

# EXHIBIT 1

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IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

ARENDI S.A.R.L.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 12-1601-LPS
	)	
MOTOROLA MOBILITY LLC	)	
f/k/a MOTOROLA MOBILITY, INC.,	)	
	)	
Defendant.	)	
<hr/>		
ARENDI S.A.R.L.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. 13-919-LPS
	)	
GOOGLE LLC,	)	
	)	
Defendant.	)	
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**EXPERT REPORT OF DR. EARL SACERDOTI**  
**REGARDING VALIDITY OF U.S. PATENT NO. 7,917,843**

Dr. Earl Sacerdoti

*Earl D Sacerdoti*  
\_\_\_\_\_  
October 20, 2020

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**Table of Contents**

	<b>Page</b>
I. INTRODUCTION .....	1
II. QUALIFICATIONS .....	1
III. LEVEL OF ORDINARY SKILL .....	3
IV. LEGAL STANDARDS .....	4
V. VALIDITY OF THE ASSERTED PATENTS.....	11
A. The Alleged Prior Art Does Not Disclose the Asserted Claims .....	18
1. CyberDesk Does Not Invalidate the Asserted Claims .....	21
2. Apple Data Detectors System Does Not Invalidate the Asserted Claims.....	38
3. Nardi et al. Does Not Invalidate the Asserted Claims .....	50
4. Miller Does Not Invalidate the Asserted Claims .....	57
5. The LiveDoc System Does Not Invalidate the Asserted Claims .....	72
6. Apple Newton MessagePad 2000 Does Not Invalidate the Asserted Claims.....	83
7. U.S. Patent No. 5,644, 735 (“Luciw”) Does Not Invalidate the Asserted Claims.....	94
8. Eudora Pro Does Not Invalidate the Asserted Claims .....	107
9. Microsoft Word 97 Does Not Invalidate the Asserted Claims .....	123
10. Microsoft Outlook 97 Does Not Invalidate the Asserted Claims .....	137
11. U.S. Patent No. 6,085,206 (“Domini”) Does Not Invalidate the Asserted Claims	145
12. U.S. Patent No. 6.377,965 (“Hachamovitch”) Does Not Invalidate the Asserted Claims	153
13. U.S. Patent No. 5,392,386 (“Chalas”) Does Not Invalidate the Asserted Claims..	166
14. Selection Recognition Agent Does Not Invalidate the Asserted Claims.....	175
15. U.S. Patent No. 5,859,636 (“Pandit”) Does Not Invalidate the Asserted Claims...	186
16. U.S. Patent No. 6,085,201 (“Tso”) Does Not Invalidate the Asserted Claims.....	198
B. The Asserted Claims are Not Anticipated by CyberDesk .....	213
C. The Asserted Claims Were Not Obvious.....	213
1. Combining Pandit with CyberDesk Is Not Obvious or Invalidating .....	219
2. Combining Pandit with Eudora Is Not Obvious or Invalidating.....	224
3. Combining Pandit with Apple Data Detectors Is Not Obvious or Invalidating .....	227
4. Combining Pandit with LiveDoc System Is Not Obvious or Invalidating .....	229
5. Combining Pandit with Newton Is Not Obvious or Invalidating .....	232
6. Combining Pandit with Microsoft Outlook 97 Is Not Obvious or Invalidating .....	234

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7. Combining CyberDesk with Chalas Is Not Obvious or Invalidating ..... 238

8. Combining CyberDesk with Eudora Is Not Obvious or Invalidating..... 242

9. Combining CyberDesk with Apple Data Detector Is Not Obvious or Invalidating ... 244

10. Combining CyberDesk with Newton Is Not Obvious or Invalidating..... 247

11. Combining CyberDesk with LiveDoc System Is Not Obvious or Invalidating..... 249

12. Combining CyberDesk with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating ..... 251

13. Combining CyberDesk with Domini Is Not Obvious or Invalidating ..... 254

14. Combining CyberDesk with Microsoft Word 97 Is Not Obvious or Invalidating . 256

15. Combining Apple Data Detectors with Chalas Is Not Obvious or Invalidating..... 258

16. Combining Apple Data Detectors with Eudora Is Not Obvious or Invalidating .... 260

17. Combining Apple Data Detectors System with CyberDesk System Is Not Obvious or Invalidating ..... 264

18. Combining Apple Data Detectors with Newton Is Not Obvious or Invalidating ... 266

19. Combining Apple Data Detectors System with LiveDoc System Is Not Obvious or Invalidating ..... 268

20. Combining Apple Data Detectors with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating ..... 270

21. Combining Apple Data Detectors with Domini Is Not Obvious or Invalidating ... 272

22. Combining Apple Data Detectors with Microsoft Word 97 Is Not Obvious or Invalidating ..... 274

23. Combining Apple Data Detectors with Microsoft Outlook 97 Is Not Obvious or Invalidating ..... 276

24. Combining Eudora System with CyberDesk System Is Not Obvious or Invalidating 278

25. Combining Eudora System with Apple Data Detectors System Is Not Obvious or Invalidating ..... 281

26. Combining Eudora with Newton Is Not Obvious or Invalidating ..... 286

27. Combining Eudora with LiveDoc System Is Not Obvious or Invalidating ..... 288

28. Combining Eudora with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating ..... 289

29. Combining Chalas with CyberDesk System Is Not Obvious or Invalidating..... 294

30. Combining Chalas with Apple Data Detectors System Is Not Obvious or Invalidating ..... 298

31. Combining Chalas with LiveDoc System Is Not Obvious or Invalidating..... 299

32. Combining Chalas with Newton Is Not Obvious or Invalidating..... 300



CONFIDENTIAL OUTSIDE COUNSEL ONLY

33. Combining Chalas with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating .....	302
34. Dr. Fox’s Generalized Discussion Does Not Establish the Obviousness of the Proposed Combinations .....	303
D. Secondary Considerations of Non-Obviousness Further Confirm the Validity of the Asserted Claims .....	316
E. The Specification of the ’843 Patent Adequately Supports and Enables the Asserted Claims .....	326

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**I. INTRODUCTION**

1. I have been asked by counsel for Plaintiff Arendi S.à.r.l. (“Arendi”) to respond to the expert report entitled “Expert Report of Edward Fox, Ph.D. On the Invalidity of U.S. Patent 7,917,843,” dated August 7, 2020 (“Fox Report”). I understand that Dr. Fox was retained by Google LLC (“Google”) and Motorola Mobility LLC (“Motorola”), the defendants in this case.

2. This report contains a summary of my opinions and analysis to date regarding the validity of U.S. Patent No. 7,917,843 (“the ’843 Patent”) in connection with this case. I expect to be called as an expert witness if this case comes to trial. As I continue my work on the issues raised in this case, I may supplement or amend my opinions and conclusions as a result of further review and analysis, or upon further information from the parties, Dr. Fox, or the Court.

3. In preparing the opinions and discussion outlined in this report, I have reviewed the ’843 Patent. I have likewise reviewed and considered the information ostensibly relied upon by Dr. Fox in reaching his opinions, including the alleged prior art that he identifies. I have also reviewed other materials presumably not reviewed or relied upon by Dr. Fox. Those materials are listed in Exhibit A to this responsive report.

4. I am being compensated at the rate of \$550 an hour for my time working on this matter. My compensation does not depend on my opinions or the outcome of this action.

**II. QUALIFICATIONS**

5. My qualifications are reflected in my CV, which is attached as Exhibit B to this report. I summarize my most relevant qualifications below.

6. I received my Bachelor of Arts in Psychology from Yale College in 1969. I received both my Master of Science (M.S.) and my Doctor of Philosophy (Ph.D.) degrees in Computer Science from Stanford University in 1972 and 1975, respectively. I also took courses at Stanford’s

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graduate business school in 1983 as part of its American Electronics Association-sponsored Executive Education Program.

7. From 1972 until 1979, I worked at the Stanford Research Institute (now SRI International), initially as a Research Mathematician, and later as the Associate Director for the Artificial Intelligence Center. In those roles, I managed and performed research in a variety of subfields within Artificial Intelligence.

8. After leaving SRI International, I co-founded Machine Intelligence Corporation, where I served as Director of Research and Development, Vice President of Engineering, and President of International Machine Intelligence Corporation. Here, I directed development of the first general industrial vision system, the first vision-guided industrial robot, and the first computer-networked industrial robot. I also supervised and participated in developing the prototype of a data management product, for which we created a spin-off business named Symantec, Inc., a leading software publisher.

9. In 1983 I joined Teknowledge, Inc. as Chief Technical Officer, and later served as General Manager of its products division and Vice President of Business Development. In these roles, I managed the development, sales, and application of two programming languages for developing expert systems. These engagements included serving as Interim Chief Technology Officer during 1997 and 1998 for two companies, Portola Dimensional Systems and Open Minded Solutions, where I recruited and supervised developers whose role was designing and implementing user applications or software modules.

10. Since leaving Teknowledge in 1988, I worked primarily as Principal Consultant for The Copernican Group and subsequently as Managing Partner for Opero Partners, LLC. In these roles, I provided management and technical consultation to over 100 companies.

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11. In 1994–95, I helped establish the Apple Systems Architecture group, reporting to Apple’s Chief Scientist, to coordinate technology developments across its business units. There, I helped develop Apple’s first technology roadmap and led the AppleSoft Architecture Council. I executed special projects for the CEO’s Product Strategy Council, including market and technical strategies for enterprise computing, and for the Internet.

12. I also am the author of a book and over 20 papers and articles on a wide range of advanced software topics. I am the inventor of U.S. Patent Number 6,222,540, principal inventor of U.S. Patent Number 6,188,403, and co-inventor of seven other United States Patents: U.S. Patent Numbers 6,954,728, 7,797,168, 7,996,264, 8,407,086, 8,417,535, 8,583,562, and 9,589,274.

13. I am a co-founder of the American Association for Artificial Intelligence (AAAI), and a former member of the editorial boards of Cognitive Science, Robotics World, and AI Expert, and was Conference Chair for AIPS-96 (an international conference on automatic planning). I also am a former member of the Steering Committee of the DECUS AI Special Interest Group, and program committees of numerous AAAI and IEEE conferences on both computer science research and applications. I have presented 7 invited conference talks and 4 conference tutorials, and I was a frequent speaker for such groups as DPMA, DECUS, GUIDE, and SME on technical, management and business issues concerning advanced software technology and technology transfer.

**III. LEVEL OF ORDINARY SKILL**

14. I have been informed that “a person of ordinary skill in the relevant field” is a hypothetical person to whom an expert in the relevant field could assign a routine task with reasonable confidence that the task would be successfully carried out at the time of the invention. I understand that several factors are relevant in determining the level of ordinary skill in the art:

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the type of problems encountered in the art; prior art solutions to those problems; the rapidity with which innovations are made; the sophistication of the technology; and the education level of active workers in the field.

15. In my opinion, a person of ordinary skill in the art would have at least a B.S. in Computer Science or Electrical Engineering or a related field and approximately two years of experience designing user applications or software modules. Alternatively, significant industry experience can serve as a substitute for a formal degree. I understand that Dr. Fox has adopted an alternative definition of the person of ordinary skill in the art. According to Dr. Fox, “a person of ordinary skill . . . would have at least a Bachelor’s degree in Computer Science or Electrical and/or Computer Engineering or related discipline and approximately two years experience designing applications using databases.” (Fox Report, p. 44 (quoting IPR IPR2014-00208, Menascé Declaration, Ex. 1002, a pp. 12, 13-14, ARENDI 208840-9091 at 208852, 208853-54).

16. In my opinion, the former qualification is more apt, and it is the one that I have applied. Both standards, however, reflect a similar level of skill in the art. My analysis and conclusions would not change were the latter standard, preferred by Dr. Fox, adopted. Moreover, based on my experience, education and training, I qualify as a person of ordinary skill in the art under both standards. Further, I generally understand the capabilities of a person of ordinary skill in the relevant field. I have supervised and directed many such persons over the course of my career.

**IV. LEGAL STANDARDS**

17. In forming my opinions, I have been asked to apply certain standards regarding patent validity. I have been informed that patents are presumed valid and that the evidence required to overcome the presumption of validity must be clear and convincing. I have been informed that clear and convincing evidence requires evidence that produces in one’s mind a firm belief or

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conviction as to the matter at issue, demonstrated by a showing that something is highly probable and not merely likelier than not.

18. I have also been informed that determining whether a recited claim limitation is contained in the prior art is a two-step analysis: (1) determining the meaning and scope of the claims, and (2) comparing the properly construed claims to the prior art. In determining the meaning and scope of the claims, I relied in part on the constructions of certain claim terms given by the Court in its August 19, 2019 Claim Construction Order. In particular, I understand that the Court has construed claims in the '843 Patent as follows:

Claim Term	Construction
“document”	“a word processing, spreadsheet, or similar file into which text can be entered”
“first information”	“text in a document that can be used as input for a search operation in a source external to the document”
“computer program”	“a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task”
“to determine if the first information is at least one of a plurality of information that can be searched for”	“to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document”
“that allows a user to enter a user command to initiate an operation”	“that allows a user to enter an input or series of inputs to initiate an operation”
“providing an input device configured by the first computer program”	“providing an input device set up by the first computer program for use by the user”

19. I have been informed that a patent claim is anticipated when a single piece of prior art describes all of the claim limitations either expressly or by inherent disclosure. I have been informed that a reference that does not expressly disclose a claim limitation may inherently disclose that limitation if the missing limitation is necessarily present in the reference. I have been

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informed that the disclosure must show that the natural result flowing from the operation of the system or method disclosed in the reference necessarily results in the performance of the claim limitations. Standards for anticipation that may be relevant are reproduced below as I understand them:

- The invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the application for patent.
- The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than a year prior to the date of the application for patent in the United States.
- The invention was described in a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent.

20. It is my understanding that a claim is invalid for obviousness under 35 U.S.C. §103 if two or more prior art references in combination disclose, expressly or inherently, every claim limitation so as to render the claim, as a whole, obvious. In determining whether or not a patented invention would have been obvious, the following factors should be considered: (a) the scope and content of the prior art; (b) the differences between the prior art and the claims at issue; (c) the level of ordinary skill in the art; and (d) whatever “secondary considerations” may be present. I further understand that obviousness does not always require combining two or more references, and can be shown by demonstrating that the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

21. I understand that a patent claim composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. But multiple prior art references or elements may, in some circumstances, be combined to render a

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patent claim obvious. I understand that I should consider whether there is an “apparent reason” to combine the prior art references or elements in the way the patent claims. Requiring a reason for the prior art combination protects against the distortion caused by hindsight. Along the same lines, one cannot use the Asserted Patents as a blueprint to piece together the prior art in order to combine the right ones in the right way as to create the claimed inventions. To determine whether such an “apparent reason” exists to combine the prior art references or elements in the way a patent claims, it will often be necessary to look to the interrelated teachings of multiple patents, to the effects of demands known to the design community or present in the marketplace, and to the background knowledge possessed by a person having ordinary skill in the art.

22. I also understand that when the prior art “teaches away” from combining prior art references or certain known elements, discovery of a successful means of combining them is less likely to be obvious. A prior art reference may be said to “teach away” from a patent when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the patent or would be led in a direction divergent from the path that was taken by the patent. Additionally, a prior art reference may “teach away” from a claimed invention when substituting an element within that prior art reference for a claim element would render the claimed invention inoperable.

23. I understand that certain “secondary considerations” may be relevant in determining whether or not an invention would have been obvious, and that these secondary considerations may include commercial success of a product using the invention, if that commercial success is due to the invention; long-felt need for the invention; evidence of copying of the claimed invention; industry acceptance; the taking of licenses under the patents by others; initial skepticism; failure of others; and praise of the invention.



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24. I understand that an applicant or patentee may antedate, or “swear behind,” an alleged prior art reference by establishing both conception of the claimed invention prior to the effective date of the reference and reasonable diligence from just prior to the effective date to a subsequent filing of the patent application. I understand that the legal definition of conception is a definite and permanent idea of a complete and operative invention. I understand an idea is sufficiently definite for conception when the inventor has a specific, settled idea—a particular solution to the problem at hand—not just a general goal or research plan he hopes to pursue. I also understand that conception does not require perfection, and that conception is complete when the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.

25. I further understand that constant effort is not required to establish diligence, and the inventor need not spend all his time working on the invention. I understand the party seeking to establish diligence must merely have been pursuing its goal in a reasonable fashion. Further, I understand that the diligence with which a patent attorney prepares a patent application may count toward the client’s constructive reduction to practice.

26. I still further understand that inventor testimony regarding conception and diligence must be corroborated. I am also informed that if the testimony of a third-party witness, a document prepared by a third party, or a document from the inventor suggests that the inventor's testimony is accurate, the inventor's testimony may be deemed to be corroborated. I understand that conception may be corroborated even if no single piece of evidence shows complete conception.

27. I have been informed that an attempt to swear behind an alleged prior art reference does not constitute an admission that the reference renders the claims anticipated.

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28. I also understand that a patent's specification must include a written description of the claimed invention sufficient to allow a person of ordinary skill in the art to recognize that the inventor invented what is claimed. I understand that the test for sufficiency of the written description is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.

29. I am informed that in the patent application process, the applicant may keep the originally filed claims, or change the claims between the time the patent application is first filed and the time a patent is issued. An applicant may amend the claims or add new claims. These changes may narrow or broaden the scope of the claims. I understand that the written description requirement ensures that the issued claims correspond to the scope of the written description that was provided in the original application.

30. I understand that the written description requirement may be satisfied by any combination of the words, structures, figures, diagrams, formulas, etc., contained in the patent application. The full scope of a claim or any particular requirement in a claim need not be expressly disclosed in the original patent application if a person having ordinary skill in the art at the time of filing would have understood that the full scope or missing requirement is in the written description in the patent application.

31. The written description requirement is satisfied if a person having ordinary skill reading the original patent application would have recognized that it describes the full scope of the claimed invention as it is finally claimed in the issued patent and that the inventor actually possessed that full scope by the filing date of the original application.

32. I understand that the written description requirement may be satisfied by any combination of the words, structures, figures, diagrams, formulas, etc., contained in the patent

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application. The full scope of a claim or any particular requirement in a claim need not be expressly disclosed in the original patent application if a person having ordinary skill in the art at the time of filing would have understood that the full scope or missing requirement is in the written description in the patent application.

33. I further understand that the patent specification must contain sufficient information to enable one skilled in the art to make and use the invention described in a claim without undue experimentation. I understand that the enablement analysis proceeds on a claim-by-claim basis. I understand that enablement is determined as of the priority date of the patent

34. I understand that the enablement requirement does not require the patent specification to describe how to make and use every possible variant of the claimed invention. Rather, I understand that routine experimentation and the knowledge of one of skill in the art can be used to fill perceived gaps, interpolate between embodiments, or extrapolate beyond the disclosed embodiments, depending on the predictability of the technology at issue. The presence of inoperative embodiments within the scope of a claim does not necessarily render a claim non enabled. The standard is whether a person of ordinary skill in the art could determine which embodiments that were conceived, but not yet made, would be inoperative or operative with expenditure of no more effort than is normally required in the art.

35. I also understand that enablement does not require an inventor to meet lofty standards for success in the commercial marketplace. I understand that a patent does not need to enable one of ordinary skill in the art to make and use a viable or perfected embodiment or prototype unless there is a claim limitation requiring it.

36. I also understand that because descriptions in patents are addressed to persons of ordinary skill in the art to which the invention pertains, an applicant for a patent need not expressly

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include information that is commonly understood by, available to, or already known to a person of ordinary skill in the art.

37. I also understand that, in determining whether the experimentation necessary to practice the invention is undue, a number of factors, including the following, may be considered: (1) the quantity of experimentation necessary; (2) the amount of direction or guidance presented; (3) the presence or absence of working examples; (4) the nature of the invention; (5) the state of the prior art; (6) the relative skill of those in the art; (7) the predictability or unpredictability of the art; and (8) the breadth of the claims. I understand that these factors are illustrative only, and not mandatory to the enablement analysis.

**V. VALIDITY OF THE ASSERTED PATENTS**

38. I understand that Arendi has asserted claims 1, 8, 23 and 30 (“Asserted Claims”) against the defendants. It is my opinion that Dr. Fox has failed to show that any of these claims are invalid.

39. Claim 1 of the ’843 Patent states:

A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:

displaying the document electronically using the first computer program;

while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information;

retrieving the first information;

providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is

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dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information;

in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and

if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information.

40. Asserted Claim 8 of the '843 Patent, which depends from claim 1, states:

8. A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.

41. Asserted Claim Asserted Claim 23 of the '843 Patent states:

23. At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the processes comprising:

displaying the document electronically using the first computer program;

while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information;

retrieving the first information;

providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information;

in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and

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if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information.

42. Asserted Claim 30 of the '843 Patent, which depends from claim 23, states:

At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising:

providing a prompt for updating the information source to include the first information.

43. Because the body of claim 1 and claim 23 recite the same elements, I discuss their parallel limitations jointly in my report. To the extent that I express my opinion that an alleged prior art reference or system neither anticipates nor renders obvious an element of claim 1, it is also my opinion that the alleged prior art reference or system neither anticipates nor renders obvious the same limitation of claim 23. Claims 8 and 30 also parallel one another. Claims 8 and 30 each add the limitation of “providing a prompt for updating the information source to include the first information” to claims 1 and 23 from which they respectively depend. Therefore, I discuss these limitations in parallel as well. To the extent that I express my opinion that an alleged prior art reference or system neither anticipates nor renders obvious “providing a prompt for updating the information source to include the first information” with respect to claim 8, it is also my opinion that the alleged prior art reference or system neither anticipates nor renders obvious the same limitation of claim 30.

44. For the reasons discussed below, it is my opinion that Dr. Fox has not shown that any alleged prior art anticipated the Asserted Claims or that the Asserted Claims were obvious in light of that alleged prior art. I also disagree with Dr. Fox’s opinion that secondary considerations of obvious suggest one of ordinary skill in the art would have found the invention to be obvious. To the contrary, it is my opinion that a proper consideration of those factors supports the opposing

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conclusion. It is also my opinion that, contrary to Dr. Fox's assertion, the '843 Patent provides an adequate written description to support and enables the Asserted Claims.

A. References Cited by Dr. Fox Are Not Prior Art to the '843 Patent

45. In my opinion, the date of Mr. Hedløy's invention for purposes of determining whether a reference or system qualifies as prior art is at least as early as July 6, 1997.<sup>1</sup> By that date Mr. Hedløy conceived of the invention embodied by the '843 Patent, and he thenceforth worked diligently to reduce the invention to practice into the autumn of 1998. Then, on November 10, 1998, Mr. Hedløy domestically filed the parent application for the '843 Patent, application No. 09/189,626, thus constructively reducing his invention to practice.<sup>2</sup> Accordingly, I understand that July 6, 1997 is the relevant date for assessing whether a method or system constitutes prior art under pre-AIA 35 U.S.C. § 102(a) and November 10, 1997, is the relevant date with respect to 35 U.S.C. § 102(b). The opinions that I express above are supported by my conversation with Mr. Hedløy regarding his invention of the '843 Patent, Mr. Hedløy's testimony, my review of files related to the development of Arendi A.S. products, and contemporary business records. .-

46. During our conversation, Mr. Hedløy stated that he conceived of the idea no later than July 6, 1997, which is consistent with his prior testimony. (10/29/2019 Depo Tr. of A. Hedløy at 36:5-16; 38:10-39:21). This timeline is independently corroborated by at least the following three files. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

47. [REDACTED]

[REDACTED]

48. Files last modified in the autumn and winter of 1997 show Mr. Hedløy continuing to develop the analyzing, searching and retrieving functions of his invention, as well as expand the external databases in which searching would occur. [REDACTED]

[REDACTED]



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[REDACTED]

[REDACTED]

49. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

50. Likewise, my discussion with Mr. Hedløy informed me that his business development efforts in the spring and fall of 1998 reflect a consistent and effort to reduce his invention to practice. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED],

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

51. I understand that Arendi attended Comdex from November 10–15, 1998 and exhibited products that featured the OneButton technology.<sup>4</sup> Arendi’s ability to give demonstrations at Comdex necessitated diligent reduction to practice in the months preceding the convention. [REDACTED]

[REDACTED]

52. As a result of the activity described above, I understand that references which became available after July 6, 1997 or November 10, 1997, cannot properly be considered as prior art to the ’843 Patent, ~~—~~under section 102(a) or (b), respectively, as Mr. Hedløy had already conceived of his invention and worked diligently to reduce the invention to practice both tangibly and constructively with the filing of his patent application. Although I have opined on each reference Dr. Fox alleges to be prior art, I believe that the ’843 Patent antedates the references upon which she relies, disqualifying it from constituting prior art. Specifically, I believe that Dr. Fox has failed to demonstrate that the following systems were disclosed before the relevant priority date and thus cannot anticipate or render obvious (alone or in combination with other references) any claims of the ’843 Patent:

- Apple Data Detectors. To the extent that Dr. Fox relies on computer programs running ADDS that either weren’t in existence or were last modified after the effective date of the ’843 Patent, it cannot be considered prior art. (See ¶102)

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- CyberDesk. In light of the continuing development of CyberDesk, publications that post-date July 5, 1997, cannot properly be considered prior art in their own right and have not been shown to evidence a CyberDesk system in existence prior to that date. *E.g.* “CyberDesk: A Framework for Providing Self-Integrating Context-Aware Services,” Knowledge-Based Systems, Vol. 11 (1998), Dey, Abowd and Wood; or “Context-Aware Computing: The CyberDesk Project,” proceedings of AAAI 1998 Spring Symposium at Stanford University.
- Hachamovitch
- LiveDoc
- Nardi

53. To the extent that Dr. Fox or defendants should assert that references were available earlier than the date Dr. Fox established, I reserve my right to respond.

54. Although it is my opinion that the above-listed material does not constitute prior art for purposes of determining the validity of the '843 Patent, I have nonetheless provided an opinion regarding whether these references and systems would have invalidated the Asserted Claims had they qualified as prior art. As discussed below, it is my opinion that they would not invalidate the Asserted Claims.

**A. The Alleged Prior Art Does Not Disclose the Asserted Claims**

55. In section IX of his report, Dr. Fox identifies one alleged prior art system, CyberDesk, as anticipating the Asserted Claims, and he enumerates 33 combinations of alleged prior art that he asserts establish that the Asserted Claims were obvious. For the reasons that I discuss below, I disagree that Dr. Fox's assertions, and I am of the opinion that Dr. Fox has failed to explain or justify his position.

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56. Before turning to Dr. Fox's assertions in section IX, however, I first consider section VII of his report. In section VII (together with Exhibits D-U), Dr. Fox purports to discuss in "detail" the alleged prior art that he "considered and rel[ied] upon" and to explain "the way in which each [prior art] reference discloses the various elements of the asserted claims." In the main body of his report, Dr. Fox provides only a brief overview of the alleged prior art, in each case directing the reader to a separate claim chart for evidence that the alleged prior art disclosed the Asserted Claims. For example, in the case of CyberDesk, Dr. Fox writes, "For a detailed, element-by-element analysis of how the CyberDesk System included, disclosed, and suggested the various elements of the asserted '843 patent claims, see Ex. D."

57. I have studied the cross-referenced exhibits and they do not include a "detailed, element-by-element analysis," let alone any analysis. Rather, as I discuss with respect to individual systems and references below, those exhibits contain series of block quotations, reproduced figures and citations from the alleged prior art *without any explanation or analysis*. Dr. Fox does not identify how those block quotes match up to any limitations of a given claim element, and in many instances the same material is recycled without explanation for subsequent claim elements. I also offer examples below of instances in which material reproduced in the claim chart exhibits bears no material relation to the features of the prior art identified as relevant in the body Dr. Fox's report. As such, it is my opinion that Dr. Fox has not provided any reasoning or justification to support his view that the alleged prior art relates to the Asserted Claims, and certainly not that the alleged prior art discloses the elements of the Asserted Claims.

58. Dr. Fox's failure to explain his reasoning is exacerbated by his attempt to avoid limiting himself to even the series of unexplained quotations and figures in the claim charts of Exhibits D-T. At paragraph 117, Dr. Fox adds, "[I]n the charts that accompany this report, I have

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cited to and include only exemplary passages that disclose or indicate certain claim elements; I did not reprint the entire reference . . . . I reserve the right to raise and rely on additional portions or passages of each prior art reference.” Dr. Fox’s refusal to identify what material he relies on and what he believes that material shows means that Dr. Fox has not provided an intelligible basis for his opinion that the alleged prior art discloses the elements of the Asserted Claims.

59. Furthermore, in each of Exhibits D-T, Dr. Fox purports to incorporate material from Exhibit U, titled “Obvious Modifications and Combinations.” That chart, too, consists of series of unexplained quotations and citations, (*see generally* Ex. U), and each table in the chart is accompanied by the following footnote: “For additional exemplary disclosures of each of the references listed in this table, see the claim charts served concurrently herewith and those served concurrently with the invalidity contentions.” I have already described the deficiencies of the charts in Exhibits D-T, and the charts served with the Joint Invalidity Contentions follow the same pattern of reproducing source material without explanation or analysis. Exhibit U itself consists of unexplained quotations and citations related to various pieces of alleged prior art without any explanation or discussion of the relevance of those quotations and citations. Tables containing those citations are accompanied by generic assertions that one of ordinary skill in the art would have been motivated to modify the primary reference to include the missing limitation. Dr. Fox fails to explain how the alleged prior art that he quotes and cites discloses missing claim elements, and he has also failed to provide any explanation for why one of ordinary skill in the art would have been motivated to combine them with the primary references in Exhibits D-T. In paragraphs 814–834, I discuss my opinion that Dr. Fox has, therefore, failed to show that the combinations or modifications proposed in section IX of Fox’s Report would render the Asserted Claims invalid for obviousness.

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60. Additionally, in Exhibits D-T, Dr. Fox incorporates his generic “Obviousness Statement” paragraph into almost every claim element without *any* rationale to support his conclusion that the reference’s failure to teach any specific claim element would still render that element “obvious to a POSITA based on the state of the art.” (*See, e.g.*, Fox Report, Ex. E, at 1). It is my opinion that Dr. Fox has not provided any justification for or explanation of his view that any claim element not disclosed by the alleged prior art was obvious, either alone or in light of secondary references enumerated by Dr. Fox. Therefore, to the extent that I state my opinion that one or more claim elements have not been shown by Dr. Fox to be disclosed, it is also my opinion that Dr. Fox has not shown that these limitations would have been obvious to one of ordinary skill in the art.

***1. CyberDesk Does Not Invalidate the Asserted Claims***

61. “CyberDesk is a component-based framework written in Java, that supports automatic integration of desktop and network services.” (ARENDI-DEFS00021071, at ’21071). As I discuss below, CyberDesk knits together “services,” *i.e.*, Java applets or network services from which text can be obtained by the system or by which certain information can be consumed.<sup>1</sup> Between these applets stand the Locator, IntelliButton, ActOnButton Bar, and Type Converter applets.<sup>2</sup> These additional applets categorize selected text, match that selection up with services that can handle them or information related to them, and provide a button for those services’ use.

62. Dr. Fox has not explained how CyberDesk meets any of the limitations of claims 1, 8, 23, or 30. Dr. Fox writes, “[f]or a detailed, element-by-element analysis of how the

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<sup>1</sup> Although certain publications suggest the possibility of integrating other services using the Java Native Interface, I have not seen evidence that such a system actually existed. For example, “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services describes “CyberDesk services [as] Java applets collected on a single Web page” and states “adding an application (or any CyberDesk component) to CyberDesk simply requires the addition of HTML applet tags to a CyberDesk Web page.”

<sup>2</sup> In some later publications discussing the second version of CyberDesk, the terms Registry, Integrator, User Interface, and Type Converter are used. (*See* AHL0121553).

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

CyberDesk System included, disclosed, and suggested the various elements of the asserted '843 patent claims, see Ex. D.” (Fox Report, ¶134). Exhibit D to the Fox Report, however, provides no such “detailed, element-by-element analysis.” Dr. Fox cannot prove that CyberDesk discloses the elements of the Asserted Claims or renders them obvious without indicating which aspects of which disclosures regarding CyberDesk that he believes correspond to which terms in the limitations.

63. Dr. Fox generally fails to distinguish between the three versions of CyberDesk, which, as Dr. Dey testified at his deposition, were distinct. It is my opinion that differences between these three versions (also referred to during the deposition as “instantiations”), including with respect to aspects of the system such as chaining that Dr. Fox identifies as material to his opinion, make it inappropriate to consider the three versions of CyberDesk jointly. This is particularly true due to my opinion that Mr. Hedløy conceived of his invention at least as early as July 6, 1997, and development of CyberDesk software continued after this date. Dr. Anind Dey, the principal developer of CyberDesk, testified that there were three versions of CyberDesk: an “old version with hard-wired buttons,” “JavaDesk (with the Intellibutton),” and “JavaDeskII (with Intellibutton and TypeConverters).” (Dey Depo. Tr. 144:17–146:13), ARENDI-DEFS021090). Consistent with the majority of Dr. Dey’s deposition transcript, I will refer to these as the alpha version, version 1, and version 2, respectively. Because Dr. Fox has unjustifiably combined multiple systems, it is my opinion that he has not demonstrated that *any* system disclosed the Asserted Claims.

64. At paragraph 120 of his report, Dr. Fox asserts, “no single material accurately captures or describes the full feature-set and the full operation of the CyberDesk System, as it was demonstrated for persons of skill in the art in 1997 and 1998.” Dr. Fox states that his

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“understanding of the full feature-set and full operational capacity of the CyberDesk System in 1997 and 1998 . . . comes from the combined disclosures of (a) the materials identified below (and identified in my list of Materials Considered), (b) code fragments and screen shots from the CyberDesk System as it existed in 1997 and 1998, (c) screen shots and descriptions of utilities and databases that were sued with and by the CyberDesk System in 1997 and 1998, (d) slide presentations used to demonstrate and describe the CyberDesk System in 1997 and 1998, (e) laboratory notebooks relating to the development of aspects of the CyberDesk System, (f) conversations with one of the developers of the CyberDesk System (Mike Pinkerton, whose May 1997 thesis, as he explained, provided additional information), and (g) the full Dey deposition transcript. In my opinion, Dr. Fox’s difficulty finding material that “accurately captures or describes” CyberDesk does not give him license to combine and cherry-pick from references without regard for their consistency or the evolution of the CyberDesk system over time. It is my opinion that he has done so and that his opinions are therefore founded on an inaccurate understanding of the CyberDesk system.

65. At paragraph 121, Dr. Fox states that “[t]he first working version of the CyberDesk System was created in the summer of 1996, and it was first publicly used and disclosed in the United States by Spring 1997. Therefore, it is my understanding that the CyberDesk System constitutes prior . . . .” I disagree with Dr. Fox’s attempt to assimilate various instantiations of the CyberDesk System into a single system. As even he admits, Dr. Dey identified multiple versions with material differences between them. (Fox Report, ¶125). It is my opinion, therefore, that Dr. Fox’s opinion is founded on unreliable bases.

- i. **Dr. Fox does not establish that CyberDesk discloses “A computer-implemented method for finding data related to the contents of a**



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**document using a first computer program running on a computer, the method comprising:”**

66. To the extent that the preamble is considered limiting, Dr. Fox has failed to disclose how CyberDesk practices the Preamble of Claim 1. He has not, for example, identified what he considers to be the “document,” the “first computer program,” or the method for finding data. Instead, he provides a series of block quotes and images unaccompanied by a word of analysis or explanation. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses the preamble or renders it obvious.

**ii. Dr. Fox does not establish that CyberDesk discloses “displaying the document electronically using the first computer program”**

67. It is my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses this claim element. Dr. Fox does not identify, for example, what he considers to be the “first computer program” used for “displaying the document electronically” or what he considers that “document” to be. It is unclear, for example, whether Dr. Fox contends that CyberDesk is the “first computer program” or if the underlying program on which CyberDesk may operate is the “first computer program” as construed by the Court. Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

**iii. Dr. Fox does not establish that CyberDesk discloses “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

68. The Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first

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information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

69. It is my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses this claim element. For example, Dr. Fox has failed to identify what he considers to be the “first information,” “document,” “plurality of types of information,” “second information,” or “analyzing.” Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

70. It is my opinion that Dr. Fox has not shown that the alpha version of CyberDesk analyzes text in the document to determine its type. Dr. Fox has, instead, ignored this version of CyberDesk. The alpha version is “hard-wired” to presume that certain text is of a given type. For example, “CyberDesk: A Framework for providing Self-Integrating Ubiquitous Software Services” describes the alpha system as follows:

Initially, we hardcoded applications to generate events for different data types. For example, the e-mail browser declares that it can generate String selection events when text is highlighted, but also EmailAddress selection events when the ‘To:’ or ‘From:’ field in an e-mail message is selected. When EmailAddress selection events were generated, they were passed through the CyberDesk system . . . to the ActOnButton Bar, which displayed services that could consume EmailAddress selection events (e.g. Send an E-mail to this E-mail Address using Netscape). However, this required the applications themselves to be

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aware of the CyberDesk type system. It was also limiting since e-mail addresses could also appear in the unformatted body text of an e-mail message and only be recognized as a String selection.

(ARENDI-DEFS00021071, at '21073; *see also* Dey Depo. Tr. at 224:5-14). One of ordinary skill in the art would understand that the system treated—without analyzing—any highlighted text as an EmailAddress in the To: or From: fields as being of both the String and EmailAddress types and treated—without analyzing—any text highlighted in the body of an email as being of only the String type. Moreover, Dr. Fox has not cited evidence establishing that the alpha version identified any information types other than those disclosed in the prior paragraph. Because “Strings” are neither a type of identifying or contact information, the alpha version has not been shown to “determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address).” Nor, in my opinion, has Dr. Fox put forward evidence to show that the alpha version analyzed first information to identify a single category of information that “can be searched for.” To the contrary, Dr. Fox has not cited evidence in support of the proposition that any particular action could be performed on any category of information. As Dr. Dey explained during his deposition, “[a]t the beginning of this project, we had some fairly simple conversions and some [*sic*] very simple set of services.” (Dey Deposition Tr., at 67:4-11). There is no basis to assume that EmailAddresses or any other type of information could be used for searching in the alpha version, and indeed, no search as required by the ‘843 claims is disclosed. Therefore, it is my opinion that the alpha version did not disclose this claim element or render it obvious.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

71. It is also my opinion that the first version of CyberDesk did not disclose this claim element or render it obvious. With respect to the first version, Dr. Dey testified that the type converters attempted to convert “[t]ext to e-mail, text to URL, text to mailing address, [and] text to phone number.” (Dey Deposition Tr., 200:2-6).<sup>3</sup> Even assuming that the conversion architecture constitutes analyzing—which is not disclosed for version 1—constitutes a species of analysis, it is my opinion that URLs are neither a type of identifying or contact information, and so their identification is not relevant to the claim. Moreover, the only one of these types that the cited evidence establishes could be used as a search term in version 1 were names. (ARENDI-DEFS00022052, at ’22052). Therefore, version 1 has not been shown to analyze text in the document “to determine if the first information belongs to one or more of several predefined categories of [information] that can be searched for.” With respect to version 2, and searching incidental to setting up the ActOn Button Bar precedes the user’s command, contrary to the requirements of subsequent claim elements; as such, one of ordinary skill in the art would understand that a type of information would need to be able to be used for searching following receipt of the user command to qualify as a “type of information that can be searched for” within the meaning of this claim element.

72. Furthermore, to the extent that Dr. Fox relies on chaining to establish that a type of information can be searched for, I disagree that the chaining process reflects the required searching. As discussed below, the searching must follow the user’s command. However, in the case of chaining, searching using the analyzed text precedes the user’s command.

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<sup>3</sup> “CyberDesk: Automated Integration of Desktop and Network Services” included the following description of the first version raises the possibility of identifying addresses and names, but it does not state that conversion for these types of first information was actually implemented at that time. (ARENDI-DEFS00022052, at ’22053 (noting that certain types of patterns “*can be used* for dates, URLs, e-mail and mailing addresses”). In fact, Figure 3, which purports to show “The run-time architecture of CyberDesk” suggests that even fewer types were subject to conversion. (ARENDI-DEFS00022052, at ’22053).

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iv. **CyberDesk does not disclose “retrieving the first information”**

73. It is my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses this claim element. For example, Dr. Fox has failed to identify what he considers to be the “first information” or “retrieving.” Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

74. One of ordinary skill in the art would also understand that the first information to be retrieved is the first information subject to analyzing. Because CyberDesk did not disclose the required analyzing of first information, “the first information” is not available to be retrieved.

v. **CyberDesk does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information”**

75. The Court construed “providing an input device configured by the first computer program” to mean “providing an input device set up by the first computer program for use by the user.” The Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” In my opinion, CyberDesk does not disclose this element or render it obvious.

76. It is my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses this claim element. For example, Dr. Fox has failed to identify what he considers to be the “input device,” “first computer program,” “operation” or any component of that operation.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

77. CyberDesk does not disclose an input device “set up by the first computer program.” To the extent that Dr. Fox conceives of the service applets as “computer programs,” the applet “that allows a user to enter an input or series of inputs to initiate an operation” would be the system’s ActOn Button Bar, which is set up by the IntelliButton and ActOn Button Bar applets within the CyberDesk framework. (*E.g.*, ARENDI-DEFS00021071, at ’21072 (“The IntelliButton displays the matches in the form of suggestions to the user, via the ActOn Button Bar. It is through the ActOn Button Bar that the user accesses the integrating functionality of CyberDesk.”); ’21073 (“The ActOn Button Bar, as described before, is simply the user interface for the integrating IntelliButton. . . . The list of buttons is provided by the IntelliButton.”); Fig. 2). As discussed above, CyberDesk’s explicit aim is to avoid requiring individual services to encode integrating other computer services, and it aims to provide such integration with a framework that the individual programs operate within. (AHL0121553, at ’121555; *see also* Dey Depo. Tr., 155:21–156:7). Thus, to the extent that Dr. Fox conceives of the first computer program as the Java applet or desktop service that displays the document in order to satisfy the “displaying the document . . . using the first computer program claim element,” CyberDesk does not disclose providing an input device set up by the first computer program.<sup>4</sup>

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<sup>4</sup> In the alternative, CyberDesk consists of Java applets, (*See, e.g.*, ARENDI-DEFS00022052, at 22053 (“CyberDesk services are Java applets collected on a single Web page.”); Dey Depo. Tr., 143:15-144:1; 148:3-8), and it is my opinion that Java applets are not, in fact, first computer programs at all. Rather, it is the computer program that runs the applets, such as the web browser, that constitutes the first computer program.

A computer program is “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” One of ordinary skill in the art would understand that a Java applet is a not a self-contained set of instructions but is instead embedded within a webpage loaded by a web

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78. With respect to the required operation, as I discuss above in paragraph 70 the alpha version does not disclose searching at all. Therefore, it does not disclose that the input device may be used to initiate either the required search or the required action that uses second information found during the search.

79. As I discuss in paragraph 71, Dr. Fox has not established that the first version of CyberDesk identified more than one type of first information that could be used for searching: names. Because there is only one type of first information, the type of second information cannot depend on the type of first information. Nor has Dr. Fox shown that any action is performed using the second information. Rather, “CyberDesk: Automated Integration of Desktop and Network Systems” stops after disclosing searching for second information using the name:

**For example, at the top left in Figure 1, is an e-mail message informing Anind about the great work going on in the Future Computing Environments group at Georgia Tech. Anind is intrigued and decides to investigate further. Highlighting “Gregory Abowd” causes the ActOn button bar to suggest some actions (a). One suggestion is to look up the name in an available contact manager (b). Anind discovers that he doesn’t have Gregory’s phone number, so he decides to follow another suggestion and initiates a search using the Switchboard Web service (c).**

(ARENDI-DEFS00022052).

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browser. “CyberDesk: A Framework for Providing Self-Integrating Context-Aware Services” described the system’s architecture as follows:

All of the components have been implemented as Java applets for simplicity of network programming. We also chose Java for its promise of platform independence, ability to execute within a Web browser, and object-oriented nature. The first two features support our goal of ubiquity, and the last feature made development easier. Also, most of the integrated network applications are available via the Web, so the natural access method was via a Web browser.

(ARENDI-DEFS00021064, at ’21066 (emphasis added); see also, e.g., Dey Deposition Tr., at143:15-144:1). Because applets are merely components of a computer program like a browser, they are not themselves a “self-contained set of instructions,” and it is my opinion that they more closely approximate routines or libraries. Thus, the computer program would be the one, such as the browser, running the Java applet.

Should Dr. Fox adopt the view that the browser is the first computer program, it would remain my opinion that the element is not disclosed. The Asserted Claims require two computer programs: the “first computer program” and the “second computer program.” To the extent that the Java applets are viewed as components of the larger browser, there is only one computer program, and it becomes meaningless to assert that the “first” computer program sets up the input device.

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80. It is also my opinion that the second version of CyberDesk does not disclose the required operation. Chaining's *raison d'être* is to eliminate any dependency of the type of second information on the type or types of first information. Any type of alleged first information can ultimately be used to find any type of alleged second information that can be found through the chaining process. (See, e.g., ARENDI-DEFS00021071, '21075-21076; ARENDI-DEFS00021064, '21067; Dey Depo. Tr., at 81:21-82:24; 210:12-18 ("So for version 2, the—the biggest differences were the ability to have multiple rounds of conversion, essentially unlimited, although we eventually looked for cycles so that you couldn't go loop forever.")).

81. Furthermore, to the extent Dr. Fox argues that the search is performed by the CyberDesk "chaining" feature, I disagree with his conclusion, since chaining happens automatically without any user command or input device on the ActOn Button Bar menu items. It is, therefore, not initiated through use of those buttons.

82. The articles on CyberDesk emphasize time and again that its aim is to remove the integration of computing services from the ambit of the first computer program. One of ordinary skill in the art would not be motivated to take steps to move control over the input device to the alleged first computer program because doing so would conflict with CyberDesk's purpose and intentional architecture. For example, "Applying Dynamic Integration as a Software Infrastructure of Context-Aware Computing," described the following limitations overcome by CyberDesk:

There are some limitations, however, to the current approaches for providing this integration that impact both the programmer and the user. From the programmer's perspective, the integrating behavior between applications is static. That is, the behavior must be identified and supported when the applications are built. The programmer has the impossible task of predicting all of the possible ways users will



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want a given application to work with all other applications. What results is a limited number of software applications that are made available in an integration suite.

From the user's perspective, integrating behavior is limited to the applications that are bound to the particular suite being used. Further integration is either impossible to obtain or must be implemented by the user (e.g., by cutting and pasting between application windows or by end-user macro programming). In addition, the integrating behavior has a strong dependence on the individual applications in the suite. If a user would like to substitute a comparable application for one in the suite (e.g. use a different contact manager, or word processor), she does so at the risk of losing all integrating behavior.

Given these software engineering considerations, our goal is to provide a more flexible framework for integrating software behavior based on knowledge of a user's context. We want our solution to work under the assumption of a networked and heterogeneous operating environment. We aim to reduce the programming burden in identifying and defining integrating behavior, while at the same time retaining as much user freedom in determining how integration is to occur.

(ARENDI-DEFS0021045, at '21046; ARENDI-DEFS00021064, at '21064). “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services” drives this point home, answering the question “WHAT DOES CYBERDESK GAIN US?”:

CyberDesk provides a simple framework for adding new services and integrating them in reasonably intelligent ways. It relieves burdens from both the individual service designer and the end user. The individual service designer can develop a

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generic service, with a usable API, and not have to worry how it will be integrated into CyberDesk. The designer does not have to design specifically for the CyberDesk framework. The designer also doesn't have to think of all possible ways a user may want to integrate this service with another service, because the integrating behaviour is inherent to the CyberDesk framework. CyberDesk creates a dynamic mapping at runtime from user actions to possible user actions, saving the designer from constructing this map at design time.

83. (ARENDI-DEFS00021071, '21073). The CyberDesk architecture places the configuration of the buttons used to trigger the operation wholly within the control of the CyberDesk system, rather than under the aegis of any individual computer program.

- vi. **CyberDesk does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term”**

84. It is my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses this claim element. For example, Dr. Fox has failed to identify what he considers to be the “first computer program,” “input device,” “search term,” “information source,” or “second information.” Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

85. The claimed search must be in consequence of receipt by the first computer program of the user command from the claimed input device. Because, as discussed in the preceding paragraphs, CyberDesk does not disclose the required input device, any search cannot be in consequence of the required receipt of the user command. Accordingly, CyberDesk does not disclose this element or render it obvious.

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86. Furthermore, causing the search must be “in consequence of receipt *by the first computer program* of the user command from the input device.” However, as I discuss with respect to the prior claim element, the input device is set up by and is a component of the IntelliButton and ActOn Button Bar applets—not the service displaying the document as required of the first computer program. “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services” makes plain that the IntelliButton not only sets up the ActOn Button Bar but also receives the user’s command from the ActOn Button Bar:

The IntelliButton uses the event information (passed in the form of a structured message) to find any matches; i.e. any components registered with the Locator that can consume the event. . . . The matches are displayed to the user via the ActOn Button Bar, from which the user can select any or none of the integrating services suggested. If the user does choose one of the integrating services, the IntelliButton is notified and it accesses the correct service passing the associated data and event as parameters.

(ARENDI-DEFS00021071, '21073). Thus, it is the IntelliButton that receives the user command and causes a search, if any, to result.

87. As I discuss paragraph 70, Dr. Fox also has not shown that the claimed searching is caused in the alpha version of CyberDesk.

88. Furthermore, as I discuss in note 3, CyberDesk integrates Java applets. These do not fit the Court’s construction of “computer program” in their own right. Because each of these applets, including the desktop and network services, are accessed from within a browser, it is my opinion that the individual Java-based services do not constitute “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” Rather, they are executed as part of operating the browser. Therefore, to the

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extent that CyberDesk is argued to have disclosed a single computer program (i.e., the browser), it is my opinion that it does not have a command that is received by the *first* computer program or that a search using a *second* computer program is caused.

89. Several of Dr. Fox's citations concerning this limitation relate to the chaining functionality of the second version of CyberDesk. Search operations invoked through the chaining functionality cannot be the claimed search because chaining is used by the CyberDesk framework to create the input device, *i.e.*, the ActOn Button Bar buttons, and thus cannot be initiated by a user command to the claimed input device. Hence, because the chaining operation occurs prior to the providing of any input device, they cannot disclose the claimed search that is in consequence of receipt of a user command from that device. Moreover, even were chaining itself considered the searching, it would not satisfy the searching requirements of the Asserted Claims. (*See* paragraph 80).

- vii. **Dr. Fox does not establish that CyberDesk discloses “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

90. It is my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses this claim element. For example, Dr. Fox has failed to identify what he considers to be the “searching,” “second information,” “search term,” “action,” type of action or type of first information. Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

91. As I have discussed at length, in the alpha version of CyberDesk, no searching has been shown. Thus, it is also the case that no action has been disclosed using information found by searching.

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92. I have also noted that the first version of CyberDesk disclosed searching using only one type of information and did not disclose taking any action with the second information found. (See ¶79). Therefore, the first version of CyberDesk also does not disclose performing the required action. Even if an action could be undertaken when names are the type of first information, the type of action could not depend on the type of first information because there would only be one type of first information.

93. To the extent that Dr. Fox argues that chaining constitutes the required searching (which it does not), only one type of action is disclosed: setting up an ActOn button. Therefore, the type of action cannot depend at least in part on the type or types of first information. I further note that any searching related to chaining is not caused following receipt of the user command on the ActOn Button Bar button.

viii. **CyberDesk does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

94. Because CyberDesk does not disclose or render obvious the elements of claim 1, it is my opinion that CyberDesk does not disclose claim 8.

95. It is also my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses the additional limitation of this claim element. For example, Dr. Fox has failed to identify what he considers to be the “prompt,” “information source,” and “first information.” Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

96. Additionally, at least the alpha and first versions of CyberDesk fail to disclose the additional limitation. No evidence has been put forward that the alpha version of CyberDesk provided such a prompt. Likewise, a prompt to add the first information to any information source

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is absent from “CyberDesk: Automated Integration of Desktop and Network Services,” which describes the first version (Dey Depo. Tr. at 69:15–70:6), despite showing that the user can *look up* a name in “ContactManager.” (ARENDI-DEFS00022052, ’22052).

- ix. **CyberDesk does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

97. The body of claims 23 includes the same elements as claim 1. CyberDesk does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above.

98. It also my opinion that Dr. Fox provides no analysis or discussion to support his opinion. Instead, he cross-references the unexplained material in claim 1 and for the preamble also offers a series of block quotes without explanation or analysis. It is therefore my opinion that Dr. Fox has not shown that the CyberDesk discloses this claim element.

- x. **CyberDesk does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

99. Because CyberDesk does not disclose or render obvious the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious. It is also my opinion that CyberDesk does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraph 96. The additional block quotes that Dr. Fox offers in support of claim 30 appear without explanation or analysis.

100. Consequently, Dr. Fox has failed to prove that CyberDesk invalidates claim 30.

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**2. *Apple Data Detectors System Does Not Invalidate the Asserted Claims***

101. Dr. Fox contends that the Apple DataDetector System (ADDS) invalidates the asserted claims of the '843 Patent. I disagree. ADDS does not disclose several material elements of the asserted claims.

102. As an initial matter, however, I note that much of the evidence that Dr. Fox relies on does not constitute prior art. For example, when I personally inspected the laptops cited by Dr. Fox, I found that Miller's Exhibit 9 PowerBook included software operating with ADDS having "Dates modified" well after the effective date of the '843 Patent. Specifically, the "Modified date" for the ClarisWorks emailer folder, the ClarisWorks 4.0 folder, and the Eudora Light Folder were all January 23, 2014. Similarly, for the Miller Exhibit 8 PowerBook, the "Modified date" for the ClarisWorks emailer folder, the ClarisWorks 4.0 folder, and the Eudora Light Folder were all December 19, 2013. The Claris emailer program within the ClarisWorks 4.0 folder had a modified date of January 22, 1998. Dr. Fox has not shown when IAD version 1.0.2 was released, and he has not shown when IAD Version 1.0.2 was combined with US Geographic Detectors 1.0 into an alleged single system. Written material that he cites also postdates the relevant period; for example, Dr. Fox writes that Nardi was not published until March 1998, and he assigns a date of February 23, 1998, to "Apple, StarNine updates in mail." Dr. Fox has not shown that these articles describe systems in existence during the relevant period—putting aside whether they even describe a single ADDS. As I discuss in paragraphs 45 and following, it is my opinion that Mr. Hedløy conceived of the invention no later than July 5, 1997, and thereafter worked diligently to reduce it to practice, until he did so constructively by filing the parent application for the '843 Patent.

103. Dr. Fox provides no rationale for his conclusion that ADDS anticipates the '843 Patent. In his report, Dr. Fox provides no substantive discussion of how ADDS discloses any claim element whatsoever. In the claim chart included as Exhibit E to his report, Dr. Fox provides various

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citations to and quotations of various documentation and deposition testimony regarding ADDS with no further explanation. (As I discuss in subsequent sections, the exhibits provided for Nardi and Miller also fail to explain how those references disclose the Asserted Claims.) Dr. Fox provides limited, superficial explanation related to his device testing of the laptop running ADDS that he examined, none of which explains how his observations support his conclusion that ADDS anticipates the '843 Patent. Furthermore, Dr. Fox provides no explanation of why block quotations from Nardi—which in my opinion is not prior art—and the Miller patent (both of which also suffer from the same infirmities as his quotations from ADDS) are relevant to his conclusion that ADDS anticipates the '843 Patent. Dr. Fox himself states, “[N]o single publication accurately captures or describes” Apple Data Detectors. (Fox Report ¶135). Yet, Dr. Fox improperly uses this lack of evidence as permission to treat Apple Data Detectors as if it were a single, unevolving system without providing any reason to do so, and it is, therefore, my opinion that he has improperly combined multiple references and systems into a single piece of alleged prior art. In my opinion, Dr. Fox cannot prove that ADDS meets any claim element.

104. Further, Dr. Fox’s incorporates his generic “Obviousness Statement” paragraph to every claim element without *any* rationale to support his conclusion that ADDS’s failure to teach any specific claim element would still render that element “obvious to a POSITA based on the state of the art.” Fox Report, Ex. E at 1.<sup>5</sup>

**i. ADDS does not disclose “analyzing . . . to determine if first information is at least one of a plurality of types of information that can be searched for”**

105. Dr. Fox provides no explanation or analysis of how ADDS discloses this claim element. He offers a series of block quotations both from ADDS and “other materials and

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<sup>5</sup> I respond below in section IV.B to Dr. Fox’s likewise unsupported conclusions that ADDS combined with other references rendered obvious the '843 Patent.



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documentation” with no explanation of their relevance. He provides only minimal, superficial descriptions of his testing of a device running ADDS and of images of the relevant technology, but to the extent this commentary is relevant it does not sufficiently explain how or show that this claim element has been disclosed or rendered obvious.

106. The asserted claims require “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information.” The Court construed “first information” as “text in a document that can be used as input for a search operation in a source external to the document.” It further construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” as “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” ADDS does not disclose this claim element because it analyzes “first information” to determine if it belongs to a *single* predefined category of identifying or contact information that can be searched for: email addresses. A necessary aspect of the invention is analyzing with respect to *several* such predefined categories. Dr. Fox entirely ignores this requirement. In attempting to explain how ADDS practices this claim element, he writes, “when a user selects text and right-clicks in Simple Text,” ADDS “detect[s] URLs, email addresses, and “occurrences of a city name followed by a state name.” (Fox Report, Ex. E, at 2831). He further cites to his examination of a device running ADDS in which he “observed that there were a number of [] actions available to Data Detectors” which “could be associated with, for example, a detected email address . . . , phone number, Newsgroup, HTTP address, or Host.”

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(Fox Report, Ex. E, at 4447). However, he does not identify how any of these categories constitute “types” within the meaning of the ’843 Patent, namely that they are identifying or contact information..

107. In Exhibit E to his report, Dr. Fox notes the ability of ADDS to identify webpage HTTP addresses, but he never demonstrates that webpages were of a type of information *that can be searched for*. The September 8, 1997 press release relied upon by Dr. Fox describes the IAD as detecting internet addresses within a document. The press release does not qualify as prior art in light of the July 1997 conception date, but more critically Dr. Fox does not cite any evidence that IAD determines whether the HTTP address belongs to one or more of several predefined categories of information that can be searched for in an information source external to the document. Rather, at most, Dr. Fox cites to an action that can be performed once ADDS recognizes a string of text as a possible HTTP address, and none of those actions involve searching an external information source.

108. Dr. Fox contends that the same “analysis” occurs with an email address. *See* Fox Report, Ex. E at 30. However, the actions in the contextual menu cited by Dr. Fox on page 30 of Exhibit E again do disclose or suggest the required search. Dr. Fox also relies on functionality allegedly provided by US Geographic Detectors that ostensibly recognizes geographic entities. However, US Geographic Detectors is not prior art under 35 U.S.C. §102 because it was released in December 1997 at the earliest. Dr. Fox concedes that the US Geographic Detectors does not constitute prior art under §102(b). It is not prior art under §102(a) or (g) because it post-dates the invention’s July 1997 conception. Thus, any functionality provided by US Geographic Detectors cannot be considered.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

109. At most, Dr. Fox identifies only *one* type of information that can be searched for: email addresses, and even then the “write a letter” feature is not present on the system depicted by Dr. Fox on page 30 of Exhibit E. (*See* Fox Report, Ex. E, at 30). To be sure, I personally inspected the laptops cited by Dr. Fox, and identified three operations that ADDS suggested with respect to a phone number: dialing it, saving it in a file, and copying it to a clipboard. None of these entails searching. But that ADDS may search for email does not anticipate this element because it requires analysis to determine whether the first information is at least one of a plurality of types of information that can be searched for. At most, Dr. Fox may have identified a single type of information, which is less than the claim element requires. [REDACTED]

110. Unable to show that ADDS disclosed this claim element, Dr. Fox turns to what he terms “other materials and demonstrations.” (*See* Fox Report ¶137). These alleged other materials do not overcome ADDS’s deficiency. The additional data structures discussed in paragraphs 138<sup>6</sup> through 141 and blocked-quoted without any explanation or analysis in Exhibit E, are not disclosed to relate to types that can be searched for. I also note that several entity types discussed in those paragraphs—*e.g.*, URLs, meeting announcements, and dates—are neither identifying nor contact information.

**ii. ADDS does not disclose “retrieving the first information”**

111. Dr. Fox does not explain how ADDS discloses this claim element or renders it obvious. For example, he does not identify what he believes to be “the first information” or the “retrieving.” Instead, he offers a series of unanalyzed screenshots and quotations. He also refers user to the entirety of the prior claim element without explanation. His statement that “Mac Word Data Detectors System could detect data structures in a written document and provide options for

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<sup>6</sup> Note that, in my opinion, Nardi does not constitute prior art. Therefore, its disclosure, or lack thereof, is not pertinent to the validity of Asserted Claims.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

the detected structures” does not obviously relate to the requirements of this element. Moreover, because the first information must have been subject to the required analyzing, which as I have discussed is not disclosed, *the* first information could not have been retrieved.

- iii. **ADDS does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information”**

112. Dr. Fox provides no explanation or analysis of how ADDS discloses this claim element or renders it obvious. He offers a series of block quotations both from ADDS and “other materials and documentation” with no explanation of their relevance. He provides only minimal, superficial descriptions of his testing of a device running ADDS and of images of the relevant technology, but to the extent this commentary is relevant it does not sufficiently explain how or show that this claim element has been disclosed. For example, Dr. Fox does not identify what he considers to be the “input device”<sup>7</sup> or “first computer program,” “first information,” the “second information,” or “specific type or types” of information.

113. The asserted claims require “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in

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<sup>7</sup> In Exhibit E to his report, Dr. Fox identifies an “input device” in his discussion of the Miller patent, but he provides no evidence or explanation for why the Miller patent is relevant to his conclusion that ADDS as implemented anticipated the ’843 Patent. He connects Miller and ADDS through the entirely conclusory statement that “Further aspects of the ADD System are described in U.S. Patent No. 5,946,647 (‘Miller’).” Dr. Fox provides no justification for combining these references.

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an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information.” The Court construed providing an input device configured by the first computer program” to mean “providing an input device set up by the first computer program for use by the user.” The Court construed “that allows a user to enter a user command to initiate an operation” and “that allows a user to enter an input or series of inputs to initiate an operation.”

114. ADDS does not disclose this element or render it obvious because the “first computer program” does not set up the input device for use by the user. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” Under the claims, the “first computer program” displays the document electronically. In a system running ADDS, the document is displayed by any program capable of displaying text, such as a word processor like ClarisWorks. The program displaying the text does not provide an input device set up by the first computer program for use by the user.

115. Although Dr. Fox fails to identify what he considers to be the “input device” or what he considers to be the “first computer program,” he discusses a “menu” and “sub-menu” that appeared when he “highlighted in Note Pad with the mouse cursor and right-clicked” on an email address and a website address during his inspection of a laptop running ADDS. (Fox Report, Ex. E, at 74). Assuming Dr. Fox provides this illustration as evidence that the menu and sub-menu is an “input device” and Note Pad is a first computer program, Dr. Fox still has failed to demonstrate that ADDS discloses this element. If the menu and sub-menu are an input device, it is an input device of ADDS. But ADDS is not the “first computer program” because it does not display the

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

document electronically—Note Pad does. Dr. Fox has presented no evidence that a text-editing program, such as Note Pad or others like ClarisWorks or SimpleText, set up the contextual menu of ADDS. Because the asserted claims require the “first computer program” to both display the document electronically and set up an input device—which neither ADDS nor the program displaying the text is shown to do—ADDS does not disclose this element.

116. Dr. Fox appears to recognize this shortcoming of ADDS. In discussing his inspection of a device running ADDS, Dr. Fox states that “[ADDS] detected that ‘test1@apple.com was an email address, and presented actions in the sub-menu associated with an email address.’” (Fox Report, Ex. E. at 74.)<sup>8</sup> Dr. Fox also has not explained the apparent absence of this functionality from the laptop depicted on page 30 of Exhibit E. But the claim does not say “providing an input device, configured by the first program or other programs.” The input device must be configured by the first computer program—the same first computer program that displays the document electronically. ADDS does not do that.

117. Although he does not specifically identify what he considers to be first or second information, Dr. Fox appears to identify a single scenario in which an email address is allegedly used as a search term in order to find a mailing address and name. He identifies no other types of information that could qualify as first information, and he identifies no searches designed to find types of information that could qualify as second information other than a mailing address and name. (One might aptly characterize this collectively as a search for an address.). Both because ADDS supports only one type of first information used for searching and only one set of second information sought, the type of second information cannot be of a type or types “dependent at least

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<sup>8</sup> On Page 82 of Exhibit E, in further discussion regarding his testing of the device running ADDS, Dr. Fox leaves ambiguous whether he observed ADDS or Note Pad providing the menu and sub-menu. (See Fox Report, Ex. E at 82). I therefore interpret Page 82 in a manner that would be consistent with his prior observation, quoted above.

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in part on the type or types of the first information.” Dr. Fox cites the addition of a “company name” to an email, *see* Exhibit E at 57, but adding a company name is no different than mailing address or name.

118. Dr. Fox then states “Data Detectors also detected that “apple.com” was an Internet address, and presented actions in the sub-menu associated with an Internet address.” (Fox Report, Ex. E, at 74.) Setting aside the question of whether a website address constitutes identifying or contact information, Dr. Fox ignored the Court’s construction of “first information.” First information is “text in a document that can be used as input for a search operation in a source external to the document.” ADDS does not disclose use of website addresses as search terms and, therefore, they are not a type of first information.

119. Moreover, this claim element requires that different types of first information result in a search for at least partially different types of second information. This is what it means for the *type* of second information to depend, at least in part, on the *type* of first information. Even ignoring Dr. Fox’s potential misidentification of website addresses as first information, Dr. Fox would not have shown that the *type* of second information depends on the type of first information; rather, he would have shown that the *availability* of second information (or, more accurately, the invocation of searching) depends on the type of alleged first information.

120. Dr. Fox further states that ADDS “can detect occurrences of a city name followed by a state name or US Postal abbreviation” and then “search the Yahoo map website for a map of the city” or “search the US Postal Service website for a list of zip codes for the city.” (Fox Report, Ex. E at 5758.) However, this functionality is provided by US Geographic Detectors, which is not prior art to the invention, and Dr. Fox does not cite any evidence that such functionality existed before the conception of the ’843 Patent’s invention.

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- iv. **ADDS does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term”**

121. ADDS does not disclose this claim element or render it obvious because the “first computer program” does not receive the user command from the input device. According to the claim language, the “first computer program” must display the document electronically, configure an input device, and receive a user command from the input device. ADDS does not meet these requirements. As discussed above, ADDS does not display the document electronically, which means that it cannot serve as the “first computer program.” Rather, the underlying text-editing program displays the document. The input device, as described by Dr. Fox, is the “menu” and “sub-menu.” Dr. Fox offers no evidence or analysis to indicate that these menus are set up by the first computer program. These menus are functionalities of ADDS, not the underlying text-editing application. Accordingly, because the “first computer program” does not receive the user command from the input device, ADDS does not disclose this element. And as discussed above, if ADDS is deemed to be the “first computer program,” then there is no invalidity because ADDS does not display the document electronically. Furthermore, as I discuss above, Dr. Fox has not shown that the alleged search-related features constitute prior art.

- v. **ADDS does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

122. ADDS does not disclose this element or render it obvious because the action performed using at least part of the second information does not depend on the type or types of first information.



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123. Dr. Fox identifies a scenario in which a laptop is running (1) a text-editing program (that is displaying the document), (2) ADDS, and (3) Now Contact. Dr. Fox relies on the “[w]rite a letter” feature that he contends was available at the time and opines that this feature meets this claim element. *See* Fox Report, Ex. E at 121. I disagree.

124. Dr. Fox states that if a name or address associated with a detected email address is identified in the so-called contact database, then “the first name [], last name [], and physical address information . . . associated with [the email address] . . . is displayed.” *Id.* at 121. Although he does not explain how the process occurs, Dr. Fox displays a screenshot that shows that ADDS creates a new document in a word-processing application and inserts the name and/or address information into the document. *See id.* at 123. Dr. Fox discusses no other purported first information that ADDS utilizes toward “providing a prompt for updating the information source to include the first information.”

125. Further, when I operated ADDS on Mr. Miller’s PowerBook computers, I verified that the “write a letter” action was only offered as an option in the contextual menu presented by ADDS when an email address was recognized, and verified that ADDS was not even active when, for example, a name alone was highlighted and I right-clicked on the selection. (When a name alone was highlighted, a right-click caused a menu to be presented containing only one choice: “Help”. This same choice is presented when ADDS is not operating.) I found no other form of first information capable of providing a prompt for updating the information source to include the first information.

126. Dr. Fox’s reliance on the allegedly ability of ADDS to detect occurrences of city name followed by a state name or a postal code—see Exhibit E at 104—is misplaced. As discussed

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

above, such functionality is provided by US Geographic Detectors, which is not prior art. Dr. Fox is not permitted to rely on such functionality that post-dates the invention.

- vi. **ADDS does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

127. As discussed in the preceding paragraphs, the only type of “first information” disclosed by ADDS are email addresses because they alone are “text in a document that can be used as input for a *search* operation in a source external to the document.” On page 124 of Exhibit E to his report, however, Dr. Fox writes, referring to one sub-menu item, “If a user selects ‘Add email address to Emailer Address Book,’ [ADDS] will ask the user for a name to associate with the email address.” The name and address are not, however, first information. Rather, they are germane in Dr. Fox’s discussion only as types of second information in his “[w]rite a letter” example. Also on page 128, Dr. Fox points to an “Add e-mail address to Emailer address book” menu item as evidence of the required prompt. To the extent that this qualifies as prior art, however, this discloses, at most, a prompt for adding the email address to the *Emailer* address book. Dr. Fox has identified the Now Contact program and its contact database as *the information source* in which searching to find second information occurs. When I personally inspected ADDS, I added my email address, [earl@copernican.com](mailto:earl@copernican.com), to the test text. I verified that the “Add e-mail address to Emailer address book” selection did lead to adding a record to that file and, after doing so, the “write a letter” functionality reported “Sorry, I don’t have information about [earl@copernican.com](mailto:earl@copernican.com),” demonstrating that the information source was not updated. Therefore, the prompt does not disclose updating *the information source* to include the first information, nor does it render it obvious.

- vii. **ADDS does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to**

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**the contents of a document using a first computer program running on a computer, the process comprising...”**

128. The body of claims 23 includes the same elements as claim 1. ADDS does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above.

129. It also my opinion that Dr. Fox provides no analysis or discussion to support his opinion. Instead, he cross-references the unexplained material in claim 1 and for the preamble also offers a series of block quotes without explanation or analysis. It is therefore my opinion that Dr. Fox has not shown that the ADDS discloses this claim element or renders it obvious.

viii. **ADDS does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

130. Because ADDS does not disclose the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious. It is also my opinion that ADDS does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraph 127. The additional block quotes that Dr. Fox offers in support of claim 30 appear without explanation or analysis.

131. Consequently, Dr. Fox has failed to prove that ADDS invalidates claim 30.

***3. Nardi et al. Does Not Invalidate the Asserted Claims***

132. Dr. Fox contends that “Collaborative, Programmable Intelligent Agents” article (“Nardi”) invalidates the Asserted Claims. I disagree. Nardi does not disclose several material elements of the Asserted Claims.

133. As an initial matter, however, I note that the Nardi article that Dr. Fox relies on does not constitute prior art. As I discuss in paragraphs 45–54, it is my opinion that Mr. Hedløy conceived of the invention no later than July 6, 1997, and thereafter worked diligently to reduce it

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to practice, until he did so constructively by filing the parent application for the '843 Patent. The Nardi article was not published until March 1998, and therefore I understand it does not constitute prior art under pre-AIA 35 U.S.C. § 102(a)

134. Putting aside the fact that the Nardi article does not constitute prior art, there are a number of flaws with Dr. Fox's reliance on the Nardi article for invalidity. In his report, Dr. Fox provides no substantive discussion of how the Nardi article discloses any claim element whatsoever. In Exhibit F to his report Dr. Fox provides no substantive discussion of how the Nardi article discloses any claim element; rather, he provides various citations to and quotations of or graphics from the article with no explanation of or analysis of the relevance of the quotations.

135. Although Dr. Fox includes a separate claim chart for Nardi, Dr. Fox attempts to present it as evidence of ADDS (Fox Report, ¶142). Dr. Fox does "reiterate, however, [that] by itself, the Miller patent (like the ADD User Manual and the Nardi Publication) does not fully describe" an Apple Data Detectors System. As discussed in paragraph 103, for example, Dr. Fox offers no support for his assertion that Nardi can be combined with other material he sites as evidence of a single Apple Data Detectors System.

136. Further, the Nardi article itself only describes with detail one script that allegedly uses telephone numbers in order to find names and addresses and to address a letter to them. This script does not invalidate the '843 Patent. While the rest of the Nardi article vaguely discusses potential applications of the Apple Data Detectors software at a high level, Dr. Fox does not attempt to analyze these applications of ADDS. Further, the high-level descriptions of Nardi, particularly the allusions to changes required to the underlying operating system to enable the system of Nardi to function, are insufficient to enable one of skill in the art to implement that system without replicating the substantial experimentation which it discloses. "During the

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system's development, we experimented with various user interfaces to its basic technology, an effort that paid off in a number of ways. The different interfaces followed different assumptions about various aspects of the system, such as the interface techniques themselves, the demand the techniques would place on the underlying operating system, and the demand imposed on developers who wanted to adapt Apple Data Detectors to their own uses". (Nardi, p. 103) Yet further, Nardi describes ADDS in hypothetical, aspirational, and general terms. For example, the structure recognition algorithm is alluded to but not described, and Nardi mentions a few structures that the algorithm *could* recognize without stating that it was ever applied to do so. As another example, it describes hypothetical meeting detectors and conference room detectors, and what they *might* do. I understand that the standard for anticipation requires that a single prior art reference puts one of skill in the art in possession of the claimed invention. The Nardi reference's hypothetical, aspirational, and general discussion of other applications is not sufficient for one of ordinary skill in the art to understand to implement a system that goes beyond what is disclosed.

- i. **Nardi does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

137. Dr. Fox does not attempt to provide any explanation or analysis describing this claim element. Instead, Dr. Fox provides a block quote from the Nardi article describing the use of Apple Data Detectors. For example, Dr. Fox does not attempt to analyze what in the Nardi article constitutes “first information” or “types of information that can be searched for”.

138. The asserted claims require “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information.” The Court construed “first information” as “text in a

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document that can be used as input for a search operation in a source external to the document.” It further construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” as “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.”

139. Nardi does not disclose this claim element or render it obvious because it analyzes “first information” to determine if it belongs to a single predefined category of identifying or contact information or identifying information that can be searched for: telephone numbers. A necessary aspect of the invention is analyzing with respect to *several* such predefined categories. Dr. Fox entirely ignores this requirement.

**ii. Dr. Fox does not establish that Nardi discloses “retrieving the first information”**

140. It is my opinion that Dr. Fox has failed to support his assertion that Nardi discloses this claim element. For example, Dr. Fox has failed to identify what he considers to be the “first information” or “retrieving.” Instead, Dr. Fox provides a single block quote without a word of analysis or explanation. That quote, moreover, bears no apparent connection to retrieving first information. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

**iii. Nardi does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or**

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**types of the first information, and (ii) performing an action using at least part of the second information”**

141. The Court construed providing an input device configured by the first computer program” to mean “providing an input device set up by the first computer program for use by the user.” The Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” In my opinion, Nardi does not disclose this element or render it obvious.

142. It is my opinion that Dr. Fox has failed to support his assertion that Nardi discloses this claim element. For example, Dr. Fox has failed to identify what he considers to be the “input device,” “first computer program,” “operation” or any component of that operation. Instead, Dr. Fox provides a series of block quotations and a screenshot without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that Nardi discloses this claim element or renders it obvious.

143. Nardi does not disclose an input device set up by the first computer program. There is no indication in material that Dr. Fox quotes or in Nardi itself that the computer program used for displaying the document sets up any input device. Rather, Nardi describes the input device as set up by the separate Apple Data Detectors system. (*E.g.*, ARENDI-DEFS00003329, 3331 (“The Apple Data Detectors architecture, which separates the application in which the information is found, the presentation of the analysis and possible actions, and the analysis of the information itself. This separation means that Apple Data Detectors can be invoked in any application . . . .”)). Furthermore, the only type of first information that Nardi discloses can be searched for is telephone numbers. Therefore, it does not disclose performing a search in order to find second information of a type or types “dependent at least in part on the type or types of the first information.”

- iv. **Nardi does not disclose “in consequence of receipt by the first computer program of the user command from the input device,**

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**causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term”**

144. It is my opinion that Dr. Fox has failed to support his assertion that Nardi discloses this claim element or renders it obvious. For example, Dr. Fox has failed to identify what he considers to be the “first computer program,” “input device,” “search term,” “information source,” or “second information.” Instead, Dr. Fox provides a single block quotation without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that Nardi discloses this claim element or renders it obvious.

145. The claim requires that the user command be received from the input device by the first computer program. However, as I discuss in paragraph 143, Nardi does not disclose the required input device, nor is it rendered obvious. The input device that it does disclose is part of the Apple Data Detectors system and is separate from the first computer program.

**v. Nardi does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

146. It is my opinion that Dr. Fox has failed to support his assertion that Nardi discloses this claim element or renders it obvious. For example, Dr. Fox has failed to identify what he considers to be the “searching,” “second information,” “search term,” “action,” type of action or type of first information. Instead, Dr. Fox provides a single block quotation without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

147. Furthermore, this claim element requires that *different* types of first information result in a search for at least partially *different* types of second information. This is what it means for the type of second information to depend, at least in part, on the type of first information. As



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discussed in the section above, the Nardi script discloses only one type of first information: telephone numbers. The article contains a script that allegedly uses telephone numbers in order to find names and addresses and to address a letter to them. (ARENDI-DEFS00003329, 3332). Both because there is only one type of first information disclosed and one type of action disclosed, the type of action cannot depend at all on the type of first information.

vi. **Nardi does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

148. Because Nardi does not disclose the elements of claim 1, it is my opinion that Nardi does not disclose claim 8 or render it obvious.

149. It is also my opinion that Dr. Fox has failed to support his assertion that CyberDesk discloses the additional limitation of this claim element. For example, Dr. Fox has failed to identify what he considers to be the “prompt,” “information source,” and “first information.” Instead, Dr. Fox provides a single block quote without a word of explanation or analysis. Therefore, it is my opinion that Dr. Fox has provided no basis for his assertion that CyberDesk discloses this claim element or renders it obvious.

150. The block quote that Dr. Fox reproduces is taken out of context and references “placing a meeting on a calendar” and “adding an address to an address book.” (Fox Report, Ex. F, p. 4; ARENDI-DEFS00003329, 3332). To begin with, Nardi references these activities as hypothetical, aspirational ones that it alleges ADDS is capable of supporting because they are examples of employing “countless structures ... [that] ... are also recognizable by parsing technologies.” (ARENDI-DEFS00003329, 3331). Dr. Fox does not show and Nardi does not disclose, however, that either meetings or addresses can be searched for, and therefore they cannot constitute first information. Likewise, there is now showing that the calendar or the address book is an information source in which those types of information are searched. Furthermore, meetings

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are neither identifying or contact information and therefore not relevant as first information. Thus, these actions cannot disclose “updating the information source to include the first information.”

- vii. **Nardi does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

151. The body of claims 23 includes the same elements as claim 1. Nardi does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above.

152. It also my opinion that Dr. Fox provides no analysis or discussion to support his opinion. Instead, he cross-references the unexplained material in claim 1. It is therefore my opinion that Dr. Fox has not shown that the Nardi discloses this claim or renders it obvious.

- viii. **Nardi does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

153. Because Nardi does not disclose the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious. It is also my opinion that Nardi does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraph 150.

154. It also my opinion that Dr. Fox provides no analysis or discussion to support his opinion. Instead, he cross-references the unexplained material in claim 8. It is therefore my opinion that Dr. Fox has not shown that the Nardi discloses this claim or renders it obvious.

***4. Miller Does Not Invalidate the Asserted Claims***

155. U.S. Patent No. 5,946,647 to Miller *et al.* (“Miller”) discloses a system and method for detecting and acting on structures in computer data. It discloses a system that detects structures

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in computer data, interfaces with another computer program that presents the data, creates and displays a menu of potential actions that can be taken using the analyzed data, and invokes a subroutine that initiates the selected action.

156. Although Dr. Fox includes a separate claim chart for Miller, he does not claim Miller to be independently invalidating prior art in the main body of his report. Instead, Dr. Fox claims in paragraph 140 that “aspects of the ADD System are described in” and asserts that it provides evidence of the infringing capability of an unspecified “ADD System.” (*See also* Fox Report, ¶142). Dr. Fox does “reiterate, however, [that] by itself, the Miller patent (like the ADD User Manual and the Nardi Publication) does not fully describe” an Apple Data Detectors System. As discussed in paragraph 103, for example, Dr. Fox offers no support for his assertion that Miller can be combined with other material he sites as evidence of a single Apple Data Detectors System. Moreover, even if Miller did relate to the development of the Apple Data Detectors System, which Dr. Fox has not shown, one of ordinary skill in the art would appreciate that patents often diverge in material respects from the product development projects to which they relate.

157. Dr. Fox, moreover, has not explained how Miller meets any of the limitations of claims 1, 8, 23, or 30. Exhibit G to the Fox Report provides no analysis. That exhibit cites portions of separate disclosures that purport to indicate different aspects of Miller and assign them to particular claim elements. Dr. Fox cannot prove that Miller anticipates the ’843 Patent without indicating which aspects of Miller he believes correspond to which terms in the limitations.

- i. **Miller does not disclose “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

158. I understand that the Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a

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computer so as to perform some task.” I further understand that the Court has construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered.”

159. To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not shown that the preamble is disclosed or rendered obvious by Miller. Dr. Fox provides a series of block quotes and figures without any explanation or analysis. For example, Dr. Fox does not indicate what he considers to be the “document,” “method for finding data” or “first computer program.”

160. To the extent that the preamble is considered limiting, it is my opinion that Miller does not, in fact, disclose this element or render it obvious. As I discuss below, Miller identifies structures in text, but it provides no method to search for (and thereby to find) data related to the identified text. Therefore, it does not disclose the preamble.

- ii. **Miller does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

161. The Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

162. Dr. Fox provides no explanation or analysis of how Miller meets this limitation. He instead offers a series of block quotations and figures without analysis or explanation of their

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

relevance. For example, Dr. Fox does not indicate what in Miller he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” the “plurality of types of information,” or “analyzing.” It is, therefore, my opinion that Dr. Fox has failed to show how this claim element is rendered obvious or anticipated by Miller.

163. It is also my opinion that Miller fails to disclose this limitation. Miller does not analyze “to determine if the first information belongs to one or more of several predefined categories . . . that can be searched for.” Instead, Miller discloses analyzing to identify structures and then performing an action that takes that structure as an input. (*E.g.*, Miller, at 2:4-9; 2:31-41 (“Each action is a computer subroutine that causes the CPU to perform a sequence of operations on the particular structure to which it is linked.”); 2:49-53 (“Upon selection of a detected structure, the user interface presents and enables selection of candidate actions. When a candidate action is selected, the action processor performs the selected action on the selected structure.”); 4:52-57 (“Upon selection of a candidate action . . . [a]ction processor 250 retrieves the sequence of operations that constitute the selected action, and performs the sequence using the selected structure as the object of the selected action”)). For example, Miller discloses storing an identifying telephone number or address in an address book. (Miller Patent, at 2:34-36; see also 1:42-44 (“Upon identification of a structure, the user may want to perform an action on the structure, such as moving the number to an electronic telephone book.”)). Because Miller does not disclose analyzing to identify categories of information that can be searched for, it does not disclose the required analyzing. Related, it does not disclose analyzing “first information” because first information is “text in a document that can be used as input for a search operation in a source external to the document.”

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

164. It is also my opinion that identifying actions that may be taken using the structure does not constitute identifying “categories of information that can be searched for.” First, the searching referred to in this claim element would be understood by one of ordinary skill in the art to be the same as that referred to in the claim elements “providing an input device . . .” and “in consequence of receipt . . .” Both of those claim elements make clear that the search must follow the user’s command on the input device. The input device disclosed by Miller is the menu of selectable actions. (*E.g.*, Miller, at 2:59-62; 3:11-12; 5:38-43; Fig. 7). However, the identification of candidate actions necessarily precedes the presentation of the menu, and it thus cannot be the required searching. Dr. Fox has described setting up the input device rather than searching.

165. More importantly, Miller does not disclose using the identified structures as search terms in order to identify types of actions that may be taken. Miller offers the following descriptions of two methods for analyzing data to identify structures. The first uses grammars and the latter a fast string search function applied to a string library. That is, the system can either look for patterns or pre-defined sequences of characters:

Referring now to FIG. 3, a block diagram illustrating an analyzer server **220** is shown. In this figure, analyzer server  
60 **220** is described as having a parser **310** and a grammar file **320**, although alternatively or additionally a fast string search function or other function can be used. Parser **310** retrieves a grammar from grammar file **320** and parses text using the retrieved grammar. Upon identification of a structure  
65 in the text, parser **310** links the actions associated with the grammar to the identified structure. More particularly, parser **310** retrieves from grammar file **320** pointers attached

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

to the grammar and attaches the same pointers to the identified structure. These pointers direct the system to the associated actions contained in associated actions file **330**. Thus, upon selection of the identified structure, user interface **240** can locate the linked actions. 5

FIG. 4 illustrates an example of an analyzer server **220**, which includes grammars **410** and a string library **420** such as a dictionary, each with associated actions. One of the grammars **410** is a telephone number grammar with associated actions for dialing a number identified by the telephone number grammar or placing the number in an electronic telephone book. Analyzer server **220** also includes grammars for post-office addresses, e-mail addresses and dates, and a string library **420** containing important names. When analyzer server **220** identifies an address using the “e-mail address” grammar, actions for sending e-mail to the identified address and putting the identified address in an e-mail address book are linked to the address. 10 15

(Miller Patent, at 4:58-5:18 *see also* Miller Patent, at Fig. 3; Fig. 4).

Referring now to FIG. 10, a flowchart illustrating the preferred method **820** for scanning and detecting patterns in a document is shown. Method **820** starts by retrieving **1010** data to be analyzed. After the data is retrieved, several pattern analysis processes may be performed on the data. As illustrated in block **1020**, a parsing process retrieves **1030** grammars, detects **1040** structures in the data based on the retrieved grammars, and links **1050** actions associated with each grammar to each structure detected by that grammar. As illustrated in block **1060**, a fast string search function retrieves **1070** the contents of string library **420**, detects **1080** the strings in the data identical to those in the string library **420**, and links **1090** actions associated with the library string to the detected string. As illustrated in block **1100**, additional pattern analysis processes, such as a neural net scan, can be performed **1100** to detect in the data other patterns, such as pictures, graphs, sound, etc. Method **820** then ends. Alternatively, the pattern analysis processes can be performed in parallel using a multiprocessor multitasking system, or using a uniprocessor multithreaded multitasking system where a thread is allocated to execute each pattern detection scheme. 35 40 45 50 55



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

(Miller Patent, at 6:34-55; *see also* Miller Patent, at Fig. 4). For structures identified using grammars, Miller states that, when a structure is identified, the actions associated with that structure are retrieved using a pointer—not by performing a search using the first information. (Furthermore, even if Miller disclosed searching to find the action (which it does not), that search would not use first information as a search term. Rather than use text from a document for the alleged searching, Miller would use of the information’s type. The actual content of the analyzed text is irrelevant to pairing grammars with actions.)

166. In instances when a string library is used to identify the structure, no further search is necessary to associate actions with the structure because the actions are already associated with them in the library string. The search using the string library, moreover, is performed to *identify* data structures in the first place. It is not analyzing “to determine *if* the first information belongs to one or more of several predefined categories . . . that *can be searched* for in an information source external to the document” but rather the simple act of searching. The search of the “string library” is carried out for *every* input without any separate analysis to determine whether the input can be used for searching. In short, if searching using the string library constitutes analyzing, then there is no subsequent search. If searching using the string library constitutes searching, then there is no prior analyzing.

iii. **Miller does not disclose “retrieving the first information”**

167. Dr. Fox provides no explanation or analysis of how Miller meets this limitation. He instead offers two block quotes without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Miller he believes constitutes “retrieving” or “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how this claim element is rendered obvious or anticipated by Miller.



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168. Furthermore, it is my opinion that Miller does not disclose retrieving the first information. First information was construed by the Court to mean “text in a document that can be used as input for a search operation in a source external to the document.” However, as I discuss in paragraphs 165 and following, Miller does not disclose use of text in the document for searching. Therefore, it does not disclose use of “first information” and no such “first information” exists to be retrieved.

- iv. **Miller does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information”**

169. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.”

170. Dr. Fox provides no explanation or analysis of how Miller meets this limitation. He instead offers a series of block quotes and reproduces figures from Miller without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Miller he believes constitutes the “input device,” “first computer program,” “user command,” “operation” or any required element of that operation. It is, therefore, my opinion that Dr. Fox has failed to show how this claim element is rendered obvious or anticipated by Miller.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

171. It is my opinion that Miller does not provide an input device set up by the first computer program. Miller discloses an input device in the form of a menu of candidate actions. The menu, however, is not set up by the computer program used for displaying the document, and Miller describes that computer program and the one implementing its invention as distinct computer programs. (E.g., Miller, 2:42-44 (“Since the program may be executed during the run-time of another program, i.e. the application which presents the document, such as Microsoft Word, an application program interface provides for interprogram communications.”) The computer program in which the invention of Miller is implemented “includes program subroutines that include an analyzer server, an application program interface, a user interface and an action processor.” (Miller Patent, at 2:25-27). Miller explains how they work together to set up the input device:

Referring now to FIG. 2, a schematic block diagram of program 165 is shown together with its interaction with a document 210. Program 165 contains program subroutines including an analyzer server 220, an application program 55 interface 230, a user interface 240 and an action processor 250. Analyzer server 220 receives data having recognizable patterns from a document 210, which may be retrieved from a storage medium such as RAM 170, ROM 155, disk storage 175, or the like, and presented on output device 105 by 60 application 167. Analyzer server 220 comprises one or more pattern analysis units, such as a parser and grammars or a fast string search function and dictionaries, which uses patterns to parse document 210 for recognizable structures. Upon detection of a structure, analyzer server 220 links 65 actions associated with the responsible pattern to the detected structure, using conventional pointers.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

After identifying structures and linking actions, application program interface **230** communicates with application **167** to obtain information on the identified structures so that user interface **240** can successfully present and enable  
 5 selection of the actions. In a display-type environment, application program interface **230** retrieves the locations in document **210** of the presentation regions for the detected structures from application **167**. Application program interface **230** then transmits this location information to user  
 10 interface **240**, which highlights the detected structures, although other presentation mechanisms can be used. User interface **240** enables selection of an identified structure by making the presentation regions mouse-sensitive, i.e. aware when a mouse event such as a mouse-down operation is  
 15 performed while the cursor is over the region. Alternative selection mechanisms can be used such as touch sensitive screens and dialog boxes. It will be appreciated that detected structures can be hierarchical, i.e. that a sub-structure can itself be selected and have actions associated with it. For  
 20 example, a user may be able to select the year portion of an identified date, and select actions specific to the year rather than to the entire date.

User interface **240** communicates with application **167** through application program interface **230** to determine if a  
 25 user has performed a mouse-down operation in a particular mouse-sensitive presentation region, thereby selecting the structure presented at those coordinates. Upon selection of this structure, user interface **240** presents and enables selection of the linked candidate actions using any selection  
 30 mechanism, such as a conventional pull-down or pop-up menu.

(Miller, 3:52-4:31). Thus, it is the analyzer server of the Miller computer program that “links actions associated with the responsible pattern to the detected structure” and the user interface that creates a mouse-sensitive menu. When the user selects a menu item, it is also “the user interface 240 [that] transmits the selected structure and the selected action to the action processor 250,” which “retrieves the sequence of operations that constitute the selected action[] and performs the sequence.” (Miller Patent, 4:52-57; *see also* Miller Patent, at Abstract (“[T]he user interface can present and enable selection of the detected structures, and upon selection of a detected structure, present the linked candidate actions.”)).

172. Nor in my opinion does the “Detect Structures” button depicted in Figure 5 represent the required input device. (*See* Miller Patent, at Fig. 5; 5:22-24). First, Miller does not

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disclose that the input device is set up by the first computer program, such as Microsoft Word. Although the button in Figure 5 is overlaid on the top corner of the window, one of ordinary skill in the art would not assume on the sole basis of that highly stylized image that the first computer program had set up that button. My opinion is confirmed by Miller's suggestion that the button could be replaced by "alternative mechanisms such as pressing the 'option' key." (Miller Patent, at 5:22-24). Furthermore, one of ordinary skill in the art would contrast Figure 5, which shows the document overlaid with the "Detect Structures" button, with Figure 6, which shows the document overlaid with mouse-sensitive boxes but with the "Detect Structures" button removed. One of ordinary skill in the art would therefore conclude that the display of the "Detect Structures" button would be handled by the same mechanism as the display of the mouse-sensitive boxes, which as discussed in the preceding paragraphs the user interface of the computer program described by Miller.

173. It is also my opinion that Miller does not disclose an input device that can be used to initiate the required operation. As I discuss in paragraphs 165 and 166 Miller does not describe searching using at least part of the first information as a search term. And, even if the identification of candidate actions constituted searching (which it does not), the search would precede the user's command using the input device (*See* ¶166). Therefore, the input device could not be used to initiate an operation comprising performing a search. Likewise, even if Miller disclosed searching to find the action (which it does not), the type of alleged second information (an action) could not depend on the type of first information: there is only one type of alleged second information. The fact that different actions may be returned for different types of structures would mean only that the value of the second information depends on the first information. The Asserted Claims, however, require that the type of second information depend on the type of first information.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

174. Because it is my opinion that Miller does not disclose the required searching in order to find second information, it is also my opinion that Miller does not disclose an input device that can be used to initiate an operation that comprises performing an action using second information. There is no second information to use. Rather, Miller discloses performing actions using structures in the document—which Dr. Fox contends is first information. (E.g., Miller Patent, at 2:4-9; 2:31-41 (“Each action is a computer subroutine that causes the CPU to perform a sequence of operations on the particular structure to which it is linked.”); 2:49-53 (“Upon selection of a detected structure, the user interface presents and enables selection of candidate actions. When a candidate action is selected, the action processor performs the selected action on the selected structure.”); 4:52-57 (“Upon selection of a candidate action . . . [a]ction processor 250 retrieves the sequence of operations that constitute the selected action, and performs the sequence using the selected structure as the object of the selected action”)).

- v. **Miller does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and”**

175. I understand that the Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

176. Dr. Fox provides no explanation or analysis of how Miller meets this limitation. He instead offers a series of quotes from Miller without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Miller he believes constitutes the “input device,” “first computer program,” “user command,” “operation” or any required element of that operation. It is,

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therefore, my opinion that Dr. Fox has failed to show how this claim element is rendered obvious or anticipated by Miller.

177. As I discuss in paragraphs 171 and following, and the material cross-referenced therein, it is also my opinion that Miller does not disclose the required input device or the searching required in consequence of receipt of the user command. Moreover, just as the first computer program does not set up the input device, it is my opinion that the first computer program does not receive the user command from the input device. (*See* ¶171). When the user selects a menu item, it is “the user interface 240 [that] transmits the selected structure and the selected action to the action processor 250,” which “retrieves the sequence of operations that constitute the selected action[] and performs the sequence.” (Miller Patent, at 4:52-57; *see also* Miller Patent, at Abstract (“[T]he user interface can present and enable selection of the detected structures, and upon selection of a detected structure, present the linked candidate actions.”)). The user interface is a component of the Miller computer program, not the first computer program, such as Microsoft Word.

- vi. **Miller does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

178. Dr. Fox provides no explanation or analysis of how Miller meets this limitation. He instead offers a series of block quotes from Miller without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Miller he believes constitutes the “search term,” “searching,” “action,” “second information” or the types of actions and first information. It is, therefore, my opinion that Dr. Fox has failed to show how this claim element is rendered obvious or anticipated by Miller.

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179. As I have repeatedly discussed, it is my opinion that Miller does not disclose the required searching to find second information. Therefore, it cannot disclose performing an action using at least part of the second section information. Rather, Miller discloses performing actions using structures in the document—which Dr. Fox contends is first information. (*E.g.*, Miller Patent, at 2:4-9; 2:31-41 (“Each action is a computer subroutine that causes the CPU to perform a sequence of operations on the particular structure to which it is linked.”); 2:49-53 (“Upon selection of a detected structure, the user interface presents and enables selection of candidate actions. When a candidate action is selected, the action processor performs the selected action on the selected structure.”); 4:52-57 (“Upon selection of a candidate action . . . [a]ction processor 250 retrieves the sequence of operations that constitute the selected action, and performs the sequence using the selected structure as the object of the selected action”)).

180. Likewise, it is my opinion that the action performed in Miller is not disclosed to depend at least in part on the type or types of first information. I understand that “first information” has been construed as “text in a document that can be used as input for a search operation in a source external to the document.” Because it is my opinion that text in the document is not used by Miller for the required searching, it is also my opinion that Miller does not disclose use of “first information.” Therefore, the action cannot depend at least in part on the type or types of first information.

vii. **Miller does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

181. Because Miller does not disclose the elements of claim 1 or render claim 1 obvious, it is also my opinion that Miller does not anticipate claim 8 or render claim 8 obvious.

182. Dr. Fox provides no explanation or analysis of how Miller meets this limitation. He instead offers a series of block quotes from Miller without analysis or explanation of their

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relevance. For example, Dr. Fox does not indicate what in Miller he believes constitutes the “prompt,” “information source” or “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how this claim element is rendered obvious or anticipated by Miller.

183. Nonetheless, based on Dr. Fox’s selection of quotations, it is my understanding that he identifies as the required prompt the menu items associated with the action of adding an identified telephone number to an address book.<sup>9</sup>] However, as I have repeatedly discussed above, it is my opinion that Miller does not disclose the required searching using text in the document. Therefore, it is my opinion that Miller does not disclose any first information for which the required prompt could be provided. Moreover, claim 8 requires that the prompt add the first information to the information source. The information source is identified in previous claim elements as the data store in which the first information is searched. Miller does not disclose conducting any search of an address book. Therefore, even if a structure, such as a telephone number, were first information (which it is not), adding the structure to the address book would not constitute “updating the information source to include the first information.”

viii. **Miller does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

184. The body of claims 23 includes the same elements as claim 1. Miller does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above.

185. Although I take no position on whether the preamble is limiting, it is my opinion that Miller does not disclose “finding data related to the contents of a document using a first

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<sup>9</sup> Should Dr. Fox adopt a different position, despite my best efforts to deduce his argument, I reserve the right to supplement and amend my opinion.



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computer program,” as I note above with respect to claim 1 in paragraphs 158 and following. Dr. Fox offers no additional argument regarding how Miller overcomes this deficiency. Consequently, Dr. Fox has failed to prove that Miller invalidates claim 23. Therefore, to the extent that the preamble is considered limiting, it has not been shown that Miller anticipates claim 23 or renders it obvious.

- ix. **Miller does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

186. Because Miller does not disclose the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious. It is also my opinion that Miller does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraphs 181–183. Dr. Fox offers no additional argument regarding “providing a prompt . . .,” instead cross-referencing claim 8.

187. Consequently, Dr. Fox has failed to prove that Miller invalidates claim 30.

***5. The LiveDoc System Does Not Invalidate the Asserted Claims***

188. Dr. Fox contends that the LiveDoc System invalidates the asserted claims of the ’843 Patent. I disagree. Most importantly, the LiveDoc System is not prior art, as Apple did not make LiveDoc public in printed publication prior to July 6, 1997. Further, the LiveDoc System does not disclose several material elements of the Asserted Claims.

**i. The LiveDoc System does not constitute prior art**

189. In my opinion, the LiveDoc system does not constitute prior art. As I discuss in paragraphs 45 and following, it is my opinion that Mr. Hedløy conceived of the invention no later than July 6, 1997, and thereafter worked diligently to reduce it to practice, until he did so constructively by filing the parent application for the ’843 Patent.

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190. In both his report and Exhibit H to his report, Dr. Fox provides mostly irrelevant evidence to support his conclusion that LiveDoc constitutes prior art. For example, In Exhibit H to his report, Dr. Fox cites to eleven<sup>10</sup> bulleted items as “[e]vidence of the design and operation of LiveDoc Version 0.8 and LiveDoc Version 0.8 System.” However, in my opinion none support Dr. Fox’s conclusion that the LiveDoc System constitutes prior art, and in fact some explicitly contradict such a conclusion. Seven of these eleven items are the technology itself and its source code, internal Apple documentation about the technology itself, or Dr. Fox’s purported observation of an executable version of the LiveDoc System itself. It is my understanding that these items are irrelevant to any conclusion regarding prior art because in order to constitute prior art, the prior art must be in the public domain or publicly known, regardless of whether the allegation is invalidity by an invention known or used by others in this country or by a printed publication in this or a foreign country before the invention date. While some of these seven items might indicate that (at most) Apple privately conceived of some aspects but not necessarily all of the LiveDoc System prior to July 6, 1997, they do not demonstrate public knowledge.

191. In Exhibit H to his report, Dr. Fox cites to a purported “Mac World Demonstration video captured on or around August 7, 1996.” I have reviewed this video, and I have found no mention of the LiveDoc System. Rather, the only relevant technology mentioned in this video is ADDS, which I discuss in paragraphs 101 and following. In his report, Dr. Fox further mentions that the LiveDoc System “was demonstrated for and/or used by persons of skill in the art in 1996-1998,” but cites to no evidence (other than the video discussed in this paragraph) from 1996 or 1997 in support (Fox Report, ¶144). I do not have any personal knowledge of the LiveDoc System

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<sup>10</sup> Dr. Fox actually cites to thirteen items, but two are redundant. Dr. Fox lists U.S. Patent No. 5,946,647 (“Miller Patent”) twice, as he does a pair of articles published in 1998.

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prior to July 6, 1997, nor do I recall any public demonstrations of the LiveDoc System that Dr. Fox may be alluding to.

192. Dr. Fox cites to U.S. Patent No. 5,946,647 (“Miller Patent”), which was filed on February 1, 1996. However, Dr. Fox provides no explanation for his conclusion that the Miller Patent is relevant to whether the *LiveDoc System* constitutes prior art. The Miller Patent makes no mention of the LiveDoc System, and Dr. Fox’s unsupported assertion that “[v]arious aspects of the LiveDoc System are described in [the Miller Patent]” is insufficient to establish the relevance of the Miller Patent to the LiveDoc System (Fox Report ¶143). In my opinion, the Miller Patent is not evidence of the functionality of the LiveDoc System. It is my understanding that it therefore cannot constitute the making public of the LiveDoc System for purposes of determining whether the LiveDoc System is prior art.

193. Dr. Fox also cites to two articles, each published in April 1998, concerning the operation of the LiveDoc System. In my opinion, these two articles were the first time the LiveDoc System was made publicly known, and therefore constitute the applicable date for whether the LiveDoc System can constitute prior art. I have reviewed the testimony of [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

194. Therefore, it is my opinion that the LiveDoc System does not constitute prior art to the ’843 Patent. Further, it is my opinion that Dr. Fox has provided no evidence that the LiveDoc System could constitute prior art.

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ii. **The LiveDoc System fails to disclose elements of the Asserted Claims**

195. Dr. Fox provides no rationale for his conclusion that the LiveDoc System anticipates or renders obvious the '843 Patent. In his report, Dr. Fox provides no substantive discussion of how the LiveDoc System discloses any claim element whatsoever. In Exhibit H to his report, except as in regards to one claim element, Dr. Fox provides no substantive discussion of how the LiveDoc System discloses that claim element; rather, he provides various citations to and quotations of or graphics from various documentation and deposition testimony regarding the LiveDoc System with no explanation of or analysis of the relevance of the quotations. For the one claim element where Dr. Fox provides some analysis, in my opinion his analysis ignores certain evidence he claims he relied on as well as the Court's construction of the claim element.

196. Dr. Fox also appears to confuse the LiveDoc System with other technology Apple purportedly developed, such as ADDS or Drop Zones. As I noted above in paragraph 191, Dr. Fox cites the 1996 Mac World video that displayed aspects of ADDS as evidence of the publication and functionality of the LiveDoc System. Likewise, Dr. Fox block quotes a section of an article about Drop Zones that discusses certain functions within Drop Zones that the LiveDoc System *is incapable of performing* without any explanation of how what the LiveDoc System cannot do is relevant to what it can do. (Fox Report, Ex. H, at 2223). His other numerous countless citations to the Drop Zones article further show that Dr. Fox is confusing different potential systems as the LiveDoc System when they are actually some other technology entirely. (*See, e.g.*, Fox Report, Ex. H, at 1819).

197. Additionally, to the extent Dr. Fox's block quotes and graphics constitute evidence, Dr. Fox relies on information that post-dates the critical date. Dr. Fox frequently quotes from or pastes images from the two April 1998 articles discussed above in paragraph 193; however,

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because these articles were written well after Mr. Hedløy invented the technology covered by the '843 Patent, they can only provide evidence of how the LiveDoc System operated in and around April 1998, to the extent they provide evidence of the LiveDoc System at all. Dr. Fox provides no explanation as to how they are relevant to how the LiveDoc System operated prior to July 6, 1997.

198. Further, Dr. Fox's incorporates his generic "Obviousness Statement" paragraph to every claim element bar one without *any* rationale to support his conclusion that the LiveDoc System's failure to teach any specific claim element would still render that element "obvious to a POSITA based on the state of the art" (Fox Report, Ex. H, at 1).<sup>11</sup>

- iii. **The LiveDoc System does not disclose "while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information;"**

199. Dr. Fox provides no explanation or analysis of how the LiveDoc System discloses this claim element. He offers a series of block quotations both from the LiveDoc System's "read me file" as well as other documentation with no explanation of their relevance to this claim element. For example, he does not identify what he considers to be "first information" or "types of information," nor does he identify any potential search that could be derived from any "first information." It is, therefore, my opinion that Dr. Fox has failed to show how LiveDoc renders this claim element obvious or anticipated by LiveDoc.

200. The asserted claims require "while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information." The Court construed "first information" as "text in a

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<sup>11</sup> I respond in section IV.B to Dr. Fox's likewise unsupported conclusions that the LiveDoc System combined with other references rendered obvious the '843 Patent.

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document that can be used as input for a search operation in a source external to the document.” It further construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” as “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.”

201. Dr. Fox has not shown that LiveDoc System discloses this claim element. Dr. Fox states that the LiveDoc System’s “Read Me File” shows that the LiveDoc System could identify “patterns and phrases” such as “email addresses, URLs, FTP file specifications, America Online keywords, Internet host names, Internet newsgroups, names of people, names of companies, and strings specified in the People, Companies, and Strings field in [a particular folder]” (Fox Report, Ex. H, at 9). Dr. Fox provides no evidence from any observation of the LiveDoc System or from any operation of the LiveDoc System to confirm this, nor that the “read me” file was ever publicly available. Furthermore, Dr. Fox does not explain how any of these constitute “first information” as construed by the Court.

202. Furthermore, to the extent that any of these categories that Dr. Fox observed in a “Read Me File” could be “first information,” Dr. Fox does not identify that they are of one or more of several predefined categories of information that could be searched for. In fact, he identifies no searching capabilities whatsoever. Moreover, most of the categories of information Dr. Fox identified from the Read Me File—such as URLs, Internet newsgroups, and America Online keywords—do not appear to be identifying or contact information, as is necessary under the Court’s construction. As such, Dr. Fox has not established that the LiveDoc System discloses this claim element or renders it obvious.

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iv. **The LiveDoc System does not disclose “retrieving the first information”**

203. It is also my opinion that Dr. Fox has not shown that LiveDoc disclosed “retrieving the first information” or renders it obvious. The claim requires that *the* first information be retrieved, which is the first information subject to the required analyzing. Because Dr. Fox has not shown that the required analyzing occurs, he cannot show that “the first information” is present to be retrieved.

v. **The LiveDoc System does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information.”**

204. Dr. Fox provides no explanation or analysis of how the LiveDoc System discloses this claim element. For example, he does not identify what he considers to be the “input device” or “first computer program,” “first information,” “second information,” or “specific type or types,” “operation” or required elements of that operation. It is, therefore, my opinion that Dr. Fox has failed to show how LiveDoc renders this claim element obvious or anticipated by LiveDoc.

205. The asserted claims require “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information.” The Court construed providing

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an input device configured by the first computer program” to mean “providing an input device set up by the first computer program for use by the user.” The Court construed “that allows a user to enter a user command to initiate an operation” and “that allows a user to enter an input or series of inputs to initiate an operation.”

206. The LiveDoc System also does not disclose this element because the “first computer program” does not set up the input device for use by the user. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” Under the claims, the “first computer program” displays the document electronically. In a system running the LiveDoc System, the document is displayed by any program capable of displaying text, not LiveDoc. [REDACTED]

[REDACTED]

[REDACTED]

207. Although Dr. Fox fails to identify what he considers to be the “input device” or what he considers to be the “first computer program,” he discusses “options” that are provided to the user when the user “right-click[s]” on highlighted text with a mouse within a LiveSimpleText document. (Fox Report, Ex. H, at 14). Assuming Dr. Fox provides this illustration as evidence that these options are the “input device” and LiveSimpleText is a first computer program, Dr. Fox still has failed to demonstrate that the LiveDoc System discloses this element. If the options menu is an input device, it is an input device set up by the LiveDoc System. But the LiveDoc System is not the “first computer program” because it does not display the document electronically—LiveSimpleText does. And there is no evidence that a text-editing program, such as LiveSimpleText, or others like ClarisWorks or Note Pad, sets up the options menu of the LiveDoc System. [REDACTED] Because the asserted claims



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require the “first computer program” to both display the document electronically and set up an input device—which neither the LiveDoc System nor the program displaying the text does—the LiveDoc System does not disclose this element.

208. Dr. Fox appears to recognize this shortcoming of the LiveDoc System and to concede that the LiveDoc System does not disclose this claim element. Dr. Fox states that “[a] POSITA would have recognized advantages and benefits to have [the LiveDoc System] to configure a [sic] input device in its first computer program” (Fox Report, Ex. H, at 16).<sup>12</sup> This appears to be a recognition that the input device is set up not by the first computer system but rather by the LiveDoc System itself and an acknowledgement that this renders the claim element undisclosed. As noted above, such an acknowledgement would be correct, as in my opinion the LiveDoc System does not disclose this claim element.

209. Dr. Fox also does not show that the LiveDoc System discloses an input device that can be used to initiate the required operation. Specifically, Dr. Fox does not identify what he considers to be the “first information,” the “second information,” or “specific type or types” of information. Moreover, as I have discussed previously the claims require that *the* first information have been analyzed but the required analyzing is not disclosed. As such, Dr. Fox has failed to show how the LiveDoc System discloses this claim element or renders it obvious.

- vi. **The LiveDoc System does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term”**

210. The LiveDoc System does not disclose this claim element because the “first computer program” does not receive the user command from the input device. According to the

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<sup>12</sup> In my opinion, for the reasons discussed in section IV.B, it would not have been obvious to combine the LiveDoc System with any of the first computer systems Dr. Fox identifies.

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claim language, the “first computer program” must display the document electronically, configure an input device, and receive a user command from the input device. The LiveDoc System does not meet these requirements. As discussed above, the LiveDoc System does not display the document electronically, which means that it cannot serve as the “first computer program.” Rather, the underlying text-editing program displays the document. The input device, as described by Dr. Fox, is the option menu provided when the user right clicks with the mouse. This option menu is set up by the LiveDoc System, not the underlying text-editing application. Accordingly, because the “first computer program” does not receive the user command from the input device, the LiveDoc System does not disclose this element. And as discussed above, if the LiveDoc System is deemed to be the “first computer program,” then LiveDoc cannot render the ’843 Patent invalid because the LiveDoc System does not display the document electronically.

- vii. **The LiveDoc System does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

211. Dr. Fox provides no explanation or analysis of how the LiveDoc System discloses this claim element. He offers a series of block quotations from various documentation—most of which discuss other systems, such as ADDS or Drop Zones, not the LiveDoc System—with no explanation of their relevance to this claim element. For example, he does not identify what he considers to be “first information” or “types of information,” nor does he identify any potential search that could be derived from any “first information.” As such, Dr. Fox has not shown that the LiveDoc System discloses this claim element or renders it obvious.

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viii. **The LiveDoc System does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

212. Because LiveDoc does not disclose the elements of claim 1 or render claim 1 obvious, it is also my opinion that LiveDoc does not anticipate claim 8 or render claim 8 obvious.

213. Dr. Fox provides no explanation or analysis of how the LiveDoc System discloses this claim element. He offers a series of block quotations from various documentation—most of which discuss other systems, such as ADDS or Drop Zones, not the LiveDoc System—with no explanation of their relevance to this claim element. For example, he does not identify what he considers to be “first information” or “information source.”

214. Dr. Fox states that “[i]f a user selects the option ‘Add e-mail address to E-mailer address book,’ the system would add the email address to the Claris E-mailer address book” (Fox Report, Ex. H, at 23). To the extent that Dr. Fox intends the e-mail address to be “first information” and the Claris E-mailer address book to be the “information source,” this one example is insufficient to establish this claim element. Dr. Fox has not shown, for example, that the email address is searched for in the Claris E-mailer address book in order to find second information.

ix. **The LiveDoc System does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

215. The body of claims 23 includes the same elements as claim 1. LiveDoc does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above. Nor does Dr. Fox provide any explanation for his assertion that LiveDoc discloses claim 23 that goes beyond the incomplete explanation that he offered in support of claim 1.

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- x. **The LiveDoc System does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

216. Because LiveDoc does not disclose the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious. It is also my opinion that LiveDoc does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraphs 212-214 Dr. Fox offers no additional argument regarding “providing a prompt . . . .” Consequently, Dr. Fox has failed to prove that LiveDoc invalidates claim 30.

*6. Apple Newton MessagePad 2000 Does Not Invalidate the Asserted Claims*

217. Dr. Fox contends that the Newton MessagePad invalidates the asserted claims of the '843 Patent. I disagree. The Newton does not disclose material elements of the asserted claims.

- i. **Newton does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information;”**

218. The Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

219. Dr. Fox provides only limited explanation of how the Newton allegedly meets this limitation. He instead largely offers a series of block quotations and figures without analysis or

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explanation of their relevance. Dr. Fox does not, for example, clearly identify what in Newton he believes constitutes the “plurality of types of information,” or “analyzing.” It is, therefore, my opinion that Dr. Fox has failed to show how this claim element is rendered obvious or anticipated by Newton.

220. It is also my opinion that Newton fails to disclose or render obvious this limitation. The asserted claims require “analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information.” The Court construed the term “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.” The Court construed the term “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Newton does not determine whether the first information “belongs to one or more of several predefined categories of [identifying or contact information] that can be searched for in an information source external to the document.”

221. For example, if the user enters an unknown name, such as “Jane”, “Jane Doe”, or “Mrs. Jane Doe” into the NotePad program, the Newton does not recognize that as name or other identifying information. To the contrary, when the user taps on the “Assist” icon in the lower right portion of the screen after entering such an input, the Newton displays the message, “The Assistant cannot interpret this.” When the “Please” icon is tapped, the Newton displays all of the potential actions available to any entry, regardless of type. That is, the actions associated with “Jane Doe”

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

are the same associated with any other text, including gibberish, that the Newton may not classify as a phone number or a date: “call,” “fax,” “find,” “mail,” “print,” “remember,” “schedule,” and “time.” For example, if the user enters the word “potato” into the Newton and taps the Assist icon, the same results appear. Newton says, “The Assistant cannot interpret this” and tapping the “Please” icon gives a menu containing “call,” “fax,” “find,” “mail,” “print,” “remember,” “schedule,” and “time.” (ARENDI-DEFS00003649, at ’4300 (“If the Assistant cannot match an action frame with any of the task templates currently registered, it displays the Assist slip, which prompts the user to specify an action.”), ’4303 (Unmatched words appear in the noiseWords slot of the frame that the ParseUtter function returns. Your PostParse method may be able to use the contents of this array to determine further information about the user's intended action. For example, if there are no entries for Bob in the Names Soup, the word "bob" is not matched and is returned as an element of the noise Words array.”)). Newton’s treatment of “potato” in the same way as a proper name is evidence that no analysis, as required under the Court’s construction, occurs. Furthermore, the Newton does not recognize text as a name even if prefixed by a clear indicium of a name, such as Mr., Mrs., or Dr.

222. If the user has previously saved a name on a name card, such as “Bob Anderson,” and the user enters “Bob” and taps the “Assist” icon, the Newton displays the message “Tap ‘Please’ for more options.” Tapping “Please” reveals options for “call,” “fax,” “find,” “mail,” and “schedule.” (ARENDI-DEFS00003649, at ’4297). Even if this apparent simple search of the name cards for a matching value is considered “analysis” as construed, this element is not met because there is no evidence of a subsequent search for second information. The claim requires “analyzing ... first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

to the first information.” If the search itself constitutes “analyzing” and there is no subsequent search as described later in the claim, then there is nothing that “can be searched for in order to find second information.” Put another way, because a search during this “analyzing phase” was performed in the same information source as the one holding the second information, *i.e.* the Names Soup, there is no need to repeat the search again using the same search term, *i.e.*, the name to retrieve the needed information, such as the contact’s telephone number or other information, as would be understood by the person of skill in the art. And there is no evidence that the Newton does that search in any event.

223. As one example of the missing search, if there are multiple instances of the same name, such as “Bob,” the Newton does not ask the user to select which instance of “Bob” is the desired one. To test this, I added name card entries of “Bob Jones” and “Bob Aames,” the latter to precede “Anderson” alphabetically. I then entered “Call Bob” and the Newton initiated a call to “Bob Anderson.” The Newton did not inquire which “Bob” I desired to call. I note that even if the system had recognized that there were multiple entries in the Names soup matching “Bob”, it would not prove that there was a second search. However, the fact that the Newton does not recognize this is a strong indication that a second search does not happen.

224. To further test this, I saved the word “Potato” as a first name and then entered “potato” in a note. Tapping the Assist icon resulted in the same choices as presented when selecting “Bob.” “Potato” is not a name. Newton is not deciding that “Potato” is name but is treating it as one simply because Potato was entered into the Names database. Unprincipled word-for-word matching is not “analyzing” as construed by the Court. Furthermore, I added Potato without including a telephone number or any other information, and when “call” is selected from the menu, the Newton attempts to initiate a call to “Potato” with its dialer even though there is no phone

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

number associated with that entry, “Potato.” This indicates that Newton does not perform the required analysis.

225. The Newton’s approach to taking actions also indicates that it does not perform this element. The Newton’s actions are represented by a task template, which is composed of an action template and a target template. (ARENDI-DEFS00003649, at ’4297). “In general, an action template’s lexicon slot holds one or more verbs, while the lexicon slot of a target templates holds one or more nouns.” (ARENDI-DEFS00003649, at ’4299). And, “the Assistant creates an action frame or target frame for each word in the input string that matches a lexicon item in a registered template.” ARENDI-DEFS004300. Newton then simply looks for matches between the input string and predefined templates using a function called ParseUtter. (ARENDI-DEFS00003649, at ’4302-4303). ParseUtter looks for exact, yet case insensitive matches. (ARENDI-DEFS00003649, at ’4302). By way of example, the lexicon for dialing a telephone number is “call,” “phone,” “ring,” and “dial.” (ARENDI-DEFS00003649, at ’4317). The system-supplied target lexicons are provided by “lexical dictionaries.” (ARENDI-DEFS00003649, at ’4320). A lexical dictionary under the Newton is “a list of valid grammars, each specifying the format of an entity to be recognized, such as date, time, phone number or currency value.” (ARENDI-DEFS00003649, at ’4560). The Newton appears to have a set of preloaded lexical dictionaries incorporating grammars that assist it in recognizing various formats, such as date and time. Even though a grammar, format or string exists in a lexical dictionary does not mean that Newton meets this claim limitation because merely recognizing a string of text does not mean that the Newton has determined that the string of text is of a type that can be searched in order to find second information related to the first information. That is, that the Newton thinks that 555-1000 might be a phone number does not mean that a phone number can be searched for. As discussed below, the evidence establishes the



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

contrary. Further, I note that no grammar is disclosed for a “name” format; instead, Newton appears to rely on the Names Soup as a dictionary to check if something is a name.

226. The lack of the required “analyzing” is also demonstrated by a user entering “Call” followed by a name that has not been previously stored. For example, upon typing “Call James”—with James being absent from any of the name cards—the Newton sets up a call to James. The same event occurs when the Assist icon is tapped after entering “Call Lamp.” The same thing happens when a user enters “call” followed by an email address. This again demonstrates that Newton performs no analysis; it simply initiates a “call” to the string that follows “Call” regardless of whether the string’s type. This is a far cry from the analysis contemplated by the patent as construed.

227. Furthermore, even assuming that the Newton had disclosed analyzing text in the document to determine “if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address)” (which it does not), the Asserted Claims require that the categories be ones that can be searched for subsequent to the analysis. Dr. Fox has identified only one type of identifying or contact information for which searching allegedly occurs at any stage during use of the Intelligent Assistant—names—and neither the references that Dr. Fox cites nor the Newton itself evidences searching for information related to anything other than names. (Fox Report, Ex. I, 25). Therefore, even if a subsequent search has occurred, which has not been shown, at most, the Newton determines whether a single category of identifying or contact information is present in the text. This falls short of the “plurality” requirement of the Asserted Claims.

228. The foregoing, *i.e.*, the absence of the required analysis, is further demonstrated when the user enters “call” followed by a phone number. Upon tapping the Assist icon, the Newton

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

will initiate a call to “Untitled Person.” This is the case even if the phone number has been saved in the Names Soup. For example, the Newton apparently comes preloaded with the phone number 315-555-4467 as part of the “Bob Anderson” contact. If one entered “call 315-555-4467,” the Newton initiates a call to “Untitled Person,” not Bob Anderson. The Newton also seeks to initiate a call to any number even if it is not a phone number on its face. For example, if a user enters “Call 23” and taps the Assist icon, the Newton initiates a phone call to “Name None.” This shows that the Newton does not use a phone number as a search term in a search for second information and further shows that the Newton does not perform the analyzing or determining as required by the claim. And because the Newton does not disclose the required analyzing, it also cannot disclose the “first information” as required by the claim, and because the Newton does not disclose “first information” as required, it cannot disclose the elements that rely on the first information, such as “retrieving the first information.”

- ii. **Newton does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information”**

229. The Newton does not disclose or render obvious an input device set up by the first computer program. The Court construed “providing an input device, configured by the first computer program” to mean “providing an input device set up by the first computer program for use by the user.” The Court construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” The Intelligent Assistant itself is launched by pressing a persistent icon, or

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

hard key, at the bottom of the Newton's screen, and is not dependent on or configured by the Notes, Names, or Dates applications. On page 44 of Exhibit I, Dr. Fox evidently identifies this "Assist" icon as the input device disclosed by the Newton. Both the Assist icon and the Intelligent Assistant are available, however, irrespective of the computer program displaying the document on the screen—such as the Notepad or Names applications. The Task Slip, including its menus and buttons, is also not set up by the first computer program. The Task Slip is opened by pressing the Assist button and Dr. Fox has not shown that its features or availability are set up in any way by the first computer program.

230. Newton additionally does not disclose the required searching as explained above. In the case where the Newton performs a search in the Names Soup to determine whether text is a name or not, there is no need to search again, using the identical search term, to retrieve any further information related to that name; the system can simply retrieve that information in conjunction with its first search in the same information source, *i.e.* the Names Soup. Again, there is at least no evidence that the Newton performs this later search. In other words, the Newton does not disclose both analyzing *and* searching.

231. Newton further does not disclose this claim element because "the specific type or types of second information" is not "dependent at least in part on the type or types of the first information." Dr. Fox identifies a scenario in which pressing the Assist button for the string "call bob" results in a full name and telephone number associated with "bob" in the names soup being displayed in the Assist slip. Under the Court's construction, "first information is "text in a document that can be used as input for a search operation in a source external to the document." As discussed above, even if "Bob" is searched for, that the search constitutes the "analysis" means that there is no need for a subsequent search. Since the Newton has already identified an instance

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

of “Bob” on a name card, there is no need to conduct a subsequent search, and there is no evidence that one is conducted—Dr. Fox certainly has not pointed to any.

232. Moreover, this claim element requires that different types of first information result in a search for at least partially different types of second information. This is what it means for the *type* of second information to depend, at least in part, on the *type* of first information. According to Dr. Fox’s view, there is only one type of alleged “first information” that can arguably be used as first information in the document containing “call bob.” Even if Bob were “first information,” there is no other type of first information identified in Dr. Fox’s report such that the specific type or types of second information is dependent at least in part on the type or types of the first information. Dr. Fox does not—and likely cannot—point to any other alleged “first information” that is used to find second information. As discussed above, entering “call” following by a phone number does not result in any search for second information because the result is merely a call to an Unidentified Person or “Name None,” regardless of whether the phone number is present on a name card.

233. At page 50, Dr. Fox’s choice of quotes (still unaccompanied by analysis or explanation) appears to suggest that classification of words as action, target, or unknown entity falls within the scope of this element. To the extent that he is suggesting such, I disagree. “Action,” “target,” and “unknown entity” are not types of information under the Court’s construction. As discussed above, the action words, like “call,” are not first information because they are not used as search terms and do not fall into categories of identifying or contact information. And classifying a word such as “Bob” as a “target” does not affect the type or types of second information. The second information “type” will not change based on whether alleged first information is “action” or “target” (or unknown), meaning there is no dependency.

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- iii. **Newton does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term”**

234. The Newton does not disclose or render obvious this element. As discussed above, the Newton does not disclose the input device set up by the first computer program. Accordingly, any alleged user command provided through the Assist icon or the is not received by the first computer program.

235. Further, because the Newton does not disclose the required search for second information apart from analyzing, as explained above, the Newton does not disclose or render obvious this element.

- iv. **Newton does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

236. Because the Newton does not disclose or render obvious the required search for second information, as explained above, there Newton does not disclose or render obvious this element. The Newton further does not disclose or render obvious this element because the action performed using at least part of the second information does not depend on the type or types of first information.

237. Dr. Fox describes a scenario in which “call bob” is used to call someone named Bob. According to Dr. Fox, the action type (displaying the call slip or making a phone call) depends at least in part on the type of user input, “Bob.” But Dr. Fox does not explain how the action of dialing a phone call depends at least in part on the type or types of the first information. Dr. Fox also offers the example of “email bob,” which he asserts allows the user to send an email to the email address associated with the name “bob.” (Fox Report, Ex. I, p. 75). Dr. Fox’s example is

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evidence that the type of action does not depend on the type(s) of the first information. In each case, the alleged “first information” was “bob,” but different actions resulted. The difference stemmed from the user’s choice of request word (i.e., command) and subsequent call or mail menu items—not the type of first information, which was unchanged.

**v. Newton does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

238. Claim 8 depends from claim 1 and includes the limitation of “providing a prompt for updating the information source to include the first information.” Because Newton does not disclose the elements of claim 1 or render obvious claim 1, it is my opinion that Newton does not disclose claim 8, nor does it render it obvious.

239. Dr. Fox cites a button present after a user makes a call to add a name to the Names soup as well as presenting the information such as the name and phone number used to make the phone call. But this icon is not used to add the first information under my testing. In the example of “Call Alice” where Alice is not found on a name card, tapping that button will not add “Alice” to a name card or create a new name card. Rather, the Newton flashes an error message stating that “You must fill in a name and number before adding to Names.” This is inconsistent with claim 8.

240. In the example of “Call Bob” where Bob Anderson has been previously saved onto a name card along with a number, tapping the button results in the question, “Would you like to add a new name?” But the Newton name card already has a name and number populated, so there is no updating of the information source *to include the first information* – it already includes the first information. This, too, is inconsistent with claim 8.

241. Even if the user presses “Yes” in response to the question, there is no updating of the entry because the Newton simply places the caret in the Name field. The Newton does not change the entry or place any additional information in the entry.

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- vi. **Newton does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

242. The body of claims 23 includes the same elements as claim 1. The Newton does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above.

- vii. **Newton does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

243. Because Newton does not disclose the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious. It is also my opinion that Newton does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraphs 239 and following.

244. It also my opinion that Dr. Fox provides no analysis or discussion to support his opinion. Instead, he cross-references the unexplained material in claim 8. It is therefore my opinion that Dr. Fox has not shown that the Newton discloses this claim or renders it obvious.

**7. U.S. Patent No. 5,644, 735 (“Luciw”) Does Not Invalidate the Asserted Claims**

245. U.S. Patent No. 5,644,735 to Luciw *et al.* (“Luciw”) discloses a system and method for providing computer-implemented assistance to a user. Luciw infers potential actions that may be taken based on a user’s selection of elements on a screen. It may automatically select an action, display the choices of action to a user for selection, or permit a user to obtain a menu of possible actions for selection. The action is then initiated.

246. Luciw discloses three ways in which assistance can be invoked: for so-called implicit assist, the user may either enter text into a predefined “smart field” or perform a predefined

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

event such as writing a specific trigger word in a document; for so-called explicit assists, the user taps on a specific icon or button on a dedicated area of the device such as a preprinted membrane or a physical keyboard. (Luciw, 8:9-13, 8:29-41, 8:51-55). Only explicit assists are mentioned by Dr. Fox in the main body of his report, and I understand him to have identified explicit assists as the relevant, allegedly invalidating functionality disclosed by Newton. Potential actions are inferred from the user's intent, and those actions are performed or presented as alternatives for the user to select. This inference is performed by matching the types of particular objects selected by a user with the types of objects known to be needed to perform particular actions. (Luciw, at 2:32-37, 14:18-62)

247. I do not understand Dr. Fox to cite Luciw as part of the Newton System or as evidence of its operation. (See Fox Report, Ex. I, p. 1; Fox Report, ¶156). However, I note that Dr. Fox places the brief discussion of Luciw in his main report under the heading "Apple Newton MessagePad 2000 with Intelligent Assistant System ('Newton System'), and he states, "Additional aspects of the Newton System are detailed in" Luciw and "Luciw related to Apple's pen-based, handheld Newton device." (Fox Report, ¶¶152-53). To the extent that Fox implies that Luciw is part of the Newton System or evidence of the Newton System's operation, it is my opinion that Dr. Fox has not established a basis for doing so. Despite certain similarities between the Newton device and the Luciw Patent, it is my opinion and experience that patents often diverge in material respects from the product-development projects out of which they develop—even assuming, as Dr. Fox has not shown, that Luciw developed alongside Newton. Furthermore, Dr. Fox has provided no explanation or evidence to support a contention that Luciw reliably describes the Newton. Indeed, The Newton 2000 which I examined is not an implementation of the preferred embodiment; its keypad, which comprises the assist button, is described by Luciw as a permanent



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

physical layer beneath the tablet's transparent membrane, whereas the keypad of the Newton 2000, is comprised of computer-generated images presented on its LCD display: "The keypad 24 can comprise an array of mechanical buttons or switches coupled to I/O circuitry 18 by a data bus 42. Alternatively, keypad 24 can comprise an entire, standard QWERTY keyboard. In the present embodiment, a separate keypad 24 is not used in favor of a "pseudo" keypad 24'. This pseudo" keypad 24' comprises "button" areas which are associated with a bottom edge of the tablet membrane that extends beyond the lower edge of the LCD display. These button areas are defined by a printed or silk-screened icons which can be seen through the transparent membrane of the input tablet." (Luciw, 7:17, *see also* Luciw, 3:32-35). Therefore, to the extent that Dr. Fox is trying to combine two pieces of prior art, Luciw and the Newton, into a single piece of prior art, it is my opinion that he has not established a basis for doing so and that such a combination cannot invalidate the Asserted Claims.

248. Dr. Fox has not explained how Luciw meets any of the limitations of claims 1, 8, 23, or 30. The main body of Dr. Fox's report does not explain how Luciw relates to the Asserted Claims and instead refers to Ex. J for a "detailed, element-by-element analysis." (Fox Report, ¶156). Exhibit J to the Fox Report provides no such analysis. That exhibit reproduces block quotes and figures without explanation or analysis. It is my opinion that Dr. Fox has therefore failed to put forward any support for his assertion that Luciw discloses the Asserted Claims.

- i. **Dr. Fox does not establish that Luciw discloses "A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:"**

249. I understand that the Court has construed "computer program" to mean "a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task." I further understand that the Court has construed

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“document” to mean “a word processing, spreadsheet, or similar file into which text can be entered.”

250. To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not shown that the preamble is disclosed or rendered obvious by Luciw. Dr. Fox provides a series of block quotes and figures without any explanation or analysis. For example, Dr. Fox does not indicate what he considers to be the “document,” “method for finding data” or “first computer program.”

**ii. Dr. Fox does not establish that Luciw discloses “displaying the document electronically using the first computer program”**

251. Dr. Fox provides no explanation or analysis of how Luciw meets this limitation. Dr. Fox does not specify what he considers to be the “first computer program” used for “displaying the document electronically” or what he considers that “document” to be, nor does Luciw disclose this claim element. It is, therefore, my opinion that Dr. Fox has failed to show how Luciw renders this claim element obvious or anticipated by Luciw.

252. Certain quotes that Dr. Fox reproduces without analysis in apparent support of this limitation suggest the possibility that he considers the notepad to be the document; however, in support of subsequent claim elements he reproduces material suggesting that he believes the phone slip window or smart field to be the document. To the extent that Dr. Fox identifies different documents in support of different claim elements, it is my opinion that Dr. Fox has not shown how Luciw discloses those claims. One of ordinary skill in the art would understand that each claim element refers to the same document. Moreover, to the extent that Dr. Fox conceives of the phone slip window or its smart fields as the document, I disagree because it is my opinion that neither is “a word processing, spreadsheet, or similar file into which text can be entered.” For example, both the phone slip and the smart field embedded in it are transitory interfaces in windows that are

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established during and for the assist process (*e.g.*, Luciw, 10:22-26). Like a search field, they are established for the entry of a command to a computer.

- iii. **Luciw does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

253. The Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (*e.g.*, a name) or contact information (*e.g.*, a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.” The Court construed “document” as “a word processing, spreadsheet, or similar file into which text can be entered.”

254. Dr. Fox provides no explanation or analysis of how Luciw meets this limitation. He offers a series of block quotations with no explanation of their relevance. For example, Dr. Fox does not indicate what in Luciw he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” or “analyzing.” It is, therefore, my opinion that Dr. Fox has failed to show how Luciw renders this claim element obvious or anticipated by Luciw.

255. If Dr. Fox considers the information displayed by the notepad program to be the document (an opinion that is never expressed in his report because he never states how he believes Luciw aligns with any claim limitations), Luciw does not disclose analyzing first information from it to determine if the first information is at least one of the required plurality of types. Luciw discloses writing of a particular indication or word outside a smart field, or the happening of

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

predefined allowable events as potentially triggering an implicit assist (*e.g.*, Luciw, 8:36-41), but never discloses any analysis of the type of those words, indications, or happenings. Luciw further discloses entering user-selected objects into the assistant if there are any, or else entering objects since a delimiter for an explicit assist (*e.g.*, Luciw, 9:27-33), but again never discloses any analysis of the type of user-selected or delimited objects. Presuming that Dr. Fox considers the information displayed by the phone slip window or its smart field to be the document, Luciw discloses highlighting a field containing a verb or writing text into a smart field to potentially trigger an implicit assist (*e.g.*, Luciw, 10:10-18), but again never discloses any analysis of the type of verb or writing, simply disclosing “recognize the user input.” (*e.g.*, Luciw, 10:15-18, Fig. 4a)

256. Luciw discloses a type of identifying information – names – and several types of contact information that are associated with a name. (*e.g.*, Luciw, Fig. 5) It further discloses that, by some unspecified means, the smart field input “Call Isaac” results in an “object combination” as shown in Fig. 11b, in which “Call” is identified as a specific action and “Isaac” is identified as a specific person. Nothing in Luciw discloses that this process includes the required analyzing. Luciw never identifies how such types are determined for text entries, or if or how they are employed in determining if a search based on that information is possible.

257. Consequently, Luciw does not disclose this limitation or render it obvious.

**iv. Dr. Fox does not establish that Luciw discloses “retrieving the first information”**

258. Dr. Fox provides no explanation or analysis of how Luciw meets this limitation. He offers a series of block quotations with no explanation of their relevance. Dr. Fox does not indicate what in Luciw he believes constitutes “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how Luciw renders this claim element obvious or anticipated by Luciw.

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- v. **Luciw does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising ...”**

259. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” As noted above, I understand that the Court construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

260. Dr. Fox provides no explanation or analysis of how Luciw meets this limitation. He offers a series of block quotations with no explanation of their relevance. For example, Dr. Fox does not indicate what in Luciw he believes to be the “input device,” “first computer program,” “user command” or “operation.” With respect to the first component of the operation, he does not indicate what he considers to be the “search[],” “first information,” the “second information,” or the external “information source,” or the dependency of the second information on the first information. It is, therefore, my opinion that Dr. Fox has failed to show how Luciw renders this claim element obvious or anticipated by Luciw.

261. Luciw does not provide an input device set up by the ‘first computer program’ for use by the user. As discussed above, the “first computer program” that Dr. Fox appears to identify in support of the “displaying the document . . .” claim element and the only computer program disclosed by Luciw to disclose a document, is the “notepad” application. The notepad application, however, is not responsible for setting up any input device involved in the processing of assists. Should Dr. Fox consider the assist button to be the input device, Luciw discloses this to be printed or silk-screened onto the physical device, and not set up by any computer program, let alone the

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first computer program. Should Dr. Fox consider windows such as the “phone slip” or its smart fields to be the required input device, Luciw discloses that the phone slip is “established” during the assist process (*e.g.*, Luciw, 10:22-26), and one of ordinary skill in the art would understand it not to be set up by the first computer program. Indeed, nothing in Luciw discloses that any of the actions and activates it discusses regarding assistance are performed by the notepad application rather than the operating system.

262. Luciw discloses that the processing of assists can be initiated in response to three kinds of actions, none of which entail “an input device set up by the first computer program for use by the user.” The first kind of action is a user entering text into a predefined “smart field”, which is not set up by the first computer program. (Luciw, 8:9-13 (“[I]mplicit assistance may, for example, arise from an entry into a smart field by a user. If a user does enter information into a “smart field,” the computer database will be queried at step 106 to determine whether assistance is possible given the user input.”) The only smart fields disclosed in Luciw are within a “phone slip window,” “call slip window,” or “confirmation window,” none of which is a component of the “notepad” “first computer program.” As I have discussed above, Dr. Fox does not identify a smart field as the “document” in the “displaying the document . . .” claim element, and it is my opinion that a smart field is not a document.

263. The second kind of action is the performance by the user of specified events, which also does not require an input device set up by the “first computer program.” (Luciw, 8:29-41). Luciw explains that the specified event may be “by the happening of any of a number of predefined allowable events.” (Luciw, 8:39-41). Although Luciw states that a trigger event could include writing a particular word on the screen, there is no suggestion in Luciw that the computer program,

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such as notepad, in which such a word is written plays any role in invoking the implicit assistance system.

264. The third kind of action is equated with an explicit intent and is the only one identified by Dr. Fox in his report. The user triggers an explicit assist by tapping on a specific icon or button on a dedicated area of the device such as a preprinted membrane or a physical keyboard. For example, Luciw explains that the user initiates explicit assistance as follows:

**An example of an indication of user desire to have explicit assistance undertaken is the act of using pen 38 in FIG. 2 to tap or click on the assist icon or button 64 shown on the surface of stylus-sensitive membrane 62 or a keypad 24 including a range of dedicated function buttons 64. If the query at process step 108 produces a negative, i.e., null, response to the question of whether any implicit assist actions are available in the database of computer 10, indicating that no assistance actions are identified for performance, then process control returns to point A.**

(Luciw, 8:51-60). In the preferred embodiment, Luciw describes the “stylus-sensitive membrane 62” as printed or silk-screened onto the device or taking the form of separate soft buttons. (*E.g.*, Luciw, 6:31-48). Those buttons are not set up by the notepad computer program, but instead are features of the larger system. Again, this does not involve any input device set up by the “first computer program.”

265. Similarly, the user interactions needed to cause a phone slip or equivalent window to appear are described as sensed by the operation of the Luciw invention, rather than of the notepad computer program. (*E.g.*, Luciw 10:21-58). Interactions with the notepad are mediated by the “view system” of the operating system. (Luciw, 7:47-61). No functionality of the notepad application related to establishing or responding to an input device is disclosed by Luciw.

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266. It is also my opinion that Luciw does not disclose an input device set up by the first computer program that can be used to initiate the required operation. The only arguable searching disclosed by Luciw is searching a collection of “templates” based on the *type* of first information, whose determination, as discussed above, is not disclosed in Luciw. This search does not utilize any part of the first information itself. This search is for the purpose of inferring the user’s intent, not to find second information related to the search term in the template collection. (*E.g.*, Luciw, 13:52-65 (“FIG. 11a shows the recognition of object(s) process which is part of FIG. 3 at 135, in order to enable recognition of possible user intent. ... In substance, the process aims to determine whether the object(s) match at least one of the templates of object combinations set forth in FIG. 11c. FIG. 11b illustrates the object combination under operation, denoted by kind of object. The verb CALL is considered to be an action object and ISAAC is considered to be a person object. The two objects in combination are subject to template comparison. The template in FIG. 11c is effective for organizing in preset form the various object combinations which are capable of further operation as particular functions to be accomplished.”) One of skill in the art would recognize that the references to “objects” in the above citation refer to the types of the objects (*e.g.*, “Person” or “Action”) rather than their values (*e.g.*, “Isaac” or “Call”). (Luciw, 14:18-22 (“The recognition of possible user intent process called for at 135 in FIG. 3 and expressed in example form at FIG. 11a, calls for a matching operation between particular noted object(s) such as those illustrated in FIG. 11b and those expressed in the template of FIG. 11c.”) Figure 11c, which references the types of object rather than their values, is reproduced below.



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1	Scheduling	Meet	Person Place Day Time Slot
2	Finding	Find	Quantifier Object
3	Filing	File	Quantifier Notes
⋮			
6	Formatting	Format	Notes Form
7	Mailing	Mail	Person Place Letter
8	Faxing	Fax	Person Place Fax # Notes
9	Print	Print	Object Place
10	Calling	Call	Person Place Phone

*Figure 11c*

As the search term is not textual information, Luciw’s template processing does not perform a search using any part of the first information as a search term to find second information.

267. The only search disclosed by Luciw is for names, which are of a single type. Because Luciw does not disclose a plurality of types that can be searched for, it cannot disclose this limitation.

268. For at least these reasons, Luciw does not disclose this limitation or render it obvious.

- vi. **Luciw does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source,**

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**using a second computer program, in order to find second information related to the search term; and”**

269. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

270. Dr. Fox provides no explanation or analysis of how Luciw meets this limitation. He offers a series of block quotations with no explanation of their relevance. Dr. Fox does not indicate what in Luciw he believes constitutes any element of the claim, including the “first computer program,” the “user command,” the “input device,” the “information source,” the “second computer program,” or the “second information.” It is, therefore, my opinion that Dr. Fox has failed to show how Luciw renders this claim element obvious or anticipated by Luciw.

271. As I discuss in the preceding section, Luciw does not disclose the input device required by this claim element, nor does it disclose the required plurality of types. Moreover, as I discuss in paragraph 261 and following, the input devices related to the assist feature are not set up by the first computer program such as notepad. For the same reasons, they are not part of or integrated into the first computer program, and Luciw does not disclose that the first computer program receives the user command from those input devices.

**vii. Luciw does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

272. Dr. Fox provides no explanation or analysis of how Luciw meets this limitation. He offers a series of block quotations with no discussion of their relevance. Dr. Fox does not indicate what he considers to be the “searching,” “action,” “second information,” or the action. It is, therefore, my opinion that Dr. Fox has failed to show how Luciw renders this claim element obvious or anticipated.

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273. Luciw does not disclose that the type of second information depends on the type of first information. As discussed above, Luciw disclose only one type of first information – a name – and thus cannot disclose that the type of second information depends on the type of first information in any way. Further, the only actions with respect to a phone slip disclosed by Luciw, inserting a full name or telephone number into a smart field within it, do not depend on the type of first information either.

274. Therefore, Luciw cannot disclose the action using second information required by this claim element.

**viii. Luciw does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

275. Because Luciw does not disclose the elements of claim 1 or render claim 1 obvious, it does not anticipate claim 8 or render it obvious. Additionally, Luciw does not disclose claim 8 or render it obvious because there is no evidence that it provides a prompt for updating the information source to include the first information.

276. Furthermore, Dr. Fox does not explain how this claim element is disclosed. Instead, he cross-references claim 1 and then reproduces two figures from the patent. He does not identify, for example, what he considers to be the “prompt,” “information source” or “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how Luciw renders this claim obvious or anticipated by Luciw.

**ix. Luciw does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

277. The body of claims 23 includes the same elements as claim 1. Luciw, therefore, does not disclose claim 23 or render it obvious for the same reasons it does not do so for claim 1.

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278. Nor does Dr. Fox provide any explanation for his assertion that Luciw discloses the preamble. Rather, he cross-references claim 1, for which he also provides no explanation or analysis.

- x. **Luciw does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

279. Because Luciw does not disclose the elements of claim 23, it is also my opinion that it does not disclose claim 30. Nor does Dr. Fox provide any explanation for his assertion that Luciw discloses claim 30. Rather, he cross-references claim 8, for which he also provides no explanation or analysis,.

280. Consequently, Dr. Fox has failed to prove that Luciw anticipates Claims 1, 8, 23, or 30.

***8. Eudora Pro Does Not Invalidate the Asserted Claims***

281. Eudora Pro (“Eudora”) was an email client developed by Qualcomm, Inc. In the body of his report, Dr. Fox cites several features of Eudora as invalidating the Asserted Claims without indicating how they relate to the ’843 Patent. These features are the insertion of an address book entry into a To, CC, or Bcc field (the “address book functionality”); a user-configurable toolbar (the “toolbar functionality”); the ability to accept and identify URLs in the body of an email (the “hot link functionality”); and included a spellcheck application (the “spell check functionality”). (Fox Report, ¶158).

282. Dr. Fox does not discuss if or how these features relate to one another, and he provides no explanation as to why these features should be considered jointly. In my opinion, one of ordinary skill in the art would consider these to be distinct functionalities involving separate

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processes and would not consider them jointly. These features are not related to one another beyond the fact that they are features of Eudora.

283. It is also my opinion that Dr. Fox has improperly combined material from Windows and Macintosh versions of the Eudora software without providing any justification for doing so. Dr. Fox has not put forward evidence establishing that the two versions of Eudora should be considered as a single prior art system. To the contrary, the material that he cites suggests material differences between the two computer programs, including with the respect to functionality that he emphasizes. For example, version 3.0 for Windows “includes a built-in spelling checker” whereas version 3.1 for Macintosh includes the “Spellswell 7 Spelling Checker, developed by Working Software, Inc,” and the screenshots of the spell check dialogues included in the two user manuals show that they are not mere variants of one another (Compare, *e.g.*, Eudora Windows Manual, at 33–34, with Eudora Mac Manual, at 42–43). Therefore, in my opinion, Dr. Fox has improperly combined two distinct references, and he has done so with no discussion. In my opinion, each user manual should be considered as a separate, alleged prior art reference.

284. Dr. Fox refers to Exhibit K for a “detailed, element-by-element analysis.” Exhibit K provides no such analysis. In fact, it is devoid of analysis and explanation. The incorporated claim chart consists of block quotations from two user guides and a website review without the addition of analysis, contextualization or identification of how Eudora discloses the elements of the Asserted Claims.

285. Dr. Fox has not explained how Eudora meets any of the limitations of claims 1, 8, 23, or 30. Dr. Fox cannot prove that Eudora discloses elements of the Asserted Claims—let alone renders the Asserted Claims obvious—without indicating which aspects of Eudora he believes correspond to which terms in the Asserted Claims.

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286. I reserve the right to opine on functionality of Eudora to the extent that Dr. Fox identifies it as germane, as well as to modify or expand on my opinion related to the functionality of either version of Eudora discussed below should Dr. Fox provide an explanation of its relevance. In the sections that follow, I have done my best to surmise the points that Dr. Fox might have been trying to make.

**i. Dr. Fox does not establish that Eudora discloses “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

287. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” It has construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered.” Dr. Fox does not indicate, however, what he considers to be the “first computer program,” the “method for finding data,” or the “document” with respect to any of his four Eudora functionalities. Rather, Dr. Fox provides 58 pages of block quotations and apparent screenshots without any accompanying analysis or explanation of their relevance. (Fox, Expert Report, Ex. K, at 1-58). To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not provided any reasoned basis for his opinion that Eudora practices this element or renders it obvious.

**ii. Dr. Fox does not establish that Eudora discloses “displaying the document electronically using the first computer program”**

288. Dr. Fox again fails to identify what he considers to be the “first computer program” or the “document” allegedly subject to display. Rather, Dr. Fox provides a series of block quotations accompanied by two apparent screenshots of a composition window. (Fox, Expert Report, Ex. K, at 56-58). He also has not indicated to which—if any—of the four Eudora functionalities, he believes the quotations and screenshots to be relevant. It is my opinion that Dr.

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Fox has not provided any reasoned basis for his opinion that Eudora practices this element or renders it obvious, including with respect to any of the identified functionalities of Eudora.

- iii. **Eudora does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

289. I understand that the Court construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” I further understand that the Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

290. Dr. Fox provides no explanation or analysis of how Eudora meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what in Eudora he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” or “analyzing” with respect to any of the four functionalities that he identifies in his report. Indicative of Dr. Fox’s lack of clarity or analysis is a series of block quotations apparently related to the ability to organize messages using filters. (Fox Report, Ex. K, at 60). I am unable to deduce for which of the four functionalities identified in the main body of Dr. Fox’s report he believes filters to be relevant, nor does Dr. Fox provide any guidance.<sup>13</sup> To the extent that Dr. Fox provides an explanation in the

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<sup>13</sup> On its own, I am of the opinion that the filter functionality is not relevant to the Asserted Claims. The filter functionality is essentially a method for screening messages by setting various criteria, *i.e.*, performing an advanced search. (*E.g.* Eudora Windows Manual, p. 72 and following). The filtering process is not disclosed to be executed

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future, I reserve my right to amend and supplement my response. However, it is my opinion that Dr. Fox has not provided any reasoned basis for his opinion that Eudora practices this element or renders it obvious, including with respect to any of the identified functionalities of Eudora.

291. *Spell check functionality*: With respect to the spell check functionality, it is also my opinion that the required analyzing is not disclosed—even setting aside Dr. Fox’s unsupported merger of the Windows and Macintosh versions (*see* ¶283). To the extent that the manuals disclose Eudora’s operating principals, one of ordinary skill in the art would understand that spellchecking in both the Mac and Windows versions works principally by comparing words in an email (or the selected portion of an email) to those in a dictionary. (*See* Eudora Mac Manual, p. 43; Eudora Windows Manual, p. 33). That is, the spell check searches in the dictionary for every word in the email. This does not constitute the required analyzing for at least the following reasons: First, Eudora is analyzing for only one type: misspelled words. The analysis must be, however, “to determine if the first information belongs to *one or more of several predefined categories.*” Second, these categories must be categories of contact or identifying information. Misspelled words are neither. (*See* Claim Construction Memorandum, p. 14). Third, the analyzing must be “to determine if the first information belongs to one or more of several predefined categories ... *that can be searched for.*” The purported analyzing of spell checking, however, *is* the searching.

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while any particular document is being displayed—including an email being composed that, as best I can surmise, Dr. Fox considers to be “the document.” Moreover, in my opinion, filtering messages as described in the user manuals would not constitute analyzing text in the document to determine its type; rather, the filtering process is disclosed to match information from defined fields (such as “To”) against the filter or simply to search the body of an email for the text entered into the filter. (*E.g.* Eudora Windows Manual, p. 73-74). The result of that process is a determination that the email either matches the filter or does not match the filter. The email is not categorized as being one or more of several types, nor is a “match” a type of identifying or contact information, nor is it a type of information that can be searched for. I have laid out what are, in my opinion, just some of the deficiencies in Dr. Fox’s idea that the filter functionality anticipates the claims of the ’843 Patent. Because Dr. Fox has not stated in his report that he considers the filter functionality to be relevant to the validity of Asserted Claims—and I see no apparent relevance—I do not discuss it further in this report; however, I reiterate my reservation of rights to extend or modify my opinions should Dr. Fox disclose the functionality’s alleged relevance in the future.



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Misspelled words are not a category of information that *can be searched for* but rather a category of information that *have been searched for*. Although the Eudora manuals disclose the ability to “ignore capitalized words, words with numbers, and mixed case words, [and] to report mixed case words and double (repeated) words” (Eudora Windows Manual, p. 33; *see also* Eudora Windows Manual, p. 33; Eudora Mac Manual, p. 46-47 (disclosing similar functionality)), any analyzing related to identifying these categories of information is not responsive to the claim element. None of these are categories of identifying or contact information and none of these are disclosed to be categories of information that can be searched for.

292. *Hot link functionality*: With respect to the hot link functionality, it is also my opinion that the required analyzing is not disclosed by the references Dr. Fox cites. In order to create a “hot link,” that is, a clickable URL, when composing a message, the user (at least in the Mac version) is directed to enclose the URL in angled brackets (<>), which causes the URL to be “automatically highlighted as an active URL in your message window.” (Eudora Mac Manual, p. 42; *see also* ARENDI-DEFS00014105, at ’14107).<sup>14</sup> The system can handle various URL protocols including http, ftp, gopher, ph, and finger (Eudora Mac Manual, p. 64; *see also* Eudora Windows Manual, p. 50).

293. In my opinion, the identification of hot links does not constitute the required analysis for at least the following reasons. First, in my opinion the analyzing disclosed is to locate a URL, which is of only one type of information. For example, Eudora discloses identifying URLs by looking for angled brackets; it discloses no other method. Second, the predefined categories

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<sup>14</sup> The Macintosh user manual suggests that URLs in incoming mail may sometimes be recognized without angled brackets, however, it does not explain how or when this occurs. (Eudora Mac Manual, p. 65). Moreover, there is no disclosure that such analyzing occurs while the document is being displayed. It also explains that a user can manually highlight the text that he or she would like Eudora to operate on as a URL. (Eudora Mac Manual, p. 65). In such cases, Eudora does not disclose any analyzing to identify whether the highlighted text is the URL because this is done by the user.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

must be categories of identifying or contact information. Neither URLs nor any of the of URL protocols supported by Eudora such as http (if considered to be additional types analyzed for, which Eudora does not disclose that they are) qualify as identifying or contact information. Third, the predefined categories must be categories of information “that can be searched for in an information source external to the document.” Eudora does not disclose multiple types of URLs on which clicking would cause searching to occur. (Eudora Mac Manual, p. 64; *see also* Eudora Windows Manual, p. 50).

294. *Address book functionality:* With respect to insertion of an address book entry into a To, CC, or Bcc field, the functionality discussed by Dr. Fox in his report, Eudora does not disclose analysis of any text for any type of information. For example, the Windows manual contains the following disclosure:

**Addressing a Message from the Address Book**

You can open and address a new message from the Address Book using the **To**, **Cc**, and **Bcc** buttons.

To create a new message from the Address Book, select the entry to which you want to address the mail (hold down the Shift key to select multiple entries in sequence, or the Ctrl key to make disjoint selections). Then click on **To**, **Cc**, or **Bcc**. A new composition window is displayed with the selected nickname(s) inserted in the appropriate field.

*Note:* You can also double-click on an entry to enter that nickname in the *To* field.

To address the message with the addresses in the Address(es) field (instead of the nickname), turn on the **Expand Nicknames** option.

Once the composition window is displayed, you can use the **To**, **Cc**, and **Bcc** buttons to insert additional nicknames into the corresponding fields.

(Eudora Windows Manual, p. 87). This functionality consists purely of entering a user-selected entry from an address book into an address line.

295. Certain quotes in Exhibit K reference the “Finish Address Book Entry” functionality that is distinct from the “Addressing a Message from the Address Book” functionality referenced in the main body of Dr. Fox’s report. The “Finish Address Book Entry” functionality

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also does not perform the required analyzing. The Eudora for Macintosh user manual summarizes the functionality as follows:

**The “Finish Address Book Entry” Command**

With the **Finish Address Book Entry** command, you can enter a unique portion of a nickname in the **To**, **Cc**, or **Bcc** fields of a message, then select **Finish Address Book Entry** from the **Edit** menu, and the nickname will be completed for you. You must enter the characters in the nickname that make it unique, or Eudora will not know which nickname to use. For example, if you have two nicknames, joan and john, you would have to enter “joa” or “joh” for Eudora to complete them.

To insert the real addresses for the entry, instead of the nickname, hold down the option key and select **Finish & Expand Address Book Entry** from the **Edit** menu. To set this to happen all the time, turn on the **Expand nicknames immediately** option in the Sending Mail Settings.

(Eudora Mac Manual, p. 101). The manual for the Windows version contains a similar disclosure:

**The “Finish Address Book Entry” Command**

With the **Finish Address Book Entry** command, you can enter a unique portion of a nickname in the **To**, **Cc**, or **Bcc** fields of a message, then select **Finish Address Book Entry** from the **Edit** menu, and the nickname will be completed for you. You must enter the characters in the nickname that make it unique, or Eudora will not know which nickname to use. For example, if you have two nicknames, jon and john, you would have to enter “jon” or “joh” for Eudora to complete them.

To insert the real addresses for the entry, instead of the nickname, hold down the Shift key and select **Finish Address Book Entry** from the **Edit** menu. To set this to happen all the time, turn on the **Automatically Expand Nicknames** option in the Miscellaneous Options.

(Eudora Windows Manual, p. 89). In neither example is any analyzing to determine a type of information disclosed. Rather, Eudora uses whatever is typed into the address line in order to search the address book for a match. For this reason, also Eudora necessarily fails to disclose any aspects of the required analyzing.

296. *Toolbar functionality:* Dr. Fox does not point to any analyzing that occurs with respect to the user-configurable toolbar, and the referenced material does not disclose any

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analyzing of text in any document that could conceivably relate to providing a user-configurable toolbar.

297. For all these reasons, Eudora does not disclose this limitation or render it obvious.

**iv. Dr. Fox does not establish that Eudora discloses “retrieving the first information”**

298. Dr. Fox provides no explanation or analysis of how Eudora meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what in Eudora he believes constitutes “first information” or the “retrieving.” It is my opinion that Dr. Fox has not provided any justification for his opinion that Eudora practices this element or renders it obvious, including with respect to any of the identified functionalities of Eudora.

299. I understand that the Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.” As discussed above, it is my opinion that at least several of the functionalities identified by Dr. Fox are not disclosed to include “text in a document that can be used as input for a search operation in a source external to the document.” For example, neither the Eudora documentation nor Dr. Fox identify the use of URLs for searching or the use of any text in the email for searching when inserting an address selected from the address book into the address field.

**v. Dr. Fox does not establish that Eudora discloses “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in**

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**part on the type or types of the first information, and (ii) performing an action using at least part of the second information”**

300. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” I understand that the Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed so as to perform some task.”

301. Dr. Fox provides no explanation or analysis of how Eudora meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what in Eudora he believes constitutes the “input device,” “first computer program,” “user command,” “operation” or any of the required aspects of that operation. It is my opinion that Dr. Fox has not provided any reasoned basis for his opinion that Eudora practices this element or renders it obvious, including with respect to any of the identified functionalities of Eudora.

302. *Spell check functionality*: As best I can tell, Dr. Fox conceives of the “Check Spelling” menu item as his input device. That menu item does not constitute the input device required by the Asserted Claims. First, to the extent that Dr. Fox conceives of the identification of incorrectly spelled words to be analyzing (see paragraph 291), there is no search apart from that alleged analyzing that can be initiated by the input device. Analyzing and searching are two distinct claim requirements, and the searching must logically follow the analyzing. There is no second round of searching disclosed following the identification of spelling errors, however, including with respect to the identification of suggested corrections. This also means that there is no second

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

information with which to perform an action because the second information must be found as a result of the search initiated by the user's command through the input device. Second, the claim requires that the "specific type or types of second information [be] dependent at least in part on the type or types of the first information." Even assuming for the sake of argument that searching occurs and that suggested corrections constitute second information, the required type-based dependency is not met. Both because there is only one type of first information (misspellings) and one type of second information (corrections) the type of second information cannot depend, at least in part, on the type of first information.

1) *Address book functionality*: With respect to insertion of an address book entry into a To, CC, or Bcc field, as discussed in paragraph 294), it is entirely unclear from Exhibit K what Dr. Fox contends is the input device. However, he writes in his report "the user 'select[s] the entry to which you want to address the mail . . . [t]hen click on the To, CC, or Bcc. A new composition window is displayed with the selected nickname(s) inserted into the appropriate fields.'" (Fox Report, at ¶158). It would therefore seem that Dr. Fox conceives of the To, CC, or Bcc buttons as his input device—perhaps in conjunction with a selectable address book entry. However, clicking To, CC, or Bcc, either alone or in combination with selecting entries does not initiate the required operation. There is no search. The selected name is simply entered in to address line. And there is no action using second information because there is no search. Although I do not believe that Dr. Fox has identified it as a potential input device, I would also note that the "Finish Address Book Entry" menu item does not constitute the required input device. (See Eudora Mac Manual, p 101; Eudora Windows Manual, p. 89). Even assuming for the sake of argument that i) the characters entered in the address line constitute first information and ii) the nickname constitutes second information, the claim

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

element would not be met: only one type of first information (partial nicknames) and one type of second information (full nicknames) will have been disclosed. Therefore, the type of second information could not depend, at least in part, on the type of first information. (*See Eudora Mac Manual*, p 101; *Eudora Windows Manual*, p. 89).

303. *Hot links*: I see no evidence of any arguable input device for the hot link functionality identified in the 23 pages of block quotations and screenshots that Dr. Fox provides for this claim element in Exhibit K. Nor, in my opinion, could the active URL itself constitute the input device. As discussed in paragraphs 292 and 293, the Eudora references do not disclose searching for an information related to a plurality of types of URLs and, therefore, cannot disclose performing any action with the results of such searching. In my opinion, loading the resource at the location designated by a URL does not constitute searching.

2) *Toolbar functionality*: While the toolbar and its various buttons may act as input devices for initiating *some* operation, the toolbar does not allow the user to initiate the operation required by the claim. I do not see any evidence in Exhibit K that Dr. Fox has identified a button on that toolbar that might be fairly interpreted to initiate the required operation.

- vi. **Eudora does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and”**

304. Dr. Fox provides no explanation or analysis of how Eudora meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what he considers to be the “input device,” “search term,” “information source,” “second computer program,” “first computer program,” or “second information.” It is my opinion that Dr. Fox has not provided any justification for his opinion that



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

Eudora practices this element or renders it obvious, including with respect to any of the identified functionalities of Eudora.

305. Nor do the Eudora references disclose this claim element or render it obvious. For example, as discussed in paragraphs 300–302, the Eudora references do not disclose the required input device. Therefore, they do not disclose this element, which requires “receipt of the user command from the input device.” The hot link functionality does not disclose searching for multiple types of information. The address book functionality of “Addressing a Message from the Address Book” also does not disclose searching. (See Eudora Windows Manual, p. 87). The spell check functionality discloses searching, but not searching using the search term, which I understand must be at least part of the first information subject to the analyzing process—which spell check does not disclose. (See ¶291). No relevant searching is disclosed with respect to the toolbar.

306. Furthermore, I understand that this claim element adds the additional requirement of “using a second computer program” with respect to the search. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” Eudora discloses use of only one computer program—Eudora—with respect to the toolbar functionality, Windows spell check functionality (Eudora Windows Manual, p. 33 (“Eudora includes a built-in spelling checker”)), and address book functionality.

- vii. **Eudora does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

307. Dr. Fox provides no explanation or analysis of how Eudora meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance.



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Dr. Fox does not identify, for example, what he considers to be the “searching,” “second information,” “search term,” “action,” “type” of action or “type or types of the first information.” It is my opinion that Dr. Fox has not provided any justification for his opinion that Eudora practices this element or renders it obvious, including with respect to any of the identified functionalities of Eudora.

308. It is also my opinion that Eudora does not disclose this claim element or render it obvious. With respect to the hot links functionality, no search is performed for multiple types. Furthermore, as I discuss in paragraph 293, it is my opinion that hot links discloses only one type of first information: URLs. Therefore, the type of action cannot depend on the type of first information. Furthermore, even if each URL protocol constituted a separate type of first information and even if opening that link constituted a search (which it does not), Eudora would still disclose no action using the second information—let alone an action depending at least in part on the type or types of the first information. Therefore, this claim element would not be disclosed or rendered obvious.

309. With respect to the spell check functionality, it is also my opinion that this claim element is not met. For example, even if suggested corrections constitute second information, the only actions that use that second information are displaying the suggestions and possibly inserting them into the document. (*See, e.g.*, Eudora Mac Manual, p. 43). Whether the second information is inserted into the document depends not on the type of first information, but on whether the user pushes the “Change” or “Replace” button (Eudora Mac Manual, p. 43; Eudora Windows Manual, p. 34). Furthermore, there is only one type of first information: misspelled words. Therefore, the type of action does not depend at least in part on the type(s) of first information.

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310. As for the address book, the “Addressing a Message from the Address Book” functionality identified in the main body of Dr. Fox’s report does not involve the required searching. Therefore, there is no second information with which to perform an action. With respect to the “Finish Address Book Entry” command, the only action disclosed is inserting the full nickname into the address line, and the only type of text in the document used for searching is a partial nickname. Therefore, the type of action cannot depend on the type of first information.

311. No relevant searching is disclosed with respect to the toolbar. Therefore, there is no second information with which to perform an action.

**viii. Eudora does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

312. Dr. Fox provides no explanation or analysis of how Eudora meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what he considers to be the “prompt,” “information source,” or “first information” for any of the four functionalities.

313. Because Eudora does not disclose the elements of claim 1 or render obvious claim 1, it does not disclose claim 8 or render it obvious. Moreover, to the extent that I have argued above that searching is absent from functionality cited by Dr. Fox, there can be no first information or information source and, therefore, no prompt for updating the information source to include the first information.

314. Furthermore, nothing in Dr. Fox’s screenshots or any of the material referenced bears the slightest resemblance to a prompt for adding URLs in the text of the email to an external information source. Therefore, even if the hot link functionality had disclosed searching and the other elements of claim 1, such an input device is not disclosed. With respect to the toolbar functionality, the ability to add or remove buttons to the toolbar referred to by Dr. Fox on page

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160 and following of Exhibit K is entirely irrelevant. Buttons are not first information and the toolbar is not an information source.

- ix. **Eudora does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

315. The body of claims 23 includes the same elements as claim 1. Eudora, therefore, does not disclose claim 23 or render it obvious for the same reasons it does not do so for claim 1.

316. Nor does Dr. Fox provide any explanation for his assertion that Eudora discloses the preamble or renders it obvious. Rather, he cross-references claim 1, for which he also provides no explanation or analysis, and then provides a series of unexplained screenshots.

- x. **Eudora does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

317. Because Eudora does not disclose the elements of claim 23 or render claim 23 obvious, it is also my opinion that it does not disclose claim 30 or render it obvious. It is also my opinion that Eudora does not disclose the additional requirements of this claim for the reasons discussed in paragraph 313 and 314.

318. Nor does Dr. Fox provide any explanation for his assertion that Eudora discloses claim 30 or renders it obvious. Rather, he cross-references claim 8, for which he also provides no explanation or analysis.

319. Consequently, Dr. Fox has failed to prove that Eudora anticipates Claims 1, 8, 23, or 30.

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**9. Microsoft Word 97 Does Not Invalidate the Asserted Claims**

320. In the body of his report, Dr. Fox points to the “Mail Merger” feature of Word 97 (“Word”), apparently referring to Word’s mail merge feature, without indicating how it relates to the ’843 Patent. (Fox Report, ¶161). He refers to Exhibits L and M for an allegedly “detailed, element-by-element analysis,” but those exhibits include no analysis whatsoever. Exhibit M cites “Special Edition Using Microsoft Word 97” (“Person”), published by Que Publisher on December 16, 1996. Exhibit L cites several references, including Person, a YouTube video, and screen shots that are apparently from the use of the product itself.<sup>15</sup> These exhibits consist of screenshots and block quotes without accompanying explanation. Many of the images and quotations do not even relate to the mail merge functionality mentioned in Dr. Fox’s report and appear to be unrelated to Dr. Fox’s assertion that mail merge disclosed the Asserted Claims. Should Dr. Fox subsequently provide discussion regarding the relevance of those citations, I reserve the right to respond to that discussion.

321. Dr. Fox has not explained how Word meets any of the limitations of claims 1, 8, 23, or 30. Exhibits L and M provide no analysis. Dr. Fox cannot support his assertion that Word discloses the ’843 Patent or renders it obvious without indicating, for example, which aspects of Word he believes correspond to which terms in the limitations.

322. As I discuss in this section, it is also my opinion that Word does not disclose the elements of the Asserted Claim. My opinion is not only supported by documentation related to the Word 97, but also on my own testing and operation of the copy of Word installed on the system produced for my inspection by defendants.

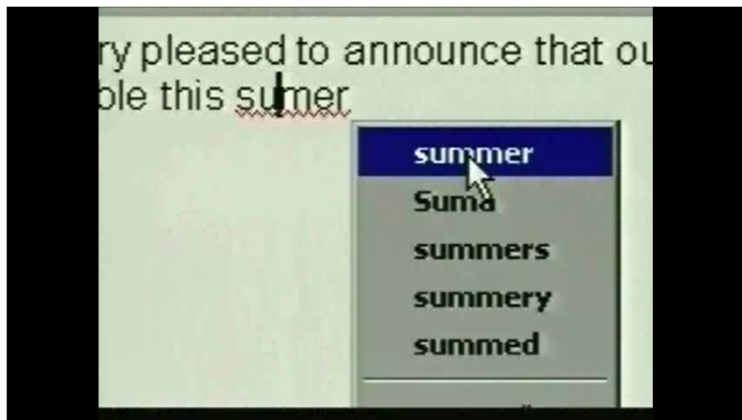
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<sup>15</sup> Dr. Fox also states at ¶161 that his “analysis included . . . [his] analysis of a system running Microsoft Word 97.” I have inspected a computer running Microsoft Word 97, produced by defendants. My inspection and testing of Word 97 on that computer supports my opinion that Word 97 does not disclose the elements of the Asserted Claims or render them otherwise obvious.

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- i. **Dr. Fox does not establish that Word discloses “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

323. Dr. Fox does not identify what he considers to be the “first computer program,” the “document,” or the “method for finding data.” Rather, in Exhibits L and M, Dr. Fox provides 31 pages of block quotations and screenshots without any accompanying analysis or explanation of their relevance. (Fox, Expert Report, Ex. L, at 1-24, Ex. M at 1-2). Many of these, including the following illustration of a spell-checking functionality, do not even bear an obvious connection to mail merge:



(Fox Report, Ex. L, p. 16). To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 discloses the preamble or renders it obvious. Furthermore, as I discuss with respect to the elements that follow, Word does not disclose a “method for finding data related to the contents of a document” because it does not disclose the required searching.

- ii. **Dr. Fox does not establish that Word discloses “displaying the document electronically using the first computer program”**

324. Dr. Fox does not indicate what he considers to be the ‘first computer program’ used for “displaying the document electronically” or what he considers that document to be. Indicative

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of Dr. Fox’s lack of clarity is his quotation—again without explanation—of the following passage from Person: “You need two documents to create form letters or mailing labels. One document, called the *data source* , contains a precisely laid-out set of data, such as names and addresses. The other document, the *main document*, acts as a form that receives the data.” (Fox Report, Ex. L, p. 28 (quoting Person, p. 485). It is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 practices this element or renders it obvious.

iii. **Word does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

325. I understand that the Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” I further understand that the Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

326. Dr. Fox provides no explanation or analysis of how Word meets this limitation. He instead provides a series of block quotations and screenshots with no explanation of their relevance. Dr. Fox does not identify, for example, what in Word he believes constitutes “first information,” “document,” “second information,” “first computer program,” “analyzing,” “plurality of types of information,” etc. It is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 practices this element or renders it obvious.

327. Nor does mail merge disclose the required analyzing or render it obvious. Main merge operates by inserting specified fields from a record located in a structured data source, such

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as an address book or spreadsheet, into a word processing document. That is, a data source such as an address book or spreadsheet is specified prior to running the mail merge. (Word also allows for the creation of a such data source through the use of dialogs. (*See Person*, p. 490-91).) That data source contains one or more fields for each record. *Person* explains its structure as follows:

**manually. The data source is a grid of rows and columns. The first row in the data source must contain the field names. These names label each column's contents. Only one row of field names can be at the top of the data source. Field names cannot contain blanks and cannot start with a number (although you can include a number in the field name). If you need to use a two-part field name, use an underscore rather than a space. You may want to put words together and capitalize a word's leading letter, such as RegionManager. Each field name must be unique.**

(*Person*, p. 490). For example, if the data source contains information about individuals it might have a record for each individual that contains fields denominated *FirstName* and *LastName* in which to save the individual's first name and surname respectively. However, the names of the columns (also known as field names) are arbitrary. The field denominated *FirstName* could hold temperature readings, and a field denominated with the random sequence *a8nfi3jand* could hold colors.

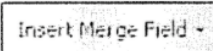
328. Then, one or more fields from the data source are designated for insertion into the main document using Word's mail merge menus. The insertions are placed at points in the document indicated by a "field code" of a type called a MERGEFIELD. The MERGEFIELDS are identified with the same text as the field name in the data source. For example, the user might enter "Dear <<FirstName>> <<LastName>>," where both the <<FirstName>> <<LastName>> are MERGEFIELDS added to the main document by the user by selecting them using the "Insert Merge Field" button. This is explained by *Person* as follows:

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Editing the Main Document

After the data source is attached to the main document, you can edit the document by using normal typing and formatting features. Whether you start with an existing document containing body copy or a new blank document, you must enter MERGEFIELD codes to tell Word where to insert specific data from the data source. Once the data source is attached, you can use the Insert Merge Field button in the Mail Merge toolbar to insert these codes.

To insert merge fields in the main document, follow these steps:

1. Place the insertion point where you want the first merged data to appear.
2.  Click the Insert Merge Field button from the Mail Merge toolbar that appears under the Formatting toolbar. This displays a list of the fields in your data source.
3. Select the field name from the Print Merge Fields list.
4. Choose OK or press Enter.
5. Move the insertion point to the next location where you want to insert data.

(Person, at 505). Once the data source is designated and the MERGEFIELDS are added to the main document, the mail merge may be run, which causes the specified field values for each individual record to be substituted for the MERGEFIELDS. (E.g., Person, at 504-505).

329. At no point during this mail merge process is the required analyzing disclosed, and Dr. Fox does not identify where he erroneously believes such analysis might be found. Word performs no analyzing of first information from the main document. Word simply iterates through the records in the data source and, for each record, substitutes the values of the fields in that record for the MERGEFIELDS in the main document having the same name as the corresponding field name in the data source. Nor are those MERGEFIELDS “text in a document that can be used as input for a search operation in a source external to the document” because they are not used for searching. Rather, they designate the field in the data source from which data is to be drawn.

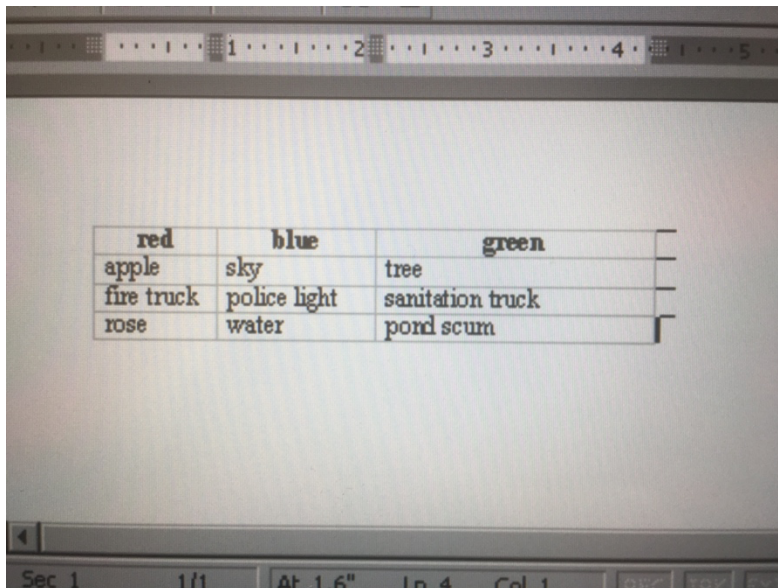
330. Furthermore, when merging, Word does not determine if the first information belongs to one or more of several predefined categories of identifying information or contact information. Rather, it employs the MERGEFIELDS to identify where in the word processing document the designated fields from a record in the data source should be placed. The MERGEFIELDS are not identifying information or contact information. Even were they to be considered so, they are all of the same type. For example, a MERGEFIELD denoted as



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

“TelephoneNumber” is neither a telephone number nor any other type of contact information. As noted in paragraph 327, the field name (and hence, the corresponding MERGEFIELD) is arbitrary. For similar reasons, the mail merge functionality of Word does not disclose analyzing “to determine if the first information belongs to one or more of several predefined categories.” MERGEFIELDs are of only one type: MERGEFIELDs.

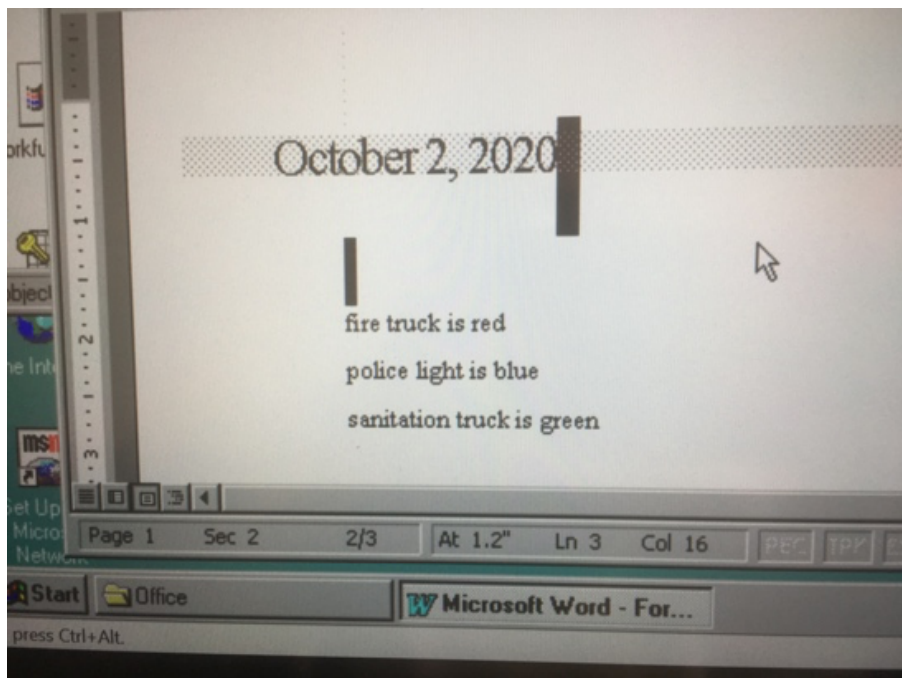
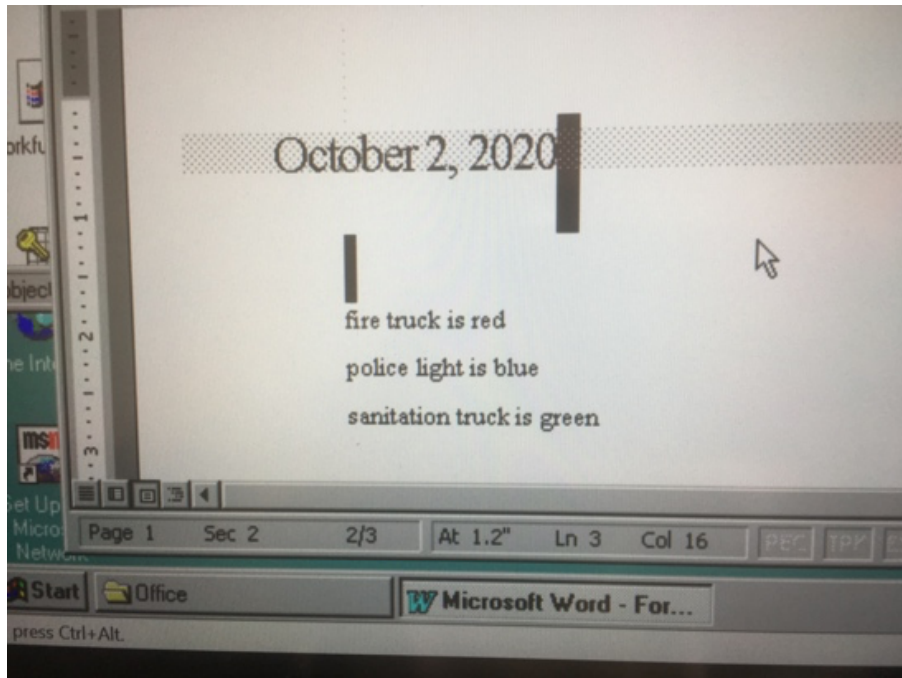
331. To demonstrate this, when I inspected Word 97 on the computer inspected by Dr. Fox, I created a data source having three columns labelled “red”, “blue”, and “green” and three rows having red, blue, and green items respectively, as shown below.



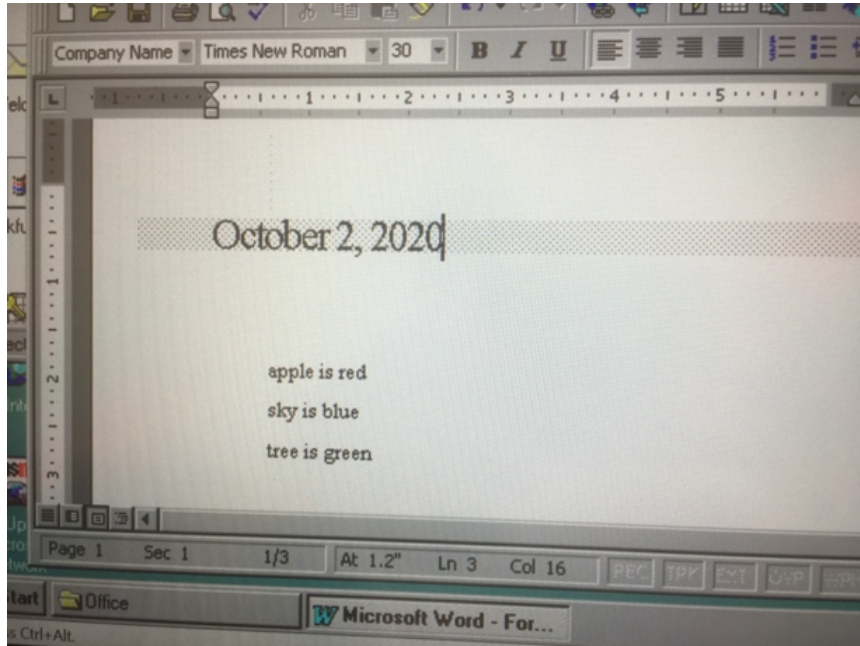
red	blue	green
apple	sky	tree
fire truck	police light	sanitation truck
rose	water	pond scum

I created a main document containing the text, “<<RED>> is red, <<BLUE>> is blue, <<GREEN>> is green”, where the capitalized strings in double angle brackets indicate MERGEFIELDs. When I ran the mail merge functionality, a three-page document was produced in which each page containing text such as “apple is red, sky is blue, tree is green,” as shown below:

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Nothing in the main document or source document corresponds to a predefined category of identifying information or contact information.

332. The mail merge function does not involve any search. Rather, each record from the data source is retrieved in sequence and placed in the target document. After retrieval and before being placed in the target document, it may be evaluated by Word to determine if it meets particular requirements, and if not, the placement won't occur. (Person, ARENDI570979-82). But because each record from the data source is retrieved in turn by Word in sequence and thus the entire data source file is retrieved, one of skill in the art would understand that no search is involved.

333. For at least these reasons, Word's mail merge function does not disclose this limitation or render it obvious.

**iv. Word does not disclose "retrieving the first information"**

334. The Court construed "first information" to mean "text in a document that can be used as input for a search operation in a source external to the document."

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335. Dr. Fox provides no explanation or analysis of how Word meets this limitation. He instead offers a series of block quotations and screenshots with no explanation of their relevance. Dr. Fox does not identify, for example, what in Word he believes constitutes “first information.” It is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 discloses this element or renders it obvious.

336. If Dr. Fox is assuming that the first information is the data in the data source that is being retrieved, he is incorrect. As confirmed by the Court’s claim construction, the first information must be from the document, whose only information relevant to the claim is the MERGEFIELDS. Neither Dr. Fox nor the material he cites identifies any instance in which these are retrieved during the mail merge operation. My own operation of Word 97 also provided no evidence of such retrieval. The records in the data source also are not used for searching, nor as I have discussed are the MERGEFIELDS, and thus neither can qualify as the “first information” required by this claim. (MERGEFIELDS also cannot qualify as “the first information” because that information must have been subject to analyzing; however, as discussed above with respect to the element “while the document is being displayed...,” Word performs no analyzing of first information from the first document.) Thus, Word’s mail merge function does not disclose this limitation or render it obvious.

**v. Word does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising ...”**

337. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” As noted above, I understand that the Court construed

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“computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

338. Dr. Fox provides no explanation or analysis of how Word meets this limitation. He instead offers a series of block quotations and screenshots with no explanation of their relevance. For example, Dr. Fox does not indicate what he considers to be Word’s “input device,” “first computer program,” “user command,” “operation.” With respect to the first component of the operation, he does not indicate what he considers to be the “search[],” “first information,” the “second information,” or the external “information source,” and he does not address the dependency of the second information on the first information. It is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 practices this element or renders it obvious.

339. With respect to the mail merge function of Word, Dr. Fox might believe that one of the “Merge” buttons in the “Mail Merge Helper” window or the “Merge” window is the input device. However, as discussed below, clicking these buttons does not initiate the claimed operation.

340. It is also my opinion that Word 97 does not disclose the required input device. The claimed operation must perform a search. As discussed above (*see, e.g.*, paragraph 332), Word’s mail merge function does not perform a search. The claimed search, moreover, must use “at least part of *the first information* as a search term in order to find the second information, *of a specific type or types.*” But, because there is no search, MERGEFIELDS cannot be “first information” because they cannot “be used as input for a search operation.” MERGEFIELDS also cannot qualify as “the first information” because that information must have been subject to analyzing; however,

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as discussed above with respect to the element “while the document is being displayed...,” Word performs no analyzing of first information from the first document.

341. Further, even assuming for the sake of argument that the MERGEFIELD constitutes first information and the corresponding field of each individual record in the data source constitutes second information, there is no dependency between the first information type and the second information type. As discussed in paragraph 330, a MERGEFIELD is not of a type as the term has been construed by the Court. And even were they to be considered to have a type, all MERGEFIELDS would be of a single type. The information that they would return if a search had been involved (which it is not) is also all of a single type: field values. Consequently, even were a MERGEFIELD considered first information and the field values in each record in the data source considered second information, the type of the second information could not depend on the type of the first information.

342. For at least these reasons, Word’s mail merge function does not disclose this limitation or render it obvious.

- vi. **Word does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term”**

343. I understand that the Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

344. Dr. Fox provides no explanation or analysis of how Word meets this limitation. He instead offers a series of block quotations and screenshots with no explanation of their relevance. Dr. Fox does not indicate what in Word he believes constitutes any element of the claim, including the “first computer program,” the “user command,” the “input device,” the “information source,”



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the “second computer program,” or the “second information.” It is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 practices this element or renders it obvious.

345. It is also my opinion that Word does not disclose this claim element or render it obvious. As discussed above with respect to the elements “while the document is being displayed...” and “providing an input device...,” Word’s mail merge function does not perform a search.

346. Furthermore, the claim requires the search to be performed using a second computer program. Ever were retrieving records with no search criterion to be considered (erroneously) a search, Word discloses only a single program, namely Word 97. Neither the mail merge functionality as a whole nor its record retrieval component are “a self-contained set of instructions, as opposed to a routine or library.” For at least these reasons, Word’s mail merge function does not disclose this limitation or render it obvious.

**vii. Word does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

347. Dr. Fox provides no explanation or analysis of how Word meets this limitation. He instead offers a series of block quotations and screenshots with no explanation of their relevance. Dr. Fox provides no explanation or analysis of how Word meets this limitation. He offers a series of block quotations with no discussion of their relevance. He does not indicate what he considers to be the “searching,” “action”, “second information,” or any of the required aspects of the action. It is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 practices this element.

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348. It is also my opinion that Word does not disclose this claim element. As discussed above with respect to the elements “while the document is being displayed...” and “providing an input device...,” Word’s mail merge functionality does not disclose a search, no first information is disclosed, and even were MERGEFIELDS to be considered first information, they are all of one type. Consequently, there is no second information found through searching with which to perform an action. Even were field values to be considered second information found through searching (which they are not), the only action disclosed using those field values is inserting them into a document in place of the corresponding MERGEFIELD. Both because there would be only one type of action and one type of first information under this supposition (of which there are, in fact, neither), the actions cannot depend in any way on the type of the first information.

349. Further, Word 97 discloses that the action of replacing a MEREGFIELD in a document by the data in the corresponding field of the data source is determined by the user establishing that correspondence prior to any data being retrieved from the data source. (*See e.g.*, Person, at ARENDI570957). Therefore, the type of action performed by the mail merge is dependent only on factors that are established prior to the initiation of the mail merge function, so the type of action cannot depend on anything to do with the subsequent operation.

350. Consequently, Word’s mail merge function does not disclose this limitation or render it obvious.

**viii. Word does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

351. Dr. Fox provides no explanation or analysis of how Word meets this limitation. In fact, Dr. Fox cites no disclosures of Word related to this claim, no analysis, and no explanation. For example, in Exhibit M he asserts, “Person further discloses this claim.” (Fox Report, Ex. M, p. 11); none of the material listed under claim 8 in Exhibit L concerns mail merge. He does not



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indicate what he considers to be Word's "first information" or "information source." Dr. Fox provides no explanation or analysis of how Word meets performs this claim. It is my opinion that Dr. Fox has not provided any justification for his opinion that Word 97 practices this claim or renders it obvious .

352. It is also my opinion that Word does not disclose this claim. Because Word does not disclose the elements of claim 1 or render claim 1 obvious, it does not disclose claim 8 or render it obvious. Additionally, as discussed above, including with respect to the element "while the document is being displayed..." the mail merge functionality of Word does not disclose use of first information. Therefore, there can be no prompt to add that first information to a data source. Further, even were a MERGEFIELD considered first information (which it is not) and the data source considered to be the information source, no prompt is provided to add a MERGEFIELD in the document to the data source. To the contrary, Microsoft Word permits the user to add MERGEFIELDS corresponding to field names in the data source to the main document using the "Insert Merge Field" button. (*E.g.*, Person, p. 505).

353. For at least these reasons, Word's mail merge function does not disclose claim 8 or render it obvious.

- ix. **Word does not disclose Claims 23, "At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising..."**

354. The body of claims 23 includes the same elements as claim 1. Word, therefore, does not disclose claim 23 or render it obvious for the same reasons it does not do so for claim 1.

355. Although I take no position on whether the preamble is limiting, it is also my opinion that Word does not disclose "finding data related to the contents of a document using a first computer program," as I note above with respect to claim 1 in paragraph 323.

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356. Nor does Dr. Fox provide any explanation for his assertion that Word discloses the preamble or renders it obvious. Rather, he cross-references claim 1, for which he also provides no explanation or analysis, and then provides a series of unexplained screenshots. Many of these screenshots are not even related to mail merge.

- x. **Word does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

357. Because Word does not disclose the elements of claim 23 or render claim 23 obvious, it is also my opinion that it does not disclose claim 30 or render it obvious. It is also my opinion that Word does not disclose the additional requirements of this claim for the reasons discussed in paragraph 352

358. Nor does Dr. Fox provide any explanation for his assertion that Word discloses claim 30. Rather, he cross-references claim 8, for which he also provides no explanation or analysis, and then provides a series of three unexplained screenshots. None of these three screenshots have anything to do with mail merge.

359. Consequently, Dr. Fox has failed to prove that Word anticipates Claims 1, 8, 23, or 30.

***10. Microsoft Outlook 97 Does Not Invalidate the Asserted Claims***

360. Microsoft Outlook 97 (“Outlook”) was an email, calendar, document, and contact management product offered as a component of Microsoft’s Office 97. (ARENDI 203925 at ’3961). In Outlook 97, a user could enter text into the “To”, “Cc” or “Bcc” lines of an email. (ARENDI 203925 at ’4105). Thereafter, Outlook 97 would search one or more address books, such as Outlook’s Global Address Book, Personal Address Book and Outlook Address Book, to identify a match for that text (ARENDI 203925 at ’4101-5). If the text matched one entry in an

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Address Book, Outlook 97 would complete the recipient's name (if necessary) and underline it. (*E.g.*, Fox\_0007386, at 34:00; ARENDI 203925 at '4105). If Outlook 97 found multiple matches, it would underline the user-entered text with a red wavy line. The user could then click the text over the red wavy line to view the potential name matches and select one. (*E.g.*, ARENDI 203925, at '4105). The ambiguous entry is then stored as the selection's "nickname," and the nickname is automatically replaced by the selected name in the future. (AHL0159008, at AHL0159059).

361. In the body of his report, Dr. Fox points to the functionality of checking an entry in Outlook 97's To, Cc, and Bcc lines against the names in the user's Address Book, without indicating how it relates to the '843 Patent. (Fox Report, ¶164). He refers to Exhibit N for an allegedly "detailed, element-by-element analysis," but that exhibit includes no analysis whatsoever.

362. Dr. Fox has not explained how Outlook meets any of the limitations of claims 1, 8, 23, or 30. Exhibit N to the Fox Report provides no analysis. Dr. Fox cannot prove that Outlook anticipates the '843 Patent without indicating which aspects of Outlook he believes correspond to which terms in the limitations.

363. As I discuss in this section, it is also my opinion that Outlook does not disclose the elements of the Asserted Claim. My opinion is not only supported by documentation related to Outlook, but also on my own testing and operation of the copy of Outlook installed on the system produced for my inspection by defendants.

- i. **Dr. Fox does not establish that Outlook 97 discloses "A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:"**

364. The Court has construed "computer program" to mean "a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

perform some task.” It has construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered.” Dr. Fox does not indicate, however, what he considers to be Outlook’s “first computer program,” the “method for finding data,” or the “document.” Rather, Dr. Fox provides block quotations and screenshots of an Outlook tutorial without any accompanying analysis or explanation of their relevance. (Fox Report, Ex. N). To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not provided any reasoned basis for his opinion that Outlook practices this element or renders it obvious.

- ii. **Outlook 97 does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

365. Dr. Fox provides no explanation or analysis of how Outlook 97 performs this claim element. Instead, he offers a series of block quotes and screen shots with no explanation of their relevance. Dr. Fox does not identify, for example, what in Outlook 97 he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” or “analyzing.” It is my opinion that Dr. Fox has not established that Outlook 97 practices this element or renders it obvious.

366. Moreover, Outlook 97 does not disclose this claim element or render it obvious. The Court has construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.”

367. If Dr. Fox believes that the addressee validation functionality of Outlook 97 discloses the required analyzing, he is mistaken. Outlook 97 does not disclose analyzing the first

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

information to identify whether it “belongs to one or more of several predefined categories of [information] that can be searched for”; rather, Outlook 97 simply searches for each and every entry in the To, Cc and Bcc lines of the email. (*E.g.*, ARENDI 203925 at ’4038, ARENDI 203925 at ’4038 (“By default, Outlook automatically checks the names you enter in the To, Cc, and Bcc boxes against the names in the Address Books.”); ARENDI 203925 at ’4105 (“Before you send a message, Outlook automatically checks the names you type in the To, Cc, and Bcc boxes against the names in the Address Books.”)). In fact, the addressee validation functionality is necessary precisely because “[w]hen you type a name, there is always the possibility that you will type the name incorrectly or type a name for which there is no mailbox.” (ARENDI 203925 at ’4039); it would be useless if it only operated on “valid” names. Stated another way, Outlook assumes without analysis that the information should be treated as if it were a name. (Fox\_0007386, at 34:00). If an exact match is found with a name in an address book, that name is inserted and underlined. If multiple potential matches are found, the user-entered text is underlined with a red wavy line, and if the user right-clicks on the text above the line, a list of matching names is presented.

368. Although several Outlook 97 manuals refer to entries in the address lines as “names,” it bears emphasis that the type of information entered into the address line is irrelevant to Outlook’s processing of that information. This behavior is confirmed by my operation of the version of Outlook 97 produced by the defendant in this case. For example, when I entered “Elvi\$ Pr@sley” in the “To:” field of a new message window, Outlook brought up a “Check Names” window offering a choice to “Create a new address for “Elvi\$ Pr@sley”” or “Change to” an empty list of suggestions. This demonstrates that the system attempted to resolve the address in the same way as it seeks to resolve names, partial names, and nicknames.

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369. Finally, even if the text were analyzed to determine that it was a name (which it is not), this claim element would not be disclosed. The element requires analyzing for “one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for.” Names are but one category of identifying information. As such the requirement to determine among a plurality of types is not met.

**iii. Dr. Fox does not establish that Outlook 97 discloses “retrieving the first information”**

370. Dr. Fox provides no explanation or analysis of how Outlook 97 performs this claim element. Instead, he offers a series of block quotes and screen shots with no explanation of their relevance. Dr. Fox does not identify, for example, what in Outlook 97 he believes constitutes “first information” or “retrieving.” It is my opinion that Dr. Fox has not established that Outlook 97 practices this element or renders it obvious.

**iv. Outlook 97 does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information”**

371. Dr. Fox provides no explanation or analysis of how Outlook 97 performs this claim element. Instead, he offers a series of block quotes and screen shots with no explanation of their relevance. Dr. Fox does not identify, for example, what in Outlook 97 he believes to be to be the “input device,” “first computer program,” “operation,” or any part of that operation. It is my opinion that Dr. Fox has not established that Outlook 97 discloses this element or renders it obvious.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

372. Moreover, even assuming that Outlook discloses providing an input device with which the user can initiate its addressee validation functionality, that input device would not meet the requirements of the claim. For example, the claim requires that the search be to find “second information, of a specific type or types . . . wherein the specific type or types of second information is dependent at least in part on the type or types of the first information”; however, as already discussed in paragraphs 367-369, Outlook 97 discloses only one type of information used for searching (entries in the address line, denominated “names” in documentation). Moreover, Outlook 97 discloses use of only one type of information found during this search and used to perform an action: a “full resolved name.” (AHL0159008, at AHL0159059). Both because there is only one type of potential first information and one type of possible second information, the type(s) of second information searched for cannot depend at least in part on the type(s) of first information.

- v. **Outlook 97 does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and”**

373. Dr. Fox provides no explanation or analysis of how Outlook 97 performs this claim element. Instead, he offers a series of block quotes and screen shots with no explanation of their relevance. Dr. Fox does not identify, for example, what in Outlook 97 he believes to be the “first computer program,” “input device,” “search,” or “information source.” It is my opinion that Dr. Fox has not established that Outlook 97 discloses this element or renders it obvious.

374. Moreover, as discussed in paragraphs 372, Outlook 97 does not disclose the required input device. Outlook 97 also fails to disclose “causing a search . . . using a *second computer program*.” The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

perform some task.” Outlook 97 discloses only one such computer program: Outlook 97. If Outlook 97 is, in Dr. Fox’s necessary opinion, the first computer program responsible for displaying the document, setting up the input device, and receiving the user command from the input device, then Outlook 97 cannot also be the second computer program required by this claim element. Yet, the address books searched are part of Outlook, (*See* AHL0159008, at AHL0159082), and it is the “Outlook desktop information manager [that] automatically checks the e-mail names” in its address books during the address validation process, (*See* AHL0159008, at AHL0159059). In fact, “The essence of Outlook is the way it integrates the types of information you have to deal with.” (ARENDI 147659). No distinct computer program is responsible for doing so.

- vi. **Outlook 97 does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

375. Dr. Fox provides no explanation or analysis of how Outlook 97 performs this claim element. Instead, he offers a series of block quotes and screen shots with no explanation of their relevance. Dr. Fox does not identify, for example, what he considers to be the “second information,” “action” or “type or types of the first information.”

376. As discussed in paragraph 372, Outlook 97 does not disclose the required input device from which the search should ensue. Moreover, as discussed in paragraphs 367-369 and 372, Outlook 97 discloses only one type of information used for searching (address line entries). The only action by Outlook 97 using the results of a search is inserting a “full resolved name.” (AHL0159008, at AHL0159059). Both because Outlook 97 discloses only one type of first information and one type of action, the action cannot be “of a type depending at least in part on



CONFIDENTIAL OUTSIDE COUNSEL ONLY

the type or types of the first information.” Thus, Outlook 97 does not disclose this limitation or render it obvious.

- vii. **Outlook 97 does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

377. Because Outlook does not disclose the elements of claim 1 or render claim 1 obvious, it is also my opinion that it does not disclose those of claim 8 or render it obvious. Nor has Dr. Fox identified what he believes to constitute the “prompt,” the “information source,” or the “first information” recited by this claim. Rather, he offers a series of screenshots and block quotes with analysis or explanation. Moreover, it is my opinion that Outlook does not disclose the required prompt. The prompt must be to add *the first information* to the information source, which is the same first information subject to analyzing. Because it is my opinion that the required analyzing is not disclosed or rendered obvious, it is also my opinion that there can be no prompt to add *the first information* to an information source.

- viii. **Outlook 97 does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

378. The body of claims 23 includes the same elements as claim 1. Outlook, therefore, does not disclose claim 23 or render claim 23 obvious for the same reasons it does not do so for claim 1.

379. Nor does Dr. Fox provide any explanation for his assertion that Outlook discloses the preamble or renders it obvious. Rather, he cross-references claim 1, for which he also provides no explanation or analysis. (*See* paragraph 364). It is my opinion that Dr. Fox has not established that Outlook 97 practices this element or renders it obvious.

CONFIDENTIAL OUTSIDE COUNSEL ONLY

- ix. **Outlook 97 does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

380. Because Outlook does not disclose the elements of claim 23 or renders claim 23 obvious, it is also my opinion that it does not disclose claim 30 or render it obvious. It is also my opinion that Outlook does not disclose or render obvious the additional requirements of this claim for the reasons discussed in paragraph 377.

381. Nor does Dr. Fox provide any explanation for his assertion that Outlook discloses claim 30 or renders it obvious. Rather, he cross-references claim 8, for which he also provides no explanation or analysis.

382. Consequently, Dr. Fox has failed to prove that Outlook anticipates Claims 1, 8, 23, or 30.

***11. U.S. Patent No. 6,085,206 (“Domini”) Does Not Invalidate the Asserted Claims***

383. U.S. Patent No. 6,085,206 to Domini *et al.* (“Domini”) discloses a method and system for checking spelling and grammar in a document. The system disclosed by Domini checks words in a document for spelling word-by-word, and similarly checks sentences for grammar sentence-by-sentence.

384. In the body of his report, Dr. Fox describes Domini without indicating how it relates to the ’843 Patent. (Fox Report, ¶170). He refers to Exhibit P for an allegedly “detailed, element-by-element analysis,” but that exhibit includes no analysis whatsoever.

385. Dr. Fox has not explained how Domini meets any of the limitations of claims 1, 8, 23, or 30. Exhibit P to the Fox Report provides no analysis. Dr. Fox cannot prove that Domini anticipates the ’843 Patent without indicating which aspects of Domini he believes correspond to

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which terms in the limitations. As I discuss in this section, it is also my opinion that Domini does not disclose the elements of the Asserted Claims nor does it render them obvious.

- i. **Dr. Fox does not establish that Domini discloses “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

386. Dr. Fox asserts, “To the extent this preamble is found to be limiting, Domini discloses this preamble.” Dr. Fox does not, however, provide any explanation or analysis as to how Domini does so. He does not, for example, identify what he believes constitutes the “document,” the “first computer program” or the “method for finding [related] data.” Instead, Dr. Fox offers three unexplained quotations and two unexplained figures. (*See* Fox Report, Ex. P at 2-3). To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not provided any reasoned basis for his opinion that Domini discloses this element or renders it obvious.

- ii. **Dr. Fox does not establish that Domini discloses “displaying the document electronically using the first computer program”**

387. Dr. Fox does not explain his opinion that Domini discloses this claim element. Instead, he reproduces a series of block quotes and figures from the patent without explanation or analysis. . Dr. Fox does not identify, for example, what in Domini he believes constitutes the “document” or the “first computer program.” It is my opinion that Dr. Fox has not established that Domini discloses this element or renders it obvious.

- iii. **Domini does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

388. Dr. Fox provides no explanation or analysis of how Domini performs this claim element. He instead offers two block quotations and two figures with no explanation of their relevance. For example, Dr. Fox does not indicate what in Domini he believes constitutes “first

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

information,” “document,” “second information,” “first computer program,” “plurality of types of information,” or “analyzing.”

389. Nor, in my opinion, does Domini disclose this claim element or render it obvious. I understand that the Court has construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” I further understand that it has construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

390. The text Dr. Fox quotes relates to identifying a sentence in a document so that it might be extracted for spell checking and grammar checking. (*See* Fox Report, Ex. P, at 4). That is not the analyzing required by the Asserted Claims. First, the analyzing must be “to determine if the first information belongs to one or more *of several* predefined categories”; however, “sentence” is only a single type of category. Second, the categories must be “categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address).” Sentences are neither identifying nor contact information; they are grammatical constructs, similar to nouns and verbs. (*See* Claim Construction Memorandum, at 14). Third, Domini does not disclose sentences to be a type of information “that can be searched for.” The only *arguable* searching in Domini is the comparison of *words* (not sentences) in the document to lists of words found in the spell-checking dictionary. (*See* Domini, at 17:19-37, 1:34-45).<sup>16</sup> And, just as sentences are not a category of information that can be searched for, sentences cannot

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<sup>16</sup> Domini does not disclose searching in order to perform the grammar check portion of the invention. (*E.g.*, Domini, 19:8-14).

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

qualify as “first information” because first information must be usable “as input for a search operation in a source external to the document.”

391. To the extent that Dr. Fox conceives of the spell-checking process itself as the required analysis, I disagree that this functionality of Domini satisfies the claim limitation. Domini discloses checking spelling by searching one or more dictionaries for each individual word, without regard to whether it belongs to any category of information. (Domini, 16:66-17:33). In other words, Domini does not analyze in order to identify an occurrence of a type of information that *can be searched for*: it simply searches every word. As with sentences, words are not a category of identifying or contact information. Nor are words on their own a plurality of types of information.<sup>17</sup>

**iv. Dr. Fox does not establish that Domini disclose “retrieving the first information”**

392. Dr. Fox provides no explanation or analysis of how Domini performs this claim element. He instead offers a single, unexplained quotation and figure. He does not, for example, identify what he considers to be the “first information” or process of “retrieving.” Moreover, as I discuss above, Dr. Fox has not identified any first information in the document and, as a consequence, cannot have identified any first information subject to retrieving. It is my opinion that Dr. Fox has not established that Domini discloses this element or renders it obvious.

**v. Domini does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or**

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<sup>17</sup> Although Domini discloses different types of errors handled by the spell-checking function, such as “word not in dictionary,” “repeated word,” and “capitalization,” none of these are categories of contact or identifying information and none of these are used for searching. (Domini, 17:64-18:3).

CONFIDENTIAL OUTSIDE COUNSEL ONLY

**types of the first information, and (ii) performing an action using at least part of the second information”**

393. Dr. Fox provides no explanation or analysis of how Domini performs this claim element. He instead offers three unexplained and unanalyzed quotations followed by a single figure from Domini. (Fox Report, Ex. P, at 6). Fox does not identify what he believes constitutes the “input device,” the “first computer program,” the “user command,” the “operation” or any aspect of that operation. It is my opinion that Dr. Fox has not established that Domini discloses this element or renders it obvious.

394. In my opinion, Domini does not disclose this claim element or render it obvious. As discussed above in paragraphs 388 through 391, Domini does not disclose any first information subject to the required analyzing and, therefore, does not disclose use of any of that first information for the “performing a search” element of the required operation.

395. Second, the only searching disclosed by Domini is the comparison of words in the document to words in the spell checker dictionary or dictionaries. In this search, the “specific type or types of second information” cannot depend “at least in part on the type or types of the first information” because there is only one type of first information: words. Furthermore, although Domini does not fully explain how the suggestions are compiled for incorrectly spelled words, even assuming these are found purely through the search and might therefore qualify as second information, there would still be no dependency of second information on first information: there would still be only one type of first information (words) and one type of second information (spelling suggestions). (See Domini, 17:43-46; 18:4-9)

- vi. **Domini does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source,**

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**using a second computer program, in order to find second information related to the search term; and”**

396. Dr. Fox provides no explanation or analysis of how Domini performs this claim element. He instead offers a series of unexplained and unanalyzed quotations and figures from Domini. (Fox Report, Ex. P, at 7-8). Fox does not identify, for example, what he believes constitutes the “input device,” the “user command,” the “information source,” the “first computer program,” the “second computer,” or the “second computer program.” It is my opinion that Dr. Fox has not established that Domini discloses this element or renders it obvious.

397. It is also my opinion that Domini does not disclose this claim element or render it obvious. For example, Domini does not disclose “using a second computer program.” I understand that the Court construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” Domini discloses only one such computer program: the word processor, such as Word. The spell check and grammar check functionality are described as modules of that computer program. (*E.g.*, Domini, 5:1-12; 19:56-59; *see also* Domini, 1:65-2:4; 9:29-42). For example, Domini offers the following description of its preferred embodiment:

a document. The preferred embodiment of the present invention is represented by “WORD”, version 8.0, which is a word processing application program produced by Microsoft Corporation of Redmond, Wash. Briefly described, the preferred program allows users to create and edit electronic documents by entering characters, symbols, graphical objects, and commands. The preferred program includes a spell checker program module and a grammar checker program module. After a document has been created, a user may proof the document by conducting both spell checking and grammar checking operations in response to entering a single command.

CONFIDENTIAL OUTSIDE COUNSEL ONLY

(Domini, at 5:1-12). In this preferred embodiment, the only computer program disclosed is Word, which is said to “include” the spell checker and grammar checker modules. These modules are not self-contained programs in their own right, but instead operate through and as part of Word.

398. This element is also not disclosed or rendered obvious by Domini because, as described in paragraphs 393 through 395 and the material cross-referenced therein, Domini neither discloses the required input device nor the required search (including the required first and second information used for the input and output of that search).

- vii. **Domini does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

399. Dr. Fox provides no explanation or analysis of how Domini performs this claim element. He instead offers a pair of block quotes and a pair of figures without any explanation or analysis. (Fox Report, Ex. P, at 9-10). Fox does not identify, for example, what he believes constitutes the “searching,” “second information,” “search term,” “action,” “type of first information,” or “type of second information.” It is my opinion that Dr. Fox has not established that Domini discloses this element or renders it obvious.

400. It is also my opinion that Domini does not disclose this claim element or render it obvious. The second quotation offered by Dr. Fox relates to replacing a grammatical error with a suggested correction. Domini does not, however, disclose any searching related to its grammar check functionality, including with respect to identifying errors or suggested corrections. Therefore, Domini does not disclose any second information related to the grammar check with which to perform an action, nor any type of first information used for searching on which that type of action can depend.



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

401. Similarly, it is my opinion that the display of suggested spelling corrections and/or the substitution of those suggestions for the misspelled word in the original document does not constitute the required action. First, as I have discussed above, Domini does not disclose the required searching on the success of which the action must depend. Second, even assuming for the sake of argument that words constitute first information (*see* paragraph 391), they would be the only type of first information. Because there is only one type of first information, the type of action cannot depend on the type of first information. Similarly, even assuming for the sake of argument that suggested spelling corrections constitute second information (*see* paragraph 395), the only actions disclosed using that second information are displaying the suggestions and/or, at the command of the user, inserting the suggestion into the document. (*E.g.*, Domini, 12:61-64; 18:10-26). However, the combination of actions does not depend on the type of first information, but rather on whether the user clicks the “Change” button.

viii. **Domini does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

402. Because Domini does not disclose the elements of claim 1 or render claim 1 obvious, it is also my opinion that it does not disclose those of claim 8 or render it obvious. Moreover, it is my opinion that Domini does not disclose the required prompt. The prompt must be to add *the first information* to the information source, which is the same first information subject to analyzing. Because it is my opinion that the required analyzing is not disclosed, it is also my opinion that there can be no prompt to add *the first information* to an information source.

ix. **Domini does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to**

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**the contents of a document using a first computer program running on a computer, the process comprising...”**

403. The body of claims 23 includes the same elements as claim 1. It is, therefore, my opinion that Domini does not disclose claim 23 or render claim 23 obvious for the same reasons it does not do so for claim 1.

404. Nor does Dr. Fox provide an explanation for his assertion that Domini discloses the preamble. Rather, he cross-references claim 1, for which he also provides no explanation or analysis. (*See* paragraph 384). It is my opinion that Dr. Fox has not established that Domini discloses this element or renders it obvious.

**x. Domini does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

405. Because Domini does not disclose the elements of claim 23 or render claim 23 obvious, it is also my opinion that it does not disclose claim 30 or render it obvious. It is also my opinion that Domini does not disclose the additional requirements of this claim for the reasons discussed in paragraph 402.

406. Nor does Dr. Fox provide any explanation for his assertion that Domini discloses or renders obvious the additional requirement of claim 30. Rather, he cross-references claim 8, for which he also provides no explanation or analysis.

407. Consequently, Dr. Fox has failed to prove that Domini anticipates Claims 1, 8, 23, or 30.

***12. U.S. Patent No. 6,377,965 (“Hachamovitch”) Does Not Invalidate the Asserted Claims***

408. U.S. Patent 6,377,965 to Hachamovitch *et al.* (“Hachamovitch”) discloses a “word completion system that can automatically predict unrestricted word completions for data entries in

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

an unstructured portion of a data file.” (Hachamovitch, at Abstract). More specifically, Hachamovitch discloses a “utility” which monitors data entry into one or more computer programs. “Generally stated, the invention is a computer-readable medium having computer-executable instructions for running a word completion utility on a computer system. The word completion utility monitors data entry into a data file associated with a program module running on the computer system,” (Hachamovitch, 4:53-58) and proposes completions. That autocomplete utility is not a computer program as construed by the Court, that is, “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task,” and, therefore, Hachamovitch discloses use of only a single computer program in its implementation.

409. As each character of a new word (termed a “partial data entry”) is entered, Hachamovitch compares the partial data entry to the “name” component of name-completion pairs<sup>18</sup> that comprise a selectable suggestion list.<sup>19</sup> If the partial data entry is matched to the name portion of the name-completion pair, then Hachamovitch proposes the corresponding “completion” to the user for insertion into the document by displaying the completion to the user. (Hachamovitch, 4:53-5:5:6; Figs. 5 & 6; 14:18-16:22). The user may then indicate acceptance of the proposed completion by pressing “traditional acceptance keystrokes, such as the ‘tab’ key or the ‘enter’ key.” (E.g., Hachamovitch, at Abstract, 5:7-13, 7:6-8, 15:55-59, Fig. 5).

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<sup>18</sup> Hachamovitch uses the term “name” for the portion of the suggestion list entry to be matched with the user’s input text. (Thus, the term “name” is not used as a synonym of appellation, surname, first name, etc., and thus cannot be equated with a type of identifying information.) The term “completion” refers to the portion of the entry to be proposed for insertion into the text, *i.e.*, the suggested word or phrase. The name and completion may be the same. (See, *e.g.*, Hachamovitch, Fig. 3).

<sup>19</sup> Hachamovitch teaches that a minimum number of characters may be required before the utility seeks to match a partial data entry to a name. (E.g., Hachamovitch, 14:55-15:3).

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

410. In the body of his report, Dr. Fox refers to Exhibit Q for an allegedly “detailed, element-by-element analysis,” but that exhibit includes no analysis whatsoever. (Fox Report, ¶173). Dr. Fox provides no rationale for his conclusion that Hachamovitch anticipates the ’843 Patent. In the claim chart included as Exhibit Q to his report, Dr. Fox reproduces quotes and figures from the patent with no further explanation. In my opinion, Dr. Fox has not shown how any claim elements are met. As I discuss in this section, it is also my opinion that Hachamovitch does not disclose the elements of the Asserted Claims or render them obvious.

**i. Dr. Fox does not establish that Hachamovitch discloses “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

411. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” It has construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered.”

412. To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not shown that the preamble is disclosed by Hachamovitch. Rather, Dr. Fox provides 23 pages of block quotations and figures from the patent without any accompanying analysis or explanation of their relevance. (Fox Report, Ex. Q, at 1-24). For example, Dr. Fox does not indicate what he considers to be the “document,” “method for finding data” or “first computer program.” It is my opinion that Dr. Fox has not provided any basis for his opinion that Hachamovitch practices the preamble or renders it obvious.

**ii. Dr. Fox does not establish that Hachamovitch discloses “displaying the document electronically using the first computer program”**

413. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to

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perform some task.” It has construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered.”

414. Dr. Fox again fails to identify what he considers to be the “first computer program” or the “document” allegedly subject to display. Rather, Dr. Fox cites the entire Abstract and provides 3 block quotations. (Fox Report, Ex. Q, at 24-25). It is my opinion that Dr. Fox has not provided any reasoned basis for his opinion that Hachamovitch practices this element or renders it obvious.

**iii. Hachamovitch does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

415. I understand that the Court construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” I further understand that the Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

416. Dr. Fox provides no explanation or analysis of how Hachamovitch meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what in Hachamovitch he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” or “analyzing.” Indicative of Dr. Fox’s lack of clarity or analysis is a series of block quotations apparently related to the ability to organize messages using filters. (Fox Report, Ex. Q, at 25-27).

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

It is, therefore, my opinion that Dr. Fox has failed to show how Hachamovitch renders this claim element obvious or anticipated by Hachamovitch.

417. Assuming that Dr. Fox believes the “first information” to be the partially-typed word being entered into an application (which I do not agree that it is), Hachamovitch does not disclose analyzing as that term is employed by the Asserted Claims. Rather than analyzing alleged first information “to determine if the first information belongs to one or more types of information that can be searched for,” Hachamovitch simply discloses using the alleged first information (a “partial data entry”) as a search term in order to find the name-completion pair. All partially-typed text words are compared with “name entries” in a suggestion list consisting of “name-completion pairs.” (Hachamovitch, 4:58-66). Moreover, as I discuss in more detail below, if identifying the relevant name-completion pair does constitute analysis within the meaning of the ’843 Patent, then Hachamovitch does not disclose searching for second information as required by subsequent claim elements.

418. Furthermore, a partial data entry (*i.e.*, the beginning of *any* word) is not a type of identifying or contact information.<sup>20</sup> Every partial data entry (longer, at least, than the minimum character threshold, if set) is used in an attempt to find a name-completion pair. (Hachamovitch, 14:66-15:54, Fig. 5). Nor is a partial data entry one of several types of information. Hachamovitch teaches comparing every partial data entry to the names in the suggestion list to identify a matching name-suggestion pair (so long as that data entry meets certain content-agnostic criteria such as length). There is no categorization of the partial data entry by type.

419. Hachamovitch discloses methods to tailor the identification of suggestions to specific contexts or to lessen the risk of identifying false positives. These do not constitute analysis;

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<sup>20</sup> The only concrete examples that Dr. Fox includes in his claim chart are autocompleting “Jun” to “June 26, 1997,” and “Juni” to “Juniper.” Neither a date nor a tree is identifying or contact information.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

rather, they make the search for the name-completion pair more efficient. For example, associating suggestion lists with specific paragraphs via paragraph styles simply identifies which suggestion list in which to perform the lookup. Likewise, requiring capitalization of the partial data entry and name to match simply introduces a search rule requiring upper-case and lower-case characters to be treated as distinct for purposes of searching the suggestion list. (*See* Hachamovitch, 5:18-36, 5:46-57, 6:53-60, 7:41-46, 7:47-61).

420. I have also observed that Dr. Fox quotes several passages that concern the insertion of a space following an accepted suggestion. (*E.g.*, Fox Report, Ex. Q, p. 26 (quoting Hachamovitch, 5:7-17, 7:13-17)). Those quotes are not germane. Identifying the presence of a period or space does not constitute the required analysis.<sup>21</sup> Among other shortcomings, only one type of information is at issue (delimiter characters); delimiter characters are not a type of contact or identifying information; and delimiter characters are not a type of information that can be searched for in Hachamovitch.

**iv. Dr. Fox does not establish that Hachamovitch discloses “retrieving the first information”**

421. Dr. Fox provides no explanation or analysis of how Hachamovitch meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what in Hachamovitch he believes constitutes “first information” or the “retrieving.” It is my opinion that Dr. Fox has not provided any justification for his opinion that Hachamovitch practices this element or renders it obvious, including with respect to any of the identified functionalities of Hachamovitch.

**v. Hachamovitch does not disclose “providing an input device, configured by the first computer program, that allows a user to**

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<sup>21</sup> *See* Hachamovitch, 14:52-54 (“A delimiter character is a character that signifies the end of a word, such as a space character or punctuation mark.”); Hachamovitch, 10:28-31 (“[A] partial data entry . . . is defined as a contiguous set of characters following a word boundary, such as a delimiter character.”).

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**enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and performing an action using at least part of the second information”**

422. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” I understand that the Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed so as to perform some task.”

423. Dr. Fox provides no explanation or analysis of how Hachamovitch meets this limitation. Instead, he offers 11 pages of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what in Hachamovitch he believes constitutes the “input device,” “first computer program,” “user command,” “operation” or any of the required aspects of that operation. It is my opinion that Dr. Fox has not provided any reasoned basis for his opinion that Hachamovitch practices this element or renders it obvious.

424. The only input device disclosed by Hachamovitch is the one able to “receive a command [from the user] indicating acceptance of the completion entry.” (Hachamovitch, 5:7-8; *see also* 9:7-9). Hachamovitch teaches that the user may “accept[] a suggestion using traditional acceptance keystrokes, such as the ‘tab’ key or the ‘enter’ key.” (Hachamovitch, 7:4-5; *see also* 4:18-20; Abstract; 10:54-56; 14:12-15). That input device does not, however, allow the user to enter a user command to initiate the operation required by the ’843 Patent, which comprises



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

“performing a search.” The only arguable search disclosed by Hachamovitch —identifying the “name” and corresponding completion—is completed *before* the user enters a command using the input device disclosed by Hachamovitch. Hachamovitch automatically identifies a suggestion (if one is found), which is displayed to the user. Then, the user can elect to accept it by entering the command. (*E.g.*, Hachamovitch, 14:5-17; Abstract (“Suggested word completions, which may change as the user types a partial data entry, are displayed in a non-disruptive manner and selected using traditional acceptance keystrokes, such as the ‘tab’ key or the ‘enter’ key.”); 4:16-21; 6:61-7:5; 10:47-56). Because the search (to the extent one exists) has already been completed prior to the provision of the input device, the user’s command cannot initiate the search.

425. Further, the required search must use “at least part of the first information as a search term in order to find the second information.” If, as Dr. Fox may be intending to suggest, matching a “partial data entry” to a “name” in the “suggestion list” constitutes analyzing rather than searching, then Hachamovitch does not disclose using the first information as a search term. Once a partial data entry is matched to a name-completion pair, no further searching is performed or needed before presenting the suggestion to the user.

426. Finally, the search must be to find second information “of a specific type or type ... [that] depend[s] at least in part on the type or types of the first information.” However, Hachamovitch discloses at most one type of first information (partial data entries) and one type of second information (completions). Because there are neither multiple types of first nor second information, the type of second information cannot depend on the type of the first information.

427. For these reasons, Hachamovitch does not disclose this limitation or render it obvious.

- vi. **Hachamovitch does not disclose “in consequence of receipt by the first computer program of the user command from the input device,**

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**causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and”**

428. The Court has construed "computer program" to mean "a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task."

429. Dr. Fox provides no explanation or analysis of how Hachamovitch meets this limitation. Instead, he offers a series of block quotations without analysis or explanation of their relevance. Dr. Fox does not identify, for example, what he considers to be the "input device," "search term," "information source," "second computer program," "first computer program," or "second information." It is my opinion that Dr. Fox has not provided any justification for his opinion that Hachamovitch practices this element or renders it obvious, including with respect to any of the identified functionalities of Hachamovitch. In particular, Dr. Fox does not identify a second computer program. The passages that he quotes in support of this claim element neither mention nor relate to a supposed second computer program.

430. As discussed above with respect to the prior claim element, Hachamovitch does not disclose searching to the extent that Dr. Fox treats the identification of name-completion pairs as analyzing rather than searching. Either analyzing or searching is disclosed; finding a completion in a suggestion list cannot be both.

431. As also discussed with respect to the prior claim element, the user's command to accept the proposed completion does not cause the search. Rather, the user's command follows the search for the completion (under the incorrect interpretation that the identification of the completion involves the required search for second information).

432. In addition, Hachamovitch does not disclose a second computer program. Rather it discloses a utility integrated with the computer program displaying the document. For example,

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Hachamovitch explains, “Exemplary embodiments of the present invention *are incorporated into* the MICROSOFT OFFICE 97 suite of application programs . . . . The invention may be *deployed within, or in connection with,* the OFFICE 97 suite of application programs . . . .” (Hachamovitch, 9:44-52) (emphasis added). Hachamovitch further states that the utility “may be deployed on an individual application program basis or on an application-independent basis,” and if distributed in the latter manner the utility may “work *with several different application programs*, such as a word processing program, an e-mail program, a spreadsheet program, and so forth.” (Hachamovitch, 4:21-28). One of ordinary skill in the art would thus understand Hachamovitch’s references to deploying the autocomplete utility on an “application-independent basis” indicates that the autocomplete utility is not a self-contained set of instructions (and thus cannot be a second computer program under the Court’s construction). For example, Hachamovitch explains, “To deploy the word completion system as an application-independent utility, an interface is defined within each application program through which the word completion utility may communicate with each application program. This allows the word completion utility to monitor the entry of characters into the application program user interface, to determine the location within the user interface to display the word completion frame, and to determine when the user had invoked the word completion user interface. The only potential drawback of an application-independent deployment may be a slight reduction in the speed at which the word completion system performs its operations.” (Hachamovitch, 8:6-17)

433. As a further indication that the utility of Hachamovitch is not a computer program under the Court’s construction, Hachamovitch teaches limiting a given suggestion list to partial data entries “occurring at the start of a paragraph, occurring at the end of a paragraph, and so forth.” (Hachamovitch, 4:46-48). In order to execute this functionality, the autocomplete utility must have

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

access to more than a buffer of recent keystrokes; it must be informed by components of the first computer program of the structure of the document and where the user is working in that document's structure. Yet further, Hachamovitch teaches associating different suggestion lists with different portions of a single document by associating those lists with the specific styles associated with individual paragraphs. (*E.g.*, Hachamovitch, 5:26-36.) The association with and processing of styles for paragraphs is accomplished within a first computer program, such as Microsoft Word, further emphasizing the close integration of the utility and the other components of the first computer program, and the dependency of the utility on the first computer program.

434. Hachamovitch provides no details of how the utility could operate as a separate computer program. Given the tight integration of the utility with the first computer program described above, one of ordinary skill in the art would need such a description in order to implement such an invention.

435. It is therefore my opinion that Hachamovitch does not disclose this claim element or render it obvious.

- vii. **Hachamovitch does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

436. Dr. Fox also fails to explain how Hachamovitch relates to this claim element. He does not indicate, for example, what he considers to be the “second information,” “action” or “type or types of the first information.” Instead, he provides a series of block quotes without any analysis or explanation of their relevance. It is my opinion that Dr. Fox has not provided any justification for his opinion that Hachamovitch discloses this element or renders it obvious.

437. Nor does Hachamovitch disclose this claim element or render it obvious. First, as discussed above, Hachamovitch does not disclose the searching required by the claims. Second,

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

even *if* a name-suggestion pair (or bare suggestion) could be considered second information within the scope of the claim, this element would not be disclosed. Although the suggestion is presented to the user and, upon the user's acceptance, inserted into the text, (*E.g.*, Hachamovitch, 5:1-10), those actions are *not* "of a type depending at least in part on the type or types of the first information." As noted above, Hachamovitch discloses *at best* one type of first information (partial data entries). Because there is only one type of first information and one set of actions, the type of action is not dependent on the type of first information. The types do not vary.

438. Further, as also discussed above, Hachamovitch does not disclose searching to the extent that it identifies the identification of name-completion pairs as analyzing. Either analyzing or searching is disclosed; finding a completion in a suggestion list cannot be both.

viii. **Hachamovitch does not disclose Claim 8, "A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information."**

439. Because it is my opinion that Hachamovitch does not disclose claim 1 or render obvious claim 1, it is also my opinion that Hachamovitch does not disclose or render obvious claim 8, which depends from claim 1.

440. Moreover, Dr. Fox provides no explanation or analysis of how Hachamovitch meets this limitation. Instead, he provides a single block quote without any analysis or explanation of its relevance. For example, Dr. Fox does not indicate what in Hachamovitch he believes constitutes the "prompt," "information source" or "first information." It is, therefore, my opinion that Dr. Fox has failed to show how Hachamovitch renders this claim element obvious or anticipated by Hachamovitch.

441. Claim 8 requires a prompt to update the information source with *the* first information. One of ordinary skill in the art would understand that first information must be subject

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to the required analyzing. Hachamovitch does not, however, disclose any text in the document subject to the required analyzing.

- ix. **Hachamovitch does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

442. The body of claims 23 includes the same elements as claim 1. It is, therefore, my opinion that Hachamovitch does not disclose claim 23 or render claim 23 obvious for the same reasons it does not do so for claim 1.

443. Nor does Dr. Fox provide an explanation for his assertion that Hachamovitch discloses the preamble or renders it obvious. Rather, he cross-references claim 1, for which he also provides no explanation or analysis. It is my opinion that Dr. Fox has not provided any justification for his opinion that Hachamovitch discloses this element or renders it obvious.

- x. **Hachamovitch does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

444. Because Hachamovitch does not disclose the elements of claim 23 or render claim 23 obvious, it is also my opinion that it does not disclose claim 30 or render it obvious. It is also my opinion that Hachamovitch does not disclose or render obvious the additional requirements of this claim for the reasons discussed in paragraph 441.

445. Nor does Dr. Fox provide any explanation for his assertion that Hachamovitch discloses the additional requirement of claim 30. Rather, he cross-references claim 8, for which he also provides no explanation or analysis.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

**13. U.S. Patent No. 5,392,386 (“Chalas”) Does Not Invalidate the Asserted Claims**

446. US Patent No. 5,392,386 to Chalas (“Chalas”) discloses a method for interposing a common computer program which intercepts information exchanged between applications and an operating system. This allows it to capture user input such as keystrokes and mouse operations to add functionality to the applications and enable them to share information through a common “clipboard” area of memory. It discloses uses such as spell checking, looking up entries in an encyclopedia, translating text, matching a zip code to a city, and calculating mathematical formulae.

447. In the disclosed environment, Chalas operates by intercepting user inputs to an application program, such as keystrokes and mouse operations, before the operating system transmits them to the program, and, if particular inputs are detected, simulating other user inputs to the application program to cause it to copy text to a “clipboard.” (*E.g.*, Chalas 2:50-3:10; Fig. 3; 14:21-25). Chalas then pauses the application program and invokes a second pre-determined application program that can potentially modify the information in the clipboard (*E.g.*, *id.* 5:7-25). Then, Chalas simulates further keystrokes and mouse operations to copy the modified information to the clipboard and communicates a final input to the original application program to replace the original information with the modified information. (*E.g.*, *id.* 10:51-12:47, Fig. 6).

448. In the body of his report, Dr. Fox refers to Exhibit R for an allegedly “detailed, element-by-element analysis,” but that exhibit includes no analysis whatsoever. (Fox Report, ¶176). Dr. Fox provides no rationale for his conclusion that Chalas anticipates the ’843 Patent. In the claim chart included as Exhibit R to his report, Dr. Fox reproduces quotes and figures from the patent with no further explanation. In my opinion, Dr. Fox has not shown how any claim elements

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are met. As I discuss in this section, it is also my opinion that Chalas does not disclose the elements of the Asserted Claims or render them obvious.

- i. **Dr. Fox does not establish that Chalas discloses “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

449. To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not shown that the preamble is disclosed by Chalas or rendered obvious. Dr. Fox provides a series of block quotes and figures without any explanation or analysis. For example, Dr. Fox does not indicate what he considers to be the “document,” “method for finding data” or “first computer program.”

- ii. **Dr. Fox does not establish that Chalas discloses “displaying the document electronically using the first computer program”**

450. Dr. Fox provides no explanation or analysis of how Chalas meets this limitation. He instead offers a series of block quotations and figures without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Chalas he believes constitutes the “document” or “first computer program.” It is, therefore, my opinion that Dr. Fox has failed to show how Chalas renders this claim element obvious or anticipated by Chalas.

- iii. **Chalas does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information;”**

451. Dr. Fox provides no explanation or analysis of how Chalas meets this limitation. He instead offers a series of block quotations and figures without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Chalas he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” the “plurality



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of types of information,” or “analyzing.” It is, therefore, my opinion that Dr. Fox has failed to show how Chalas renders this claim element obvious or anticipated by Chalas.

452. I understand that the Court has construed “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The term “first information” has been construed to be “text in a document that can be used as input for a search operation in a source external to the document.”

453. It is my opinion that Chalas does not disclose this limitation or render it obvious. Chalas does not disclose the step of analyzing information from the document to determine whether the text to be copied to the clipboard is one of several predefined categories of contact or identifying information. Rather, Chalas performs a specific function based, for example, on a user’s selection of an entry in a menu created by the Chalas system (“the add-on menu”) that lists various functions that Chalas supports. (Chalas, 5:53-60, 8:25-43). The text processed by this function may be identified in a variety of ways, such as highlighting by the user, selecting all the text in a page of the document, within character delimiter or other boundaries, or by automatically transferring all text. (Chalas, 7:19-27). None of these means of identifying text to be processed entails determining the type of information represented by the text. In its preferred embodiment, when a user highlights or otherwise selects text, Chalas provides a menu giving the user an option to input a “trigger communication” to perform a function such as spell-checking, language translation, or solving mathematical equations, among other functional options. (Chalas, 6:54-56; 12:47-65). With the exception of an automatic spell-checking embodiment discussed below in

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

paragraph 455 (which still would not perform “analysis”), Chalas does not disclose any capability to analyze whether the selected text is of any particular type; in fact, Chalas is completely agnostic to the contents of the selected text. Chalas discloses no independent analysis of the text from the document and discloses no means to determine whether the first information is of any type.

454. Moreover, after the user selects a function from the menu, Chalas discloses performing this selected function without regard for the nature of the text. The highlighted or otherwise selected text is transferred to the clipboard without regard to its type—indeed, no type is disclosed in Chalas. (*E.g.*, Chalas, 7:13-27; 5:7-11).

455. In respect to its spell-checking feature, Chalas mentions “detect[ing]” a completed word and “check[ing it] instantly against a dictionary database as the user continues typing” (Chalas, 1:60-62), and “on-the-fly spell checking in that the spell checking is done automatically as the user completes the typing of each word” (Chalas, 8:45-47). However, neither the detecting function nor the identification of partially-typed words discloses the required “analyzing” for at least the following reasons. First, Chalas does not explain how detection occurs, and this to a person of ordinary skill in the art would suggest no more than detecting a word terminator such as a space or punctuation mark. Second, even were some more complex methodology employed to detect words (which Chalas does not disclose), detecting word boundaries does not constitute determining whether “first information belongs to one or more of several predefined categories of identifying ... or contact information” as a word is not a type of identifying or contact information. Third, Chalas discloses searching for every detected item in the spellcheck dictionary for a match. It does not disclose determining whether the first information is of a type of information that can be searched for.

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456. Chalas also mentions in passing translation (*e.g.*, Chalas, 9:66-7:2) and looking up words in an online encyclopedia (*e.g.*, Chalas, 13:49-56) as functions that its invention can support. These functions also take words (of no type) as input, and consequently do not disclose the required analyzing. Chalas further mentions “detecting Zip-Codes and providing the name of a town, state, etc.” (Chalas, 12:51-52) but does not disclose how such “detecting” might take place. Further, even if zip codes were considered contact information, they would be the only type of first information disclosed by Chalas and therefore not one of a plurality of types of first information as required by this limitation.

457. Chalas does not disclose determining if an input is of one or more of several predefined categories. First, as already discussed, Chalas does not disclose any analyzing to determine whether text is of any predefined category. Second, none of the disclosed examples of menu items provided in any disclosed embodiment cited above require such a determination. Each menu item causes Chalas to process text based on the user’s input. All of the disclosed menu items can be implemented without a determination of type.

458. For these reasons, Chalas does not disclose this limitation or render it obvious.

459. Additionally, Dr. Fox provides no guidance for the reader to assess whether any disclosures allegedly relating to other claim limitations are relevant, since they may refer to alternative “first information,” “document,” “second information,” “type(s),” etc., and hence not prove that Chalas invalidates the Asserted Claims.

**iv. Dr. Fox does not establish that Chalas discloses “retrieving the first information”**

460. Dr. Fox provides no explanation or analysis of how Chalas meets this limitation. He instead offers two block quotes without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Chalas he believes constitutes “retrieving” or “first information.”

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It is, therefore, my opinion that Dr. Fox has failed to show how Chalas renders this claim element obvious or anticipated by Chalas.

- v. **Chalas does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and performing an action using at least part of the second information”**

461. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I understand that “computer program” has been construed to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” I understand that “that allows a user to enter a user command to initiate an operation” has been construed by the Court to mean “that allows a user to enter an input or series of inputs to initiate an operation.”

462. Dr. Fox provides no explanation or analysis of how Chalas meets this limitation. He instead offers a series of block quotes and reproduces figures from Chalas without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Chalas he believes constitutes the “input device,” “first computer program,” “user command,” “operation” or any required element of that operation. It is, therefore, my opinion that Dr. Fox has failed to show how Chalas renders this claim element obvious or anticipated by Chalas.

463. It is also my opinion that Chalas does not disclose this claim element or render it obvious. Nothing in Chalas discloses an “input device” that is set up by a “first computer program” and initiates the required operation. To the contrary, Chalas discloses that the “first program”

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operates without awareness of the add-on menu's existence: "The application has no knowledge that the EXWAYS menu" exists. (Chalas, 6:48-49).

464. Chalas also does not disclose an input device that can be used to initiate the required search. First, that search must use "at least part of the first information," which one of ordinary skill in the art would understand to be the same first information subject to analyzing; however, as I discuss above, Chalas does not disclose the required analyzing.

465. Further, Chalas does not disclose that any information returned to the "first program" from the clipboard is of more than one type for any disclosed function. Nor, as I discussed above, does Chalas disclose analyzing to determine if text in the document "belongs to one or more of several predefined categories" of information, let alone categories of identifying or contact information. Therefore, even presuming that there were a type of "first information" as the Court has construed the term (which there is not), Dr. Fox cannot demonstrate that the type of a "second information" depends in any way on the type of "first information" used during the search.

466. For at least these reasons, Chalas does not disclose this limitation or render it obvious.

- vi. **Chalas does not disclose "in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and"**

467. I understand that "computer program" has been construed to mean "a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task."

468. Dr. Fox provides no explanation or analysis of how Chalas meets this limitation. He instead offers the unsupported statement, "Chalas discloses this claim element. See claim 1 above." No other portion of the claim chart, however, discusses how this claim element is met.

CONFIDENTIAL OUTSIDE COUNSEL ONLY

Therefore, it is my opinion that Dr. Fox has not established that Chalas discloses this claim element or renders it obvious.

469. It is also my opinion that Chalas does not disclose this claim element or render it obvious. First, as discussed above, Chalas does not disclose the required input device to which this claim limitation refers. Second, as noted in paragraph 463, Chalas does not describe the first computer program (*i.e.*, the computer program responsible for displaying the document) as receiving any command from the input. Rather, the Chalas system uses Windows routines to add its own menu to the user interface, and the “application has no knowledge that the EXWAYS menu now resides in its user interface.” (Chalas, 6:42-50).

470. Since Chalas does not disclose analyzing text in the document, it also does not disclose a search for at least part of the first information as required by this limitation.

**vii. Chalas does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

471. Dr. Fox provides no explanation or analysis of how Chalas meets this limitation. He instead offers the unsupported statement, “Chalas discloses this claim element. *See* claim 1 above.” No other portion of the claim chart, however, discusses how this claim element is met. Therefore, it is my opinion that Dr. Fox has not established that Chalas discloses this claim element or renders it obvious.

472. As discussed in the preceding paragraphs, Chalas does not disclose the required searching. Therefore, the action cannot depend on whether second information is found as required by this limitation.

473. Furthermore, as discussed in part above, the type of action taken by Chalas is determined entirely by the function specified by the user’s selection of a menu item, and not by

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any type (of which there is none) of the first information. There is no analyzing of the selected text's type, and the same actions are available regardless of the selection. (*See* paragraph 453. Therefore, the action does not depend in any part on the type of first information.

viii. **Chalas does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

474. Because it is my opinion that Chalas does not disclose claim 1 or render claim 1 obvious, it is also my opinion that Chalas does not disclose or render obvious claim 8, which depends from claim 1.

475. Moreover, Dr. Fox provides no explanation or analysis of how Chalas meets this limitation. He instead offers a series of block quotes from Chalas without analysis or explanation of their relevance. For example, Dr. Fox does not indicate what in Chalas he believes constitutes the “prompt,” “information source” or “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how Chalas renders this claim obvious or anticipated by Chalas.

476. Nor in my opinion does Chalas disclose this claim or render it obvious. First, it does not disclose a feature for adding text in the document to an information source outside the document in which Chalas searches. Second, claim 8 requires a prompt to update the information source with *the* first information. As I have discussed repeatedly above, that first information must be subject to the required analyzing. Chalas does not, however, disclose any text in the document subject to the required analyzing.

ix. **Chalas does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to**

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**the contents of a document using a first computer program running on a computer, the process comprising...”**

477. The body of claims 23 includes the same elements as claim 1. It is, therefore, my opinion that Chalas does not disclose claim 23 or render claim 23 obvious for the same reasons it does not do so for claim 1.

478. Nor does Dr. Fox provide an explanation for his assertion that Chalas discloses the preamble. Rather, he cross-references claim 1, for which he also provides no explanation or analysis. The two additional block quotations that Dr. Fox provides for claim 23—again without explanation or analysis—appear to relate only to whether Chalas discloses a computer readable medium. It is my opinion that Dr. Fox has not established that Chalas practices this element or renders it obvious.

**x. Chalas does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

479. Because Chalas does not disclose the elements of claim 23 or render claim 23 obvious, it is also my opinion that it does not disclose claim 30 or render it obvious. It is also my opinion that Chalas does not disclose or render obvious the additional requirements of this claim for the reasons discussed in paragraph 476.

480. Nor does Dr. Fox provide any explanation for his assertion that Chalas discloses the additional requirement of claim 30. Rather, he cross-references claim 8, for which he also provides no explanation or analysis.

***14. Selection Recognition Agent Does Not Invalidate the Asserted Claims***

481. The Selection Recognition Agent (“SRA”) was reported in a published paper: “The Selection Recognition Agent: Instant Access to Relevant Information and Operations”, M. Pandit



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and S. Kalbag, IUI97: 1997 International Conference on Intelligent User Interfaces (the “SRA Paper”).

482. Dr. Fox also states that SRA’s “design and operation” is evidenced in U.S. Patent No. 5,859,636 (the “Pandit Patent”); however, nothing in the SRA Paper or Pandit Patent indicates that SRA embodies the invention described by the Pandit Patent, and Dr. Fox provides no support for his assertion. In fact, the systems described in the Pandit Patent and the SRA Paper discuss different user interfaces. The Pandit Patent “provides a menu bar 13 in which the name of menu 12 corresponding to the class of text accented is highlighted or shown in bold type, thereby showing that the menu is enabled ....” (Pandit, 2:9-12). SRA “uses context menus, a well-known component of the Microsoft Windows 95 user interface,” which are known in the art to be presented when a user right-clicks on an icon that represents an application. (SRA, p. 48). Dr. Fox provides no evidence that other aspects of the method of the Pandit Patent was employed in implementing SRA. Thus, in my opinion, the Pandit Patent does not establish the functionality of SRA or the technology that it disclosed. Nor in my opinion, does the Pandit Patent disclose the elements of the Asserted Claims for the reasons described in paragraphs 519-554. Thus, even if the Pandit Patent did evidence the design and operation of SRA, it would only serve to reinforce my opinion that SRA does not disclose the elements of the Asserted Claims.

483. SRA was disclosed to run on Windows 95 and Windows NT operating systems. SRA monitors text selected by a user in a window or copied to the clipboard by a user. (SRA Paper, pp. 47-48). “*The application [in which that text originated] need not be aware of the existence of the SRA*” for SRA to operate (SRA Paper, p. 48). SRA can recognize certain place names (“geographical names”), dates, email addresses, phone numbers, names of Usenet Newsgroups, and URLs. SRA generates a “context menu” with “[o]perations relevant to the class

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of the recognized object.” (SRA Paper, p. 48-49). As discussed below, those operations comprise neither searching in order to find second information nor performing an action using at least part of the second information.

484. In the body of his report, Dr. Fox refers to Exhibit S for an allegedly “detailed, element-by-element analysis.” (Fox Report, ¶179). Exhibit S contains no such analysis. Dr. Fox provides no rationale for his conclusion that SRA discloses the elements of the ’843 Patent. In the claim chart included as Exhibit S to his report, Dr. Fox reproduces quotes and figures with no further explanation. In my opinion, Dr. Fox has not shown how any claim elements are met. As I discuss in this section, it is also my opinion that SRA does not disclose the elements of the Asserted Claims.

i. **SRA does not disclose “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

485. To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not shown that the preamble is disclosed by SRA or that SRA renders it obvious. Dr. Fox provides a series of block quotes without any explanation or analysis. For example, Dr. Fox does not indicate what he considers to be the “document,” “method for finding data” or “first computer program.”

486. Furthermore, the Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” It has construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered.” SRA does not disclose a document as construed by the Court, *i.e.*, “a word processing, spreadsheet, or similar file into which text can be entered.” Rather, it relates generally to “text objects appearing in any desktop window” (SRA

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Paper, p. 47; *see also* pp. 48, 51) or the clipboard (SRA Paper, p. 48). Similarly, SRA discloses no specific “first computer program,” *i.e.*, “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” As discussed below, SRA does not describe “finding data related to the contents of a document”

ii. **SRA does not disclose “displaying the document electronically using the first computer program”**

487. Dr. Fox provides no explanation or analysis of how SRA meets this limitation. Dr. Fox does not indicate what he considers to be the “first computer program” used for “displaying the document electronically” or what he considers that “document” to be, nor does SRA disclose this claim element. It is, therefore, my opinion that Dr. Fox has failed to show how SRA renders this claim element obvious or anticipated by SRA.

488. As discussed above with respect to the preamble, SRA does not disclose a document or a “first computer program” as those terms have been construed by the Court.

489. SRA is not itself responsible for displaying any text-based document. Rather, the text it recognized is associated with the displays of “other applications.” “The SRA acquires text for recognition in one of two ways. The first way is by monitoring user actions in other applications. In most applications, when the user selects text by dragging the mouse to highlight it, the SRA acquires the text and attempts to recognize meaningful objects within it. *The application need not be aware of the existence of the SRA.* The second way is by monitoring the clipboard.” (SRA Paper, p. 48). SRA never identifies what these other “applications” might be.

490. For these reasons, SRA does not disclose this limitation or render it obvious.

iii. **SRA does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a**

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**plurality of types of information that can be searched for in order to find second information related to the first information”**

491. The Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.” The Court construed “document” as “a word processing, spreadsheet, or similar file into which text can be entered.”

492. Dr. Fox provides no explanation or analysis of how SRA meets this limitation. He offers a series of block quotations with no explanation of their relevance. For example, Dr. Fox does not indicate what in SRA he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” or “analyzing.” It is, therefore, my opinion that Dr. Fox has failed to show how SRA renders this claim element obvious or anticipated by SRA.

493. As discussed above with respect to limitation 1a), SRA does not disclose displaying a “document.” Because no document is disclosed, no “information source external to the *document*” is disclosed for searching, no analysis “while the *document* is being displayed” is disclosed, and no “analyzing . . . first information from the *document*” is disclosed. Likewise, no “first information” is disclosed because no “text in a *document* . . .” is disclosed. and, as noted in paragraph 494, no searching is disclosed.

494. SRA does not disclose analysis “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in

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an information source external to the document.” The SRA Paper states that “SRA includes six recognition modules for geographic names, dates, email addresses, phone numbers, Usenet newsgroup name components, and URLs, as well as a module that enables useful operations on text in general.” (SRA Paper, p. 47). Dates, URLs and “text in general” are not identifying or contact information. (*See Memorandum Opinion on Claim Construction*, p. 14 n.11). With respect to the remaining types of first information, no use of that type of first information for searching is disclosed. For example, geographic names are simply used to visit the CityNet web site; an email address is used to open an email program; a phone number is used to open a phone book program and copy the phone number to the clipboard; the Usenet Newsgroup name is used to retrieve the FAQ page of that newsgroup. (SRA Paper, pp. 49, 51-52). Likewise, even were URLs and dates types of identifying or contact information (which they are not), SRA does not disclose the ability to search for them. (SRA Paper, pp. 49, 52).

495. For at least these reasons, SRA does not disclose this limitation or render it obvious.

**iv. SRA does not disclose “retrieving the first information”**

496. Dr. Fox provides no explanation or analysis of how SRA meets this limitation. He offers a series of block quotations with no explanation of their relevance. Dr. Fox does not indicate what in SRA he believes constitutes “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how SRA renders this claim element obvious or anticipated by SRA.

497. SRA also does not disclose this element. As noted above, the Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.” As discussed in paragraphs 486, SRA does not disclose a document and, therefore, does not disclose doing anything with text in a document or in an information source external to a document. SRA also fails to disclose the use of recognized text

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for searching, as I note in paragraph 494. Thus, SRA does not disclose use of “first information” and cannot disclose its retrieval as required by this claim element.

v. **SRA does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising ...”**

498. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” As noted above, I understand that the Court construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

499. Dr. Fox provides no explanation or analysis of how SRA meets this limitation. He offers a series of block quotations with no explanation of their relevance. For example, Dr. Fox does not indicate what in SRA he believes to be the “input device,” “first computer program,” “user command” or “operation.” With respect to the first component of the operation, he does not indicate what he considers to be the “search[],” “first information,” the “second information,” or the external “information source,” or the dependency of the second information on the first information. It is, therefore, my opinion that Dr. Fox has failed to show how SRA renders this claim element obvious or anticipated by SRA.

500. Even if the contextual menus and/or icon referred to on page 49 of the SRA Paper were considered an input device, it is SRA rather than the “applications” that sets them up. In fact, the SRA Paper emphasizes, “*The application need not be aware of the existence of the SRA.*” (SRA Paper, p. 48). The context menu that allows a user to enter a user command to initiate an operation is provided by SRA itself, not a program displaying a document. “When the user right-clicks on

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the SRA, a context menu appears (Figure 2) showing operations that are currently available.” (SRA Paper, p. 48).

501. When SRA thereafter recognizes a text object, “*the SRA* adds submenus for each class of operations to its context menu,” and “[*t*]/*he SRA* can be configured to perform a default operation—the first operation in the main menu—when the user double-clicks on its icon.” (SRA Paper, p. 49 (emphasis added); *see also* SRA Paper, p. 50 (“The SRA changes its icon to that of the recognizer, and adds the recognizer’s operations to its context menu. If less specific recognizers were also activated, the SRA asks them for the names of operations they support, and adds these to the sub-menus of its context menu.”)).

502. SRA does not disclose the ability to initiate the first half of the required operation. First, as discussed in paragraph 493, SRA does not disclose use of “first information.” Second, as discussed in paragraph 494, SRA does not disclose use of a plurality of types of identifying information or contact information for searching. Third, because, as discussed above in paragraph 494, SRA does not perform a search, it also does not disclose finding second information, and it cannot disclose second information “of a specific type or types” that depends on the type of first information. Fourth, SRA does not disclose a document and, therefore, cannot disclose searching in an information source external to that document.

503. SRA also does not disclose the second half of the required operation: “performing an action using at least part of the second information.” Because SRA does not perform a search to find “second information,” let alone a search initiated by an input device as required by the claim limitation, it cannot perform an action using at least part of that second information. Thus, Dr. Fox does not, and indeed cannot, identify any “action,” and none of the text that he quotes relates to performing an action using a search result.

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504. For at least these reasons, SRA does not disclose this limitation or render it obvious.

- vi. **SRA does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and”**

505. Dr. Fox provides no explanation or analysis of how SRA meets this limitation. He offers a series of block quotations with no explanation of their relevance. Dr. Fox does not indicate what in SRA he believes constitutes any element of the claim, including the “first computer program,” the “user command,” the “input device,” the “information source,” the “second computer program,” or the “second information.” It is, therefore, my opinion that Dr. Fox has failed to show how SRA renders this claim element obvious or anticipated by SRA.

506. Moreover, SRA does not disclose this claim element. For example, as discussed in paragraph 489, no “first computer program” responsible for displaying the document is disclosed, and as discussed in paragraph 500 the SRA icon and/or contextual menu (to the extent Dr. Fox assumes them to be the input device) are components of the SRA itself. It is the SRA that receives the user command and not the component responsible for displaying the document, which the SRA Paper emphasizes “*need not be aware of the existence of the SRA.*” (SRA Paper, p. 48). The SRA Paper states, “When the user selects an operation from the context menu, *the SRA* asks the appropriate recognizer to perform the appropriate operation on the last object it recognized.” (SRA Paper, p. 50 (emphasis added)). Thus, it is SRA that receives the user command and causes a subsequent process to occur.

507. That subsequent process does not, moreover, constitute the required search. As discussed in paragraphs 494 and 502, SRA does not disclose searching for all or part of the first information in order to find second information. SRA, therefore, also does not disclose use of a second computer program for searching.



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- vii. **SRA does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

508. Dr. Fox provides no explanation or analysis of how SRA meets this limitation. He offers a series of block quotations with no discussion of their relevance. Dr. Fox does not indicate what he considers to be the “searching,” “action,” “second information,” or the action. It is, therefore, my opinion that Dr. Fox has failed to show how SRA renders this claim element obvious or anticipated by SRA.

509. As discussed above in paragraphs 494, 502, and 507, SRA does not disclose the claimed search. Thus, there is no second information with which to perform the required action, let alone an action “of a type depending at least in part on the type or types of the first information.” Moreover, because, as discussed, for example, in paragraph 493 SRA does not disclose “first information”, the action cannot depend at least in part on the type or types of the first information.

- viii. **SRA does not Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

510. Dr. Fox cites only disclosures of the Pandit Patent related to this claim; however, as noted in paragraph 482 neither he nor the material he quotes establishes that SRA embodies the invention disclosed in that patent. Thus, Dr. Fox has identified no evidence that SRA practices this limitation. Moreover, because SRA does not disclose the elements of claim 1 from which claim 8 depends, SRA does not disclose claim 8 or render claim 8 obvious.

511. With respect to the additional limitation of claim 8, Dr. Fox again fails to identify both the “information source” and the “first information.” As discussed in paragraph 493 SRA discloses no first information. As discussed in paragraphs 494, 502, and 507, SRA discloses no searching and, therefore, no information source in which a search occurs is disclosed.

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512. In fact, the only arguable prompts disclosed by SRA are the contextual menu and icon. These contain no items related to adding information that is analyzed as required by claim 1 to *any* information source.

513. For at least these reasons, SRA does not disclose claim 8 or render it obvious.

- ix. **SRA does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

514. The body of claims 23 includes the same elements as claim 1. It is, therefore, my opinion that SRA does not disclose claim 23 or render claim 23 obvious for the same reasons it does not do so for claim 1.

515. Nor does Dr. Fox provide an explanation for his assertion that SRA discloses the preamble. Rather, he cross-references claim 1, for which he also provides no explanation or analysis. Although Dr. Fox also reproduces block quotes and figures for claim 23, these are again offered without explanation or analysis and do not overcome the shortcomings of SRA that I identify with respect to claim 1.

- x. **SRA does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

516. Because SRA does not disclose the elements of claim 23 or render claim 23 obvious, it is also my opinion that it does not disclose claim 30 or render it obvious. It is also my opinion that SRA does not disclose or render obvious the additional requirements of this claim for the reasons discussed in paragraph 512.

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517. Nor does Dr. Fox provide any explanation for his assertion that SRA discloses the additional requirement of claim 30. Rather, he cross-references claim 8, for which he also provides no explanation or analysis.

518. Consequently, for at least the above reasons, Dr. Fox has failed to prove that SRA anticipated Claims 1, 8, 23, or 30.

***15. U.S. Patent No. 5,859,636 (“Pandit”) Does Not Invalidate the Asserted Claims***

519. Pandit “pertains to recognition of text in a body of text as belonging to a predetermined class and performing an operation relevant to the recognized text.” (Pandit, 1:51-53). Pandit determines the class (if any) of text selected by the user and then provides a menu from which the user can select one or more actions relevant to the text’s class to be performed. (*E.g.*, Pandit, at 2:33-50).

520. In the body of his report, Dr. Fox refers to Exhibit T for an allegedly “detailed, element-by-element analysis.” (Fox Report, ¶182). Exhibit T contains no such analysis. Dr. Fox provides no rationale for his conclusion that Pandit discloses the elements of the ’843 Patent. In the claim chart included as Exhibit T to his report, Dr. Fox reproduces quotes and figures with no further explanation. In my opinion, Dr. Fox has not shown how any claim elements are met. As I discuss in this section, it is also my opinion that Pandit does not disclose or render obvious the elements of the Asserted Claims.

521. As discussed in more detail below, Pandit fails to disclose essential elements of the Asserted Claims. These shortcomings include, at least, the absence of any functionality related to searching or use of second information and the lack of a first computer program that not only displays the document but also sets up the input device and receives the user command.

- i. **Pandit does not disclose “A computer-implemented method for finding data related to the contents of a document using a first**

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**computer program running on a computer, the method comprising:”**

522. To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not shown that the preamble is disclosed or render obvious by Pandit. Dr. Fox provides a series of block quotes and citations to Pandit without any explanation or analysis. For example, Dr. Fox does not indicate what he considers to be the “document,” “method for finding data” or “first computer program.”

523. Although I take no position on whether the preamble is limiting, it is my opinion that Pandit does not disclose “finding data related to the contents of a document using a first computer program.” As I discuss in greater detail below, Pandit does not disclose searching for or finding related data.

**ii. Dr. Fox does not establish that Pandit discloses “displaying the document electronically using the first computer program”**

524. Dr. Fox does not offer any explanation or analysis of how Pandit meets this limitation. Instead, he provides a single unanalyzed block quote and a single citation. Dr. Fox does not identify, for example, what he considers the “document” to be. It is, therefore, my opinion that Dr. Fox has failed to show how Pandit renders this claim element obvious or anticipated by Pandit.

**iii. Pandit does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

525. The Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Court construed

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“first information” to mean “text in a document that can be used as input for a search operation in a source external to the document.”

526. Dr. Fox provides no explanation or analysis of how Pandit meets this limitation. Instead he offers block quotations and reproduces a figure with no explanation of their relevance. For example, Dr. Fox does not indicate what in Pandit he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” or “analyzing.” It is, therefore, my opinion that Dr. Fox has failed to show how Pandit renders this claim element obvious or anticipated by Pandit.

527. Pandit does not disclose this claim element or render it obvious because it performs no analysis to identify “categories of identifying information . . . or contact information . . . that can be searched for in an information source external to the document.” Although Pandit analyzes text to determine its class (*e.g.*, Pandit, 2:24-31), it does not disclose a single instance in which a type of identifying or contact information (let alone a plurality of such types) is used for searching. Rather than first obtaining second information that can be used to perform an action, Pandit teaches performing an action using the first information itself. For example, Figures 1d and 1f offer examples of how Pandit would allow the user to utilize a recognized email address or telephone number, respectively:

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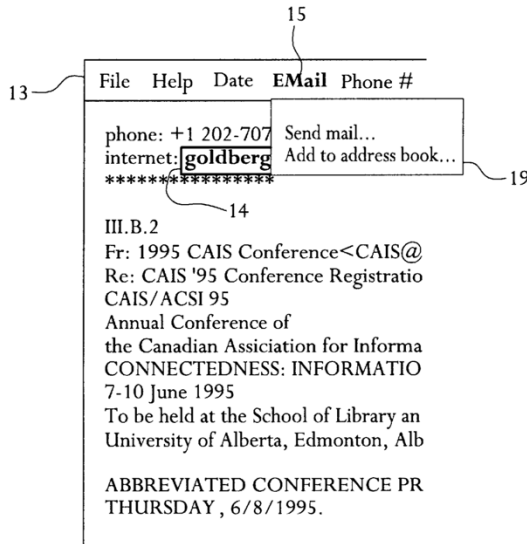


FIG. 1d

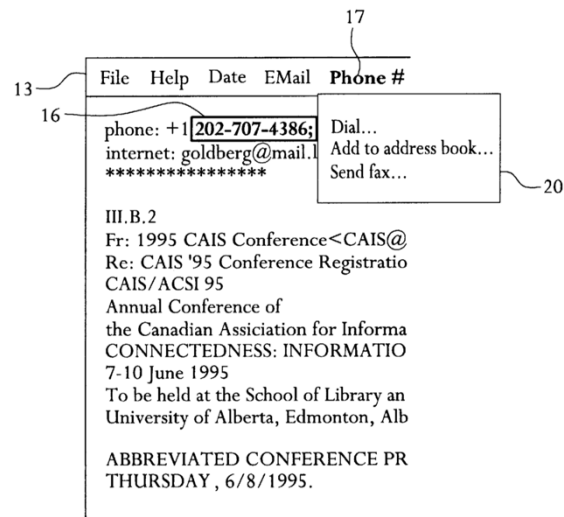


FIG. 1f

528. As illustrated in these Figures, an email address can be used to initiate such operations as sending an email (potentially preaddressed to the recognized email address) or adding the email address to the address book. (See also Pandit, 2:53-63 (“The Email menu preferably includes, for example, an identification of programs and operations related to Email and Email addresses. An embodiment of pulled-down Email menu 19 is shown in FIG. 1d. Included in pulled-down Email menu 19 are such programs as a writable Email or general address book database and an Email template and transmitting program, preferably automatically *addressed with the accented address recognized in the text*, etc.”) (emphasis added)). Likewise, a telephone number can be used to dial that number, to add that number to the address book or to send a fax to that telephone number. (See Pandit, 3:1-10 (“As shown in FIG. 1f on pulled-down menu 20, possible programs include a writable computer database of telephone an telefax numbers, a program which instructs a properly equipped computer to dial the number accented, a program which generates a template for the preparation of a fax message and which subsequently causes a properly equipped computer to transmit the message to the accented number, etc.”)). That is,

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Pandit discloses using the first information to perform an action, rather than disclosing using the first information as a search term in order to find related second information with which an action can be performed. (*See, e.g.*, Pandit 4:13-15 (“[S]ubroutine b (32) of Library A performs the identified operation on the recognized text data.”) As such, it neither analyzes first information (“text . . . that can be used as input for a search operation”) nor analyzes text in order to determine whether it of a plurality of “categories of identifying information . . . or contact information . . . that can be searched for.”

529. Pandit alludes to the use of recognized nouns and verbs to provide access to definitions, synonyms, plural and conjugations. (Pandit, 3:12-16). This does not cure the defects of Pandit discussed in the preceding paragraph for at least the following reasons. First, the types noun and verb are not categories of identifying or contact information. Second, Pandit does not in fact teach using nouns or verbs to search for the definitions, synonyms, plural and conjugations. It states only that the program would “identify[] executable programs which provide” access to such information by unspecified means. (Pandit, 3:12-13; *see also* Pandit, 2:33-35 (“The pull-down menus provided by the invention identify the operations *and/or programs* which relate to the class of text accented . . . .” (emphasis added)). It does not disclose how such access might be provided, let alone that a menu item will be provided that causes a search to be performed.

**iv. Pandit does not disclose “retrieving the first information”**

530. Dr. Fox provides no explanation or analysis of how Pandit meets this limitation. He offers a series of block quotations with no explanation of their relevance. Dr. Fox does not indicate what in Pandit he believes constitutes “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how Pandit renders this claim element obvious or anticipated by Pandit.

531. As discussed in paragraphs 527 and following Pandit does not disclose the required searching. Because the Court construed “first information” to mean “text in a document that can

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be used as input for a search operation in a source external to the document,” first information is not present in Pandit. Therefore, Pandit cannot disclose “retrieving the first information.”

- v. **Pandit does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising (i) performing a search using at least part of the first information as a search term in order to find the second information, of a specific type or types, associated with the search term in an information source external to the document, wherein the specific type or types of second information is dependent at least in part on the type or types of the first information, and (ii) performing an action using at least part of the second information”**

532. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” I further understand that “computer program” was construed to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

533. Dr. Fox provides no explanation or analysis of how Pandit meets this limitation. He offers a series of block quotations and figures with no explanation of their relevance. For example, Dr. Fox does not indicate what in Pandit he believes to be the “input device,” “first computer program,” “user command” or “operation.” With respect to the first component of the operation, he does not indicate what he considers to be the “search[],” “first information,” the “second information,” or the external “information source,” or the dependency of the second information on the first information. It is, therefore, my opinion that Dr. Fox has failed to show how Pandit renders this claim element obvious or anticipated by Pandit.



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534. Pandit does not disclose this claim element. For example, Pandit does not disclose an input device that the first computer program—*i.e.*, the computer program responsible for displaying the document—sets up. To the contrary, Pandit discloses implementing its invention—including providing any necessary input device—through libraries that are distinct from the computer program (if any) responsible for displaying the analyzed text and are imported into a separate application. (*See, e.g.*, Pandit, 3:36-37 (“[T]he invention is implemented in one or more modular libraries or subroutines.”); 3:60- 4:12 (“Subroutine c (33) of Library A provides the menu name corresponding to Library A . . . . For example, subroutine c provides the name Date or Dates 12. This name appears in menu bar 13, as shown in FIG. 1a . . . . Subroutine e provides the names of the operations as they appear in pull-down menu 18 . . . .”; 4:52-55 (“[A]n application 29 using the invention will use standards known to those skilled in the art to check for the presence of any libraries. Once recognized, the application 29 will be able to use any or all of the libraries.”). In particular, Pandit offers the following description of the creation of the menus and menu items disclosed in the specification explaining that it is “application 29”—shown in Fig. 3 incorporating each of the invention’s libraries—that builds these menus rather than any first computer program.

nizable. At run-time, application **29** will identify, for example, the presence of Library A (steps **41** and **42** of FIG. **4**). Subroutine c of Library A informs application **29** of the  
 65 name of the Library (step **43**), which of course will be used as one of the names of the menu of operations of appearing in the menu bar. Application **29** subsequently queries sub-

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

routine d of Library A for the number of operations Library A is capable of performing on the recognized data (step 44). Subroutine e provides to application 29 the names for each of the number of operations identified, e.g. Schedule, Calendar, To-Do, Anniversary, etc. (step 45). Application 29 5 will repeat the process outlined above to build menus relating to every library which is part of the invention (Step 46). This menu-building procedure at run time allows libraries to be added and to be upgraded at any time, for example to add additional operations performable on a piece of 10 recognized text, without a need for recompiling the program.

Conventional programs that provide any text recognition and operation capabilities, i.e., find and replace, etc. require the text to be embedded in, for example, a document created 15 by the program. This invention does not require that the text be embedded in any document created on or by a particular application program. Any text appearing on a video monitor can be operated on by the invention, whether the text is within an EMail message, World-Wide Web site, created by 20 a word processing or database program, etc. Furthermore, by

(Pandit, at 4:62-5:21). The final two sentences of the above quote are especially instructive. If the menu items were built by each first computer program, then the functionality provided by Pandit would only be available with respect to text displayed by that computer program; however, Pandit states that “[a]ny text appearing on a video monitor can be operated on by the invention” and it gives examples of text found in documents displayed by different first computer program.

535. This separation of the first computer program from the input device is not accidental or incidental to Pandit’s invention. Pandit teaches that “[a]ny text appearing on a video monitor can be operated on by the invention” (Pandit, at 5:12-24). Pandit contrasts the ability of “[t]he present invention [to] benefit any application which displays text to a user” with allegedly inferior prior art in which “words created using a particular word processing or database program can be recognized and operated on only by the word processing or database program responsible for their

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

creation” (Pandit, at 1:35-43). Were the input device to depend on the first computer program, Pandit could not deliver the promised platform-wide availability of its invention.

536. Pandit also fails to disclose an input device that can be used to initiate the required operation. That operation must comprise “performing a search”; yet, as I discuss in paragraphs 527 and following above, Pandit does not disclose searching.<sup>22</sup> When Pandit has identified the class of the ‘first information’, no ‘second information’ is needed to perform the claimed action of Limitation 1f). Hence, no search is required to find second information. Consequently, Pandit does not disclose second information.

537. I further understand that the question of whether Pandit discloses a search has been thoroughly litigated in both *inter partes* review before the Patent Trial and Appeal Board (“PTAB”) and subsequently on appeal to the Federal Circuit. I understand that both the PTAB and the Federal Circuit concluded that Pandit does not disclose a search.

538. Because Pandit does not disclose searching—through which second information is to be found—it also fails to disclose “performing an action using at least part of the second information.” As discussed in paragraph 527, the relevant actions disclosed by Pandit utilize the text subject to analyzing rather than second information—to the extent that they utilize any text at all.<sup>23</sup>

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<sup>22</sup> It also, therefore, fails to disclose the specific type of searching required by the claim element: *e.g.*, “using at least part of the first information” (recall, as well, that no “first information” is disclosed), “in order to find the second information . . . associated with the search term in an information source external to the document,” and “wherein the specific type or types of second information is dependent at least in part on the type or types of the first information.”

<sup>23</sup> Nouns and verbs are not an exception. For example, as discussed in paragraphs 529-**Error! Reference source not found.**, nouns and verbs do not qualify under the Court’s construction as among the “plurality of types of information” analyzed for in the previous claim element. Assuming, for the sake of argument, that a search is performed using the verb or noun to find definitions, synonyms, plurals or conjugations, Pandit does not disclose performing any action using the definitions, synonyms, plural or conjugation found. Nor would one of ordinary skill in the art understand Pandit to disclosing searching for plurals or conjugations. As a result, Pandit could not disclose that the “specific type or types of second information is dependent at least in part on the type or types of the first information” since the only two alleged types used for searching—names and nouns—both return definitions and

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539. Consequently, Pandit does not disclose this claim element.

- vi. **Pandit does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and”**

540. The Court has construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

541. Dr. Fox provides no explanation or analysis of how Pandit meets this limitation. He offers a series of block quotations and figures with no explanation of their relevance. Dr. Fox does not indicate what in Pandit he believes constitutes any element of the claim, including the “first computer program,” the “user command,” the “input device,” the “information source,” the “second computer program,” or the “second information.” It is, therefore, my opinion that Dr. Fox has failed to show how Pandit renders this claim element obvious or anticipated by Pandit.

542. As I have discussed with respect to the prior claim elements, it is my opinion that Pandit does not disclose searching. I understand that the PTAB and Federal Circuit have reached the same conclusion. It is also my opinion that Pandit does not disclose performing any aspect of its invention (let alone a search) “in consequence of receipt by the first computer program of the user command from the input device.” As previously discussed, Pandit intentionally separates its invention, including that invention’s menu and menu items, from such computer programs as may display the analyzed text. The logic responsible both for creating the input device and for responding to the user's command is localized in the libraries of the separate application disclosed

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synonyms. Furthermore, Pandit has not identified an “information source external to the document” as previously discussed in paragraph **Error! Reference source not found.**

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by Pandit. Finally, because no searching is disclosed, it is necessarily my opinion that “using a second computer program” for the search is not disclosed.

- vii. **Pandit does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

543. Dr. Fox provides no explanation or analysis of how Pandit meets this limitation. He offers a series of block quotations and figures with no discussion of their relevance. Dr. Fox does not identify, for example, what he considers to be the “searching,” “action,” “second information,” or the action. It is, therefore, my opinion that Dr. Fox has failed to show how Pandit renders this claim element obvious or anticipated by Pandit.

544. It is also my opinion that Pandit does not disclose this claim element. As I have discussed repeatedly, Pandit does not disclose performing a search. Thus, it does not disclose finding second information and cannot disclose performing an action using any part of the second information—let alone an action “of a type depending at least in part on the type or types of the first information.” Because Pandit discloses no searching, it is also my opinion that Pandit discloses no use of “first information,” which I understand the Court to have construed to mean “text in a document that can be used as input for a search operation in a source external to the document.”

- viii. **Pandit does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

545. Because Pandit does not disclose the elements of claim 1 or render claim 1 obvious, it does not anticipate claim 8 or render claim 8 obvious.

546. Furthermore, Dr. Fox does not explain how this claim element is disclosed. Instead, he cross-references claim 1 and then reproduces two figures from the patent. He does not identify,

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for example, what he considers to be the “prompt,” “information source” or “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how Pandit renders this claim obvious or anticipated by Pandit.

547. I also disagree that Pandit discloses a prompt for updating the information source to include the first information and, specifically, that the “Add to address book...” menu item which Dr. Fox seems to believe constitutes such a prompt. The information source referred to by the ’843 Patent is the data store where the search to find second information, using at least part of the first information as a search term, occurs. Because Pandit does not disclose searching, it does not disclose the required information source to which the first information might be added. For similar reasons, Pandit cannot provide a prompt to add the first information because first information is “text in a document that can be used as input for a search operation in a source external to the document.”

- ix. **Pandit does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

548. The body of claims 23 includes the same elements as claim 1. Pandit does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above.

549. Nor does Dr. Fox provide an explanation for his assertion that Pandit discloses the preamble. Rather, he cross-references claim 1, for which he also provides no explanation or analysis.

550. Although I take no position on whether the preamble is limiting, it is also my opinion that Pandit does not disclose “finding data related to the contents of a document using a first computer program,” as I note above with respect to claim 1 in paragraphs 522-523.

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551. Consequently, Dr. Fox has failed to prove that Pandit invalidates claim 23.

- x. **Pandit does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

552. Because Pandit does not disclose the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious.

553. It is also my opinion that Pandit does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraphs 546 and 547. Dr. Fox offers no additional argument regarding “providing a prompt . . .” other than to reproduce the same to figures provided for claim 8.

554. Therefore, Dr. Fox has not shown that this claim element is either disclosed or obvious. Nor could he show that this claim element is disclosed: as I have discussed repeatedly, Pandit does not disclose searching.

***16. U.S. Patent No. 6,085,201 (“Tso”) Does Not Invalidate the Asserted Claims***

555. U.S. Patent No. 6,085,201 to Tso (“Tso”) discloses a “template engine” that is used “to automatically generate a text message, whether in response to a previously-received message or ‘from scratch,’ whose meaning corresponds to certain user-selected words or phrases.” (Tso, 1:58-64). That is, Tso is a template engine that is a kind of mixed-initiative natural-language understanding system.

556. In the disclosed preferred embodiment, Tso provides a collection of predefined templates, each of which contains a text string incorporating alternative phrases, substrings, and input forms that can be employed by a user to compose a textual message using minimal keyboard interaction. (Tso, 2:59-61). Each template is stored in a database, associated with a collection of “keywords,” each of which has a “weight.” (Tso, 3:15-19, 2:9-16). Tso operates by identifying a

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set of “search words” within a text string corresponding to a sentence selected by the user. (*E.g.*, Tso, 5:1-6). (The method for selecting these search words is to decompose the text string into its constituent words. (Tso, 2:9-11)). Tso then searches the database of templates using an array of search words as a search term that is matched with the keywords of each template to identify the template or templates with the highest score based upon the weighted values assigned to matching keywords. (*E.g.*, Tso, 2:11-20; 5:7-17; 5:23-41). Tso presents the identified template or templates to the user, who can then elect to use one of them (*E.g.*, Tso 5:42-6:24).

557. In the body of his report, Dr. Fox refers to Exhibit O for an allegedly “detailed, element-by-element analysis.” (Fox Report, ¶168). Exhibit O contains no such analysis. Dr. Fox provides no rationale for his conclusion that Pandit discloses the elements of the ’843 Patent. In the claim chart included as Exhibit O to his report, Dr. Fox reproduces quotes and figures with no further explanation. In my opinion, Dr. Fox has not shown how any claim elements are met. As I discuss in this section, it is also my opinion that Tso does not disclose the elements of the Asserted Claims.

i. **Dr. Fox does not establish that Tso discloses “A computer-implemented method for finding data related to the contents of a document using a first computer program running on a computer, the method comprising:”**

558. I understand that the Court construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered” and “computer program” to be “a self-contained set of instructions, as opposed to a routine or library, intended to be executed so as to perform some task.”

559. To the extent that the preamble is considered limiting, it is my opinion that Dr. Fox has not shown that the preamble is disclosed by Tso. Dr. Fox provides a series of block quotes and



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citations to Pandit without any explanation or analysis. For example, Dr. Fox does not indicate what he considers to be the “document,” “method for finding data” or “first computer program.”

**ii. Dr. Fox does not establish that Tso discloses “displaying the document electronically using the first computer program”**

560. I understand that the Court construed “document” to mean “a word processing, spreadsheet, or similar file into which text can be entered” and “computer program” to be “a self-contained set of instructions, as opposed to a routine or library, intended to be executed so as to perform some task.”

561. Dr. Fox does not offer any explanation or analysis of how Tso meets this limitation. Instead, he provides a single unanalyzed block quote and a single citation. Dr. Fox does not identify, for example, what he considers the “document” to be. It is, therefore, my opinion that Dr. Fox has failed to show how Tso renders this claim element obvious or anticipated.

562. Dr. Fox, moreover, does not identify a document. All the block quotes and the screenshot that he provides with respect to this limitation reference a “template.” For example, Fox provides a screenshot of Figure 3 with the phrase “Identify/display templates for selection,” (Fox Report, Ex. O, p. 4), and he quotes from the specification, “According to this embodiment, templates presented to a user may include a number of choices that permit the user to minimize the amount of typing required . . . ,” (Fox Report, Ex. O, pp.45). Even if these quotations did adequately convey Dr. Fox’s identification of the alleged “document,” a template does not satisfy the Court’s construction. The term “template” is defined by Tso as follows:

[A] ‘template’ is a *text string* consisting of one or more ‘phrases.’ A phrase, in turn, is a text string which may include a set of optional substrings, called ‘choices.’

(Tso, 3:6-9; *see also* Tso, 2:7-13 (“In a preferred embodiment, the template engine receives an input text string from a user interface portion of an e-mail application. The template engine then decomposes, using a parser, that input text string into a set of search words or input keywords.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

These keywords are then used to search a template database for one or more templates that most closely correspond to the context of the input text string.”)). A text string is not “a word processing, spreadsheet, or similar file into which text can be entered.” Finally, even if a “template” qualified as a document (which it does not), that identification would cause other claim elements to go unmet as discussed below.

- iii. **Tso does not disclose “while the document is being displayed, analyzing, in a computer process, first information from the document to determine if the first information is at least one of a plurality of types of information that can be searched for in order to find second information related to the first information”**

563. The Court construed the phrase “to determine if the first information is at least one of a plurality of types of information that can be searched for” to mean “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” The Court construed “first information” to mean “text in a document that can be used as input for a search operation in a source external to the document” I understand that “document” has been construed as noted in paragraph 558.

564. Tso does not disclose analyzing within the meaning of the ’843 Patent, nor does Dr. Fox provide explanation or analysis of how Tso performs this claim element. Rather, Dr. Fox offers a series of block quotations with no explanation of their relevance. In fact, one of Dr. Fox’s citations refers not to the invention of Tso, but to Lotus Corporation’s cc:mail product. (Fox Report, Ex. O, p. 5 (quoting Tso, 1:31-34)). Dr. Fox does not identify what in Tso he believes constitutes “first information,” the “document,” “second information,” the “first computer program,” or “analyzing”—or, indeed, any other aspect of the limitation. It is, therefore, my

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

opinion that Dr. Fox has failed to show how Tso renders this claim element obvious or anticipated by Tso.

565. To the extent that Dr. Fox believes the “document” is a template as suggested by his selection of quotes for element 1(a), see paragraph 561, no aspect of this claim limitation is disclosed by Tso. For example, Tso describes the display of templates to occur only after the process of identifying the most relevant templates for the user has already finished. (*E.g.*, Tso, 5:42-44 (“Once the template engine 5 determines the most appropriate template, it passes that template to the user interface 2 for presentation to the user (step 233).”). Nor does Tso disclose analysis of “first information from the [template]” as part of this process. Rather, Tso discloses comparing an array of “search words” drawn from the selected text of a separate item such as a text message or email to keywords “associated with” the template but external to its textual content. ((Tso, 5:1-17); *see also* Tso: 2-14-15; Tso: 3-16-19; 7:19-25). The array of “search words” is not identifying information or contact information and thus does not have a type as the Court has construed the term. Even were it incorrectly considered to be of a type, it would be a single type—an array of words—rather than a plurality.

566. Even had Dr. Fox identified the email referenced by Tso as the document (which he does not), Tso would not have disclosed this claim limitation. In preparation for its search of the template database, Tso discloses extracting a text string from the document that appears to correspond to a sentence. (Tso, 4:48-67). Then the text string is parsed into its constituent words that are used for the search. “Once the text string to be processed is identified, the template engine 5 decomposes the text string into search words that will be used to search for a template (step 232). ... The template engine 5 then uses the extracted words to search the set of predefined templates stored in the template database 4 (step 232).” (Tso, 5:1-8).

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

567. Tso does not disclose determining that the text string, the collection of words in the text string, or any individual word in the text string is one of several predefined categories of contact or identifying information. In fact, it discloses no limitation on the categories of information that are utilized by the invention, and it contains no mention of identifying or contact information.

568. Nor does Tso disclose the step of analyzing information from the document to determine whether it is a type of contact or identifying information to be searched for. Rather, Tso discloses identifying a sentence and the set of “search words” within it. As discussed above, Tso discusses first identifying the sentence as the text string between terminal punctuation marks that corresponds to the user’s cursor location. (Tso, 4:32-67). This is done only to “determine the [bounds] of the text string to be processed.” (Tso, 4:62-63). The process then identifies the individual “search words” within the sentence. “Once the text string to be processed is identified, the template engine 5 decomposes the text string into search words that will be used to search for a template (step 232).” (Tso, 5:1-3). While Tso describes this decomposing as “using a parser” in the summary of the invention (Tso, 2:9-10) and claims “a parser decomposing the input text string” (Tso, 8:64-65) (and nowhere else), decomposing is not parsing as the term is understood in the art. In my opinion, the plain and ordinary meaning of “decomposes” is that it identifies *each* individual word in the string; this does not constitute the required “analyzing.” “Parsing” is understood in the art to be a syntactic analysis, employing a grammar, of a sentence. Tso discloses no syntactic analysis, and no grammar.

569. One of skill in the art would understand that Tso discloses identifying every word in the sentence as a search word. Tso discloses that the process of matching search words from the sentence to keywords of the template is ideally “blind” and thus language-independent. (Tso, 5:18-

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

23). One of skill in the art would know that words that are insignificant in one language would be meaningful in another. As an example, “and,” which one of skill in the art would not employ as a keyword for an English-language implementation of Tso, means “duck” in Norwegian and Danish and might be employed in an implementation of Tso supporting text in those languages. One of skill in the art would understand that the templates, and thus their keywords were language-dependent. Therefore, to achieve Tso’s language independence, every word in the sentence must be a “search word” that may be matched to some keyword. Thus, Tso does not disclose analyzing anything from the document, let alone analyzing to perform the required determination.

570. Tso’s decomposing a sentence into search words does not result in the determination of identifying or contact information; it does not identify any type of information as the Court has construed the term; it does not identify one of a plurality of types of information; nor does it identify a type of information that can be searched for. The process simply identifies a text string and breaks it into words. Tso provides just a single example of the results of this process, in which “where,” “when,” and “meet” are keywords associated with a template that is located from the text string “When and where would you like to meet.” (Tso, 5:22-38). Nothing in Tso suggests that there is more than a single category of “search words.” Even were Tso misunderstood to disclose selecting only some words as “search words,” each word would either be a “search word” or not. Further, Tso does not explain how such words would be identified. Tso’s process does not result in the identification of identifying or contact information, and it does not determine whether text in the document is one of a plurality of types of information.

571. Yet further, Tso discloses that nothing in the text string is employed as a search term, so Tso does not disclose “first information” from the document that can be searched for. Tso indicates that the search for a template does not employ individual “search words” as search terms.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

Rather, the entire collection of “search words,” extracted from a sentence and composed into an array is the search term. “Once the text string to be processed is identified, the template engine 5 decomposes the text string into search words that will be used to search for a template (step 232). The template engine 5 may, for example, build an array in which each member contains a different word extracted from the text string. ¶ The template engine 5 then uses the extracted words to search the set of predefined templates stored in the template database 4 (step 232). *For each stored template, the template engine 5 compares the weighted keywords associated with that template to the array of extracted search words.*” (Tso, 5:1-11 (emphasis added). In other words, the search term is an array that is compared to each template’s weighted keywords. The array of words does not have a “type” as the Court has construed the term, and thus cannot be the required “first information.”

572. Consequently, Tso does not disclose “analyzing” within the meaning of the Asserted Claims, and thus does not disclose “first information.”

573. For at least these reasons, Tso does not disclose this limitation.

**iv. Tso does not disclose “retrieving the first information”**

574. Dr. Fox does not identify how Tso discloses this element. He simply asserts, without explanation or analysis, “Tso discloses this element. See previous element.” (Fox report, Exhibit O, p. 6). As noted in paragraph 563, Dr. Fox’s treatment of the prior claim element is itself deficient, consisting of a series of unexplained block quotes, one of which does not even refer to the invention disclosed by Tso. Indeed, Dr. Fox does not even identify what he believes to be the “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how Tso renders this claim element obvious or anticipated by Tso.

575. Furthermore, since, as described above, Tso does not disclose the required “first information,” Tso cannot disclose this element.

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- v. **Tso does not disclose “providing an input device, configured by the first computer program, that allows a user to enter a user command to initiate an operation, the operation comprising...”**

576. I understand that “providing an input device, configured by the first computer program” has been construed by the Court to mean “providing an input device set up by the first computer program for use by the user.” I also understand that the Court construed “that allows a user to enter a user command to initiate an operation” to mean “that allows a user to enter an input or series of inputs to initiate an operation.” As noted above, I understand that the Court construed “computer program” to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.”

577. Dr. Fox provides no explanation or analysis of how Tso meets this limitation. He offers a series of block quotations with no explanation of their relevance. For example, Dr. Fox does not indicate what in Tso he believes to be the “input device,” “first computer program,” “user command” or “operation.” With respect to the first component of the operation, he does not indicate what he considers to be the “search[],” “first information,” the “second information,” the external “information source,” or the dependency of the second information on the first information. It is, therefore, my opinion that Dr. Fox has failed to show how Tso renders this claim element obvious or anticipated by Tso.

578. The block quotes reference a variety of distinct UI components mentioned in Tso. Not one of these demonstrates the input device required by this limitation. For example, Dr. Fox quotes, “An input form identifier is a graphical user interface that enables a user to easily enter special data (e.g., times, dates, numbers) using, for example, a spin button or a scroll bar.” (Fox Report, Ex. O, p. 6; *see also* Fox Report, Ex. O, pp. 7-8 (providing additional quotes related to the input form identifier)). Tso teaches using the input form specified by the identifier to allow the user to enter data such as a time (after any search of a template database) when composing a reply

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

to a message. (*E.g.*, Tso, 5:61-6:24). Tso offers the example template “Let’s meet at [the time you suggested|Monday|<time>],” which permits the user to select the version of the sentence ending with <time> and then “enter a time by clicking spin buttons ... and option buttons.” (Tso, 5:63-6:15; *see also* Tso: 6:3-5 “The third choice is an input form identifier corresponding to a special input form for entering a time.”). The input form identifier itself neither allows the user to initiate a search nor an action using results of that search. The input form identified by the input form identifier operates after Tso’s process has selected one or more templates, and hence after any search. Dr Fox also quotes, “The user could then select which template is most appropriate for the user’s purposes.” (Fox Report, Ex. O, p. 7). This quote comes from a section of Tso discussing the user’s ability to select among one or more highest-scoring templates for assistance in creating an insertion into the email. (Tso, 5:42-53; 6:66-7:3). To the extent that an input device is disclosed by this brief quote, it would be presented to the user subsequent to any search for and identification of relevant forms. It is not one that allows the user to enter a command to initiate a search or an action using results of that search.

579. Dr. Fox could not have identified the required input device in Tso because Tso does not disclose such a device. As discussed beginning in paragraphs 565, to the extent that the template is the document, Tso discloses no “first information” from the document. Therefore, Tso also does not disclose an input device that can be used to initiate “performing a search using at least part of the first information” or performing an action using second information found during such a search.

580. Even if an email (or equivalent) were the document, the required input device is not disclosed by Tso. The input device must allow the user to “enter an input or series of inputs” to initiate “performing a search using at least part of the first information in order to find the second



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information, of a specific type or types . . . wherein the specific type or types of second information is dependent at least in part on the type or types of the first information.” The only user input disclosed that initiates *any* searching is the one that activates the template engine. (*See, e.g.*, Tso, 4:32-47 (“[T]he user selects a text string to be processed, for example, by clicking-on it . . . . [O]nce the user makes a selection the user interface 2 of the e-mail application 20 will invoke the template engine . . . .”); Tso, 5:7-9 (“The template engine 5 then uses the extracted words to search the set of predefined templates . . . .”). Tso, however, discloses only one type of search term (an array of words) and one type of result: using search terms to find templates. (*E.g.*, Tso, 2:9-12 (“The template engine then decomposes, using a parser, that input text string into a set of search words or input keywords. These keywords are then used to search a template database for one or more templates . . . .”). Therefore, the type(s) of information found does not depend on the type(s) of information used for searching.

581. For at least these reasons, Tso does not disclose this claim element.

- vi. **Tso does not disclose “in consequence of receipt by the first computer program of the user command from the input device, causing a search for the search term in the information source, using a second computer program, in order to find second information related to the search term; and”**

582. Dr. Fox. provides no explanation or analysis of how Tso meets this limitation. He offers a series of block quotations with no explanation of their relevance. Dr. Fox does not indicate what in Tso he believes constitutes the “first computer program,” the “user command,” the “input device,” the “information source,” the “second computer program,” or the “second information.”

583. Furthermore, Tso does not disclose this claim element. As noted with respect to Limitation 1d), the required input device is not disclosed. This means that a first computer program cannot receive the user command from the input device.

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584. The claim element requires that the search occur “using a second computer program.” A computer program was construed by the Court to mean “a self-contained set of instructions, as opposed to a routine or library, intended to be executed on a computer so as to perform some task.” Tso discloses only one such computer program: the email application (or equivalent computer program) in which the email (or other correspondence) is composed. (*E.g.*, Tso, 4:17-19; 7:53-56). Tso discloses implementing the template engine as a dynamic linked library called by that computer program. (Dynamic linked libraries were known in the art not to be independently executable.) (*E.g.*, Tso, 3:21-28 (“In an embodiment of the present invention, the template engine is implemented as an application program interface (API) exported by a dynamic link library (DLL)”); Tso, 4:17-23 (“The block diagram of FIG. 2 graphically illustrates the manner in which an e-mail application 20 interacts with a template engine 5 according to the present invention. The e-mail application 20 is electronically coupled to the template engine 5, shown here as an API. In other words, the e-mail application 20 is capable of invoking the template engine 5.”). As would be understood by one of ordinary skill in the art, a Dynamic Link *Library* is not “a self-contained set of instructions, *as opposed to a routine or library*, intended to be executed on a computer so as to perform some task,” so the template engine is not a computer program as the Court has construed the term.

585. Furthermore, the template engine and other components of the email application are described as integrated into a single computer program. For example, following the user’s selection in the e-mail message, “the e-mail application 20 will invoke the template engine 5 (step 230), passing the entire text message being edited by the user and the current cursor position to the template engine 5.” (Tso, 4:43-47). Then, “[o]nce the template engine 5 determines the most appropriate template, it passes that template to the user interface 2 for presentation to the user (step

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233). This may be accomplished by passing a data string containing the template to the user interface 2 or, alternatively, by passing a pointer to a temporary memory location where the template is stored.” (Tso, 5:42-48). Moreover “[t]he processing associated with the special input form [if applicable to the template] is the responsibility of the user interface 2, and is initiated by a user clicking on an input form identifier presented in the template.” (Tso, 6:10-13; *see also* Tso, 4:7-12 (“[T]he user’s e-mail application must provide a user interface 2 capable of (i) displaying templates, phrases, and choices; (ii) displaying a special input form corresponding to an input form identifier; and (iii) converting a user’s selection from a special input form into text.”)).

586. For at least these reasons, Tso does not disclose this claim element

- vii. **Tso does not disclose “if searching finds any second information related to the search term, performing the action using at least part of the second information, wherein the action is of a type depending at least in part on the type or types of the first information”**

587. Dr. Fox provides no explanation or analysis of how Tso meets this limitation. He offers a series of block quotations and figures with no discussion of their relevance. Dr. Fox does not identify, for example, what he considers to be the “searching,” “action,” “second information,” or the action. It is, therefore, my opinion that Dr. Fox has failed to show how Tso renders this claim element obvious or anticipated.

588. As noted above, to the extent that Dr. Fox (inaccurately) identifies a template as the document, Tso discloses no use of “first information.” Thus, Tso cannot disclose performing a type of action that depends at least in part on the type(s) of first information.

589. If an email (or equivalent) is the document, Tso also fails to disclose this claim element. Tso discloses only one type of search term and one type of action: using an array of words to find templates and then displaying the templates or inserting them into the email. (*E.g.*, Tso, 5:7-11 (“The template engine 5 then uses the extracted words to search the set of predefined

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

templates stored in the template database 4 (step 232). For each stored template, the template engine 5 compares the weighted keywords associated with that template to the array of extracted search words.”); Tso, 6:66-7:2). Therefore, the type of action performed does not depend on the type(s) of information used for searching.

590. For at least these reasons, Tso does not disclose this claim element.

viii. **Tso does not disclose Claim 8, “A method according to claim 1, further comprising, providing a prompt for updating the information source to include the first information.”**

591. As discussed above, Dr. Fox has failed to demonstrate that Tso discloses the elements of Claim 1, and Tso does not disclose those elements. Consequently, Dr. Fox also neither has nor can show that Tso discloses Claim 8.

592. Furthermore, Dr. Fox does not explain how this claim element is disclosed. Instead, he cross-references claim one and then offers a series of block quotes without explanation or analysis. He does not identify, for example, what he considers to be the “prompt,” “information source” or “first information.” It is, therefore, my opinion that Dr. Fox has failed to show how Tso renders this claim obvious or anticipated by Tso.

593. Nor does Tso disclose such a prompt. First, to the extent that Dr. Fox has identified the template as the document in support of claim element 1(a), Tso does not disclose use of any first information as discussed, for example, in paragraph 571. Therefore, Tso also does not disclose providing a prompt for updating an information source to include such information. Tso states that the “template engine 5 will dynamically increase or decrease the weight values associated with the keywords of a template suggested to a user depending upon whether the user accepts or rejects the suggestion” (Tso, 6:36-39); however, this discloses neither providing a *prompt* to cause the change nor adding any keywords to the template database. The update merely adjusts the values assigned to keywords already in the template database. Tso also states that the user can customize proposed

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templates by altering their proposed text (Tso, 6:52-65); however, this customization only alters the text of the template and does not affect what keywords are available for searching and, moreover, no prompt is disclosed in conjunction with this functionality. In short, no keywords are added to the template database by this customization. Finally, Tso discloses the ability to create a new template and identify keywords associated with that template (Tso, 7:14-25); however, Tso does not disclose using any first information (or, indeed, any existing text) when creating those templates, and Tso again fails to disclose any prompt for creating the new template.

594. Second, to the extent that search words in the email (or equivalent) are first information (which they are not), Tso does not provide the required prompt with respect to those search words. Tso discloses nothing concerning altering that email.

- ix. **Tso does not disclose Claims 23, “At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for finding data related to the contents of a document using a first computer program running on a computer, the process comprising...”**

595. The body of claims 23 includes the same elements as claim 1. Tso does not anticipate claim 23 or render it obvious for the same reasons it does not anticipate claims 1 or render it obvious as discussed above.

596. Nor does Dr. Fox provide an explanation for his assertion that Tso discloses the preamble. Rather, he cross-references claim 1, for which he also provides no explanation or analysis. Consequently, Dr. Fox has failed to prove that Tso invalidates claim 23.

- x. **Tso does not disclose Claim 30, “At least one non-transitory computer readable medium according to claim 23, the instructions establishing processes comprising: providing a prompt for updating the information source to include the first information.”**

597. Because Tso does not disclose the elements of claim 23, it does not anticipate claim 30 or render claim 30 obvious.

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598. It is also my opinion that Tso does not disclose or render obvious “providing a prompt for updating the information source to include the first information” for the reasons that I state vis-à-vis Claim 8 in paragraphs 593 and 594. Dr. Fox offers no additional argument regarding “providing a prompt . . .” other than to reproduce the same figures provided for claim 8.

599. Consequently, Dr. Fox has failed to prove that Tso anticipated or rendered obvious Claims 1, 8, 23, or 30.

**B. The Asserted Claims are Not Anticipated by CyberDesk**

600. At paragraph 184 of his report, Dr. Fox identifies a single reference that he asserts anticipates the Asserted Claims: the “CyberDesk System.” He offers no reasoning at paragraph 184 and instead states, “For a detailed, element-by-element analysis of how CyberDesk discloses and suggests the various elements of the asserted claims, see Ex. D.”

601. As I discuss at paragraphs 61–100, I disagree with Dr. Fox’s assertion that the “CyberDesk System” discloses the elements of the Asserted Claims. It is also my opinion that Dr. Fox provides no explanation or analysis to support his assertion to the contrary. Exhibit D, to which Dr. Fox refers, forgoes analysis and instead offers series of unexplained and unanalyzed block quotes and images.

602. Moreover, as I have discussed above, it is my opinion that Dr. Fox has improperly combined multiple systems and references into a single, imaged “CyberDesk System.” Each of the three instantiation of the CyberDesk System evidenced material differences, and development of the system continued after the applicable priority dates for Mr. Hedløy’s invention.

**C. The Asserted Claims Were Not Obvious**

603. In my opinion, Dr. Fox has failed to support his opinion that the Asserted Claims are invalid in light of 33 combinations of alleged prior art. After stating in paragraph 185 his “understand[ing] that there is no longer a rigid requirement regarding motivation to combine,” Dr.

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Fox offers no discussion or analysis whatsoever for why it would have been obvious to combine the enumerated references. In a single sentence he states, “It is my opinion that at least the following combinations render the asserted claims obvious, particularly in light of the ’843 patent’s admissions with respect to prior art functionalities, pre-existing motivations to combine prior art references, the state of the art, and common sense.” His assertion of common-sense basis for his opinion is conclusory and unsupported.

604. The list of combinations is bare bones, taking the form for example of “Pandit + Eudora System” and “Apple Data Detectors System + Domini.” The list concludes by stating, “For a detailed, element-by-element analysis of how these combinations disclose and render obvious the various elements of the asserted claims, see Exs. D-U.” Exhibits D-T, as I have discussed repeatedly, are neither detailed nor do they provide an element-by-element analysis. Rather, they consist of block quotations, screenshots and images taken from the alleged prior art without any explanation or analysis of how they pertain to the Asserted Claims. Dr. Fox does not identify which features of the alleged prior art disclose or render obvious the limitations of the Asserted Claims. Exhibit U, meanwhile, asserts that various claim limitations are obvious without tying that discussion to any particular primary reference. It too consists largely of unexampled and unanalyzed block quotes or citations, labelled “Exemplary Disclosures.” Under these circumstances, Dr. Fox has not provided a reasoned basis for his opinion that the Asserted Claims are invalid.

605. The particular weaknesses of Exhibit U, titled “Obviousness Modifications and Combinations,” can be illustrated by considering its initial paragraphs and one of the claim limitations that it asserts is obvious. The section titled, “Motivation to Combine References,” does not in fact explain any motivation that one of ordinary skill in the art would have had to combine

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particular references. Rather, it makes a series of assertions unsupported by evidence, as follows:

**Motivation to Combine References**

Under *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007), there is no longer a rigid requirement regarding motivation to combine. Nevertheless, in the Tables that follow, Defendants provide various examples of motivations for the combinations of prior art and modifications to prior art.

In addition, multiple teachings, suggestions, motivations, and/or reasons to modify any of the references and/or to combine any two or more of the references come from many sources, including the prior art (specific and as a whole), common knowledge, predictability, expectations, industry trends, design incentives or need, market demand or pressure, market forces, obviousness to try, the nature of the problem faced, and/or knowledge possessed by a person of ordinary skill. In addition, it would have been obvious to try combining the prior art references identified above because there were only a finite number of predictable solutions and/or because known work in one field of endeavor prompted variations based on predictable design incentives and/or market forces either in the same field or a different one. The combination of the prior art references identified above also would have been obvious because the combination represents the known potential options with a reasonable expectation of success.

Furthermore, one of ordinary skill in the art would be motivated to combine any of the references using: known methods to yield predictable results; known techniques in the same way; a simple substitution of one known, equivalent element for another to obtain predictable results; and/or a teaching, suggestion, or motivation in the reference or in the prior art generally.



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One having ordinary skill in the art additionally would have been motivated to combine any references in order to: provide a better user experience, decrease user mistakes, automate a manual process, decrease the number of user steps required to complete a task or otherwise increase user efficiency, improve usability, improve software performance, improve software reliability, adopt more accurate algorithms, access new types or sources of data, improve or achieve compatibility or integration with popular software, add additional features to modular system, take advantage of new or unexploited features accessible through an API, object model or other publicly exposed library or interface, take advantage of the expanding capabilities of personal computer hardware, adopt the features of competing products, follow trends in industry, or satisfy market demand or pressure.

Further, one skilled in the art would have looked to the references identified in the tables below to modify and/or combine with any of the primary or obviousness references because the references relate to the same general field of technology.

(Fox Report, Ex. U, pp. 1-2). What Dr. Fox fails to provide is any explanation for why “market demand or pressure,” to take but one example, would have driven one of ordinary skill in the art to combine references such as “Apple Data Detectors System + Microsoft Word 97.”

606. Similarly, deficient is Dr. Fox’s treatment of individual limitations. For example, I surmise that Table 8 of Exhibit U is intended to show that “providing an input device configured by the first computer program” would have been obvious. Dr. Fox, however, continues to write in general terms without explaining why it would have been obvious to modify any particular piece of alleged prior art to include this feature, and why one of ordinary skill in the art would have been motivated to combine any two pieces of prior art. Dr. Fox introduces his table of unexplained and unanalyzed quotations and citations as follows:

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Numerous claims contain the element “providing an input device configured by the first computer program.” There is nothing novel or nonobvious about this element. To the extent a primary or obviousness reference does not disclose this element, one of ordinary skill in the art would be motivated to modify the reference to include this element and/or combine the primary or obviousness references with any one or more of the references listed below, each of which disclose the element, because, as explained in the following claim chart, using the techniques of the references addressed in the claim chart below would have improved the primary or obviousness references in the same way, and applying the techniques disclosed in the references in the claim chart below to improve the primary or obviousness references would have yielded predictable results.

One of ordinary skill in the art would have been motivated to make the modifications and/or combinations described because it would allow a user to interact with the first computer program , including through different types of user interface options.

Additional motivation is found in Claris Emailer: Getting Started (version 2.0) where it states: “Keyboard shortcuts are key sequences that you can press instead of choosing, selecting, and clicking software items with your mouse.” 3-5.

Additional motivation is found in U.S. Patent No. 6,493,006 (“Gourdol”) where it states: “Therefore, it is desirable to provide a graphical user interface which makes it easier for users to discover the commands that are appropriate in a given context, as well as give the user a more efficient means for quickly executing the commands.” 3:6-10.

The first two paragraphs of reproduced above consist of bare assertion unsupported by evidence. The final two paragraphs consist of unexplained quotations from a user manual and a patent. Not only is the relevance of neither quotation explained, but Dr. Fox makes no effort to justify the modification of any specific prior art reference. Neither of these two quotations mention that the input device may be configured by the first computer program.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

607. Dr. Fox's lack of precision and argument is only further compounded by his attempt not to limit himself to the 31 unjustified combinations that appear in his list in paragraph 186. For example, Dr. Fox annotates his list with the following note: "In fact, for each of the combinations below, additional references can also be combined with them for certain claims and elements, as identified in both their respective attached charts, and in Exhibit U which provides the bases to combine various references generally." (Fox Report, ¶186.A). Furthermore, each table in Exhibit U is accompanied by the following footnote: "For additional exemplary disclosures of each of the references listed in this table, see the claim charts served concurrently herewith and those served concurrently with the invalidity contentions." The claim charts accompanying the invalidity conditions, like those served with Dr. Fox's report, contain series of unexplained block quotes and reproduced images without commentary, explanation or analysis. Dr. Fox has not laid out a basis for his opinion that the 33 combinations identified in paragraph 186 of his report render the Asserted Claims obvious, let alone identified his theory of how other alleged prior art discloses elements of the Asserted Claims and would motivate one of ordinary skill in the art to modify one of Dr. Fox's primary references.

608. In short, the material referenced by Dr. Fox provides no clarity or support for his opinions. I have undertaken to respond to Dr. Fox's general assertion that two references be combined despite his failure to identify any concrete combinations to analyze or rebut, I reserve my right to supplement my opinions should Dr. Fox provide analysis or explanation regarding combinations others than the ones identified in his paragraph 186. At present, he has not shown that one of ordinary skill in the art would be motivated to combine other references or that the other references would close gaps in his Dr. Fox's primary references.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

609. I turn now to each of Dr. Fox's enumerated combinations of alleged prior art. Once again, it is my opinion that Dr. Fox has failed to offer explanation or justification for each of his proposed combinations. It is also my opinion not only that one of ordinary skill in the art would not have been motivated to combine these references, but also that each combination would still have failed to disclose each limitation of the Asserted Claims.

***1. Combining Pandit with CyberDesk Is Not Obvious or Invalidating***

610. As discussed above, Dr. Fox has not explained how Pandit or CyberDesk disclose any limitations of the Asserted Claims nor how Pandit would be modified in light of CyberDesk. It is also my opinion that Pandit and CyberDesk each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

611. At paragraph 186, Dr. Fox also states, "Importantly, as explained in Section III.D above and as found by the PTAB, the prior art Pandit reference discloses every element of the asserted claims of the '843 patent, with the exception of one limitation—'performing a search using at least part of the first information as a search term in order to find the second information.'" As I discuss above at paragraphs 519 and following, it is my opinion that Pandit fails to disclose additional claim elements. My conclusion is, in part, a necessary consequence of Pandit's failure to disclose "performing a search using at least part of the first information as a search term in order to find the second information." For example, if no such search is disclosed, then no second information can be found and no action using at least part of the second information can be performed. Likewise, the required analyzing cannot not have been disclosed. Not only do the claims require analyzing "first information," construed by the Court to mean "text in a document that can be used as *input for a search operation* in a source external to the document," but the analyzing must be "to determine if the first information is at least one of a plurality of types of

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information *that can be searched for*,” i.e., “to determine if the first information belongs to one or more of several predefined categories of [information] *that can be searched for in an information source external to the document*.” Furthermore, the Asserted claims teach using the second information found during the search to perform an action and that the action must depend, at least in part, on the type(s) of first information. Without searching there is no second information and there can be no dependency. Therefore, to say that Pandit discloses everything except searching is to say that Pandit discloses very little of the Asserted Claims. Thus, to the extent that Dr. Fox purports to rely on the PTAB’s finding that all other claim terms are disclosed, it is my opinion that his opinion is unsupported by evidence or reason.

612. I have also reviewed the ruling of the Federal Circuit, which I understand reversed the PTAB ruling that Dr. Fox cites. The Federal Circuit wrote, “Arendi is correct that Pandit itself is not about a search and does not mention or imply that a search of any kind is involved with the ‘Add to address book’ function. Rather, Pandit is about text-dependent word recognition.” (*Arendi S.A.R.L. v. Apple Inc., Google Inc., Motorola Mobility Inc.*, Case No. 2015-2073 (Fed. Cir. Aug. 10, 2016), at 13 (“Federal Circuit Opinion”). The Federal Circuit added, “[T]he disputed search of step (i) is central to representative claim 1.” (Federal Circuit Opinion, at 13). I do not understand the Federal Circuit to have found (or, indeed, considered) whether Pandit disclosed any other elements of the Asserted Claims. (Federal Circuit Opinion, at 9 (“The single question at issue here is whether the [Patent Trial and Appeal] Board misused ‘common sense’ to conclude that it would have been obvious to supply a missing limitation in the Pandit prior art reference to arrive at the claimed invention.”)). I also note that the Federal Circuit rejected the “the [Patent Trial and Appeal] Board’s presumption that adding a search of phone numbers to Pandit would be ‘common sense’ [as] conclusory and unsupported by substantial evidence.” (Federal Circuit Opinion, at 9).

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

My observations in this paragraph and the one that precedes it should be understood to be equally applicable to each combination proposed by Fox that involves Pandit.

613. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. First, one of ordinary skill in the art would understand CyberDesk and Pandit to be aimed at distinct visions for integrating applications. The CyberDesk project is described as an effort to integrate multiple Java- and network-based services, while Pandit's invention is described as a way to provide to the user of one application an easier way for transferring user-selected text to other applications. CyberDesk is explicitly described as a framework. Its goal is to provide a context-aware desktop alternative knitting together local and remote services. (*E.g.*, ARENDI-DEFS00022052, at '22053 ("The CyberDesk project is a shift away from the traditional view of the desktop as a static collection of applications that the user switches between to complete a task . . . . Instead, our approach is to present the user with an environment in which the required functionality comes to find the user."); ARENDI-DEFS00021045, '21049 ("The CyberDesk system is a context-aware framework that provides a novel interface to personal information management, blurring the distinction between desktop, network and mobile services. CyberDesk's extensible context-inferencing layer provides a new way to leverage the knowledge of user context into more automated and personalized services.")). Indeed, CyberDesk positioned itself as a "paradigm shift," and its developers cast the "main objective of the ubiquitous computing project CyberDesk" as "to provide the infrastructure for self-integrating software in which the integration is driven by actions of the user." The addition of chaining to version 2 of CyberDesk is illustrative of the effort to create a new vision of integrating applications. In contrast, Pandit more narrowly "pertains to recognition of text in a body of text as belonging to a predetermined class and performing an operation relevant to the recognized text."

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

(Pandit, 1:51-53). Pandit does not aim to replace the model of separate applications each performing their own function, but instead to “expand[] the operations which may be performed using recognized text” regardless of the text’s origin. (Pandit, 1:42-48). In other words, Pandit is focused on identifying and making actionable specific categories of text within the then-existing context of user-operated movement of information among distinct computer programs, whereas CyberDesk seeks to reimagine the structure of independent software programs to build an integrated framework of services. Those two visions attempt to solve different problems. One of ordinary skill in the art would not be motivated to combine them; the results of doing so would be unpredictable. Given the distinct aims and approaches of CyberDesk and Pandit, one of ordinary skill in the art would not be motivated to combine them.

614. One of skill in the art would also understand that the architectures of Pandit and of the CyberDesk system are not compatible and, therefore, even if motivated to combine them, could not have done so. On the one hand, Pandit is said to be implanted in its preferred embodiment as a computer program incorporating a number of Dynamic Linked Libraries. (*E.g.*, Pandit, at 3:36-49). Pandit, in other words, runs as a native computer program within a Windows operating system environment. Pandit asserts as one of its benefits the ability to utilize “[a]ny text appearing on a video monitor,” and it is not limited to particular computer programs (Pandit, 5:11-20; *see also* 1:42-48). In contrast, CyberDesk is explicitly described as a collection of Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed Java appletviewer). For example, “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services” explains that all of the desktop services in the version 2 that it described were Java applets. (ARENDI-DEFS00021071, at ’21073). The article goes on to explain the centrality of Java to the system’s architecture:

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All five of the components [*i.e.*, Locator, IntelliButton, ActOnButton Bar, desktop and network services, and type converters] have been implemented as Java applets for simplicity of network programming. We also chose Java for its promise of platform independence, its ability to execute within a web browser, and its object-oriented nature. The first two features support our goal of ubiquity, the second feature allows us to treat the browser as our desktop, and the last feature made development easier. Also, most of the network services implemented are available via the web, so the natural access method was via a web browser.

...

In CyberDesk, the Locator is implemented as a uniquely named applet on an HTML page containing all the CyberDesk applets in use. Upon startup, each of the component applets register themselves with the Locator

(ARENDI- DEFS00021071, at '21072).

615. A person of ordinary skill in the art, confronted with the CyberDesk system consisting entirely of applets running within a single compute program and accessing information from the internet would understand the system to be confined to those terms. To the extent that desktop-based applets are to be integrated into the CyberDesk framework, it is necessary to modify the applet's code or to develop an applet-specific "wrapper." (*E.g.*, ARENDI-DEFS00021071, '21073). One of ordinary skill in the art would not be motivated to combine this such a system with Pandit, which operates natively in a non-Java environment and is able to link text appearing in any computer program to an assortment of second computer programs.

616. Finally, Dr. Fox has failed to differentiate between the multiple versions of CyberDesk, (*see* ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Pandit. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system.

617. Dr. Fox may mean that Pandit can be modified in light of CyberDesk to "fill in" what Dr. Fox incorrectly claims is the only claim element missing from Pandit (Fox Report, ¶185), *i.e.*, "performing a search using at least part of the first information as a search term in order to find the second information." No matter how you combine Pandit and CyberDesk, the combination



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

cannot provide the required searching that is missing from both systems. Furthermore, this is not the only missing limitation in Pandit, as explained above. The Pandit + CyberDesk combination still fails to teach the invention, for a least the reasons that in both systems the purported input device is not configured, and the user command is not received by the required first computer program, as explained above. Therefore, for at least these reasons alone, the combination will not render the invention obvious.

618. The only possible reason a combination of CyberDesk and Pandit would be obvious would be by using hindsight, and even with hindsight the combination would be neither invalidating nor feasible.

619. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to, supplement, or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***2. Combining Pandit with Eudora Is Not Obvious or Invalidating***

620. As discussed above, Dr. Fox has not explained how Pandit or Eudora disclose any limitations of the Asserted Claims nor does he explain how Pandit would be modified in light of Eudora. It is also my opinion that Pandit and Eudora each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

621. As discussed at paragraph 283, Dr. Fox has improperly combined two distinct references addressing different implementations of Eudora, and he has done so with no discussion. In my opinion, each user manual should be considered as a separate, alleged prior art reference. Dr. Fox does not indicate which one he alleges one would be motivated to combine with Pandit.

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622. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. First, as I discuss in the preceding paragraphs, Pandit is asserted to “benefit any application which displays text to a user, regardless of the origin of the text.” (Pandit, 1:42-43). One of ordinary skill in the art would not be motivated to combine Pandit with features localized in a single computer program such as Eudora, or to localize any of its features (including its input device) in any first computer program. In fact, computer-program-specific implementations of recognizing and operating on text are identified by Pandit as a shortcoming of the prior art. (Pandit, 1:27-41).

623. Second, Dr. Fox fails to identify what aspect of Pandit one would be motivated to combine with Pandit (let alone why). In my opinion one of ordinary skill in the art would not be motivated to combine Pandit with aspects of any of the four features of Eudora that Dr. Fox references. If Dr. Fox refers to Eudora’s hotlink feature, Pandit already discloses the ability to act on URLs through its own independent and more general approach. (Pandit, 3:16-23; 4:29-31). No apparent benefit is provided by Eudora’s more limited implementation. What is more, as I discuss with respect to Eudora, URLs are neither identifying information or contact information nor are they used for searching—each of which are requirements for first information under the Asserted Claims. If Dr. Fox refers to Eudora’s spellcheck system, Pandit expressly teaches away from the implementation of integrated spellcheckers, such as the one found in the Windows version of Eudora. (Pandit, 1:38-41). Pandit also is not limited to operating on editable documents and, therefore, the addition of spellchecking would cause Pandit not to function properly whenever displayed text was not editable, which in turn would defeat a key aspect of Pandit: “benefit[ing] any application which displays text to a user.” (Pandit, 1:42-43). In combination with Pandit’s criticism of existing spellcheckers, one of ordinary skill in the art would understand Pandit to teach

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away from integrating spellchecking when Pandit suggests that language-related executable programs that provide synonyms, plurals, conjugations and definitions might be made available operate with text displayed by other computer programs with respect to recognized nouns or verbs without mentioning the possibility of spellchecking. (*See* Pandit, 3:11-15).<sup>24</sup> Further, one of skill in the art would understand that if Pandit supported a spell-checking capability, it would do so with a spell-checking program that operated independently of other computer programs, in explicit contrast to Eudora for Windows's integrated spell-checker. If Dr. Fox refers to Eudora's "address book functionality," that feature has no place in the architecture of Pandit. Pandit teaches that when an email address is recognized, the user should be able to operate on that email address by selecting an "Email template and transmitting program, preferably automatically addressed with the accented address recognized in the text." (Pandit, 2:56-63). And, if Dr. Fox refers to Eudora's user-configurable toolbar, one of ordinary skill in the art would appreciate that Pandit already provides its own user interface implemented through its system of interlinking libraries. (Pandit, 3:50-4:19). Not only does Eudora lack an analog to the text-class-specific menus that are necessary for Pandit to function, but one of ordinary skill in the art also would appreciate that Pandit teaches away from localizing any of its features (including its user interface) in any single computer program.

624. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

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<sup>24</sup> As I discuss in my element-by-element analysis of Pandit, Pandit has not disclosed the required searching in conjunction with these features.

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**3. *Combining Pandit with Apple Data Detectors Is Not Obvious or Invalidating***

625. As discussed above, Dr. Fox has not explained how Pandit or Apple Data Detectors disclose any limitations of the Asserted Claims nor does he explain how Pandit would be modified in light of Apple Data Detector. It is also my opinion that Pandit and Apple Data Detectors each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims. For example, Apple Data Detectors discloses at most one type of information that can be searched for; Pandit discloses none. Consequently, combining these references could not yield a method that could perform an analysis to identify “categories of identifying information . . . or contact information . . . that can be searched for in an information source external to the document.” As a further example, neither Pandit nor Apple Data Detectors disclose the required relationship between the input device and the first computer program.

626. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. Apple Data Detectors was a system-wide effort (including modification of the host operating system) to integrate multiple computer programs within the relatively closed Apple Computer ecosystem. Pandit’s invention, on the other hand is described as an approach, implemented within the constraints of existing Microsoft operating systems, to provide to the user of any application an easier way for transferring user-selected text to other applications. One cannot implement ADD without changing the underlying operating system as Apple did; the goal of Pandit is to function within the limits of an existing operating system. Therefore, even if their results may superficially overlap, they take entirely different approaches and adopt conflicting architectures; there would be no motivation to combine them

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627. One of ordinary skill in the art would not have been capable of modifying Pandit in light of Apple Data Detectors, let alone be motivated to do so. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Further, Apple Data Detectors relied on other proprietary Apple technologies, such as AppleScript, that were not described other than superficially in the references cited by Dr. Fox. In contrast, the architecture of Pandit relies on a collection of Dynamic Linked Libraries operating under the Windows operating environment, which are then invoked within a separate computer program from the computer program displaying the document. (Pandit, 3:24-4:55). Similarly, only Apple Computer would have had the capability, let alone the motivation, to combine Pandit into Apple Data Detectors. It would have no motivation to do so, as one of skill in the art would understand that the capabilities of Pandit could already be implemented within Apple Data Detectors.

628. Dr. Fox may mean that Apple Data Detectors can be added to Pandit to “fill in” what Dr. Fox incorrectly claims is the only claim element missing from Pandit (Fox Report, ¶185), *i.e.* “performing a search using at least part of the first information as a search term in order to find the second information.” This is not the only missing limitation in Pandit, as explained above. The Pandit + Apple Data Detectors combination still fails to teach the invention, for a least the reasons that in both systems the purported input device is not configured, and the user command is not received by the by the first computer program, as explained above. No matter how you combine the Pandit and Apple Data Detectors, the combination cannot provide the required searching that

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is missing from both systems. Therefore, for at least this reason alone, the combination will not render the invention obvious.

629. As I discuss at paragraph 103, for example, it is my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

630. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***4. Combining Pandit with LiveDoc System Is Not Obvious or Invalidating***

631. It is my opinion that Pandit and LiveDoc each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims. For example, neither LiveDoc nor Pandit discloses any type of information that can be searched for, nor a search as required by the claim. Consequently, combining these references could not yield a method that could perform an analysis to identify “categories of identifying information . . . or contact information . . . that can be searched for in an information source external to the document.” nor most of the other elements of the claim. As a further example, neither Pandit nor LiveDoc disclose the required relationship between the input device and the first computer program, or most of the other elements of the claim.

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632. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. LiveDoc was a system-wide effort (including modification of the host operating system) to integrate multiple computer programs within the relatively closed Apple Computer ecosystem. Pandit's invention, on the other hand is described as an approach, implemented within the constraints of existing Microsoft operating systems, to provide to the user of any application an easier way for transferring user-selected text to other applications. One cannot implement LiveDoc without changing the underlying operating system as Apple did; the goal of Pandit is to function within the limits of an existing operating system. Therefore, even if their results may superficially overlap, they take entirely different approaches and adopt conflicting architectures; there would be no motivation to combine them

633. One of ordinary skill in the art would not have been capable of modifying Pandit in light of LiveDoc, let alone be motivated to do so. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

634. Further, LiveDoc relied on custom APIs with particular functionality to communicate with the applications showing the text. (ARENDI-DEFS00003323, at '3326). For computer programs to operate with LiveDoc, developers would need to modify their programs to employ those APIs. This approach runs counter to and is incompatible with, Pandit's modus operandi and expressed purpose: "this invention does not require that the text be embedded in any document created on or by a particular application program. Any text appearing on a video monitor

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can be operated on by the invention, whether the text is within an EMail message, World-Wide Web site, created by a word processing or database program, etc.” (Pandit 5:15-20). Furthermore, the architecture of Pandit relies on a collection of Dynamic Linked Libraries operating under the Windows operating environment, which are then invoked within the Pandit computer program. (3:24-4:55). Similarly, only Apple Computer would have had the capability, let alone the motivation, to combine Pandit into LiveDoc.

635. Dr. Fox may mean that LiveDoc can be added to Pandit to “fill in” what Dr. Fox incorrectly claims is the only claim element missing from Pandit (*see* paragraphs 611-612), *i.e.* “performing a search using at least part of the first information as a search term in order to find the second information.” However, since LiveDoc also fails to disclose the searching required by the Asserted Claims, adding LiveDoc to Pandit does not lead to Dr. Fox’s desired result. In addition, this is not the only missing limitation in Pandit, as explained above. However, even if LiveDoc had disclosed a search, which it does not, the Pandit + LiveDoc combination still fails to teach the invention, for a least the reasons that in both systems the purported input device is not configured, and the user command is not received by the by the first computer program, as explained above. No matter how you combine the Pandit and LiveDoc, the combination cannot provide the required searching or input device that are missing from both systems. Therefore, for at least this reason alone, the combination will not render the invention obvious.

636. As I discuss at paragraphs 190–194, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed LiveDoc System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of the LiveDoc



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System he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

637. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***5. Combining Pandit with Newton Is Not Obvious or Invalidating***

638. As discussed above, Dr. Fox has not explained how Pandit or Newton disclose any limitations of the Asserted Claims nor does he explain how Pandit would be modified in light of Newton. It is also my opinion that Pandit and Newton each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

639. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. First, Dr. Fox has not shown that the architectures of Pandit and Newton are compatible with one another. For example, Pandit identifies the implementation of its invention in a series of subroutines localized in Dynamically Linked Libraries, specific to Microsoft's Windows operating system, not only as the manner in which that invention is practiced but also as a significant benefit of the invention. (*E.g.*, Pandit, 3:36-49; 4:32-5:11). Not only are Dynamically Linked Libraries unavailable on the Newton, but neither Dr. Fox nor the materials he cites identify any comparable technology through which the Newton's technology is implemented. Thus, one of ordinary skill in the art would appreciate that their architectures are not compatible.

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640. Furthermore, one of ordinary skill in the art would not have been motivated to consider Pandit and Newton's Intelligent Assistant jointly because the combination would not have understood those inventions to relate to the same field. For example, Pandit "pertains to recognition of text in a body of text as belonging to a predetermined class and performing an operation relevant to the recognized text." (Pandit, 1:51-53). In other words, Pandit is focused on identifying and making actionable specific entities. In contrast, the Newton's technology purports to interpret and act on requests. (*E.g.*, ARENDI-DEFS00004995, at '5189; ARENDI-DEFS00003649, at '4296). Pandit makes individual words actionable and proposes ways to act on them, whereas Newton permits users to launch designated operations by writing text embodying a command.

641. Dr. Fox may mean that the Newton can be added to Pandit to "fill in" what Dr. Fox incorrectly claims is the only claim element missing from Pandit (Fox Report, ¶185), *i.e.* "performing a search using at least part of the first information as a search term in order to find the second information." This is not the only missing limitation in Pandit, as explained above. However, even if it were, which it is not, adding the Newton to Pandit cannot add the required search since, as described above, the Newton also lacks the required search. Therefore, for at least this reason alone, the combination will not render the invention obvious.

642. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to, supplement, or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

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**6. *Combining Pandit with Microsoft Outlook 97 Is Not Obvious or Invalidating***

643. As discussed above, Dr. Fox has not explained how Pandit or Microsoft Outlook disclose any limitations of the Asserted Claims nor does he explain how Pandit would be modified in light of Microsoft Outlook. It is also my opinion that Pandit and Microsoft Outlook each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

644. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. Pandit and Outlook are distinct technologies in distinct fields. Pandit, unlike Outlook, would not be understood by one of skill to be an invention about sending emails; rather, Pandit, unlike Outlook, discloses improvements in “the field of text data processing” that “pertain[] to recognition of text in a body of text as belonging to a predetermined class and performing an operation relevant to the recognized text.” (Pandit, at 1:6; 1:51-53). The recognition of email addresses and the resulting “Add to address book . . .” option both appear incidentally in Pandit as examples, implemented in ways that are quite different from Outlook, consistent with their different fields of application. Pandit emphasizes that “there is no limit on the type of text which can be recognized by the invention,” and even when offering email addresses as an example states broadly, “The Email menu preferably includes, for example, an identification of programs and operations related to Email and Email addresses.” (Pandit, at 2:27-28; 2:53-55). Due to the wide gulf separating the fields and purposes of Pandit from Outlook, one of ordinary skill in the art would not be motivated to combine them.

645. Pandit teaches away from the implementation of integrating access to functions, such as address book maintenance, within an individual computer program such as Outlook. Its intent is precisely to provide such integration through its “recognition of text in a body of text as

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belonging to a predetermined class and performing an operation relevant to the recognized text.” (Pandit, at 1:6) The sole apparent connection between the two is that both handle email addresses, and that Pandit permits the user to send an email using an email client. That minimal overlap would not motivate one of ordinary skill in the art to combine them.

646. Pandit, moreover, teaches away from incorporating an extended version of Outlook’s system that would search for names related to email addresses and insert them into the address line. For example, Pandit includes the following description of FIG. 1d, discussed above:

An embodiment of pulled-down EMail menu **19** is shown in FIG. **1d**. Included in pulled-down Email menu **19** are such programs as a writable Email or general address book database and an EMail template and transmitting program, preferably automatically addressed with the accented address recognized in the text, etc. Any other program related to EMail sending or address storage may be included as within the scope of this invention.

(Pandit, at 2:56-63). Pandit, in other words, states a preference for addressing a resulting email *to the email address*, which Dr. Fox would presumably identify as the first information. This runs counter to Outlook’s address validation process which processes a text string which is not an email address and aims to insert the name of a contact into the address line.

647. Furthermore, one of ordinary skill in the art also would not understand Outlook to counsel performing a search as part of the address validation process when an email address is entered in the address line. The address validation functionality in Outlook serves to confirm that a “name” entered into the “To:” field belongs to a valid mail recipient (*i.e.*, there is an email address associated with the name to which the email can be sent). If the user enters an unknown string of characters into the address bar, sending would fail because Outlook would not know how to

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transmit an email with an ill-formed address. One of ordinary skill in the art would understand that such a validation procedure is not necessary in Pandit when the user acts on an identified email address because text that Pandit recognizes as an email address is inherently well-formed. One of ordinary skill in the art would, in fact, understand from Outlook that such addresses do not need to be resolved; Outlook recognizes such addresses as valid without matching them to a contact in the address book. (See, e.g., AHL0159008, at '059). Pandit already teaches that after the user highlights an email address, the system can send an email to this email address, and thus there is no need to search for further information related to that email address. Pandit, in short, has already validated the address as having an acceptable format when it offers the user the opportunity to send an email, so the user would have no benefit from combining Outlook with Pandit, because Outlook would add nothing.

648. To the extent that Dr. Fox has in mind Pandit's "Add to address book . . ." option, one of ordinary skill in the art would understand that this aspect of Pandit is not one that even could be enhanced through combination with the address validation functionality of Outlook. Simply put, one does not need to perform a search in order to create a new address book entry, and if one wants to add the email address to an existing contact, one cannot search for that contact using the email address that is not yet in the database. Pandit does not disclose retrieving a contact associated with the email address; rather, it discloses adding the first information to the address book. The mere fact that two computer programs mention address books is not sufficient motivation to combine them.

649. Nor, were the combination looked at conversely, would one of ordinary skill in the art have reason to modify the address validation system of Outlook with the teachings of Pandit. When the user inputs text into the To, Cc or Bcc fields, the user has already designated the type of

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information at issue and what he or she wants done with that information. It would serve no purpose to subject that text to the type of analyzing disclosed by Pandit to determine, for example, if the user had typed a date and wished to add to that date to his or her calendar. (If you add Pandit's functionality to the main text part of the email, it still does not teach the claim, this is just what Pandit already teaches, applied to the Outlook email text instead of text from an arbitrary source).

650. Furthermore, one of ordinary skill in the art would not be motivated to combine Pandit, which aims to handle text found in multiple computer programs with the features of Outlook 97—a single computer program. For example, one of ordinary skill in the art would understand that the first-computer-program-agnostic system disclosed by Pandit is incompatible with the Outlook-specific buttons and dialogs used within Outlook 97.

651. Dr. Fox may mean that Outlook 97 can be added to Pandit to “fill in” what Dr. Fox incorrectly claims is the only claim element missing from Pandit (Fox Report, ¶185), *i.e.* “performing a search using at least part of the first information as a search term in order to find the second information”. This is not the only missing limitation in Pandit, as explained above. The Pandit + Outlook 97 combination still fails to teach the invention. For example, both Pandit and Outlook fail to disclose performing an action *using second information* that depends at least in part on the type(s) of first information, and neither discloses performing a search *using a second computer program*.

652. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

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**7. Combining CyberDesk with Chalas Is Not Obvious or Invalidating**

653. As discussed above, Dr. Fox has not explained how CyberDesk or Chalas disclose any limitations of the Asserted Claims nor does he explain how CyberDesk would be modified in light of Chalas. It is also my opinion that CyberDesk and Chalas each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

654. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. First, one of ordinary skill in the art would understand CyberDesk and Chalas to be aimed at distinct visions for integrating applications. The CyberDesk project is described as an effort to integrate multiple Java- and network-based services, while Chalas' invention allows a single add-on program to provide additional functionality to an existing application program. (Chalas, 2:38-40). CyberDesk is explicitly described as a framework. Its goal is to provide a context-aware desktop-alternative knitting together local and remote services. (*E.g.*, ARENDI-DEFS00022052, at '22053 ("The CyberDesk project is a shift away from the traditional view of the desktop as a static collection of applications that the user switches between to complete a task . . . . Instead, our approach is to present the user with an environment in which the required functionality comes to find the user."); ARENDI-DEFS00021045, '21049 ("The CyberDesk system is a context-aware framework that provides a novel interface to personal information management, blurring the distinction between desktop, network and mobile services. CyberDesk's extensible context-inferencing layer provides a new way to leverage the knowledge of user context into more automated and personalized services.")). Indeed, CyberDesk positioned itself as a "paradigm shift," and its developers cast the "main objective of the ubiquitous computing project CyberDesk" as "to provide the infrastructure for self-integrating software in which the integration

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

is driven by actions of the user.” The addition of chaining to version 2 of CyberDesk is illustrative of the effort to create a new, integrated vision of computing.

655. In contrast, Chalas is directed more narrowly to an approach that “allows an add-on program to provide additional functionality to an existing application program”. (Chalas, 2:38-40) The invention in Chalas discloses an “add-on program” that sits between a computer program and operating system, intercepting communications between them and acting upon those communications. (Chalas, 5:26-44 (“The present invention uses a ‘capture mechanism’ . . . [that] serves to monitor the communication between operating system 312 and application program 310 of Fig. 3.”)). Chalas does not endeavor to determine whether the text it acts on is of a particular type or can be acted upon by a particular second computer program. It simply sends the text to the predetermined or user selected computer program. (*See* Chalas, 11:59-12:19). Unlike CyberDesk, Chalas is neither context-aware nor a framework. Its purpose is, quite simply, to allow one or more programs to accept user selections as inputs. (*See, e.g.*, Chalas, 2:38-49 (“The present invention allows an add-on program to provide additional functionality to an existing application program . . . . The invention simulates user actions relating to the clipboard’s operation and issues system program commands, e.g., those for specific system functions such as ‘read mouse cursor position,’ to allow the add-on program to copy and read images, such as text characters, from the display screen.”)). In other words, Chalas is focused on forwarding un-analyzed text to a second computer program for processing within an existing computing paradigm, whereas CyberDesk seeks to reimagine the structure of independent software programs to build an integrated framework of services. Those two visions attempt to solve different problems. One of ordinary skill in the art would not be motivated to combine them; the results of doing so would be



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unpredictable. Given the distinct aims and frameworks of CyberDesk and Chalas, one of ordinary skill in the art would not be motivated to combine them.

656. One of skill in the art would also understand that the architectures of Chalas and of the CyberDesk system are not compatible and, therefore, would not be motivated to combine them. On the one hand, Chalas works by intercepting messages between a first computer program and the operating system (though in an alternative embodiment, it can be incorporated into the operating system (*see* Chalas, 14:60-62)). It allows first computer programs to operate without modifying them, employing only documented means for modifying their user interface (*See e.g.*, Chalas, 6:42-50). In contrast, CyberDesk is explicitly described as a collection of Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer). For example, “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services” explains that all of the desktop services in the version 2 that it described were Java applets. (ARENDI-DEFS00021071, at ’21073). The article goes on to explain the centrality of Java to the system’s architecture:

All five of the components [*i.e.*, Locator, IntelliButton, ActOnButton Bar, desktop and network services, and type converters] have been implemented as Java applets for simplicity of network programming. We also chose Java for its promise of platform independence, its ability to execute within a web browser, and its object-oriented nature. The first two features support our goal of ubiquity, the second feature allows us to treat the browser as our desktop, and the last feature made development easier. Also, most of the network services implemented are available via the web, so the natural access method was via a web browser.

...

In CyberDesk, the Locator is implemented as a uniquely named applet on an HTML page containing all the CyberDesk applets in use. Upon startup, each of the component applets register themselves with the Locator

(ARENDI- DEFS00021071, at ’21072).

657. A person of ordinary skill in the art, confronted with the CyberDesk system consisting entirely of applets running within a single compute program and accessing information

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from internet web services would understand the system to be operating within those constraints. To the extent that desktop-based applets are to be integrated into the CyberDesk framework, it is necessary to modify the applet's code or to develop an applet-specific "wrapper." (E.g., ARENDI-DEFS00021071, '21073). One of ordinary skill in the art would not be motivated to combine such a system with Chalas, which operates with a program running without change to its code in a non-Java environment and is able to extend that program's functionality by simulating users' actions.

658. Dr. Fox has also failed to differentiate between the multiple versions of CyberDesk, (see ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Chalas. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system.

659. Even if a person of ordinary skill in the art had been motivated to combine CyberDesk and Chalas or the combination had been obvious, neither of which is the case, the CyberDesk + Chalas combination still fails to teach the invention, for at least the reasons that in both systems the purported input device is not configured, and the user command is not received, by the by the first computer program, as explained above. No matter how you combine CyberDesk and Chalas, the combination cannot provide something neither system has. Therefore, for at least this reason alone, the combination will not render the invention obvious.

660. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

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**8. Combining CyberDesk with Eudora Is Not Obvious or Invalidating**

661. As discussed above, Dr. Fox has not explained how CyberDesk or Eudora disclose any limitations of the Asserted Claims nor does he explain how CyberDesk would be modified in light of Eudora. It is also my opinion that CyberDesk and Eudora each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

662. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. First, one of ordinary skill in the art would understand CyberDesk and Eudora to be aimed at distinct visions for integrating application functionality. As I discussed in paragraph 654, CyberDesk was a research framework that aimed to change the computing paradigm to integrate computing services based on user's dynamic needs. In contrast, Eudora was a commercial email client—a single computer program that aimed to deliver a narrow collection of email-related functions within the bounds of its own proprietary computer program. One of ordinary skill in the art would not be motivated to combine CyberDesk with features localized in a single computer program such as Eudora, or to localize any of its features (including its input device) in any first computer program.

663. Second, Dr. Fox fails to identify what aspect of Eudora one would be motivated to combine with CyberDesk, let alone why. In my opinion one of ordinary skill in the art would not be motivated to combine any of the four features of Eudora that Dr. Fox references with CyberDesk. If Dr. Fox refers to Eudora's hotlink feature, CyberDesk already discloses the ability to act on URLs as functionality incorporated within its program. (*E.g.*, ARENDI-DEFS00022052, '22052). In fact, CyberDesk identifies functionality similar to Eudora's in an existing version of Netscape and teaches that Netscape's solution was inadequate. (ARENDI-DEFS00022052, '22052 ("The e-mail tool in Netscape offers similar but limited functionality in automatically recognizing

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URLs and e-mail addresses.”)). No apparent benefit would be provided to CyberDesk by Eudora’s more limited implementation. What is more, as I discuss with respect to Eudora, URLs are neither identifying information or contact information, nor are they used for searching—each of which are requirements for first information under the Asserted Claims. If Dr. Fox refers to Eudora’s spellcheck system, that feature is not compatible with the structure of CyberDesk, which is about moving data from event sources to event sinks, (ARENDI-DEFS00021071, ’21072), and a spellchecking system would be a detriment to utility in instances where CyberDesk monitors services that do not incorporate an editor, as it would clutter the ActOnButton Bar with useless options and lead to user frustration. If Dr. Fox refers to Eudora’s “address book functionality,” one of ordinary skill in the art would not see an additional benefit to CyberDesk from that functionality, especially in versions of CyberDesk that support chaining. In versions of CyberDesk that do not support chaining, the user would be returned data that he or she could not use to send an email. And, if Dr. Fox refers to Eudora’s user-configurable toolbar, one of ordinary skill in the art would appreciate that CyberDesk already provides its own user interface, incompatible with Eudora’s toolbars, in its system in the guise of the ActOn Button Bars. Localizing these buttons as a Java applet within CyberDesk is at the core of the CyberDesk system architecture. (ARENDI-DEFS00021072, ’21074). Eudora’s menus moreover do not deliver the type-specific selections that are necessary for CyberDesk to function.

664. One of skill in the art would also understand that the architectures of the CyberDesk system and Eudora are not compatible and, therefore, would not be motivated to combine them. As I discuss in paragraph 656, CyberDesk operates as a collection of Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer) to the extent that the web browser becomes an alternate desktop. One of ordinary

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

skill in the art would not be motivated to combine such a system with Eudora, which operates in a non-Java environment and depends on the bundling of its services in a single computer program.

665. Dr. Fox has also failed to differentiate between the multiple versions of CyberDesk, (see ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Eudora. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system. Likewise, Dr. Fox has not indicated whether he proposes to combine CyberDesk with the Windows or Microsoft versions of Eudora.

666. Even if the POSITA had been motivated to combine CyberDesk and Eudora or the combination had been obvious, neither of which is the case, the CyberDesk + Eudora combination still fails to teach the invention. No matter how you combine CyberDesk and Eudora, the combination cannot provide seething neither system has. Therefore, for at least this reason alone, the combination will not render the invention obvious.

667. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***9. Combining CyberDesk with Apple Data Detector Is Not Obvious or Invalidating***

668. As discussed above, Dr. Fox has not explained how CyberDesk or Apple Data Detectors disclose any limitations of the Asserted Claims nor does he explain how CyberDesk would be modified in light of Apple Data Detectors. It is also my opinion that CyberDesk and Eudora each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

669. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. One of ordinary skill in the art would understand CyberDesk and Apple Data Detectors to be aimed at distinct visions for integrating applications and to implement those visions using competing architectural approaches. As I discussed in paragraph 654, CyberDesk was a research framework that aimed to change the computing paradigm to integrate computing services based on users' dynamic needs. As I discuss in paragraph 656, CyberDesk sought to accomplish this goal by linking together Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer) to the extent that the web browser becomes an alternate desktop. In contrast, Apple Data Detectors operated by integrating with the operating system, automatically extending its services at run-time to computer programs running on the computer. Apple Data Detectors was a system-wide effort (including modification of the host operating system) to integrate multiple computer programs within the relatively closed Apple Computer ecosystem.

670. Dr. Dey, a developer of CyberDesk, testified to the architectural distinction between the two systems:

If [CyberDesk] were in the Apple Data Detect[or] world, all of these applications [*i.e.*, Java applets of CyberDesk] would not have to be registered with the Apple Data Detectors system. For free, any selection would automatically get -- the operating system has access to it, and the operating system could make it available to anybody else because that's the -- that's the power of having an operating system.

In contrast, when we're at the application layer, only the applications that were registered with CyberDesk -- you could have, you know, 20 other applications running, but unless they were registered with CyberDesk, they wouldn't have access to the information that was at this level.

671. (Dey Deposition Tr., 122:12-25; *see also* Dey Deposition Tr., 120:25-123:14). “CyberDesk: A Framework for Providing Self-Integrating Context-Aware Services” reiterating that Apple Data Detectors “works at the operating system level, using the selection mechanism

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

and Apple Events that most Apple applications support. ... Its focus appears to be desktop applications, as opposed to CyberDesk's ubiquitous services, existing either locally or remotely.” (AHL0121553, AHL0121561). One of skill in the art would have understood that combining the two architecture would have been both inappropriate and not technically feasible. Indeed, Dr. Dey was aware of both systems and did not attempt their further combination. In fact, Dr. Dey described attempting to integrate one capability present in ADD into CyberDesk, producing what one of ordinary skill in the art would understand to be unpredicted and adverse results when the number of entries in the ActOn Button Bar “blew up.” (Dey Deposition Tr., 106:4-18).

672. Dr. Fox has failed to differentiate between the multiple versions of CyberDesk, (*see* ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Apple Data Detectors System. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system. As I discuss at paragraph 103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine with what instantiation(s) of CyberDesk, it is also my opinion that he has no basis to argue that the proposed combination would be obvious.

673. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

***10. Combining CyberDesk with Newton Is Not Obvious or Invalidating***

674. As discussed above, Dr. Fox has not explained how CyberDesk or Newton disclose any limitations of the Asserted Claims nor does he explain how CyberDesk would be modified in light of Newton. It is also my opinion that CyberDesk and Newton each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

675. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. One of ordinary skill in the art would understand CyberDesk and Newton to be aimed at distinct visions of computing and to implement those visions using incompatible architectures. As I discussed in paragraph 654, CyberDesk was a research framework that aimed to change the computing paradigm to integrate computing services based on user's dynamic needs. As I discuss in paragraph 656, CyberDesk sought to accomplish this goal by linking together Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer) to the extent that the web browser becomes an alternate desktop. In contrast, Newton employed an operating system unique to that device, and its Intelligent Assistant operated by integrating with the operating system. Further, one of ordinary skill in the art would understand that the Newton was an early Personal Digital Assistant (PDA), addressing distinct and incompatible goals from CyberDesk which operated in a far more powerful personal computer having significantly more screen "real estate" to support its interactions with a user. Far from seeking to dynamically integrate services, its Intelligent Assistant was simply an alternate way to permit a user to enter commands. (ARENDI-DEFS00003649, at '4295 ("The Intelligent Assistant is a system service that attempts to complete actions specified by the user's written input. You can think of the Assistant as an alternate interface to Newton applications and services.")) Unlike CyberDesk, which sought to



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

dynamically identify users' needs and offer them services tailored to particular data types, the Newton's technology purports to interpret and act on requests—including entire phrases—in order to provide access to local services. (*E.g.*, ARENDI-DEFS00004995, at '5189; ARENDI-DEFS00003649, at '4296). One of ordinary skill in the art would have been motivated to modify CyberDesk in light of a product that placed greater burden on the user to deliver many of the same ends.

676. Not only would one of ordinary skill in the art see the Newton and CyberDesk as belonging to distinct fields, but they also would not have seen an obvious way to modify CyberDesk in light of Newton's Assistant. The purpose of CyberDesk was for the system to suggest actions *to* the user. In contrast, the Newton requires that the user be the active party and specify the action wanted of the machine. The Newton is the opposite of what CyberDesk would describe as context-aware. Where CyberDesk proposes actions to highlighted text without prompt from the user, the Newton requires the user to explicitly request the system's attention. Nor could elements of the Newton Assistant have been added to CyberDesk in a predictable or practical way. Dr. Fox does not suggest, for example, where in the CyberDesk framework one could slot additional applets responsible for replicating the functionality of the Newton. And, if Dr. Fox suggests that the Newton Assistant would have inspired changes to the services that act on the selected information, their development also would not have been obvious. One of ordinary skill in the art would understand CyberDesk to use of pre-existing or lightly modified services rather than to teach creating these from scratch.

677. Dr. Fox has failed to differentiate between the multiple versions of CyberDesk, (*see* ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

Newton. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system.

678. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***11. Combining CyberDesk with LiveDoc System Is Not Obvious or Invalidating***

679. It is my opinion that CyberDesk and LiveDoc each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims. For example, neither CyberDesk nor LiveDoc disclose the required relationship between the input device and the first computer program.

680. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. LiveDoc was a system-wide effort (including modification of the host operating system) to integrate multiple computer programs within the relatively closed Apple Computer ecosystem. CyberDesk, on the other hand is explicitly described as a collection of Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer). For example, “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services” explains that all of the desktop services in the version 2 that it described were Java applets. (ARENDI-DEFS00021071, at ’21073). The article goes on to explain the centrality of Java to the system’s architecture:

All five of the components [*i.e.*, Locator, IntelliButton, ActOnButton Bar, desktop and network services, and type converters] have been implemented as Java applets for simplicity of network programming. We also chose Java for its promise of

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platform independence, its ability to execute within a web browser, and its object-oriented nature. The first two features support our goal of ubiquity, the second feature allows us to treat the browser as our desktop, and the last feature made development easier. Also, most of the network services implemented are available via the web, so the natural access method was via a web browser.

In CyberDesk, the Locator is implemented as a uniquely named applet on an HTML page containing all the CyberDesk applets in use. Upon startup, each of the component applets register themselves with the Locator

(ARENDI- DEFS00021071, at '21072). A person of ordinary skill in the art, confronted with the CyberDesk system consisting entirely of applets running within a single compute program and accessing information from the internet would understand the system to be confined to those terms. Therefore, even if their results may superficially overlap, they take entirely different approaches and adopt conflicting architectures; there would be no motivation to combine them.

681. One of ordinary skill in the art would not have been capable of modifying CyberDesk in light of LiveDoc, let alone be motivated to do so. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

682. Further, LiveDoc relied on custom APIs with particular functionality to communicate with the applications showing the text. (FOX\_0011798 at FOX\_0011803). For

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computer programs to operate with LiveDoc, the developers would need to modify their programs to employ those APIs. This approach runs counter to and is incompatible with, CyberDesk's goal of not altering the externally-developed services, which CyberDesk achieved by adding "wrappers" around the applications if needed. Also for this reason, the person of skill in the art would not be motivated to make this combination.

683. It is hard to imagine how one could combine one of these two references into the other without destroying the operating principle of one of them. Additionally, since the functionality that they provide is similar, although they go about it differently, one is hard pressed to see what would be gained from a programmer's or user's perspective by their combination.

684. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***12. Combining CyberDesk with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating***

685. As discussed above, Dr. Fox has not explained how CyberDesk or Selection Recognition Agent or Pandit disclose any limitations of the Asserted Claims nor how CyberDesk would be modified in light of Selection Recognition Agent and Pandit. It is also my opinion that CyberDesk and Selection Recognition Agent and Pandit each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

686. In paragraphs 613 and following, I already explain several of the reasons why one of ordinary skill in the art would not have been motivated to combine CyberDesk with Pandit. I

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

incorporate that discussion here. Adding Selection Recognition Agent to this mix does not make the combination any more appropriate. Selection Recognition Agent did not fit the paradigm shift in computing that CyberDesk sought to implement by integrating services into a single, context-aware system. (*See* paragraph 654). Rather, Selection Recognition Agent had the narrower purpose of “recogniz[ing] meaningful words and phrases in text, and enabl[ing] useful operations on them.” (ARENDI-DEFS00008664, ’8664). In effect, SRA “turns plain text into a kind of hypertext.” (ARENDI-DEFS00008664, ’8664). That is, its focus is on making actionable entities selected by the user—not on integrating services into a single framework. Given their distinct aims and fields, one of ordinary skill in the art would not have been motivated to combine them.

687. Moreover, one of ordinary skill in the art would also appreciate that the architecture of CyberDesk and Selection Recognition Agent were incompatible and that features of one could not be ported to the other. In contrast to the Java-applet-based architecture of CyberDesk, Selection Recognition Agent operates as “an unobtrusive program that a user constantly runs on [a user’s] PC,” and which “monitors operating system events to determine when the user has selected text in a window.” ARENDI-DEFS00008664, ’8664; *see also* ARENDI-DEFS00008664, ’8667 (providing a more detailed description of the Selection Recognition Agent’s method for acquiring text and recognizing its contents). Because of its architecture, “[t]he application [in which that text originated] need not be aware of the existence of the SRA” for SRA to operate (ARENDI-DEFS00008664, ’8665). What this means is that whereas the CyberDesk relies on a framework of multiple applets, integrated with and registered with CyberDesk, to provide its services within a single web browser (or JVM), the Selection Recognition Agent is able to provide its functionality to native applications running on the desktop and to provide its services through a single Selection Recognition Agent computer program.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

688. The developers of CyberDesk highlighted additional distinctions and incompatibilities between the two systems. As explained in “CyberDesk: A Framework for Providing Self-Integrating Context-Aware Services,” “[u]nlike CyberDesk, [Selection Recognition Agent] uses a fixed data type-action pair, allowing for only one possible action for each data type recognized. The actions performed by the agent are limited to launching an application. ... For applications that do not “reveal” the data selected to the agent, the user must copy the selected data to an application that will reveal it. It does not support any of the advanced features of CyberDesk, like chaining or combining, nor does it use any other forms of context like time or position.” (AHL0121553, '121561). These distinctions and teaching away would further dissuade one of ordinary skill in the art from combining them.

689. Dr. Fox has also failed to differentiate between the multiple versions of CyberDesk, (*see* ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Eudora. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system. Furthermore, as I discuss at paragraph 482, it is my opinion that Dr. Fox has not shown that the Pandit reference evidences the Selection Recognition Agent system. It is my opinion that he has also provided no evidence to support their combination.

690. Dr. Fox has not explained how these pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

***13. Combining CyberDesk with Domini Is Not Obvious or Invalidating***

691. As discussed above, Dr. Fox has not explained how CyberDesk or Domini disclose any limitations of the Asserted Claims nor does he explain how CyberDesk would be modified in light of Domini. It is also my opinion that CyberDesk and Domini each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

692. Moreover, one of ordinary skill in the art would not have been motivated to combine CyberDesk with Domini. First, they have distinct goals and operate in different fields. As I discussed in paragraph 654, CyberDesk was a research framework that aimed to change the computing paradigm to integrate computing services based on user's dynamic needs. In contrast, Domini discloses a method and system for checking spelling and grammar in a document. In particular, Domini discloses that its preferred embodiment is represented by the spelling and grammar checking features within a single computer program: Microsoft Word. (Domini, 5:1-4). Domini is not about integrating computing services but rather the mundane task of spelling and grammar checking a document.

693. Nor would it be technologically feasible or practical to combine CyberDesk with Domini. Spellchecking and grammar checking cannot be practically implemented within CyberDesk's framework. Because, as discussed above, Domini performs no analyzing and instead checks the spelling and grammar of every word and sentence. To provide a comparable capability within CyberDesk, one of skill in the art would understand that there would be two totally impractical choices for user interaction. For one impractical choice, a user would need to individually highlight each word in a document, wait for CyberDesk to provide the ActOn Button Bar, then select an option to spell-check the word, and then interact with the spell-checker program. Alternatively, and equally impractically, the user could select the entire text of the document, in

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

which case the ActOn Button Bar of CyberDesk would provide far too many choices of possible actions that the user could choose. CyberDesk teaches away from such “menu bloat,” indicating that it is CyberDesk’s biggest limitation. (AHL0121553, at ’121562; *see also* Dey Deposition Tr. app. 247-248). Moreover, that feature is not compatible with the structure of CyberDesk, which is about moving data from event sources to event sinks, (ARENDI-DEFS00021071, ’21072), and a spellchecking system would be a detriment to utility in instances where CyberDesk monitors services that do not incorporate an editor, as it would clutter the ActOnButton Bar with useless options and frustrate users. Furthermore, to the extent that Domini is designed to be integrated into computer programs, such as Word, this localization of a resource in a single computer program is incompatible with CyberDesk’s architecture supporting linking multiple services to one another through its IntelliButton. Conversely, CyberDesk’s architecture would be incompatible with a spellchecker, which aims simply to correct words and sentences rather than to analyze text by type and to link a user to a countless other service.

694. Dr. Fox has also failed to differentiate between the multiple versions of CyberDesk, (*see* ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Eudora. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system.

695. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.



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***14. Combining CyberDesk with Microsoft Word 97 Is Not Obvious or Invalidating***

696. As discussed above, Dr. Fox has not explained how CyberDesk or Word 97 disclose any limitations of the Asserted Claims nor does he explain how CyberDesk would be modified in light of Word 97. It is also my opinion that CyberDesk and Word 97 each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

697. Furthermore, one of ordinary skill in the art would not be motivated to combine these references. Dr. Fox addresses only the mail merge function of Word 97 in his expert report. One of ordinary skill in the art would understand that mail merge and CyberDesk belong to entirely different fields. As I discussed in paragraph 654, CyberDesk was a research framework that aimed to change the computing paradigm to integrate computing services based on user's dynamic needs. CyberDesk is not about improvements to word processing, but rather to identifying user's needs and knitting together services into a single framework to meet them. In contrast, the mail merge feature of the proprietary Microsoft Word performs the mundane task of pasting text from the manually-designated field of a user-selected data source into a document at the location specified by the user.

698. One of ordinary skill in the art would also appreciate that the two systems are incompatible. With respect to their functionalities, there is no place for something like Mail Merge in CyberDesk. CyberDesk is about moving data from event sources to event sinks rather than adding data back to the event source, (ARENDI-DEFS00021071, '21072), and a mail merge system would be a detriment to utility in instances where CyberDesk monitors services that do not incorporate an editor, as it would clutter the ActOnButton Bar with useless options and frustrate users. Mail merge, too, could not be improved by borrowing from CyberDesk. Dr. Fox has not

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

identified any way in which identifying structures in a document and services that can operate on them would facilitate the addressing of form letters or envelopes from a database. Likewise, the architecture of Word 97 is incompatible with CyberDesk. As I discuss in paragraph 656, CyberDesk sought to accomplish its goal by linking together Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer). Word 97 including its integrated mail merge feature was not one or more Java applets but rather a full-fledged computer application that was self-contained and ran in its own right. Dr. Fox has not shown how it would have been possible to modify Word 97 or its mail merge function to interface with CyberDesk under these circumstances. And it is my opinion that one of ordinary skill in the art would not have been motivated to combine them under such circumstances.

699. Likewise, one of ordinary skill in the art would not think it obvious in light of Word 97 to change the architecture of CyberDesk in order to integrate the ActOn Button Bar buttons within a distinct first computer program responsible for displaying the document. First, as already discussed, this runs counter to CyberDesk's Java-based architecture. Second, as I have also discussed, CyberDesk aims to tie computer programs together into a single, interoperable framework. Moving the key input device into separate first computer programs would run counter to this goal. It also would not be obvious to one of ordinary skill in the art how the dynamism of the ActOn Button Bar menu could be replicated.

700. Dr. Fox has also failed to differentiate between the multiple versions of CyberDesk, (see ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Eudora. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system.

CONFIDENTIAL OUTSIDE COUNSEL ONLY

701. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***15. Combining Apple Data Detectors with Chalas Is Not Obvious or Invalidating***

702. As discussed above, Dr. Fox has not explained how Apple Data Detectors or Chalas disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of Chalas. It is also my opinion that Apple Data Detectors and Chalas each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

703. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. As discussed above, ADD discloses just one type of information that can be searched for. Chalas discloses none. Consequently, combining these references could not yield a method that could perform an analysis to identify “categories of identifying information . . . or contact information . . . that can be searched for in an information source external to the document.”

704. As discussed above, Chalas discloses adding functions to existing application programs. Chalas is directed more narrowly to an approach that “allows an add-on program to provide additional functionality to an existing application program.” (Chalas, 2:38-40) The invention in Chalas discloses an “add-on program” that sits between a computer program and operating system, intercepting communications between them and acting upon those communications. (Chalas, 5:26-44 (“The present invention uses a ‘capture mechanism’ . . . [that]

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

serves to monitor the communication between operating system 312 and application program 310 of Fig. 3.”)). Chalas does not endeavor to determine whether the text it acts on is of a particular type or can be acted upon by a particular second computer program. It simply sends the text to the predetermined or user selected computer program. (*See* Chalas, 11:59-12:19). Its purpose is, quite simply, to allow one or more programs to take user selections as inputs. (*See, e.g.*, Chalas, 2:38-49 (“The present invention allows an add-on program to provide additional functionality to an existing application program . . . . The invention simulates user actions relating to the clipboard’s operation and issues system program commands, e.g., those for specific system functions such as ‘read mouse cursor position,’ to allow the add-on program to copy and read images, such as text characters, from the display screen.”)). In other words, Chalas is focused on forwarding unanalyzed text to a second computer program for processing within an existing computing paradigm. In contrast, Apple Data Detectors was a system-wide effort (including modification of the host operating system) to categorize text appearing in computer programs and to make that text actionable. One of ordinary skill in the art would understand it to be an intelligent assistant the core attribute of which is the ability to identify and categorize meaningful structures in text and to suggest actions relevant to those structures. Chalas did none of these things.

705. As I discuss at paragraph 103, for example, it is my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

CONFIDENTIAL OUTSIDE COUNSEL ONLY

706. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***16. Combining Apple Data Detectors with Eudora Is Not Obvious or Invalidating***

707. As discussed above, Dr. Fox has not explained how Apple Data Detectors or Eudora disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of Eudora. It is also my opinion that Apple Data Detectors and Eudora each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

708. As discussed above, Dr. Fox has improperly combined two distinct references addressing different implementations of Eudora, and he has done so with no discussion. In my opinion, each user manual should be considered as a separate, alleged prior art reference. Likewise, Dr. Fox has improperly combined multiple references and systems, including those that post-date the applicable priority date for the Asserted Claims, to create a single theorized Apple Data Detectors System. Dr. Fox has offered no evidence that such a system ever existed, let alone during the relevant period. Dr. Fox does not indicate which Eudora one would be motivated to combine with which instantiation of Apple Data Detectors.

709. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. [REDACTED]

[REDACTED]

[REDACTED]

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

[REDACTED]

[REDACTED]

[REDACTED] One of ordinary skill in the art would not be motivated to combine Apple Data Detectors with features localized in a single computer program such as Eudora, or to localize any of Apple Data Detectors' features (including its input device) in any first computer program.

710. Second, Dr. Fox fails to identify what aspect of Eudora one would be motivated to combine with Apple Data Detectors (let alone why). In my opinion one of ordinary skill in the art would not be motivated to combine any of the four features of Eudora that Dr. Fox references with Apple Data Detector. The first feature is spell checking. Adding spell checking to ADD would not have been obvious. For example, ADD is about passing structures to a second computer program to perform an action. In contrast, spellchecking serves to alter text within the original document. Moreover, ADD teaches recognition of structures using simple grammatical analysis and teaches away from more computationally intensive methods. This method cannot be used to identify incorrectly spelled words, and the lookup procedures required of spell-checking would have unacceptably slowed ADD's identification of structures given the processing power of PCs at the time. Furthermore, ADD is not limited to operating with editable documents. Running spell-checking on non-editable text would be basically useless and would only degrade the utility of the contextual menu by providing useless options to the user. Moreover, the architecture of ADD allows the user to act on only a single entity at a time. One of ordinary skill in the art would appreciate that this would not be an efficient way to implement spell-checking. Finally, ADD is designed to be a system for analyzing text, creating a UI and then sending structures to a second computer program. Adding spellchecking to ADD would require a fundamental change to its

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architecture by building a second service into ADD itself. Even if one added Eudora “spellchecking” to ADD, the combination would still not teach the invention.

711. The second feature highlighted by Fox in Eudora is its URL “hot link” feature. One of ordinary skill in the art would not be motivated to combine this feature with ADD for at least the following reasons. For example, the feature is duplicative of ADD, which already has the ability to handle URLs. One of ordinary skill in the art would not be motivated to waste system resources with a second, duplicative URL-handling system. Moreover, the hot link feature is not consistent with the architecture of ADD. One of ordinary skill in the art would not disrupt ADD’s foundational use of contextual menus by introducing a different UI element for a single kind of link. In fact, one of ordinary skill in the art would appreciate that ADD teaches that one of its advantages is the non-disruptive nature of its contextual menus. Furthermore, one of ordinary skill in the art would see as one of the advantages of ADD that it is independent of the first computer program; Eudora’s hot links, however, would require the setting up of input devices and alteration of text *within first* computer programs. Even if one added Eudora’s URL “hot links” to ADD, the combination would still not teach the invention.

712. The third feature highlighted by Dr. Fox is the ability to insert an address into the address line of an email form an address book, what I refer to above as the “address book functionality.” One of ordinary skill in the art would not have been motivated to combine this with ADD. The purpose of ADD is not to assist in the writing of emails. Rather, its purpose is to recognize structures in text and to make those structures into the objects of an action. To put it another way, the users of ADD do not start with a blank email for which they need to an address, rather the users starts with a structure, such as an email address, and seek to do something with it. If the structure is an email address, for example, ADD already offered the ability to create an email

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addressed to that email address. There is no reason to open and manually select an addressee from an address book or to consult the address book to finish writing a “name” because the email address is already at hand. Even if one added Eudora’s “address book functionality” to ADD, the combination would still not teach the invention.

713. The fourth feature that Fox points to in Eudora is its user-configurable toolbar. One of ordinary skill in the art would not be motivated to combine that toolbar with ADD for several reasons. ADD teaches that one of its advantages and a key feature of its architecture is its independence from the first computer program displaying the text. In contrast, Eudora teaches providing a toolbar that is an integral component of the first computer program. More importantly, Dr. Fox has not explained out how Eudora’s user interface would be compatible with the architecture and needs of ADD. ADD utilizes contextual menus that can change with the context of what entities have been recognized and presents actions accordingly. Eudora does not disclose a toolbar that could change to reflect the types of entities that ADD might detect. Even if one added Eudora’s user-configurable toolbar to ADD, the combination would still not teach the invention.

714. As I discuss at paragraph 103, for example, it is my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious. Likewise, Dr. Fox has not identified which version of Eudora he proposes to combine with ADD.

715. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination,



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whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***17. Combining Apple Data Detectors System with CyberDesk System Is Not Obvious or Invalidating***

716. As discussed above, Dr. Fox has not explained how CyberDesk or Apple Data Detectors disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors System would be modified in light of CyberDesk. It is also my opinion that CyberDesk and Apple Data Detectors System each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

717. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. One of ordinary skill in the art would understand CyberDesk and Apple Data Detectors to be aimed at distinct visions for integrating applications and to implement those visions using competing architectural approaches. As I discussed in paragraph 654, CyberDesk was a research framework that aimed to change the computing paradigm to integrate computing services based on users' dynamic needs. As I discuss in paragraph 656, CyberDesk sought to accomplish this goal by linking together Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer). In contrast, Apple Data Detectors operated by integrating with the operating system, automatically extending its services at run-time to computer programs running on the computer. Apple Data Detectors was a system-wide effort (including modification of the host operating system) to integrate multiple computer programs within the relatively closed Apple Computer ecosystem.

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718. Dr. Dey, a developer of CyberDesk, testified to the architectural distinction between the two systems:

If [CyberDesk] were in the Apple Data Detect[or] world, all of these applications [*i.e.*, Java applets of CyberDesk] would not have to be registered with the Apple Data Detectors system. For free, any selection would automatically get -- the operating system has access to it, and the operating system could make it available to anybody else because that's the -- that's the power of having an operating system. In contrast, when we're at the application layer, only the applications that were registered with CyberDesk -- you could have, you know, 20 other applications running, but unless they were registered with CyberDesk, they wouldn't have access to the information that was at this level.

(Dey Deposition Tr., 122:12-25; *see also* Dey Deposition Tr., 120:25-123:14). “CyberDesk: A Framework for Providing Self-Integrating Context-Aware Services” reiterating that Apple Data Detectors “works at the operating system level, using the selection mechanism and Apple Events that most Apple applications support. ... Its focus appears to be desktop applications, as opposed to CyberDesk's ubiquitous services, existing either locally or remotely.” (AHL0121553, AHL0121561). One of skill in the art would have understood that combining the two architecture would have been both inappropriate and not technically feasible.

719. Dr. Fox has failed to differentiate between the multiple versions of CyberDesk, (*see* ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Apple Data Detectors System. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system. As I discuss at paragraph

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

720. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***18. Combining Apple Data Detectors with Newton Is Not Obvious or Invalidating***

721. As discussed above, Dr. Fox has not explained how Apple Data Detectors or the Newton disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of Newton. It is also my opinion that Apple Data Detectors and Newton each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

722. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. For example, those of ordinary skill in the art would not have been motivated to consider Apple Data Detectors and Newton's Intelligent Assistant jointly because they would not have understood those inventions to relate to the same field. For example, Apple Data Detectors was a system-wide effort (including modification of the host operating system) to categorize text appearing in computer programs and to make that text

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actionable. In contrast, the Newton was an early Personal Digital Assistant (PDA), addressing distinct and incompatible goals from Apple Data Detectors, which operated in a far more powerful personal computer having significantly more memory to support its interactions with a user. The Intelligent Assistant permits users to launch designated operations by writing a command. Put differently, Apple Data Detectors interpreted text in order to suggest actions to the user, whereas Newton executed actions based on its interpretation of what the user had commanded. One of ordinary skill in the art would also have understood that the Intelligent Assistant technology was specifically designed for a pen-based operating system such as the Newton PDA.

723. Even if one of ordinary skill in the art had considered these features jointly, such a person would not have been motivated to combine their elements. To modify Apple Data Detectors to adopt features of Newton would have both created unpredictable results and been technically undesirable. For example, for the Assistant functionality to be useful, it requires the document in which the user enters the command to be editable. Apple Data Detectors, however, are not disclosed to be limited to editable documents. Further, Apple Data Detectors are designed to work within the generally-accepted user interface paradigm of the time in which entry and modification of text in documents is entirely separate from specification of desired actions that a system should take with that text; there would be no motivation to combine it with an approach that enables users to specify commands by entering editable text. These user interface paradigms are explicitly incompatible. Moreover, due to the contextual menu-based system of Apple Data Detectors, one of ordinary skill in the art would understand that any identified entities would already be presented to the user along with all possible actions. The Intelligent Assistant would return fewer results, but this would presumably all overlap with the results already returned by Apple Data Detectors. The

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result would be to provide no additional benefit while further contributing to overcrowding of the contextual menus of Apple Data Detectors.

724. As I discuss at paragraph 103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

725. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***19. Combining Apple Data Detectors System with LiveDoc System Is Not Obvious or Invalidating***

726. As discussed above, Dr. Fox has not explained how Apple Data Detectors or LiveDoc System disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of LiveDoc System. It is my opinion that Apple Data Detectors and LiveDoc each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims. For example, neither Apple Data Detectors nor LiveDoc disclose the required relationship between the input device and the first computer program.

727. Moreover, one of ordinary skill in the art would not be motivated to combine these two systems. On the one hand, much of their functionality overlaps, and indeed LiveDoc is

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described as follow-on project to Apple Data Detectors. (ARENDI-DEFS00003323, '3325, '3326, '3328). But this also means that it would not have been obvious to one of ordinary skill in the art to combine them: “combining” Apple Data Detectors with LiveDoc can only mean upgrading Apple Data Detectors to *be* LiveDoc. Moreover, to the extent that Apple Data Detectors and LiveDoc materially differ their operating principles are incompatible. For example, analyzing cannot both occur automatically in the background (as with LiveDoc) and only after the user makes a selection (as with Apple Data Detectors). Similarly, contextual menus cannot both show actions for all matched entities in the document and only those actions that relate to the entity on which the user clicked. Dr. Fox has not identified a half-way point at which these solutions could be meaningfully combined.

728. As I discuss at paragraph 103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious. Similarly, Dr. Fox combined multiple references to create a single LiveDoc System without offering a basis for doing so.

729. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

***20. Combining Apple Data Detectors with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating***

730. As discussed above, Dr. Fox has not explained how Apple Data Detectors or Selection Recognition Agent disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of Selection Recognition Agent. It is my opinion that Apple Data Detectors and Selection Recognition Agent (including Pandit) each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims. For example, neither Apple Data Detectors nor Selection Recognition Agent disclose the required relationship between the input device and the first computer program.

731. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. One of ordinary skill in the art also would not be motivated to combine them. Apple Data Detectors teaches away from SRA and, implicitly, Pandit. As explained in the later-published “Collaborative, Programmable Intelligent Agents,” Apple Data Detectors differed from “systems based on predefined recognizer/action pairs such as [Pandit and Kalbag's] Selection Recognition Agent” in that “the Apple Data Detectors scripting capability allows any set of arbitrary actions to execute when the user selects a particular action (see Figure 3). Scripting is not limited to the parameters of a command line interface to the application; instead it and can do anything that can be expressed in the scripting language, including the manipulation of data structures inside the application, if the application's scripting model makes that possible.” (ARENDI-DEFS000003329, at '3334). That article further criticized the user interface of SRA as being contrary to the aims of Apple Data Detectors: “The use of anthropomorphism in an agent interface which comes up in so many discussions of agents was incongruent with our goal of unobtrusiveness. We designed Apple Data Detectors to be invisible until needed (the butler who

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is only there exactly when you want him philosophy). Thus, there is nothing like a ‘swiveling eyeball’ ‘watching’ the user as in the Selection Recognition Agent, or a character as in Microsoft's Bob. Apple Data Detectors act behind the scenes, emerging when summoned. (ARENDI-DEFS000003329, at ’3331-32). Nor would it have been within the aptitude or access of one of ordinary skill in the art to combine the two references because Apple Data Detectors required changes at the proprietary operating-system level. One of ordinary skill in the art would therefore understand that both the architecture and user interface of Apple Data Detectors and SRA were distinct and incompatible with one other. One would not seek to modify Apple Data Detectors by looking to the less advanced integrating abilities of SRA.

732. As I discuss at paragraph 103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious. Furthermore, as I discuss at paragraph 482, it is my opinion that Dr. Fox has not shown that the Pandit reference evidences the Selection Recognition Agent system. It is my opinion that he has also provided no evidence to support their combination.

733. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

***21. Combining Apple Data Detectors with Domini Is Not Obvious or Invalidating***

734. As discussed above, Dr. Fox has not explained how Apple Data Detectors or Domini disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of Domini. It is my opinion that Apple Data Detectors and Domini each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

735. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. As discussed above, ADD was a framework for integrating software programs. In contrast, Domini was a spelling and grammar checker employed within a single computer program. (*See Domini*, 5:1-4). One of ordinary skill in the art would have seen the two as belonging to completely distinct and un-combinable fields. It would not have been technologically feasible or practical to combine Apple Data Detectors with Domini, and any attempt to do so would have yielded truly unpredictable results. Spellchecking and grammar checking cannot be practically implemented within Apple Data Detectors' framework. As discussed above, Domini performs no analyzing as the term is used in the claims of the '843 Patent and instead checks the spelling and grammar of every word and sentence. To provide a comparable capability within Apple Data Detectors, one of skill in the art would understand that there would be at least two impractical choices for user interaction. For one impractical choice, a user would need to individually highlight each word in a document, wait for Apple Data Detectors to provide a contextual menu, then select an option to spell-check the word, and then interact with the spell-checker program. Alternatively, and equally impractically, the user could select the entire text of the document, in which case the contextual menu of Apple Data Detectors would provide far too many choices of possible actions that the user could choose. Menu bloat would result. Menu bloat

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

could be reduced somewhat by checking every word against a dictionary-based detector; however, in a typical document with many errors one would still be faced with an overcrowded menu, and the endeavor would significantly slow processing time, a concern explicitly cited by Apple Data Detectors given processing limitations of the time.

736. Moreover, that feature is not compatible with the structure of Apple Data Detectors. Apple Data Detectors does not reflect any examples of inserting the results of an operation back into the original document, and one would not think it obvious to add that functionality, particularly for documents in programs that do not permit editing text. Apple Data Detectors is about making the *structure* actionable; not about improvements to word processing or extending the operations of a single first computer program. Apple Data Detectors, moreover, is not limited to editable documents, and adding a spellchecking function to a technology that includes use of non-editable documents would not occur to one of ordinary skill in the art as having any utility. Nor would one of ordinary skill in the art see utility in replicating the existing spell-checking and grammar-checking functions of underlying first computer programs where such functionality is useful. Furthermore, since Domini is designed to be integrated into computer programs, such as Word, this localization of a resource in a single computer program is at odds with Apple Data Detector's architecture, which aims to provide services across various computer programs.

737. As I discuss at paragraph 103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

738. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***22. Combining Apple Data Detectors with Microsoft Word 97 Is Not Obvious or Invalidating***

739. As discussed above, Dr. Fox has not explained how Apple Data Detectors or Word 97 disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of Word 97. It is my opinion that Apple Data Detectors and Word 97 each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

740. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. Dr. Fox addresses only the mail merge function of Word, and one of ordinary skill in the art would not even see the relevance of mail merge of Apple Data Detectors. Apple Data Detectors identifies structures in text and proposes actions to the user related to those structures. It works across first computer programs and integrates text in one computer program with functionality in a second computer program. In stark contrast, mail merge inserts data into a document. The location in which the data is inserted, and the data source are both designated by the user. Mail Merge is a feature of a single computer program, Microsoft Word 97. It does not involve analyzing of MERGEFIELDS to determine their type and it does not propose actions of any kind to the user.

741. In light of the lack of overlap between the two features, one of ordinary skill in the art would be unable to modify Apple Data Detectors in light of mail merge. There is no obvious

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way—and perhaps no non-obvious way—to provide mail merge functionality through Apple Data Detectors. It is totally unclear how Apple Data Detectors could make them actionable. No useful action could be undertaken with a MERGEFIELD unless it had already been linked to the corresponding data source. Any solution (if there is one) would be more complex and less user-friendly than the existing mail merge functionality. Furthermore, Apple Data Detectors is not limited to operating on editable documents. One of ordinary skill in the art would appreciate the lack of utility of including a mail merge functionality that covered non-editable documents. In fact, it is likely that Apple Data Detectors would only serve to poorly duplicate the mail merge functionality of existing programs that could operate in conjunction with Apple Data Detectors as the first computer program.

742. Likewise, one of ordinary skill in the art would not think it obvious in light of Word to replace Apple Data Detectors' user interface with the those built into a first computer program since a key advantage of Apple Data Detectors' is its ability to work across different computer programs.

743. As I discuss at paragraph 103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

744. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***23. Combining Apple Data Detectors with Microsoft Outlook 97 Is Not Obvious or Invalidating***

745. As discussed above, Dr. Fox has not explained how Apple Data Detectors or Outlook 97 disclose any limitations of the Asserted Claims nor does he explain how Apple Data Detectors would be modified in light of Outlook 97. It is my opinion that Apple Data Detectors and Outlook 97 each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

746. Moreover, one of skill in the art would not have been motivated to combine these references. Apple Data Detectors identifies structures in text and proposes actions to the user related to those structures. It works across first computer programs and integrates text in one computer program with functionality in a second computer program. In contrast, Outlook is a stand-alone email client. The address validation feature of Outlook to which Dr. Fox points in his report is specifically designed to ensure that the name entered into the address line of an email matches a mailbox to which Outlook can route the email when sent. One of ordinary skill in the art would understand these systems as distinct and as belonging to distinct fields.

747. The sole connection apparent connection between Outlook and Apple Data Detectors is that both allow an action to be taken with an email address. The similarity ends there. Apple Data Detectors would not be understood by one of skill to be an invention about sending emails, unlike Outlook; rather, Apple Data Detectors, unlike Outlook, discloses the ability to identify entities in text and to make them actionable. The recognition of email addresses and the resulting ability to send an email to that address is but one of multiple entity-action pairs supported by the system.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

748. Moreover, there is no need to perform address validation when Apple Data Detectors recognizes an email address, because that email address already contains all of the information needed to route an email. In fact, one of ordinary skill in the art also would not understand Outlook to counsel performing a search as part of the address validation process when an email address is entered in the address line. The address validation functionality in Outlook serves to confirm that a “name” entered into the “To:” field belongs to a valid mail recipient (*i.e.*, there is an email address associated with the name to which the email can be sent). If the user enters an unknown string of characters into the address bar, sending would fail because Outlook would not know how to transmit an email with an ill-formed address. One of ordinary skill in the art would understand that such a validation procedure is not necessary when the user acts on an email address identified in Apple Data Detectors because text that Apple Data Detectors recognizes as an email address is inherently well-formed. One of ordinary skill in the art would, in fact, understand from Outlook that such addresses do not need to be resolved; Outlook recognizes such addresses as valid without matching them to a contact in the address book. (See, *e.g.*, AHL0159008, at ’059). Apple Data Detectors already allows the user to send an email to such an email address, and thus there is no need to search for further information related to that email address.

749. One of ordinary skill in the art would not be motivated to combine Apple Data Detectors with Outlook because their approaches to user interface were incompatible.

750. As I discuss at paragraph 103, for example, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

751. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***24. Combining Eudora System with CyberDesk System Is Not Obvious or Invalidating***

752. As discussed above, Dr. Fox has not explained how Eudora or CyberDesk disclose any limitations of the Asserted Claims nor does he explain how Eudora would be modified in light of Eudora. It is also my opinion that Eudora and CyberDesk each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

753. Moreover, as I discuss with respect to Dr. Fox's proposed modification of Eudora in light of CyberDesk, one of skill in the art would not have been motivated to combine these references. For example, one of ordinary skill in the art would understand CyberDesk and Eudora to be aimed at distinct visions for integrating application functionality. As I discussed in paragraph 654, CyberDesk was a research framework that aimed to change the computing paradigm to integrate computing services based on user's dynamic needs. In contrast, Eudora was a commercial email client—a single computer program that aimed to deliver a narrow collection of email-related functions within the bounds of its own proprietary computer program. One of ordinary skill in the art would not be motivated to combine Eudora with aspects of a system designed to replace the paradigm of computer-program-based computing.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

754. Second, Dr. Fox fails to identify what aspect of Eudora one would be motivated to combine with CyberDesk, let alone why. In my opinion one of ordinary skill in the art would not be motivated to combine any of the four features of CyberDesk that Dr. Fox references with Eudora. To start with Eudora's hotlink system, Dr. Fox does not explain how this could be improved in light of CyberDesk. The creation of a hotlink for a URL, such as a webpage or ftp location, would have been understood by one of ordinary skill in the art as a narrow undertaking to make a very specific type of information actionable: URLs. Especially in the context of emails, one of ordinary skill would have understood URLs to be a unique use case. For example, an ftp link was known to be used to permit the transfer of files too large for the limited email systems of the time (or today) to handle. Similarly, it was common to include a web address in an email that would direct the recipient to a resource that could not be included in the email itself. One of ordinary skill in the art would have been familiar with the existing practice of adding links for URLs in webpages of the era and therefore would have understood the practice in those terms. URLs also serve a very narrow purpose: they provide a path to a resource to be retrieved. One of ordinary skill in the art, therefore, would not have been motivated by CyberDesk to expand its narrow hotlink functionality into one that could provide a broad web of context-aware computer services.

755. If Dr. Fox proposes to modify Eudora's spellcheck system, that feature is not compatible with the structure of CyberDesk, which is about moving data from event sources to event sinks. (ARENDI-DEFS00021071, '21072). To check spelling, one only needs to compare a word to a dictionary to propose suggestions. One does not need a cumbersome system of type-convertors and web of context-aware services in order to provide a spell-checking functionality. Not only would one of ordinary skill in the art understand that spell-checking and CyberDesk



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

belonging to even remotely similar fields, but they would appreciate that there is no predictable or straightforward way to combine them—even were one motivated to try.

756. If Dr. Fox refers to Eudora’s “address book functionality,” one of ordinary skill in the art would not see an additional benefit to Eudora from integrating CyberDesk into its functionality. Again, these technologies belong to entirely different fields. One does not need CyberDesk in order to complete a partially typed name or to insert an address located in an address book. Nor would there be any clear advantage to including a system of type-converters and ActOn Buttons with this functionality. If Dr. Fox’s suggestion is that additional address books might be integrated into Eudora, that end could more easily be achieved simply by adding address books to Eudora. Outlook, a contemporaneous email client, already provides a model for accessing multiple address books. There is no predicable or single way that one could combine CyberDesk with the address book functionality—even if one of ordinary skill in the art were motivated to try.

757. And, if Dr. Fox refers to Eudora’s user-configurable toolbar, one of ordinary skill in the art would appreciate that the toolbar would not be improved through combination with, for example, CyberDesk’s ActOn Button Bar—or any other feature of CyberDesk. The customizable toolbar—in contrast to CyberDesk’s cross-service platform—is built by and tailored to the needs of Eudora. In contrast, localizing the ActOn Button Bar in a Java applet within CyberDesk is at the core of the CyberDesk system architecture. (ARENDI-DEFS00021072, ’21074). One would also understand that CyberDesk does not teach altering the internal menus of its various services. It suggests adding a *separate* dynamically updated window that contains actions related to the recognized text. Eudora’s toolbar is explicitly incompatible with CyberDesk’s ActOn Button Bar.

758. One of skill in the art would also understand that the architectures of Eudora and of the CyberDesk system are not compatible and, therefore, would not be motivated to combine them.

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As I discuss in paragraph 656, CyberDesk operates as a series of Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer) to the extent that the web browser becomes an alternate desktop. One of ordinary skill in the art would not be motivated to combine such a system with Eudora, which operates natively in a non-Java environment and depends on the packaging of its services in a single computer program. Nor would one of ordinary skill in the art have been motivated to replicate the functionality of CyberDesk within a single first computer program, even if it were possible to do so. Eudora would be viewed as a service were it able to be integrated with CyberDesk. One of ordinary skill in the art would not be motivated to transform a single service into the entire CyberDesk system.

759. Dr. Fox has also failed to differentiate between the multiple versions of CyberDesk, (see ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Eudora. Likewise, he has failed to disclose whether he proposes to combine CyberDesk with the Windows or Mac versions of Eudora. One of ordinary skill in the art would not have understood either Eudora or CyberDesk to be a single system.

760. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***25. Combining Eudora System with Apple Data Detectors System Is Not Obvious or Invalidating***

761. As discussed above, Dr. Fox has not explained how Eudora or Apple Data Detectors System disclose any limitations of the Asserted Claims nor does he explain how Eudora would be

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modified in light of Apple Data Detectors. It is also my opinion that Eudora and Apple Data Detectors System each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

762. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] One of ordinary skill in the art would not be motivated to combine Apple Data Detectors with features localized in a single computer program such as Eudora, or to localize any of Apple Data Detectors' features (including its input device) in any first computer program.

763. Second, Dr. Fox fails to identify what aspect of Apple Data Detectors one would be motivated to combine with Eudora (let alone why). In my opinion one of ordinary skill in the art would not be motivated to combine Apple Data Detectors with any of the four features of Eudora that Dr. Fox references. The first feature is spell checking. Adding ADD to spell checking would not have been obvious. For example, ADDS is about passing structures to a second computer program to perform an action. In contrast, spellchecking serves to alter text within the original document. Moreover, ADDS teaches recognition of structures using a grammar-based analysis, something that one of ordinary skill in the art would have understood is not useful for spell checking. Moreover, the architecture of ADDS allows the user to act on only a single entity at a time. One of ordinary skill in the art would appreciate that this would not be an efficient way

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

to implement spell-checking. ADDS is designed to be a system for analyzing text, creating a contextual menu, and then sending structures to a second computer program.

764. Nor would anyone of skill in the art think that spell checking and ADDS belong to the same field. To check spelling, one only needs to compare a word to a dictionary to propose suggestions. Consider what that might look like if one combined ADDS with Eudora's spell-checking: First, the user would highlight the word or words to be spell-checked. ADDS would then have to identify "misspelled words," presumably by comparing the selected word to a dictionary. Given the size of that dictionary, including such a recognizer would lead to a decrease in performance. Then, the user would have to select the menu option associated with spell checking. In a typical document with both spelling errors and words not in a dictionary, the ADDS contextual menu would soon be overwhelmed. After that, the user would have to use a separate spell-checker to check the word again and propose a replacement. ADDS does not explain how its system would then allow the replacement to be entered into the original document, leaving open the possibility that the user must edit the document manually, which would not even be possible if the program displaying the document did not support editing. No one of skill in the art would be motivated to replace Eudora's easy-to-use spell-checking features with one based on ADDS.

765. The second feature highlighted by Fox in Eudora is its URL "hot link" feature. One of ordinary skill in the art would not be motivated to combine this feature with ADDS for at least the following reasons. For example, the creation of a hotlink for a URL, such as a webpage or ftp location, would have been understood by one of ordinary skill in the art as a narrow undertaking to make a very specific type of information actionable: URLs. Especially in the context of emails, one of ordinary skill would have understood URLs as belonging to a distinct class of information. For example, an ftp link was known to be used to permit the transfer of files too large for the

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

limited email systems of the time (or today) to handle. Similarly, it was common to include a web address that would direct the recipient to a resource that could not be included in the email itself. One of ordinary skill in the art would have been familiar with the existing practice of adding links for URLs in webpages of the era and therefore would have understood the practice in those terms. URLs also serve a very narrow purpose: they provide a path to a resource to be retrieved. One of ordinary skill in the art, therefore, would not have been motivated by Apple Data Detectors to expand its narrow hotlink functionality into one that could recognize a broader range of information types. Nor would it have been motivated to replace its easier-to-use, more familiar and less intrusive system of clickable links with an intrusive system of windows such as that evidenced in Apple Data Detectors.

766. The third feature highlighted by Dr. Fox is the ability to insert an address into the address line of an email form an address book, what I refer to above as the “address book functionality.” One of ordinary skill in the art would not have been motivated to combine this with ADD. The purpose of ADD is not to assist in the writing of emails. Rather, its purpose is to recognize structures in text and to make those structures into the objects of an action. To put it another way, the user of ADD does not start with a blank email for which they need an address, rather the user starts with a structure, such as an email address, and seeks to do something with it. These technologies belong to entirely different fields. One does not need ADD in order to complete a partially typed name or to insert an address located in an address book. Nor would there be any clear advantage to analyzing the text in the address field to determine its class and a computer program that can help to address the email based on that data: Eudora itself already does this. If Dr. Fox’s suggestion is that additional address books might be integrated into Eudora, that end could more easily be achieved simply by adding address books to Eudora. Outlook 97 already

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

provides a model for accessing multiple address books. There is no predictable or single way that one could combine ADD with the address book functionality—even if one of ordinary skill in the art were motivated to try.

767. The fourth feature that Fox points to in Eudora is its user-configurable toolbar. One of ordinary skill in the art would not be motivated to combine that toolbar with ADDS for several reasons. ADD teaches that one of its advantages and a key feature of its architecture is its independence from the first computer program displaying the text. In contrast, Eudora teaches providing a toolbar that is an integral component of the first computer program. One would also understand that ADD does not teach supplanting the internal menus of its various services. It suggests augmenting that system with its own separate system of contextual menus.

768. As I discuss at paragraph 103, for example, it is my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious. Likewise, Dr. Fox has not identified which version of Eudora he proposes to combine with ADD.

769. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

**26. Combining Eudora with Newton Is Not Obvious or Invalidating**

770. As discussed above, Dr. Fox has not explained how Eudora or Newton disclose any limitations of the Asserted Claims nor does he explain how Eudora would be modified in light of Eudora. It is also my opinion that Eudora and CyberDesk each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

771. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. Dr. Fox focusses his discussion of the Newton on its Assist button, and the ability to interpret simple user commands. The functionality provides the user with the ability to launch designated operations by writing a command. That functionality is provided at the system level and is always available by pressing a button at the bottom of the screen. More specifically, the assistant grants the user a quick method of launching a desired computer program and passing that computer program useful data. One of ordinary skill in the art would understand that it operates under the significant constraints of data entry, data management and navigation on 1990s-era pen-based PDAs, by permitting users to enter a short, intuitive command on the device's main screen (the notepad) and then press an easily accessible button for it to be processed. For example, "Call 555-555-5555" is interpreted to permit the user to place a telephone to that telephone number using the dialer. Eudora was designed to work within the generally-accepted user interface paradigm of the time in which entry and modification of text in documents is entirely separate from specification of desired actions that a system should take with that text; there would be no motivation to combine it with an approach that enables users to specify commands by entering editable text into a first computer program. These user interface paradigms are incompatible. As I discuss, each of the four features that Dr. Fox identifies would be understood by one of ordinary skill in the art to be a reflection of that distinct purpose.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

772. One of ordinary skill in the art at the time would have no motivation to import these capabilities, or any aspects of them, into Eudora. Eudora Pro, in both its Mac and Windows versions, is an email program for PCs. Newton is a pen-based PDA. The products and their highlighted features belong to entirely different domains. Imagining the addition of Newton's Assistant to Eudora is a case in point.

773. Taking in turn each of the four Eudora features highlighted by Dr. Fox shows why their proposed combination would not have been obvious. Turning first to "hotlinks," Dr. Fox has not identified how these could be modified in light of the teachings of Newton. Eudora's hotlinks already recognize the URL as a target (to borrow the language of Newton) and links it to a computer program such as a web browser that can load the designated resource in response to the user's click. Combining this with Newton would, apparently, instead direct users to type a command like "Open http://a.com/a.html" and then an assist button *running outside of Eudora* to interpret the command, followed by a confirmation button in the assistant's slip (assuming it was interpreted correctly). No one of ordinary skill in the art would have seen such a cumbersome modification as obvious or indeed simply to implement. Moreover, the Newton was a rudimentary device that was not disclosed to handle the all types of URL protocols made actionable in Eudora to load remote data. Therefore, one of ordinary skill in the art would not have looked to the Newton as a model of how to improve Eudora's handing of actionable URLs. In addition, since Eudora already could "hot-link" URLs, it is hard to image how adding anything from the Newton would improve the already existing Eudora feature, and the combination would in any case still lack, among other elements, the search.

774. Likewise, one of ordinary skill in the art would not think to borrow from the smart assist feature to initiate composing an email to any particular address in Eudora because the user



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

would already be in Eudora. The user can more easily press a “new email” button and input the desired name or email address than open an email, type “Email X” into the body of the email, press an Assist button and then wait for the system to interpret the request (without guarantee of success). Likewise, Dr. Fox has not suggested any way in which Eudora could be modified in light of Newton to improve its To/Cc/Bcc addressing buttons or the finish address book entry features of Eudora in particular. Nor does the Newton disclose performing a search using email addresses.

775. It also is not obvious how Eudora’s spellchecking program or toolbar could have been improved in light of the Newton. There is, indeed, no hint of a way to use the Assist feature for spellchecking, and Dr. Fox has not identified how or why a user would supplement the customizable toolbar of Eudora with any elements of the Assistant.

776. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***27. Combining Eudora with LiveDoc System Is Not Obvious or Invalidating***

777. As discussed above, Dr. Fox has not explained how Eudora or LiveDoc (disclose any limitations of the Asserted Claims nor does he explain how Eudora would be modified in light of LiveDoc. It is also my opinion that Eudora and LiveDoc each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

778. It is also my opinion that one of ordinary skill in the art would not have been motivated to combine these references. My discussion of why one of ordinary skill in the art would not have been motivated to combine Eudora System and the Apple Data Detectors System in

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paragraphs 762-768 are applicable to the proposed combination of Eudora and the LiveDoc System as well. Although the differences between LiveDoc and ADD's user interfaces mean that LiveDoc might not produce overflowing contextual menus when used for spell checking, the results would be equally cumbersome: the user would be presented with numerous highlighted misspellings or unrecognized words on which the user would have to individually decide to click to correct.

779. As I discuss at paragraph 190–194, it is also my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed LiveDoc System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of the LiveDoc System he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious. Likewise, Dr. Fox has not identified which version of Eudora he proposes to combine with LiveDoc.

780. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***28. Combining Eudora with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating***

781. As discussed above, Dr. Fox has not explained how Eudora or Selection Recognition Agent disclose any limitations of the Asserted Claims nor does he explain how Eudora would be modified in light of Eudora. It is also my opinion that Eudora and Selection Recognition Agent each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

782. Moreover, one of skill in the art would not have been motivated to combine these references. For example, one of ordinary skill in the art would understand Selection Recognition Agent and Eudora to belong to entirely distinct fields. Eudora was a commercial email client—a single computer program that aimed to deliver a narrow collection of email-related functions within the bounds of its own proprietary computer program. One of ordinary skill in the art would not be motivated to combine Eudora with aspects of a system designed to operate separately from the first computer programs handling documents, such as emails, and to “recognize[] meaningful words and phrases in text, and enable[] useful operations on them.” (ARENDI-DEFS00008664, ’8664, ’8665). In effect, SRA “turns plain text into a kind of hypertext.” (ARENDI-DEFS00008664, ’8664). That is, its focus is on recognizing entities that are actionable and making them actionable. Given their distinct aims and fields, one of ordinary skill in the art would not have been motivated to combine them. (ARENDI-DEFS00008664, at ’8665)

783. Second, Dr. Fox fails to identify what aspect of Eudora one would be motivated to improve by combining with Selection Recognition Agent (and Pandit), let alone why. In my opinion one of ordinary skill in the art would not be motivated to combine any of the four features of Eudora that Dr. Fox references with Selection Recognition Agent. To start with Eudora’s hotlink system, Dr. Fox does not explain how this could be improved in light of Selection Recognition Agent. The creation of a hotlink for a URL, such as a webpage or ftp location, would have been understood by one of ordinary skill in the art as a narrow undertaking to make a very specific type of information actionable: URLs. Especially in the context of emails, one of ordinary skill would have understood URLs as belonging to a distinct class of information. For example, an ftp link was known to be used to permit the transfer of files too large for the limited email systems of the time (or today) to handle. Similarly, it was common to include a web address that would direct the

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

recipient to a resource that could not be included in the email itself. One of ordinary skill in the art would have been familiar with the existing practice of adding links for URLs in webpages of the era and therefore would have understood the practice in those terms. In fact, Selection Recognition Agent distinguishes itself (and, by extension, Pandit) from prior art on precisely these terms. (ARENDI-DEFS00008664, '8665 (“The Netscape Navigator does parse URLs and email addresses, converting them to hypertext links when displaying Usenet News and email messages. However, it only parses these two classes of text, and links them only to web pages or to its internal email application.”)). URLs also serve a very narrow purpose: they provide a path to a resource to be retrieved. One of ordinary skill in the art, therefore, would not have been motivated by Selection Recognition Agent to expand Eudora’s narrow hotlink functionality into one that could recognize a broader range of information types. Nor would it have been motivated to replace its easier-to-use, more familiar and less intrusive system of clickable links with an intrusive system of windows such as that evidenced in Selection Recognition Agent. Furthermore, one of ordinary skill in the art would appreciate that Selection Recognition Agent is intentionally kept separate from the first computer program in order to allow it to provide services across multiple computer programs. One of ordinary skill in the art would not be motivated to duplicate that functionality within an individual computer program, nor would they be motivated to violate the operating principles of Selection Recognition Agent by seeking to confine it to a single computer program.

784. If Dr. Fox proposes to modify Eudora’s spellcheck system, that feature is not obviously compatible with structure of Selection Recognition Agent. Nor would anyone of skill in the art think that spell checking and Selection Recognition Agent belong to the same field. To check spelling, one only needs to compare a word to a dictionary to propose suggestions. Consider what that might look like if one combined Selection Recognition Agent with Eudora’s spell-

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

checking: First, the user would highlight the word to be spell-checked. Either the user would have to undertake this cumbersome process for every word, or spell-checking would instead require the user to identify the words that are misspelled (thereby defeating the point of spell-checking). Selection Recognition Agent would then have to identify “misspelled words,” presumably by comparing the selected word to a dictionary. Given the size of that dictionary, including such a recognizer would lead to a decrease in performance. Then, the user would have to select the menu option associated with spell checking. After that, the user would then have to use a separate spell-checker to check the word again and propose a replacement. Selection Recognition Agent does not explain how its system would then allow the replacement to be entered into the original document, (assuming it were displayed by a program that permitted editing) leaving open the possibility that the user must reenter it manually. No one of skill in the art would be motivated to replace Eudora’s easy-to-use spell-checking features with one based on Selection Recognition Agent. In fact, Selection Recognition Agent teaches away from such a modification. It measures its own utility by the number of steps that it saves the user. (ARENDI-DEFS00008664, 00008667-69).

785. If Dr. Fox refers to Eudora’s “address book functionality,” one of ordinary skill in the art would not see an additional benefit to Eudora from integrating Selection Recognition Agent into its functionality. Again, these technologies belong to entirely different fields. One does not need Selection Recognition Agent in order to complete a partially typed name or to insert an address located in an address book. Nor would there be any clear advantage to analyzing the text in the address field to determine its class and a computer program that can help to address the email based on that data: Eudora itself already does this. If Dr. Fox’s suggestion is that additional address books might be integrated into Eudora, that end could more easily be achieved simply by adding address books to Eudora. There is no predicable or single way that one could combine

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

Eudora's address book functionality with SRA—even if one of ordinary skill in the art were motivated to try.

786. And, if Dr. Fox refers to Eudora's user-configurable toolbar, one of ordinary skill in the art would appreciate that the toolbar would not be improved through combination with, for example, Selection Recognition Agent's eye-icon and drop-down menus—or any other feature of Selection Recognition Agent. The customizable toolbar is built by and tailored to the needs of Eudora. In contrast, providing a separate user interface is at the core of the Selection Recognition Agent's architecture. (ARENDI-DEFS00008664, 00008665). One would also understand that Selection Recognition Agent does not teach altering the internal menus of its various services. It suggests adding a *separate* dynamically updated window that contains actions related to the recognized text.

787. Even adding the entire Pandit and/or SRA to Eudora adds no functionality or benefit to the user or programmer that is not already present in SRA and Pandit. If a Eudora developer would need Pandit or SRA features for users, the easiest and most flexible way to provide it would simply be to install SRA or Pandit on the same computer as Eudora. The person of skill in the art would understand that no combination or integration would be needed or advantageous. Had the developer, in spite of no motivation, added individual features of SRA or Pandit to Eudora, such as the ability to let the user highlight text in an email and letting the user select an action relevant for that type of text, the combination would still not disclose, among other element, any search, and consequently no analyzing for types of information that can be searched for, no second information, no search term, no action used the second information, and no type dependency between the type of the first information and the type of the second information or action.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

788. Furthermore, as I discuss at paragraph 482, it is my opinion that Dr. Fox has not shown that the Pandit reference evidences the Selection Recognition Agent system. It is my opinion that he has also provided no evidence to support their combination. Likewise, Dr. Fox has not identified which version of Eudora he proposes be combined with Selection Recognition Agent.

789. Dr. Fox has not explained how these pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***29. Combining Chalas with CyberDesk System Is Not Obvious or Invalidating***

790. As discussed above, Dr. Fox has not explained how Chalas or CyberDesk disclose any limitations of the Asserted Claims nor how Chalas would be modified in light of CyberDesk. It is also my opinion that Chalas and CyberDesk each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

791. Moreover, one of skill in the art would not have been motivated to modify Chalas in light of CyberDesk, just as they would not have been motivated to modify CyberDesk in light of Chalas, as discussed above. For example, one of ordinary skill in the art would understand CyberDesk and Chalas to be aimed at distinct visions for integrating applications. The CyberDesk project is described as an effort to integrate multiple Java- and network-based services, while Chalas' invention allows a single add-on program to provide additional functionality to an existing application program. (Chalas, 2:38-40) CyberDesk is explicitly described as a framework. Its goal is to provide a context-aware desktop-alternative knitting together local and remote services. (*E.g.*,

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

ARENDI-DEFS00022052, at '22053 (“The CyberDesk project is a shift away from the traditional view of the desktop as a static collection of applications that the user switches between to complete a task . . . . Instead, our approach is to present the user with an environment in which the required functionality comes to find the user.”); ARENDI-DEFS00021045, '21049 (“The CyberDesk system is a context-aware framework that provides a novel interface to personal information management, blurring the distinction between desktop, network and mobile services. CyberDesk’s extensible context-inferencing layer provides a new way to leverage the knowledge of user context into more automated and personalized services.”)). Indeed, CyberDesk positioned itself as a “paradigm shift,” and its developers cast the “main objective of the ubiquitous computing project CyberDesk” as “to provide the infrastructure for self-integrating software in which the integration is driven by actions of the user.” The addition of chaining to version 2 of CyberDesk is illustrative of the effort to create a new, integrated vision of computing.

792. In contrast, Chalas is directed more narrowly to an approach that “allows an add-on program to provide additional functionality to an existing application program”. (Chalas, 2:38-40) The invention in Chalas discloses a single “add-on program” that sits between a computer program and operating system, intercepting communications between them and acting upon those communications. (Chalas, 5:26-44 (“The present invention uses a ‘capture mechanism’ . . . [that] serves to monitor the communication between operating system 312 and application program 310 of Fig. 3.”)). Chalas does not endeavor to determine whether the text it acts on is of a particular type or can be acted upon by a particular second computer program. It simply sends the text to the predetermined or user selected computer program. (*See* Chalas, 11:59-12:19). Unlike CyberDesk, Chalas is neither context-aware nor a framework. Its purpose is, quite simply, to allow one or more programs to take user selections as inputs. (*See, e.g.*, Chalas, 2:38-49 (“The resent invention allows



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

an add-on program to provide additional functionality to an existing application program . . . . The invention simulates user actions relating to the clipboard's operation and issues system program commands, e.g., those for specific system functions such as 'read mouse cursor position,' to allow the add-on program to copy and read images, such as text characters, from the display screen.”). In other words, Chalas is focused on forwarding un-analyzed text to a second computer program for processing within an existing computing paradigm, whereas CyberDesk seeks to reimagine the structure of independent software programs to build an integrated framework of services. Those two visions attempt to solve different problems. One of ordinary skill in the art would not be motivated to combine them; the results of doing so would be unpredictable.. Given the distinct aims and frameworks of CyberDesk and Chalas, one of ordinary skill in the art would not be motivated to combine them.

793. One of skill in the art would also understand that the architectures of Chalas and of the CyberDesk system are not compatible and, therefore, would not be motivated to combine them. On the one hand, Chalas works by intercepting messages between a first computer program and the operating system (though in an alternative embodiment, it can be incorporated into the operating system (*see* Chalas, 14:60-62)). It allows first computer programs to operate without modifying them, employing only documented means for modifying their user interface. (*See e.g.*, Chalas, 6:42-50). In contrast, CyberDesk is explicitly described as a series of Java-based applets operating within the siloed environment of a web browser (or, in one apparent instantiation, possibly a siloed appletviewer). For example, “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services” explains that all of the desktop services in the version 2 that it described were Java applets. (ARENDI-DEFS00021071, at '21073). The article goes on to explain the centrality of Java to the system's architecture:

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All five of the components [*i.e.*, Locator, IntelliButton, ActOnButton Bar, desktop and network services, and type converters] have been implemented as Java applets for simplicity of network programming. We also chose Java for its promise of platform independence, its ability to execute within a web browser, and its object-oriented nature. The first two features support our goal of ubiquity, the second feature allows us to treat the browser as our desktop, and the last feature made development easier. Also, most of the network services implemented are available via the web, so the natural access method was via a web browser.

...

In CyberDesk, the Locator is implemented as a uniquely named applet on an HTML page containing all the CyberDesk applets in use. Upon startup, each of the component applets register themselves with the Locator

(ARENDI- DEFS00021071, at '21072).

794. A person of ordinary skill in the art, confronted with the Chalas system that permits the first computer program to operate in its native environment, would not be motivated to alter that system in a way that would render it incompatible with the first computer programs that it was designed to assist. To the extent that desktop-based applets are to be integrated into the CyberDesk framework, it is necessary to modify the applet's code or to develop an applet-specific "wrapper." (*E.g.*, ARENDI-DEFS00021071, '21073). One of ordinary skill in the art would not be motivated to combine such a system with Chalas, which operates with a program running natively in a non-Java environment and is able to extend that program's functionality by simulating users' actions.

795. Dr. Fox has also failed to differentiate between the multiple versions of CyberDesk, (*see* ¶¶63–65), and to identify the version or versions of CyberDesk that he proposes be combined with Chalas. Due to the evolution of CyberDesk in allegedly material respects one of ordinary skill in the art would not consider it to be a single system.

796. Even if a person of ordinary skill in the art had been motivated to combine CyberDesk and Chalas or the combination had been obvious, neither of which is the case, the Chalas + CyberDesk combination still fails to teach the invention, for a least the reasons that in both systems the purported input device is not configured, and the user command is not received,

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by the by the first computer program, as explained above. No matter how you combine Chalas and CyberDesk , the combination cannot provide something neither system has. Therefore, for at least this reason alone, the combination will not render the invention obvious.

797. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***30. Combining Chalas with Apple Data Detectors System Is Not Obvious or Invalidating***

798. As discussed above, Dr. Fox has not explained how Chalas or Apple Data Detectors System disclose any limitations of the Asserted Claims nor how Chalas would be modified in light of Apple Data Detectors. It is also my opinion that Chalas and Apple Data Detectors each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims

799. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. As discussed above, Chalas discloses adding functions to existing computer programs. It requires a user to select a desired action to be performed on all selected user inputs from a menu prior to creating the user input. In contrast, Apple Data Detectors identifies text within a document and proposes alternative actions to the user that can be taken using the identified data. Because these two systems perform the selection of an action and identification of input to the action in incompatible manner, one of skill in the art would have no motivation to consider combining them, let alone an ability to do so. Moreover, one would understand Apple Data Detectors as having a primary focus on the identification of structures of

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various types. This is a feature that is completely absent from Chalas, and it is my opinion that one of ordinary skill in the art would not see these two inventions as belonging to the same field.

800. As I discuss at paragraph 103, for example, it is my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed Apple Data Detectors System without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of Apple Data Detectors he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

801. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***31. Combing Chalas with LiveDoc System Is Not Obvious or Invalidating***

802. As discussed above, Dr. Fox has not explained how Chalas or LiveDoc System disclose any limitations of the Asserted Claims nor does he explain how Chalas would be modified in light of LiveDoc System. It is also my opinion that Chalas and LiveDoc each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

803. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. As discussed above, Chalas discloses adding functions to existing computer programs. It requires a user to select a desired action to be performed on all selected user inputs from a menu prior to creating the user input. In contrast, LiveDoc identifies text within a document and proposes alternative actions to the user that can be taken using the

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identified data. Because these two systems perform the selection of an action and identification of input to the action in incompatible manner, one of skill in the art would have no motivation to consider combining them, let alone an ability to do so. Moreover, one would understand LiveDoc as having a primary focus on the identification of structure of various type. This is a feature that is completely absent from Chalas, and it is my opinion that one of ordinary skill in the art would not see these two inventions as belonging to the same field.

804. As I discuss at paragraphs 190–194, it is my opinion that Dr. Fox has improperly combined distinct systems and references to create a single proposed LiveDoc without establishing a basis to do so. Those references and systems include material that would not be considered prior art. Because Dr. Fox has not explained what instantiation(s) of LiveDoc he proposes to combine, it is also my opinion that he has not begun to show that the proposed combination would be obvious.

805. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***32. Combining Chalas with Newton Is Not Obvious or Invalidating***

806. As discussed above, Dr. Fox has not explained how Chalas or Newton disclose any limitations of the Asserted Claims nor does he explain how Chalas would be modified in light of Newton. It is also my opinion that Chalas and Newton each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims.

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807. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. As discussed above, Chalas discloses adding functions to existing application programs. It requires a user to select a desired action to be performed on all selected user inputs from a menu prior to creating the user input. In contrast, Newton received user commands and provides an efficient way to get these performed on a limited functionality and screen with no mouse and often no keyboard. Because these two systems perform the selection of an action and identification of input to the action in incompatible manner, one of skill in the art would have no motivation to consider combining them, let alone an ability to do so.

808. Dr. Fox may suggest that the Newton's ability to analyze the user's text, *e.g.*, by comparing it to dictionaries, before it presents the relevant actions. However, since Chalas requires the user to select the action he wants performed, it needs (and performs) no analysis of the type of the first information: the user selects the correct action for the information, eliminating the need for an analysis, as would be understood by the person of skill in the art, who would therefore have no motivation to combine this feature of Newton with Chalas. Even if Dr. Fox meant to combine the feature of looking up a telephone number or other information in order to allow the user access to more functionality, *e.g.*, by calling a person's telephone number after looking it up in a phone book, this combination would not disclose, among other element, the analysis element of the '843 Patent, since the user would have told the system that it was a name by having to choose the function, *e.g.*, "Call person" from the EXWAYS menu.

809. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my

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opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***33. Combining Chalas with Selection Recognition Agent (including Pandit) Is Not Obvious or Invalidating***

810. As discussed above, Dr. Fox has not explained how Chalas or Selection Recognition Agent disclose any limitations of the Asserted Claims nor does he explain how Chalas would be modified in light of SRA. It is also my opinion that Chalas and SRA each fail to disclose numerous limitations of the Asserted Claims. Even were these references combined, the combination would not disclose each limitation of the Asserted Claims. For example, and as discussed above, SRA discloses no types of contact information or identifying information that can be searched for. Chalas also discloses none. Consequently, combining these references could not yield a method that could perform an analysis to identify “categories of identifying information . . . or contact information . . . that can be searched for in an information source external to the document.” Likewise, neither Chalas nor Selection Recognition Agent discloses an input device set up by the first computer program.

811. Moreover, one of skill in the art would not have been motivated to combine these references for at least the following reasons. As discussed above, Chalas discloses adding functions to existing application programs. It requires a user to select a desired action to be performed on all selected user inputs from a menu prior to creating the user input. In contrast, Selection Recognition Agent identifies text within a document and proposes alternative actions to the user that can be taken using the identified data. Because these two systems perform the selection of an action and identification of input to the action in incompatible manner, one of skill in the art would have no motivation to consider combining them, let alone an ability to do so.

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812. Furthermore, as I discuss at paragraph 482, it is my opinion that Dr. Fox has not shown that the Pandit reference evidences the Selection Recognition Agent system. It is my opinion that he has also provided no evidence to support their combination. Likewise, Dr. Fox has not identified which version of Eudora he proposes be combined with Selection Recognition Agent.

813. Dr. Fox has not explained how these two pieces of prior art would be combined, technically or functionally. He also has not disclosed why he believes such a combination, whatever it may be, would be obvious. I reserve the right to add to supplement or modify my opinion as expressed in this report, should Dr. Fox clarify, expand or modify his opinions or the bases for them.

***34. Dr. Fox's Generalized Discussion Does Not Establish the Obviousness of the Proposed Combinations***

814. The paragraphs that follow Dr. Fox's unannotated list of combinations do not make up for his lack of explanation of how one of ordinary skill in the art would have modified one reference in light of the other(s) or why it would have been obvious to do so. These paragraphs contain generalized assertions that various modifications would have been obvious, and they do not disclose how or why individual primary prior art references would be modified. Indeed, Dr. Fox does not even identify which prior art references would be modified in one or more ways. It is my opinion that Dr. Fox has not identified a single modification to a single prior art system or reference that he asserts would have been obvious—and he most certainly offers no explanation for why such a change would have been obvious.

815. Dr. Fox starts out by asserting at paragraphs 187 and 188 that because the '843 Patent admits that retrieving name and address information from an outside database for insertion into a document was known in the art, it would have been obvious to modify all alleged prior art



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to include these features. He therefore claims to incorporate into each of his prior art combinations two paragraphs of the '843 Patent referring to this practice. As an initial matter, the Asserted Claim do not require retrieving data for insertion into the document. Dr. Fox does not explain how modifying any prior art to retrieve data for insertion into the document would cause that prior art to practice the Asserted Claims.

816. I also disagree with Dr. Fox's unstated assumption that, just because there are instances in which such retrieval and insertion is necessary, it would have been obvious to indiscriminately modify all prior art to do so. Indeed, Dr. Fox has failed to explain why one of ordinary skill in the art would be motivated to modify any of the alleged prior art that he cites to include this functionality. One need only consider a few pieces of prior art to understand the incorrect basis of Dr. Fox's assumption. Take for example the Newton: One of ordinary skill in the art would understand that when the user wrote "Call Bill" on the notepad, the user was utilizing the notepad as an interface to command the operating system to initiate a call to Bill. The user does not need, want or intend to insert a telephone number (for example) for Bill into the notepad (or anywhere else)—but rather to call Bill. Likewise, inventions such as Pandit, Miller and CyberDesk permit the user to switch to a second program or service associated with a given text string or structure. None of these systems is disclosed to be limited to editable documents. One of ordinary skill in the art would not be motivated to add the ability add additional data to the original window. Eudora's hot link feature also exemplifies Fox's lack of analysis. One who clicks on a link in an email does not wish to paste the entire content of the webpage into the email. Indeed, many email systems (both today and in the 1990s) could not have handled messages of such large sizes, as would have been well known to one of ordinary skill in the art. Although I have offered only a few

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examples, it is my opinion that they illustrate the lack of a basis for Dr. Fox's blanket assumption more broadly.

817. At ¶190, Dr. Fox offers a list of alleged motivations to combine references again without any analysis of whether these relate to any particular prior art and, if so, how. I understand Dr. Fox to state a series of legal principles (such as "it would have been obvious to try combining the above-described prior art references because there were only a finite number of predictable solutions to the problems being addressed and/or because known work in the relevant field was encouraging variations based on predictable design incentives and/or market forces") without explaining how any of these motivations apply to or would result in modifications of any particular prior art or even what motivations applied to which prior art. Dr. Fox cites "common knowledge," "common sense," "predictability of certain programming and/or user actions," "expectations of programmers and/or users," etc., without identifying what any of these were. In my opinion, including for the reasons that I have laid out above, there was nothing predictable, obvious or commonly known about the combinations that Dr. Fox proposes. To the contrary many of those combinations would have been illogical and/or impossible to execute. Dr. Fox's generalized assertions cannot overcome his lack of explanation for why individual prior art references were supposedly obvious to combine.

818. At ¶191, Dr. Fox argues that "it would have been obvious that one design approach is to include the display and other functions as part of a single program" allegedly in light of art such as Chalas, Eudora, and Microsoft Office 97. As an initial matter, it is my opinion, as expressed above, that Dr. Fox has failed to show how Chalas, Eudora, Microsoft Office 97 or any other prior art reference discloses the Asserted Claims, including elements that require use of a first computer program. Furthermore, as I discuss in my element-by-element analysis, it is my

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opinion that Chalas affirmatively does not disclose such elements as an input device set up by the first computer program. I also disagree that one of ordinary skill would have been motivated to modify the prior art indiscriminately to achieve these ends.

819. As I have discussed extensively above, prior art cited by Dr. Fox either teaches away from localizing an input device in the first computer program or would be incompatible with such modification. For example, Pandit states that an advantage of the invention is that it “will benefit any application which displays text to a user, regardless of the origin of the text.” (Pandit, 1:42-48). As another example, CyberDesk is explicitly described as a framework. Its goal is to provide a context-aware desktop alternative knitting together local and remote services. (E.g., ARENDI-DEFS00022052, at ’22053). One of ordinary skill in the art would not find it obvious to undermine that framework by taking the duplicative step of transforming CyberDesk into components of individual computer programs—such that it would be limited to providing services only to the specific computer programs with which it was bundled. Nor does Dr. Fox suggest how such modifications could be implemented within the Java-based architecture of CyberDesk. CyberDesk, in fact, teaches away from Dr. Fox’s proposed modification as explained in, “Applying Dynamic Integration as a Software Infrastructure of Context-Aware Computing,” which describes many of the drawbacks with Dr. Fox’s approach, which would have been apparent to one of ordinary skill in the art:

There are some limitations, however, to the current approaches for providing this integration that impact both the programmer and the user. From the programmer’s perspective, the integrating behavior between applications is static. That is, the behavior must be identified and supported when the applications are built. The programmer has the impossible task of predicting all of the possible ways users will

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want a given application to work with all other applications. What results is a limited number of software applications that are made available in an integration suite.

From the user's perspective, integrating behavior is limited to the applications that are bound to the particular suite being used. Further integration is either impossible to obtain or must be implemented by the user (e.g., by cutting and pasting between application windows or by end-user macro programming). In addition, the integrating behavior has a strong dependence on the individual applications in the suite. If a user would like to substitute a comparable application for one in the suite (e.g. use a different contact manager, or word processor), she does so at the risk of losing all integrating behavior.

820. Given these software engineering considerations, our goal is to provide a more flexible framework for integrating software behavior based on knowledge of a user's context. We want our solution to work under the assumption of a networked and heterogeneous operating environment. We aim to reduce the programming burden in identifying and defining integrating behavior, while at the same time retaining as much user freedom in determining how integration is to occur.

(ARENDI-DEFS0021045, at '21046; ARENDI-DEFS00021064, at '21064). “CyberDesk: A Framework for Providing Self-Integrating Ubiquitous Software Services” drives this point home, answering the question “WHAT DOES CYBERDESK GAIN US?”:

821. CyberDesk provides a simple framework for adding new services and integrating them in reasonably intelligent ways. It relieves burdens from both the individual service designer

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and the end user. The individual service designer can develop a generic service, with a usable API, and not have to worry how it will be integrated into CyberDesk. The designer does not have to design specifically for the CyberDesk framework. The designer also doesn't have to think of all possible ways a user may want to integrate this service with another service, because the integrating behaviour is inherent to the CyberDesk framework. CyberDesk creates a dynamic mapping at runtime from user actions to possible user actions, saving the designer from constructing this map at design time.

(ARENDI-DEFS00021071, '21073). The architecture described for CyberDesk places the configuration of the buttons used to trigger the operation wholly within the control of the CyberDesk system, rather than under the aegis of any individual computer program.

822. Furthermore, it was known in the art that incorporating additional features into a computer program increased the size of the program, which in turn caused it to run more slowly on the contemporary personal computer hardware having limited random-access memory. Further, it was also known in the art that incorporating additional features made a program harder to use by requiring additional user-accessible controls to initiate, employ, and otherwise manage those features. Software that provided such multiple functions was denigrated as “bloatware.” This indicates that simply because a feature was known in one software program, combining that feature into other software products was not only not motivated on its face, but actively discouraged. Part of the utility of Mr. Hedløy’s invention was the effective balance it struck between providing additional functionality to a given program and respecting the limitations of the software and hardware technology at the time. By incorporating the operation of a second program without requiring the code it required to be resident in memory except when needed, and without overly

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complicating the user interface, the invention hit a rare “sweet spot” adding utility within the constraints of the technology at the time. Contrary to Dr. Fox’s unsupported assertions, almost all indiscriminate attempts to combine functionalities of different computer programs, let alone architectural frameworks such as CyberDesk, Apple Data Detector, and Selection Recognition Agent, into a single computer program were highly likely to fail.

823. Dr. Fox makes the unsupported and incorrect claim that “there were in 1996-1998, and there remains now, essentially two basic approaches for how to implement intelligent agent functionality like that disclosed in CyberDesk, Apple Data Detector, LiveDoc, Selection Recognition Agent, etc.: (1) as a stand-alone program/utility that can be invoked and utilized by many applications, or (2) as a built-in feature of an individual application.” This is incorrect on the face of it considering that, as discussed above that least two of the instances of prior art discussed by Dr. Fox, Luciw and Newton, implement intelligent agent functionality by embedding it within the operating system. Further, he provides no examples for or justification of the idea that intelligent agent functionality should be built into individual programs. Indeed, the well-known and much derided Microsoft Bob incorporated intelligent assistants to perform tasks within its applications. It was supposed to make using Microsoft programs easy. Instead, it made them annoying. Dr. Fox does not consider that either of the two approaches he identifies were understood by those of ordinary skill in the art as obvious solutions in certain contexts but not others. It is also my opinion that Dr. Fox has not shown that these were the only two possibilities or that these were the categories through which one of ordinary skill would have viewed the existing art. While on the one hand an input device could be set up by a first computer program displaying the document, the following non-limiting examples were among other possibilities available: the input device could be set up i) independently by the operating system, ii) by a second

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computer program responsible only for linking together the first computer program with a third computer program and passing information between them, or iii) by a second computer that monitors and consumes data from the first computer program. Indeed, systems like CyberDesk suggest one of numerous possibilities of breaking the architecture of a system among many separate computer programs. Finally, I disagree that 1996-1998 is the relevant time period for an analysis of the obviousness of combining prior art. As I have discussed, it is my opinion that the relevant cutoff dates for a consideration of prior art are November 10, 1997, and July 6, 1997.

824. At ¶192, Dr. Fox argues that with respect to retrieving or adding to contact information “it was obvious to try using first information to perform a search to find available second information in order to determine possible steps to take and/or actions to perform with the available second information.” As discussed in the previous paragraphs, adding additional functionality to a program was not at all an obvious thing to do, and was in fact ill-advised unless the specific needs of the user in performing the program’s existing tasks and the user’s ability to manage and control the added functionality in addition to the program’s existing tasks were carefully assessed. If anything, in determining whether to add additional steps such as identifying “first information” within a document and determining its type, and modifying the interaction with a contact database, a person of ordinary skill in the art would need to overcome a presumption that the effort would fail due to the reasons discussed in the previous paragraphs.

825. Moreover, contrary to Dr. Fox’s assertion and as I have discussed with respect to each reference, neither CyberDesk, Eudora, Apple Data Detector, nor LiveDoc teach that information from a document can or ordinarily should be searched for in an external information source. Rather, each of those systems reserve that functionality for a narrow subset of types of information under specific circumstances. If anything, one of ordinary skill in the art would

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understand these systems as evidence of the importance of avoiding unnecessary searching. Most text in the analyzed documents was not searched for. And none of them disclosed searching that followed the user's command and which occurred in conjunction with adding information to a contact database—a task that Dr. Fox suggests would have been obvious in light of those references. Dr. Fox cites many examples in the prior art where information can be added to a contact database without conducting a search as, for example, in Pandit and Newton.

826. Furthermore, even were a prior art reference modified “to perform a search to find available second information in order to determine possible steps to take and/or actions to perform with the available second information” it would not thereby be modified to disclose the Asserted Claims. The Asserted Claim impose additional requirements on the searching and the first information. For example, the first information must be subject to analyzing in order to determine if it is, in fact, of a type that can be searched for. The searching must be for second information that depends, at least in part, on the type(s) of first information. The searching must occur using a second computer program. The search must be in an external information source. And the action using the second information must be of a type that depends, at least in part, on the type(s) of first information. Thus, even if it would have been obvious to perform a search using first information (which it was not), the specific kind of searching required by the Asserted Claims would not be.

827. I disagree with Dr. Fox that his proposed modification would have been obvious in light of mail merge. As I discuss in my element-by-element of Word, mail merge does not disclose the searching to which Dr. Fox refers. Rather, mail merge required the user to expressly designate the fields from which data should be retrieved.

828. At ¶193, Dr. Fox argues, “While a prior art reference may disclose a particular operation as being performed by one “computer program” versus another “computer program,” it



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would be understood by a POSITA that the operation could be performed by either computer program.” This is tantamount to arguing that architecture in computer systems is irrelevant. It was well known in the art at the time, and still is today, that the assignment of functions to particular programs is one of the most critical design factors that one of skill in the art must consider. As a simple example, a well-known activity in the incremental development of software is “refactoring.” This entails restructuring a system’s code without altering its functionality. It is performed for numerous reasons, including reducing the code’s complexity and maintainability, eliminating redundant code that performs the same operations, improving the ability to extend the functionality in the future, improving performance, and reducing the use of random-access memory. Dr. Fox’s assertion that placing functionality in one program or another is “is nothing more than a routine software design choice” is incorrect and naïve.

829. Dr. Fox’s is incorrect that moving functions between architectural frameworks such as CyberDesk, Apple Data Detector, Selection Recognition Agent, and the Newton operating system and individual programs is obvious. In fact, it goes against common sense, the teachings of those architectural frameworks, the nature of the problem being solved, market trends and research, and understood user behaviors and expectations to do so. Those architectural frameworks were attempts to “refactor” software operations to address the “bloatware” issue discussed previously by providing a means for separate computer programs to integrate, rather than meld their combined functionality into an individual program.

830. One of ordinary skill in the art would not agree with Dr. Fox’s assertion that “to the extent any prior art reference identified above discloses displaying a document using a computer program that is not the same computer program that configures an input device that allows a user to initiate an operation, it would have been obvious to have the prior art system/method display

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the document using either computer program, or a service of the operating system invoked by one of the computer programs.” One of ordinary skill in the art would not have understood displaying documents to be a task that is not tied to the computer program displaying it. Rather, one of ordinary skill in the art would have been acutely aware that documents are stored in a multiplicity of formats, and the ability to display a document stored in a particular format was (even more so than today) limited to class of compatible computer programs that, quite often, was limited to the computer program that had produced the document. For example, one of ordinary skill in the art would have expected to open a word processing document using a specific word processor (e.g., Microsoft Word, WordPerfect or ClarisWorks) able to read and faithfully produce the word processor file. Adobe Acrobat, meanwhile, might be used for displaying PDFs. Webpages could be displayed using Netscape Navigator. The computer program used for displaying a document would hardly have been seen as interchangeable. Nor would it have been obvious to assign to CyberDesk’s core applets or ADD responsibility for displaying the document. These systems were not disclosed to have the capability of displaying any document, but to instead be able to deliver their functionality across multiple types of documents by integrating multiple computer programs each capable of displaying a subset of all the document formats those frameworks encompassed. To preserve these advantages would require not only building a version of CyberDesk’s core applets or ADD that could display innumerable types of documents but also provide the functionality required to interact with those documents that were previously provided by the computer programs that operated on them natively. One of ordinary skill in the art would not be motivated to create such a bloated, all-encompassing computer program—especially when programs like CyberDesk taught away from attempts to do so. (ARENDI-DEFS00022052, at ’0022052).

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831. At ¶194, Dr. Fox asserts that “to the extent that any primary prior art reference identified above discloses performing an operation or action, but arguably does not disclose the operation or action ‘being of a type depending at least in part on the type or types of the first information,’ it would it would have been obvious to have the prior art system/method alter the types of actions offered to the user, and performed by the system/product, based on the types of first information identified.” I disagree. First, as I have discussed above, many of Dr. Fox’s alleged prior art references identify no types or only one type of first information. In such cases, it would remain nonsensical for the type of action or operation to depend on the type of first information. Second, to the extent that Dr. Fox refers to a modification of the “operation” as that term is used in the Asserted Claims, Dr. Fox has not shown how his proposed modification could logically be implemented for alleged prior art that he has not shown performs any searching following the user’s command. Third, Dr. Fox’s assertion assumes that there are multiple types of actions that can be performed using first information—otherwise the type of action could not depend on the type of first information at all. This assumption is unsubstantiated. For example, Dr. Fox has not suggested what type of action other than completing addresses could possibly be useful in the address line of Eudora and Outlook. Fourth, as I have discussed with respect to individual prior art references, the required dependency that he asserts is present in systems such as CyberDesk, Eudora, ADD and SRA is in fact not present: those systems did not disclose performing actions using second information that depend at least in part on the type of first information. Then, in the second half of his paragraph, Dr. Fox asserts that a “POSITA would know of basic concepts form database management and information retrieval that searching may require, and certainly will benefit from, being constrained by ‘field’ or ‘column’ or ‘metadata element’ or other notion of ‘type of information.’” The concepts to which Dr. Fox refers might be

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

relevant to searching, but he offers no explanation of how these relate to constraining the type of action to be performed with the results of the search. Nor do I agree that “[i]t would have been obvious for a POSITA to modify the primary prior art reference to assure that an action was only taken if ‘searching finds any second information.’” Although the action described by the Asserted Claims does require the presence of second information, performing an action in general would not. One of ordinary skill in the art would be aware of many actions that are enhanced through the presence of second information but for which second information is not strictly necessary: for example, ADD’s “write a letter” feature could still present the user with a blank document or, even better, a letter template even if an address were not found for insertion into the document.

832. At ¶195, Dr. Fox opines, “The combinations of the prior art references identified above also would have been obvious because the combinations represent the known potential options with a reasonable expectation of success.” For the reasons discussed above, such arbitrary potential combinations, unmotivated except to move code around or add occasionally-used features, were known in the art to have a low expectation of success. I disagree with Dr. Fox’s assertion for many reasons, including those expressed in paragraphs 828–830. Dr. Fox, moreover, has framed his assertion in overly generalized terms, untethered from the facts and circumstances of any particular claim element or the features of any specific prior art reference.

833. At ¶196, Dr. Fox states that at the time, there was active interest in intelligent agents, as evidenced by the parallel developments of CyberDesk, Apple Data Detectors and Selection Recognition Agent. These systems explored a few of the many alternative ways of providing intelligent agent functionality. As such, substituting portions of one for the other would not necessarily be feasible, and certainly would not yield predictable results—describing the not-previously-predicted results was the point of the publications that Dr. Fox cites. Further, it is my

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opinion, as discussed in greater detail above, that many of those systems' architectures are mutually incompatible and/or those systems teach away from pursuing one another's approaches. Finally, it is my opinion that a period of significant experimentation signals the lack of an obvious solution to those of ordinary skill in the art.

834. Finally, at ¶197, Dr Fox asserts that he “reserve[s] the right to present other combinations of the above-defined references” because those references “include overlapping teachings related to the operations and advantages of particular intelligent agent implementations.” In my opinion, Dr. Fox has not shown that any prior art reflect “overlapping teachings,” nor, in my opinion, has he shown how any individual prior art system or reference allegedly maps onto elements of the Asserted Claims. To the extent that Dr. Fox presents other combinations of the above-referenced references or discloses any other opinion or factual basis for his opinions or clarifies his opinions or justifies his opinions, I too reserve the right to supplement and amend my own opinions expressed in this report—just as I reserve my right to amend or supplement my opinions based on additional rulings by the Court, new claim construction, and/or opinions or positions offered by defendants and their experts in this case.

835.

**D. Secondary Considerations of Non-Obviousness Further Confirm the Validity of the Asserted Claims**

836. Secondary considerations further support my conclusion that the '843 Patent is not obvious. Among the factors that confirm my opinion that the invention was not obvious are i) long-felt need; ii) commercial success; iii) Google's laudatory comments; iv) licensing by others, and

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v) its purported near-simultaneous invention by others. It appears that Dr. Fox has not considered these factors in forming his opinion.<sup>25</sup>

837. The '843 Patent addressed a long-felt need. As the '843 Patent disclosed, users of computer programs had a significant need to access and utilize sources of information related to the documents in which they worked; yet, utilizing that information frequently required the disruptive and cumbersome manual retrieval of that information from an external information source, such as a database. (*See, e.g.*, '843 Patent, 1:28-49). The user was required to switch back and forth between distinct computer programs, copying over search terms and search results between those computer programs. Nor could the user even be guaranteed of access to an up-to-date database. As the '843 Patent notes, “the information in the database must constant be updated by the user,” an acute disadvantage insofar as it required the user “to learn how to use and have access to” the information source. ('843 Patent, 1:43-49). An important aspect of the long-felt need for Mr. Hedløy's invention was the effective balance it struck between providing additional functionality to a given program and respecting the limitations of the software and hardware technology at and prior to the time of his invention. By incorporating the operation of a second program without requiring the code it required to be resident in memory except when needed, and without overly complicating the user interface, the invention hit a rare “sweet spot” adding utility within the constraints of the technology.

838. The problem of moving and managing information between and among independent computer programs was a real one, as I know from my own experience in the field during the decades preceding issuance of the '843 Patent. That problem is also reflected in several of the alleged prior art references cited by the defendants. Although those references offered

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<sup>25</sup> Although Dr. Fox recites them in paragraphs 44 and 46 of his report, he does not endeavor to apply them to the facts of the case. He does not offer a basis for his opinion that they do not apply to Mr. Hedløy's invention.

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distinct and ultimately unsuccessful, incomplete or belated solutions to the problem, they are instructive insofar as they reflect the problem at hand at the time of Mr. Hedløy's invention. For example, Nardi et al. summarized their own understanding of computer users' needs when working on Apple Data Detectors as follows:

**Working with Information Inside  
User Documents**

Our first step was to find a user problem that needed solving in which intelligent agents would add value. In an investigation of how people file information on their computer desktops [1], we discovered that a common user complaint is that they cannot easily take action on the structured information found in everyday documents (structured information being data-recognizable by a grammar). Ordinary docu-

(ARENDI-DEFS00003329, at '3331; [REDACTED]

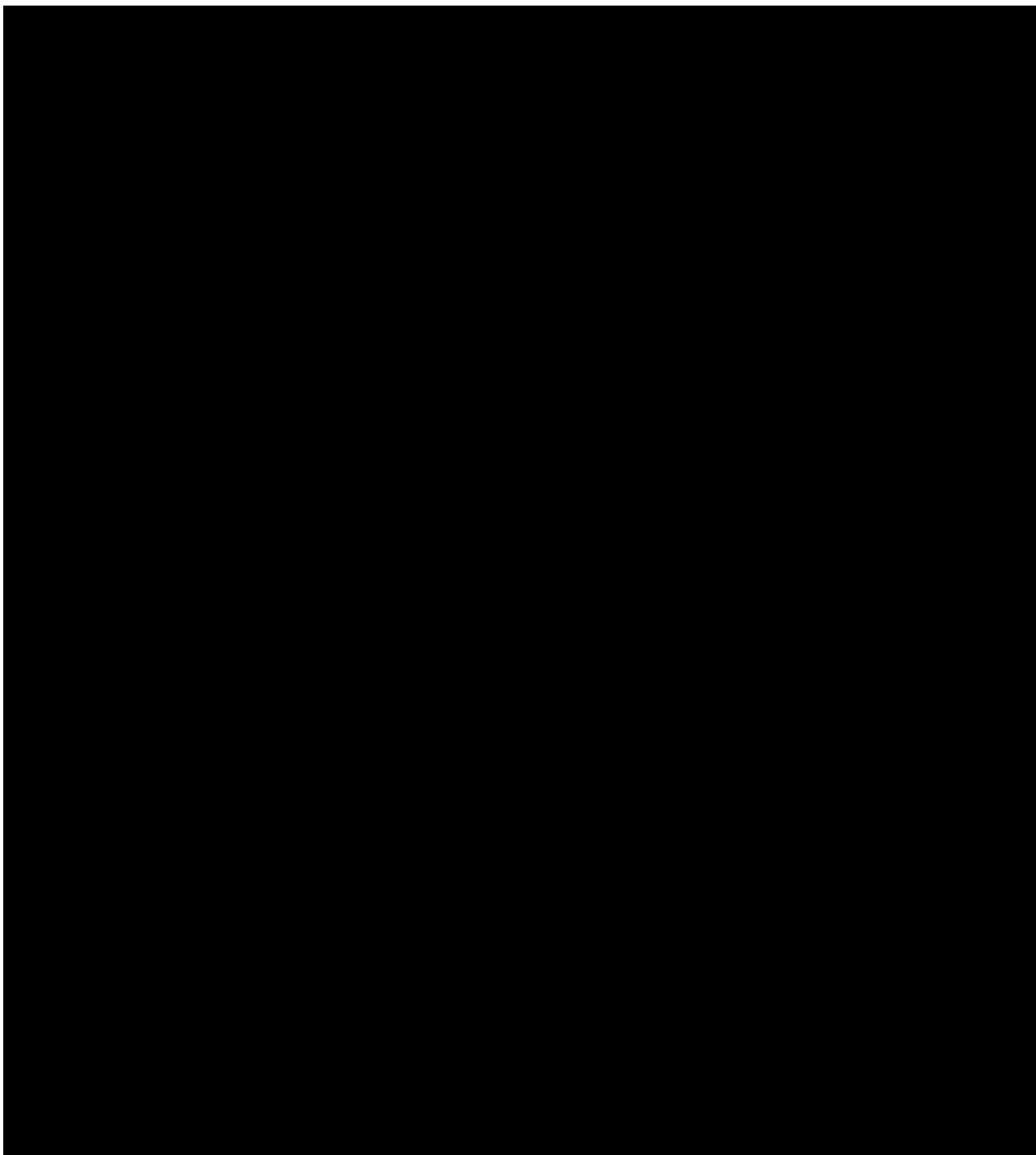
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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[REDACTED]

839. Likewise, Anind Dey and Gregory Abowd pitched CyberDesk as needed “to break the prevailing assumption in personal computing that the user must search out ways to integrate behavior between separate services.” ARENDI-DEFS00000780, at ’0780; *see also, e.g., id.* (“The expectation in personal computing is that the user must search out and find the computer's interface to access a computational service, such as a calendar manager or an e-mail browser.”); ARENDI-DEFS00001151, at ’1151 (“Current software suites suffer from problems due to poor integration of their individual tools.”); ARENDI-DEFS00000778, at ’0778 (“Current software suites suffer

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26

[REDACTED]

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

from problems due to poor integration of their individual tools.”). I have seen similar frustrations expressed in other material cited by Dr. Fox. (*E.g.*, Miller, at 1:36-50 (“Conventional systems that identify structures in computer data do not enable automatic performance of an action on an identified structure. For example, . . . the user may implement a pattern analysis unit to search for particular structures [in an email], such as telephone numbers. Upon identification of a structure, the user may want to perform an action on the structure, such as moving the number to an electronic telephone book. This usually involves cutting the structure from the e-mail message, locating and opening the electronic telephone book application program, pasting the structure into the appropriate field, and closing the application program. . . . [T]his procedure is still tedious and cognitively disruptive.”); Miller, at 1:52-65 (noting deficiencies in prior art attempts to solve the aforementioned problem)).

840. It is also my opinion that the commercial success of Accused Products was attributable, in part, to the claimed invention. For example, it is my understanding that Dr. Smedley will testify that the particular implementation of “Smart Text Selection & Text Selection-based” and “Linkify-based” functionality in various first computer programs on defendants’ devices or in Google Apps infringes the ’843 Patent. At the Google I/O conference in 2017, Dave Burke (Vice President Engineering, Android), highlighted the introduction of Smart Text Selection & Text Classifier.<sup>27</sup> Google I/O is Google’s premier annual developer conference, and it features a keynote that typically highlights the company’s leading innovations for consumer products. Interrupted on several occasions by applause, Mr. Burke demoed the technology’s implementation in Gmail. I understand that the functionality that Mr. Burke showed is among those that Dr. Smedley has specifically identified as infringing the ’843 Patent.

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<sup>27</sup> Google I/O Keynote, <https://youtu.be/Y2VF8tmLFHw> at 1:20:29.

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841. I understand that Drs. Marais and Wecker have concluded and would testify that the invention has a significant impact on both consumers' willingness to purchase defendants' products at their current price and consumers' willingness to purchase defendants' products at all.<sup>28</sup> I further understand that they have offered the following figures as customers' average valuation estimates regarding the ability to recognize and underline text to use as a meaningful input in other apps:

<sup>28</sup> I understand that some of their relevant conclusions are summarized in the following tables:

**Table 4**  
**Proportion of Smartphone Purchasers Who Would Not have Purchased their smartphone even at a \$200 discount if it did not have the Ability to Recognize and Underline Text to Use as a Meaningful Input to Other Apps**

Datum	Description	Estimate	95% Confidence Interval
See ¶ 11.b. above	The proportion of Apple iPhone purchasers who would not have purchased their iPhone even at a \$200 discount if it did not have the patented ability. (Chart F.2)	1.50%	(0.86%, 2.43%)
See ¶ 11.b. above	The proportion of Defendant Android smartphone purchasers who would not have purchased their smartphone even at a \$200 discount if it did not have the patented ability. (Chart F.6)	3.08%	(1.59%, 5.36%)
See ¶ 11.b. above	The proportion of All Android smartphone purchasers who would not have purchased their smartphone even at a \$200 discount if it did not have the patented ability. (Chart F.10)	2.29%	(1.49%, 3.36%)

**Table 2**  
**Defendant Android Smartphone Purchasers Population *Proportion* Estimate Regarding the Ability to Recognize and Underline Text to Use as a Meaningful Input to Other Apps**

Datum	Description	Estimate	95% Confidence Interval
See ¶ 11.a above	The proportion who would not have purchased their Defendant Android Smartphone at the price paid if it did not have the patented ability (Chart F.6, Q5A=No)	15.96%	(12.60%, 19.81%)

(Marais-Wecker Report, at pp. 14, 16).

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**Table 5**  
**Population Average Valuation Estimate Regarding the Ability to Recognize and Underline Text to Use as a Meaningful Input to Other Apps**

<b>Datum</b>	<b>Description</b>	<b>Estimate</b>	<b>95% Confidence Interval</b>
See ¶ 11.c above	The average valuation to <b>Apple iPhone</b> purchasers of the patented ability. (Chart F.4)	\$ 9.08	(\$ 7.27, \$ 11.08)
See ¶ 11.c above	The average valuation to <b>Defendant Android Smartphone</b> purchasers of the patented ability. (Chart F.8)	\$ 12.61	(\$ 9.20, \$ 16.82)
See ¶ 11.c above	The average valuation to <b>All Android Smartphone</b> purchasers of the patented ability. (Chart F.12)	\$ 10.62	(\$ 8.67, \$ 12.74)

(Marais-Wecker Report, at 19).

842. To the extent that Mr. Hedløy did not commercialize the invention himself, it is my opinion that factors distinct from the invention’s merit and value were responsible. Specifically, Mr. Hedløy has identified the dot-com crash as inhibiting the ability of Arendi A.S, to which he had assigned his intellectual property, to obtain financing, and he explained that cashflow limitations precluded the company from finishing the development of a revenue-generating implementation. For example, Mr. Hedløy offered the following testimony:

16	Q. Sir, am I correct that you never
17	actually launched the Everybody.net service?
18	A. That's correct.
19	Q. Why not?
20	A. We could not get the financing
21	needed.
22	Q. Why not, to your understanding?
23	A. Because of the .com crisis nobody
24	could get financing for anything at the time.

(Hedløy Deposition Tr., 423:16-24).

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4 Q. You referred to the I think -- the  
5 reason that you think you couldn't get  
6 financing was because there was eventually a  
7 crash of some sort?

8 A. You heard about the .com crisis,  
9 that is the one that I referred to.

10 Q. When did that start as you  
11 understand it?

12 A. Sort of '99 timeframe.

13 Q. Was it -- had the .com crisis that  
14 you're referring to already begun by the time  
15 that you went out trying to get financing?

16 A. It was certainly there by the time  
17 we would have closed.

843. (Hedløy Deposition Tr., at 427:4-17; *see also* Hedløy Deposition Tr., 655:19-656:10.) My personal experience at the time in raising capital for several early startups confirms that even meritorious innovations went un- or under-funded. That the failure to secure financing at a critical junction—rather than inventions' lack of commercial value—resulted in the winding up of development efforts is only emphasized by the deals Arendi A.S. had already reached with large partners, such as [REDACTED].) My understanding is that subsequent owners of the intellectual property related to the invention were not practicing entities and, therefore, were neither equipped nor intending to commercialize the product themselves. *E.g.*, Hedløy Deposition Tr., at 540:10-12; 654:5-656:10. Mr. Hedløy has further confirmed these facts during my conversation with him.

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844. I also understand that the defendants' laudatory statements may provide an additional indicium of non-obviousness. As noted above, Google touted its products' ability to practice the invention at its 2017 I/O conference. This further supports my opinion that the invention is not obvious.

845. [REDACTED]

846. Finally, I understand that evidence of near simultaneous invention may support a conclusion that the invention was not obvious. Although I disagree that ADDS, CyberDes, Hachamovitch, LiveDoc, or Nardi practices the claimed invention for the reasons outline above, I note that Dr. Fox disagrees. To the extent that Dr. Fox's opinion is found to have merit, these alleged inventions post-date the priority date of the '843 Patent and, therefore, evidence near-simultaneous inventions that further support my opinion that the invention was not obvious.

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**E. The Specification of the '843 Patent Adequately Supports and Enables the Asserted Claims**

847. As an initial matter, Dr. Fox's discussion of his inability to assess Section 112 issues does not make sense. In paragraph 199, he states, in part, that he "cannot fully assess" the adequacy of the '843 Patent with respect to "Section 112 issues" because "Plaintiff has not proposed any claim constructions to this point." My understanding is that Arendi did propose, brief and argue proposed claim constructions—as did defendants; and I further understand that as part of that process defendants identified those terms that they contended required construction. In writing my report I have consistently applied the claim constructions found in the Court's claim construction order, issued nearly a full year prior to Dr. Fox's report, and I am not of the opinion that further claim construction is required in this case.

848. Moreover, I understand that the Asserted Claims must comply with two distinct requirements: they must be supported by an adequate written description, and they must be enabled. I understand that the written description and enablement requirements are governed by separate standards, which I have laid out above. I see no evidence, however, that Dr. Fox has treated these as distinct concepts nor that he has undertaken to apply what I understand to be their separate standards in paragraphs 199 through 209 of his report; rather, he simply asserts—at times incorrectly—that certain functionality is not expressly described in the specification.

849. At paragraph 201, Dr Fox asserts that claims 1, 8, 23, and 30 "do not meet the written description and/or enablement requirements of 35 U.S.C. § 112" because "[t]he specification does not disclose analyzing and searching steps initiated by separate user commands." Dr. Fox contends that such disclosure is necessary because the "providing an input device . . ." element "requires a user command to initiate a search operation using the first information identified in the analyzing step."

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

850. I disagree with Dr. Fox's conclusion, and I find his argument puzzling: The claims do not require that the analyzing and searching steps be initiated by separate user commands. Although I agree with Dr. Fox's assertion that analyzing must precede searching, the claims do not require analyzing to also precede entry of the user command, nor do they require a user command to trigger such analysis. I reserve the right to respond to Dr. Fox should he clarify his opinion.

851. In the final sentence of paragraph 201, Dr. Fox appears to present an entirely different argument. He asserts, without explanation, "To the extent that the claims are construed to require that the user command occurs after the analyzing step, a person of ordinary skill in the art would not understand how to practice the claimed invention as applied by Plaintiff, nor would they understand the alleged inventor to have been in possession of the purported invention." Dr. Fox does not identify what claim terms he believes necessary to construe, nor am I aware of a basis for construing any terms to *require* that the user command occur after the analyzing step.

852. That being said, the claims certainly *permit* the user command to occur after the analyzing. Indeed, the claims are written in that order—though, again, they do not require such an order as is reflected in embodiments disclosed in the specification, for example, at 4:25-5:8. Moreover, the specification both provides an adequate written description for and enables sequencing analysis prior to the receipt by the first program of the user command. *Notably, Dr. Fox does not contest this.*

853. The specification provides the following summary of the invention. This summary specifies that entry of the user's command via the input device shall cause *use* of the first information for searching; however, the summary says nothing about whether the first information shall be identified following the click:



## CONFIDENTIAL OUTSIDE COUNSEL ONLY

15 The above and other objects are achieved according to the present invention by providing a novel method, system and computer readable medium for providing a function item, such as a key, button, icon, or menu, tied to a user operation in a computer, whereby a single click on the function item in a window or program on a computer screen, or one single  
20 selection in a menu in a program, initiates retrieval of name and addresses and/or other person or company related information, while the user works simultaneously in another program, e.g., a word processor. The click on the function item initiates a program connected to the button to search a data-  
25 base or file available on or through the computer, containing the person, company or address related data, in order to look up data corresponding to what the user types, or partly typed, e.g., name and/or address in the word processor, the correct data from the database, data related to the typed data, e.g., the  
30 name of the person, company, or the traditional or electronic address, or other person, or company, or address related data, and alternatively the persons, companies, or addresses, are displayed and possibly entered into the word processor, if such related data exists.

(’843 Patent, 2:13-34). In my opinion, one of ordinary skill in the art would take away the following points. First, the specification does not state that the invention is achieved by ordering analyzing and the receipt by the first program of the user command in a specific sequence. A person of ordinary skill in the art would therefore understand that the analyzing may precede the user command that initiates the search. Second, the summary of the invention lays out its key contribution as permitting the user to initiate retrieval of the second information “while the user works simultaneously in another program” by entering a command using an input device. The order of the analysis and the command is not cast to be central to achieving this goal—nor would a person of ordinary skill in the art deem it to be essential. Third, one of ordinary skill in the art would understand that use of the input device does not generate information that is necessary to analyzing, and, therefore, there is no inherent reason for the user command to precede analyzing.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

In my opinion, the conclusion to be drawn from the specification, therefore, is that the order in which these claim elements are practiced is immaterial. This stands in stark contrast to searching to find second information and use of second information, which the specification clearly states follow the user command.

854. The exemplary embodiments of the invention laid out in the specification do not lead one of ordinary skill in the art to draw a different conclusion. It is my understanding that an exemplary embodiment need not cover every (or, indeed any) particular implementation of the invention for the specification to contain an adequate written disclosure. Although the specification discloses that Mr. Hedløy's invention encompassed embodiments in which analysis follows the receipt by the first program of the user command, that observation does not establish Dr. Fox's assertion that the invention *excludes* analyzing before the user command, and it is instead consistent with my opinion that one of ordinary skill in the art would understand that Mr. Hedløy's invention is flexible with respect to the order of analyzing and the user's command. The specification repeatedly emphasizes that the disclosed embodiments are non-limiting examples. *E.g.*, '843 Patent, at 2:45-50; 3:35; 4:2; 5:58; 6:4-5.

855. Furthermore, the majority of exemplary embodiments leave the order of analyzing and the user command unstated. For example, Example 2 states, "The user commands the button 43, for example, marked 'OneButton,' and the program according to the invention retrieves the new contact 46 from the document, searches a database for the name of the new contact 46 and generates a screen . . . [that] includes a message 50 informing the user that the new contact does not exist in the database . . . ." '843 Patent, 6:12-18. While Example 2 emphasizes that searching follows the user command, the example—like the Summary of the Invention—does not state that the analyzing follows the user command. The same or similar language (in which the order of

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

analyzing and the user command is not specified) can be found in Examples 3, 4, 5, 6, and 7. '843 Patent, at 6:47-52; 7:1-6; 7:33-37; 8:14-19; 8:57-62. In my opinion, a person of ordinary skill in the art would not assume the exemplary ordering found in just one exemplary embodiment and two exemplary figures to be a limitation on Mr. Hedløy's invention.

856. Moreover, it is my opinion that one of ordinary skill in the art would readily understand that the invention can be implemented both when the analyzing precedes the user's command and when it follows the user's command. Dr. Fox himself cited alleged prior art in which what he presumably alleges to be analysis<sup>29</sup> may both precede and follow an express command from the user. For example, in "From Documents to Objects," Miller and Bonura explained how the post-command analysis of Apple Data Detectors could be implemented instead as pre-command analysis:

We encountered still other limitations resulting from our desire to increase the flexibility and power of ADD analyses. For instance, there really isn't any semantic interpretation of the discovered structures in ADD: Actions are associated with structures through a lookup table, not through any rich semantic representation of, for instance, what a URL is, what it might be used for, and what constraints exist on its use. As a result, the set of actions that can be offered to a user is fixed: it can neither include nor omit actions based on the semantics of the immediate interaction context. Further, since ADD's processing is tied to and activated by the contextual menu system, it must complete its analysis in the very short period of time in which users are willing to wait for a pop-up menu to appear (2) -- about half a second. This is typically enough time for ADD to run a set of precompiled grammars and build a menu from a lookup table. However, it's easy to imagine more complex analyses of documents that could not be completed in this short amount of time.

...

As a result, we began a follow-on project to ADD, known as *LiveDoc*, which would carry the ideas of structure detection forward to another level. In *LiveDoc*, the structure detection process is run in the background on the visible document's text, whenever that document is presented or updated. The results of *LiveDoc*'s analysis are then presented by visually highlighting the discovered structures with a patch of color around the structure. Holding down a function key places the document in "LiveDoc mode" and presents the highlighted structures; releasing the function key returns the document to normal. Pointing at a highlight and pressing the mouse button then displays the menu of actions that can be applied to the structure, as shown in Fig 2.

<sup>29</sup> Note that I disagree that this actually is analysis as required by the claims.

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(ARENDI-DEFS00003076, at '3079). Although "From Documents to Objects" cannot be considered as invalidating prior art because it was not published until April 1998, it does shed light on the understanding of those skilled in the art at the relevant time. In short, one of skill in the art would understand that Mr. Hedløy had not limited his invention to embodiments in which analyzing followed the user command and that the written description encompassed both sequences.

857. Finally, I understand that defendants argued during claim construction that any of the claimed methods had to be performed in the order recited or in any specific order. I understand that unless the claimed method or the specification compels a particular order of steps, the claimed steps may be performed in any order.

858. Nor does the order in which claim steps are performed affect enablement. As discussed above, one of ordinary skill in the art would understand that use of the input device does not generate information that is necessary to analyzing, and, therefore, there is no inherent reason for the user command to precede analyzing. One of ordinary skill in the art would appreciate that materially the same methods could be employed to analyze text in a document regardless of whether the user had already entered a command on an input device. Dr. Fox has not identified any way in which changing the order of analyzing information from the document and receiving the user command would change the ability of one skilled in the art to make and use the invention.

859. I also note that in paragraph 201, Dr. Fox alleges that the "specification discloses only a single execute command that initiates both the analyzing and the searching step." It appears that Dr. Fox is consulting the wrong patent. The "single execute command" is a feature of U.S. Patent No. 8,306,993, but it does not appear in the '843 Patent. Nothing in the specification indicates that the user's command must initiate the analyzing in all embodiments.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

860. In paragraph 202, Dr. Fox writes, “To the extent that Arendi contends that the ’843 claims can be read to cover analysis and/or identification of non-contact information, such as flight numbers, package tracking numbers, etc., the claims would not meet the written description and/or enablement requirements of 35 U.S.C. § 112.” I understand that the Asserted Claims require analyzing “to determine if the first information belongs to one or more of several predefined categories of identifying information (e.g., a name) or contact information (e.g., a phone number, a fax number, or an email address) that can be searched for in an information source external to the document.” I understand this to be the construction of the claims adopted by the Court, and it is also my understanding that Arendi is prosecuting its case on that basis.

861. With respect to Dr. Fox’s assertion that there is inadequate written description for the identification of “identifying information,” which in my opinion would include flight numbers and package tracking numbers,<sup>30</sup> I disagree. The specification repeatedly discusses analyzing the type of not only contact information, e.g., ’843 Patent, 4:12-14, but also identifying information such as names and initials, e.g., ’843 Patent, 4:40-46 and collections of names (“the name of a mailing list” e.g., ’843 Patent, 4:16-18. A person of ordinary skill in the art would readily understand that names and initials are identifying information. One of skill in the art would be readily able to adapt the detailed disclosure of how to process names and contact information to processing other categories of identifying information. Moreover, I understand the Court’s claim construction to have effectively resolved this issue by construing the term “to determine if the first information is at least one of a plurality of types of information that can be searched for” and rejecting Defendants’ argument that the term was indefinite.

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<sup>30</sup> Flight numbers, the popular term for flight designators, is *the* identifying information for a flight—akin to the flight’s name—and it encompasses both an airline designator and a numerical designator for the specific flight. Likewise, package tracking numbers are identifying information for a shipment; they are the unique identity assigned to the parcel.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

862. I also disagree with Dr. Fox's assertion in paragraph 202 that analyzing identifying information is not enabled. For example, the specification includes the following disclosure of analyzing:

quits at step **16**. The program analyzes what the user has typed in the document at step **4**, for example, by analyzing (i) paragraph/line separations/formatting, etc.; (ii) street, 35 avenue, drive, lane, boulevard, city, state, zip code, country designators and abbreviations, etc.; (iii) Mr., Mrs., Sir, Madam, Jr., Sr. designators and abbreviations, etc.; (iv) Inc., Ltd., P.C., L.L.C, designators and abbreviations, etc.; and (v) a database of common male/female names, etc.

('843 Patent, at 4:32-39). That is, the patent offers a number of exemplary techniques for identifying first information in text. A person of ordinary skill in the art would have known how to implement such analyzing using these or comparable techniques. For example, the use of regular expression (or regex) based analysis was well known to those of skill in the art. This is reflected, for example, in the Apple Data Detectors FAQ, which explains, "The recognition engine in this first version of Apple Data Detectors is able to recognize 'regular expressions' . . . . These expressions are written in a form that should be familiar to most programmers." (ARENDI-DEFS00000568, at '572). In my opinion, anyone of ordinary skill in the art in 1998 would be familiar with regular expressions and their use. They were taught in undergraduate computer courses, and many programming languages at the time such as Java, Perl, and Python included operators for matching an input string to a regular expression. The assertion that a person of ordinary skill in the art would be well-versed in implementing analysis for relevant types of information following the receipt of a user command but not before does not hold water.

863. To the extent that Dr. Fox takes specific issue with the '843 patent's enablement of processing identifying information such as tracking numbers and flight designators, one of ordinary skill in the art would, in my opinion, find it trivially easy to implement the required



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analysis . For example, one could devise a rudimentary regular expression for flight numbers that matches two letters followed by one to four numbers, with an optional space between the numbers and letters. Recognizing flight numbers in this way could readily be a homework exercise in an early programming course. A person of ordinary skill in the art might further refine this approach, for example, by replacing the two letters with a requirement that the characters preceding the numerals match a list of airline “designators and abbreviations” (e.g., IATA codes) or “a database of common [airline] names” (e.g., Delta, United, Lufthansa). *See* ’843 Patent, 4:33-39. Simplistic natural language processing techniques known since the 1970s, such as use of an augmented context-free grammar, could also be applied to easily recognize such entities in light of their standardized form.

864. In paragraph 203, Dr. Fox argues that “[t]here is no support in the patent specification for the limitation ‘while the document is being displayed, analyzing in a computer process . . . .’” I disagree, and I again find Dr. Fox’s argument puzzling. He contrasts analyzing “while the document is being displayed” with analysis occurring following receipt of the user command, which he admits *is* disclosed by the specification. This is an incorrect assumption. The specification describes the user hitting Dr. Fox’s button *while the document is being displayed*. *E.g.*, ’843 Patent, at Abstract, Fig. 3, Fig. 4, 4:25-28, 5:63-6:3.

865. To the extent that Dr. Fox’s complaint is instead that “[t]he specification does not disclose the analysis of a document automatically [*and*] without a user hitting a ‘button,’” I disagree that Dr. Fox has identified a shortcoming in the specification. With respect to the written description requirement, I refer to my comments in paragraphs 850 and following.

866. The specification also enables analyzing before the user command. The specification is enabling for analyzing as I discuss in paragraphs 858 and following. Dr. Fox has

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not identified how these enabling descriptions or any other strategies for identifying contact information or identifying information in a document would need to be implemented differently when the analyzing occurs before the receipt of the user command. That a person of ordinary skill in the art would understand how to implement these techniques—including without requiring a user's prompt—is demonstrated by alleged prior art cited by Dr. Fox himself. *E.g.*, ARENDI-DEFS00003076, at '3079. The assertion that a person of ordinary skill in the art would be well-versed in implementing analysis for relevant types of information following the user's entering a command but not before does not hold water.

867. In paragraph 203, Dr. Fox also asserts that the specification does not disclose any structure or algorithm related to analyzing “as required by Section 112.” However, Dr. Fox has not identified what section or principles of section 112 he believes he is applying. Although I understand that a means-plus-function claim must disclose such an algorithm, it is not my understanding that the Asserted Claims are means-plus-function claims. Nor was this issue raised during claim construction. I reserve the right to respond to Dr. Fox should he clarify his position.

868. In paragraph 204, Dr. Fox alleges that the specification lacks an adequate written disclosure to for the Asserted Claims if they are “read to cover implementations and/or functionalities that utilize code, routines, or libraries that are included in, or part of, the operating system, rather than part of the code that defines a ‘first computer program.’” Dr. Fox's assertion seems to rest on a misunderstanding of how a general-purpose computer works. Operating systems and their routines and libraries are responsible, for example, for display management, memory management, and interfaces to external devices like the mouse, keyboard, and printers. Indeed, the specification offers an example of a computer system on which the invention is practiced that “may include, but is not limited to, device drivers, operating systems and user applications, such as



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development tools.” ’843 Patent, 9:35-37. The specification’s disclosure of such exemplary computer programs as Word, Notepad, Excel, WordPad, Word Perfect, Quattropro, Amipro, Access, Outlook, Oracle, DBase, RBase, and Cardfile each necessarily discloses the concomitant use of a host operating system for them to run. *E.g.*, ’843 Patent, 1:37-41. On a general-purpose computer, the user’s click on the input device, described in the first exemplary embodiment, will generally be mediated through an operating system. ’843 Patent, 3:42-48. And the mockups in figures such as Figure 3, Figure 4, and Figure 5 would only appear on the screen were operating system code employed. In my opinion, one of ordinary skill in the art would be well aware of the necessary use of operating system code, routines and libraries in order to provide nearly *any* functionality on a modern general-purpose computer.

869. Dr. Fox’s statement also conflicts with the understanding a person of ordinary skill in the art would have regarding the workings of a computer program. Consistent with the Court’s construction of “computer program,” one of ordinary skill in the art would readily understand that while a routine or library is not itself a computer program, computer programs generally comprise and utilize numerous routines or libraries. Dr. Fox would seem to require that a computer program rely entirely on in-line code; however, that is not how computer programs are written—either today or in the 1990s. Thus, when the specification identifies screen shots of Microsoft Word or Microsoft Excel such as Figures, 3,4, 14, and 15, those computer programs would rely on routines or libraries—including routines or libraries distributed with the operating system—to present the screens and place text typed to the keyboard by the user, among many other functions.

870. In paragraphs 205 through 208, Dr. Fox discusses the specification’s lack of an express description of the use of wireless Internet or smart phones. In my opinion, this has no bearing on either support for the claims by an adequate written description or enablement. As a

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preliminary matter, Dr. Fox's description of the state of the art in 1998 is inaccurate—portable computing devices, operating systems for such devices, and non-wired Internet connections were well known in the art. I disagree that the limited proliferation of wireless internet vs. wireline internet in the 1990s is a matter of significance to the invention's disclosure or enablement. As I discuss above in paragraph 853, the searching for and use of second information from a source external to the document is important to the invention; however, the contribution of the invention is unaffected by whether the external information source is located on an internal drive, on removable storage or is a networked resource, all of which were well known in the art in the 1990s. In any case, examples of second computer programs disclosed by the specification include those that *did* have the ability to search networked information sources. For example, functionality of Outlook that Dr. Fox alleges to be invalidating prior art executed searches of networked address books. I am also reminded that Dr. Fox is testifying as an expert of *Google—an Internet search engine* that launched in 1998 when searching for information on the Internet was already well known in the art.

871. Even less relevant is whether a remote information source is accessed using a wired or wireless internet connection—just as it is irrelevant whether the wired connection utilizes a twisted cable or dial-up, DSL, cable, or fiberoptic modems. Moreover, as one of ordinary skill in the art would appreciate, the exchange of data with a physically-remote data source is not a process generally accomplished at the individual computer program level but is instead handled by shared drivers and operating system utilities that the invention does not purport to modify. In short, the specification provides an adequate written description of searching an information source external to the document, and there is no requirement that it specifically instruct one of ordinary skill in the art how to communicate over a wired or wireless network.

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872. I likewise disagree with Dr. Fox that a device's form-factor affects the adequacy of the written description or bears on questions of enablement. First, the specification discloses use of a general-purpose computer and does not limit such computers to a desktop form-factor. The specification repeatedly refers to the invention as operating on a "computer" without ever stating that only a particular type of general-purpose computer is used. *E.g.*, '843 Patent, at Abstract, 2:14-39. A person of ordinary skill in the art would not understand Mr. Hedløy to silently restrict his invention to a specific form-factor. In fact, Dr. Fox's argument boils down to the use of figures in the specification that depict an *exemplary* computer system resembling a 1990s era desktop computer and figures that resemble a 1990s era version of Microsoft Word for Windows. (Dr. Fox could not otherwise conclude that the written description was limited to desktops to the exclusion, for example, of laptops running equivalent software.) Yet, the specification itself describes Fig. 16 as "a schematic illustration of a *general purpose computer* . . . according to an *exemplary embodiment* of the present invention." '843 Patent, 3:27-30. A person of ordinary skill in the art would not understand the well-known concept of a "general-purpose computer" as limited to desktops. To the extent that Dr. Fox argues at ¶205 that one of ordinary skill in the art would conclude that the invention is limited to desktop machines because word processing documents "were run on desktop computers with then-standard desktop operating systems," his argument is logically flawed. Not only is the invention not limited to word processing documents, *see, e.g.*, '843 Patent, 1:56-59, but word processing documents *were* (and are) known in mobile computing. A version of Microsoft Office for Windows CE launched in 1996, and Dr. Fox himself points to word processing functionality on devices such as the Newton and the Apple PowerBooks that he inspected.

## CONFIDENTIAL OUTSIDE COUNSEL ONLY

873. Moreover, the problems addressed by the invention and solutions described by the specification, *see, e.g.*, '843 Patent, at 1:28-49; 2:14-39, are not unique to desktop computers. In fact, on devices with smaller form-factors (and, therefore, smaller screens) and less versatile input devices, the difficulty of searching for related information in an outside information source is only magnified. One of ordinary skill in the art would not understand Mr. Hedløy to have silently excluded mobile and handheld general-purpose computers from his invention.

874. Nor is there a lack of enablement with respect to non-desktop computing environments. A particular form factor would not impede one of ordinary skill from making or using the invention. Dr. Fox refers to “complex mobile software systems” but offers no explanation of what complexities must be (and could not be) overcome in order to implement the Asserted Claims.<sup>31</sup> He also has not explained what makes “interoperability of multiple standalone applications in a mobile device environment . . . including opening and passing information to a second application from a first application” distinct or more complex from performing the same activities in a desktop environment. Although mobile devices often run different operating systems than do desktops, desktops also run a variety of operating systems. And many modern mobile operating systems such as Android and iOS are, in fact, based on variants of the Unix operating systems such as BSD Unix and Linux that operated on desktops in the early 1990s.<sup>32</sup> Dr. Fox’s argument seems to rely on an assumption that one of ordinary skill in the art was ignorant of how to write code for basic elements of computer programs running on mobile devices—but not

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<sup>31</sup> As already noted, there is no appreciable difference with respect to the claim elements between the fixed-line internet connections commonly (but not exclusively) used on desktops and the wireless internet connections commonly (but not exclusively) used on mobile devices.

<sup>32</sup> At ¶207, Dr. Fox argues that “open source mobile operating systems were unknown in 1998,” but he has not explained why that matters to his argument. Leading desktop operating systems in the 1990s, such as Windows and MacOS, also were not open source. Even if an open source operating system were necessary to satisfy the enablement and the written disclosure (which it is not), Dr. Fox’s point would not establish a lack of either with respect to the *open source* mobile operating system such as Android.

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desktop computers. That point, however, is belied both by alleged prior art cited by Dr. Fox such as Newton and CyberDesk, *see, e.g.*, ARENDI-DEFS00021056, as well as the competitive marketplace in mobile computing already emerging in the late 1990s. Mobile devices included the Newton, PalmOS-based devices, and Windows CE-based devices were commercially available prior to Mr. Hedløy's invention. Even earlier in the decade, portable devices such as the HP 95LX and HP 200LX ran versions of MS-DOS. One of ordinary skill in the art would have been capable of implementing Mr. Hedløy's invention in these well-known mobile environments.

# **EXHIBIT A**



## The Copernican Group

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Earl D. Sacerdoti

50 years' experience in development, application, and commercialization of software technology, including web-based services, database management systems, expert systems, programming languages, language understanding, automated and interactive problem-solving, machine vision, robots and robotics, and medical devices. Founder, early investor, or early participant in over a dozen software companies, with executive experience in operations, technology, engineering, sales, and marketing.

### Education

Ph.D. (1975), Stanford University, Computer Science  
M.S. (1972), Stanford University, Computer Science  
B.A. (1969), Yale College, Psychology  
Stanford-AEA Executive Education Program (1982)

### Experience As Expert Consultant And Witness

Served or currently serving as a consultant and expert witness in 27 patent disputes regarding expert systems, mobile phone technology, automated configuration, video games, web services, Internet marketing, video advertising, data integration, secure processing, and application servers, 1 case involving misappropriation of intellectual property, and 4 cases involving performance under contract for enterprise software products, web site development, and consulting services. Patent claim analysis, infringement and invalidity analysis, prior art research, technical analysis of commercial software systems, assessment of professional standards in consulting work. Prepared expert reports and expert declarations, was deposed for over 150 hours, testified before judge, arbitrator, special master, and three times before a jury.

### Board Experience

Served or serving on the Boards of Directors of 9 companies. Currently on the board of MyChange, which allows consumers to round up credit purchases to the next dollar and donate the 'spare change' to progressive causes of their choice.

### Employment Experience

#### **Opero Partners**

2011-present Managing Partner

Co-founder of partnership of senior consultants focused on enhancing growth in early-stage and mid-size high-tech businesses.

### Exemplary Engagements

#### **Quarrio, Corp.**

One year as Interim Chief Technical Officer (CTO) for provider of English access to Salesforce data. Supervised overseas team to develop world-class language understanding system. Recruited permanent Vice President, Engineering. Currently serving as Chief Scientist.

*Linqto, Inc.* Advisor to CEO on corporate strategy and intellectual property for provider of FinTech apps to financial institutions as a service. Working closely with patent attorney to prosecute two patents.

*WeVideo, Inc.* Advised a cloud-based video editing business ‘transplanted’ from Norway on creating 3-way agreement among the company, its Norwegian counterpart, and the parent of the Norwegian counterpart. The agreement specified both operating relationships and IP licensing and development for software owned and used by each party.

***Prediq, Inc.*** 2013-present Co-founder  
Co-founder and product strategist for provider of a market research platform that allows panelists to own their data, decide which offers for purchasing it to accept, and receive compensation each time it is used. The platform, based on blockchain technology, increases consumer participation in market research, provides higher-quality insight data for market research firms and brands, and does this at lower cost.

***The Copernican Group*** 1996-present, 1988-1993 Principal Consultant  
Founder of consultancy focused on practical applications of advanced software technology. Repurposed in 2011 to focus on providing expert witness and consulting services supporting litigation concerning software technology.

*Exemplary Engagements*

*RealAgile, Inc.* Three years as Interim Chief Technical Officer (CTO) for the developer of patented technology that ranks residential properties based on their likelihood to sell within the next year using predictive analytics.

*Modius, Inc.* Twenty months as Interim CTO for the leading provider of data center infrastructure management software. Brought chronically late product to market far earlier than scheduled; coached staff inexperienced with enterprise software to create a high-reliability solution for monitoring, measuring, and managing distributed critical facilities.

*Audio-Ex Corporation* Eight months as Acting CTO for provider of wholesale audio conference services. Co-founded the company as provider of internet-based value-added services for audio conferencing. Served on the Board of Directors.

*Accerra Corporation* Nine months as CEO Coach and Acting CTO for provider of integrated conferencing service. Helped create focused business model. Supervised software development, quality assurance, and operations. Established operating processes and QA program, raising mean time to failure from hours to months.

*Decise Corporation* Four years as CEO coach, Chair of Technical Advisory Board, and Acting CTO for provider of subscription-based information service. Helped founder raise over \$3 million, grow the company from 1 employee to over 20. Helped transition to new management and develop a more market-focused offering based on the company’s technology.



*IDO Systems, Inc.* One year as Acting CTO for creator of development platform for interactive games. Supervised multinational developer group.

*Portola Dimensional Systems, Inc.* Ten months as Acting CTO for developer of business graphics software. Co-founded the company, conceived initial product, recruited technical team comprised of Windows programmers, graphics designers, and computer game developers. Released first product within 8 months of company launch. Recruited permanent CTO. Helped raise over \$4 million.

Prior Experience

**Avatizing, LLC** 2004-2012 Partner

Co-inventor and co-owner of an intellectual property portfolio consisting of six issued US patents. They cover consumer-selected advertising in interactive media including virtual worlds, chat, instant messaging, and web sites. I worked closely with patent attorneys to develop the portfolio, and with a patent broker to sell it.

**Apple Computer, Inc.** 1994-1995 Manager, Apple Systems Architecture

Established group, reporting to Chief Scientist, to coordinate technology developments across business units. Developed technology roadmap. Led AppleSoft Architecture Council. Executed special projects for CEO's Product Strategy Council, including market and technical strategies for enterprise computing, client-server architecture for K-12 schools, and the Internet.

**Tolfa Corporation** 1992-1993 Chief Operating Officer

Managed sales, marketing, r&d, and manufacturing for medical device company. Set marketing, financing, regulatory, and technical strategies, raised \$2 million in financing. Developed and executed sales plans, managed creditors, implemented FDA-mandated Good Manufacturing Practices.

**Teknowledge, Inc.** 1987 Vice President, Corporate Development

Set strategic goals of merger-&-acquisition program. Identified and led due diligence on candidate software firms for acquisition and products for licensing.

1985-1986 General Manager, Products and Training

Bottom-line responsibility for operating unit. Increased revenues more than 50% to over \$4 million in 15 months. This enabled an IPO as a software product company, raising over \$30 million. Established regional sales force. Established marketing or distribution arrangements with five major hardware vendors. Set product strategy.

1983-1984 Chief Technical Officer

Managed 50-person engineering group developing products and turnkey systems.

**SoftTouch Systems** 1985-1988 Vice President, Marketing

Developed and executed niche strategy for computer training organization.

- International Machine Intelligence Corporation*** 1982-1983 President  
Established joint venture with Machine Intelligence Corp. (MI) and Yaskawa Electric (now Japan's largest robot manufacturer). Defined business and product strategies, supervised product development, recruited robot sales and marketing team. Released first computer-networked robot. Frequent interaction with Japanese parent.
- Machine Intelligence Corporation*** 1983 Vice President, Engineering  
1978-1982 Director, Research and Development  
Co-founded MI; developed business plan and raised over \$40 million with core team. Managed both systems & product engineering and research & development.
- Symantec Corporation***  
Initiated product development activities in machine vision and English-language data retrieval. Released first general industrial vision system. Spun data-retrieval activity out as Symantec Corporation, today a leading software publisher.
- SRI International*** 1976-1979 Associate Center Director  
1972-1975 Research Mathematician  
Managed and performed research at Artificial Intelligence Center. Pioneered “modern problem solving.” Developed, marketed and participated in research programs in automated and interactive problem solving, natural-language interaction with data bases, distributed robotics, and programming languages.
- Professional**  
Dr. Sacerdoti is an internationally known expert in Artificial Intelligence, and can speak and write with authority about many advanced software technologies. He has lectured at the graduate level at many schools, including Stanford, University of Edinburgh, UC Berkeley, MIT, and Carnegie-Mellon. He has been an active participant in workshops sponsored by ARPA, NSF, AAI, and others on problem solving, language understanding, robotics, machine vision, database management, and other topics. He has given invited presentations at numerous national and international conferences on such topics as expert systems, problem solving, technology transfer, robotics, and the utility of AI technologies. He has presented tutorials at national and international conferences on technical, managerial, and architectural issues concerning AI software, expert systems, and technology transfer. He is effective at reducing complex concepts and technical distinctions to simple terms.
- Professional Memberships**  
Co-founder of Association for Advancement of Artificial Intelligence (AAAI). Chair of Software Committee of the Keiretsu Forum, the San Francisco area’s largest and most active angel investor group. Executive Associate with San Jose Software Business Cluster, Executive Advisor with Astia (a women-focused incubator). Former member of editorial board of *Cognitive Science*, *Robotics World*, and *AI Expert*, Conference Chair for AIPS-96 (an international conference on automatic planning). Former member of Steering Committee of DECUS AI Special Interest Group, and program committees of numerous AAI and IEEE conferences on both computer science research and applications.

Patents

Principal inventor, US Patent No. 6,188,403, “User-friendly graphics generator using direct manipulation”

Inventor, US Patent No. 6,222,540, “User-friendly graphics generator including automatic correlation”

Co-inventor, US Patent No. 6,954,728, “System and Method for Consumer-Selected Advertising and Branding in Interactive Media”

Co-inventor, US Patent No. 7,797,168, “System and method for consumer-selected advertising and branding in interactive media”

Co-inventor, US Patent No. 7,996,264 “System and method for consumer-selected advertising and branding in interactive media”

Co-inventor, US Patent No. 8,407,086 “System and method for consumer-selected advertising and branding in interactive media”

Co-inventor, US Patent No. 8,417,535 “System and method for consumer-selected advertising and branding in interactive media”

Co-inventor, US Patent No. 8,583,562 “Predicting real estate and other transactions”

Co-inventor, US Patent No. 9,589,274 “System and method for consumer-selected advertising and branding in interactive media”

Patents Applied For

Co-inventor, US Patent Application 20140058961, “Predicting real estate and other transactions”

Inventor, US Patent Application, “Improved Database Interface”

Abandoned Patent Applications

Co-inventor, US Patent Application 20060000971, “Intelligent sensory platform for wireless two-way sensory surveillance”

Co-inventor, US Patent Application 20070120978, “Intelligent sensory platform for wireless two-way sensory surveillance”

Co-inventor, US Patent Application 20120221251, “Systems and Methods for Selecting, Ordering, Scheduling, Administering, Storing, Interpreting and Transmitting a Plurality of Psychological, Neurobehavioral and Neurobiological Tests”

Publications

"Planning in a Hierarchy of Abstraction Spaces," *Artificial Intelligence*, Vol. 5, No. 2, pp. 115-135 (1974)

"The Non-Linear Nature of Plans," *Proc. International Joint Conference on Artificial Intelligence - 1975*, Tbilisi, USSR (1975)

Sacerdoti, et al., "QLISP: A Language for the Interactive Development of Complex Systems," *Proc. AFIPS National Computer Conference*, pp. 206-214, New York (1976)

*A Structure for Plans and Behavior*, Elsevier North-Holland, New York (1977)

"Language Access to Distributed Data with Error Recovery," *Proc. International Joint Conference on Artificial Intelligence - 1977*, pp. 196-202, Cambridge, Massachusetts (1977)

Wiederhold, Sacerdoti, Sagalowicz, El-Masri, and Novak: "A Preliminary Sketch to Define Research Opportunities Relevant to ARPA's Plans for Knowledge Processing in Databases,"; Planning paper for ARPA IPT office, (1977)

Hendrix, Sacerdoti, Sagalowicz, and Slocum, "Developing a Natural Language Interface to Complex Data," *ACM Transactions on Database Systems*, Vol. 3, No. 2, pp. 105-147 (1978) (Reprinted in Sparck-Jones, Grosz and Webber, *Readings in Natural Language Processing*, Morgan Kaufman, Los Altos, California (1986))

"What Language Understanding Research Suggests About Distributed Artificial Intelligence," *Proc. Distributed Sensor Nets Workshop*, pp. 8-11, Carnegie-Mellon University, Pittsburgh, Pennsylvania (1978)

"Problem Solving Tactics," *Proc. International Joint Conference on Artificial Intelligence - 1979*, pp. 1077-1085, Tokyo, Japan (1979)

"Plan Generation and Execution for Robotics," NSF Workshop on Robotics Research, Newport, Rhode Island (1980); also Technical Note 209, SRI International Artificial Intelligence Center, Menlo Park, California (1980)

Hendrix and Sacerdoti, "Natural Language Processing, The Field in Perspective," *Byte*, Vol. 6, No. 9, pp. 304-352, Peterborough, New Hampshire (1981)

"Practical Machine Intelligence," in Hayes, Michie, and Pao (eds.), *Machine Intelligence 10*, pp. 241-247, John Wiley & Sons, New York (1982)

Stefik, Aikins, Balzer, Benoit, Birnbaum, Hayes-Roth, and Sacerdoti, "Basic Concepts for Building Expert Systems," in Hayes-Roth, Waterman, and Lenat (eds.), *Building Expert Systems*, pp. 59-86, Addison-Wesley, Reading, Massachusetts (1983)

Stefik, Aikins, Balzer, Benoit, Birnbaum, Hayes-Roth, and Sacerdoti, "The Architecture of Expert Systems," in Hayes-Roth, Waterman, and Lenat (eds.), *Building Expert Systems*, pp. 89-126, Addison-Wesley, Reading, Massachusetts (1983) (This paper appeared in *Artificial Intelligence*, Vol. 18, No. 2 (1982))

"Robot Eye and ROI: Technology Transfer vs. Technology Transformation," *AI Magazine*, Vol. 6, No. 3, pp. 204-209, Menlo Park, California (1985)

"Knowledge System Programming Languages," *Proc. First IAAI Conference*, pp. 310-330, Dayton, Ohio (1985)

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"Interview with Dick Gabriel," *Unix Review*, Vol. 5, No. 6, pp. 48-53, San Francisco, California (1987)

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"Managing Expert System Projects," *AI Expert*, Vol. 6, No. 5, San Francisco, California (1991)

Stefik, Aikins, Balzer, Benoit, Birnbaum, Hayes-Roth, and Sacerdoti, "Retrospective on 'The Organization of Expert Systems, A Tutorial'", *Artificial Intelligence*, Vol. 59, No. 1-2, pp. 221-224 (1993)



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**List of cases at which Earl Sacerdoti testified  
as expert witness or consulting expert  
August 2015-Present**

1. *Inter Partes* Review of US Patent 5,944,839 (Case IPR2015-01922) (2015)
2. *Inter Partes* Review of US Patent 8,180,858 (Case No. IPR2016-01069) (2016);  
Treehouse Avatar, LLC v. Valve Corp. (2016) (District of Delaware No. 15-427-  
SLR-SRF); Treehouse Avatar, LLC v. Valve Corp. (Western District of  
Washington No. Case 2:17-cv-01860-RAJ )
3. Qualcomm Incorporated v. Apple Inc., Civil Action No. 3:17-CV-02402,  
Southern District of California (2018)
4. *Inter Partes* Reviews of US Patents 8,020,083, 8,510,407, and 9,369,545 (2019-  
present)

# EXHIBIT B

## **Documents Considered by Earl Sacerdoti in his response to the Fox Report**

### **Patents & File Histories**

U.S. Patent No. 7,921,356  
U.S. Patent No. 7,921,356 File History  
U.S. Patent No. 7,917,843  
U.S. Patent No. 7,917,843 File History  
U.S. Patent No. 7,496,854  
U.S. Patent No. 7,496,854 File History  
U.S. Patent No. 8,306,993  
U.S. Patent No. 8,306,993 File History  
U.S. Patent No. 6,323,853  
U.S. Patent Pub. No. 2011/0214052 A1  
Norwegian Patent Application No. 984066

### **IPR Documents**

Materials relating to IPR2014-00208, including the Petition for Inter Partes Review of U.S. Patent No. 7,917,843, Patent Owner Preliminary Response, Institution Decision, Patent Owner Response, Petitioner Reply, and Final Written Decision

Materials relating to IPR2014-01142, including the Petition for Inter Partes Review of U.S. Patent No. 7,917,843, Patent Owner Preliminary Response, Institution Decision, Patent Owner Response, Petitioner Reply, and Final Written Decision

### **2015-2073**

2016-08-10 Opinion of the U.S. Court of Appeals for the Federal Circuit

### **0452 IPR '853 Patent**

2015-08-18 Final Written Decision  
2018-02-20 Federal Circuit Decision

### **0450 IPR '356 Patent**

2014-02-20 Allison Declaration ISO Petition for IPR  
2014-02-20 Petition for Inter Partes Review  
2014-05-23 Arendi's Preliminary Response to Petition for IPR  
2014-08-20 Decision - Institution of IPR  
2014-11-04 Arendi's Response to Petition for IPR  
2014-11-04 Levy Declaration re Petition for IPR  
2015-02-03 Google's Reply to Arendi's Response to IPR  
2015-07-28 Record of Oral Hearing held April 21, 2015  
2015-08-19 Final Written Decision  
Exhibit 1001 - U.S. Patent No. 7,921,356  
Exhibit 1003 - Dennis Allison CV



Exhibit 1004 - US5859636  
Exhibit 1005 - US5644735  
Exhibit 1006 - Bonura & Miller, Drop Zones, An Extension to LiveDoc  
Exhibit 1007 - US6377965  
Exhibit 1008 - US5923848  
Exhibit 1009 - US6085201  
Exhibit 1010 - Magnanelli et al., Academia - An Agent-Maintained Database Based on Information Extracted from Web Documents  
Exhibit 1011 - US5754306  
Exhibit 1012 - US5790532  
Exhibit 1013 - Claim Language Comparison, '356 Patent  
Exhibit 1014 - Amendment, Dec. 18, 2000  
Exhibit 1015 - Notice of Allowability  
Exhibit 1017 - Deposition of John Levy taken Jan. 8, 2015  
Exhibit 2001 - Declaration of John V. Levy  
Exhibit 3001 - Collins English Dictionary excerpts

**0208 IPR '843 Patent**

2013-12-02 Petition for IPR  
2014-03-12 Arendi's Preliminary Response  
2014-06-11 Decision - Institution of IPR  
2014-06-25 Petitioner's Request for Rehearing  
2014-06-27 Decision - Request for Rehearing  
2014-11-11 Petitioners' Reply to Patent Owner's Response  
2015-03-03 Record of Oral Hearing held Feb. 4, 2015  
2015-06-09 Final Written Decision  
Exhibit 1001 - US7917843  
Exhibit 1002 - Declaration of Daniel A. Menasce  
Exhibit 1003 - Amendment, Jan. 24, 2008  
Exhibit 1004 - Office Action, Oct. 28, 2010  
Exhibit 1005 - Amendment, Dec. 8, 2010  
Exhibit 1006 - Miller, an Overview of the ATG Intelligent Systems Program  
Exhibit 1007 - US5946647  
Exhibit 1008 - US5644735  
Exhibit 1009 - US5859636  
Exhibit 1010 - Miller & Bonura, From Documents to Objects - An Overview of LiveDoc  
Exhibit 1013 - Deposition of Daniel A. Menasce taken Aug. 7, 2014  
Exhibit 1014 - Apple, Google & Motorola's Presentation slides  
Exhibit 2001 - definition of configure  
Exhibit 2002 - Declaration of John V. Levy  
Exhibit 2003 - Arendi's Presentation slides  
2016-08-10 IPR 2014-0208 Federal Circuit Opinion  
2016-11-08 - Petition for Writ of Certiorari  
2017-03-20 - Supreme Court denial of Petition for Writ of Certiorari Exhibit 2001 - 208 Federal Circuit Opinion  
2016-11-08 - Petition for Writ of Certiorari

2017-03-20 - Supreme Court denial of Petition for Writ of Certiorari

**0206 IPR '854 Patent**

2013-12-02 Petition for IPR  
2014-03-12 Arendi's Preliminary Response  
2014-06-11 Decision - Institution of IPR  
2014-08-26 Arendi's Response  
2014-11-11 Petitioners' Reply to Patent Owner Response  
2015-03-03 Record of Oral Hearing held Feb. 4, 2015  
2015-06-09 Final Written Decision  
Exhibit 1001 - US7496854  
Exhibit 1002 - Declaration of Daniel A. Menasce  
Exhibit 1003 - Amendment, Jan. 24, 2008  
Exhibit 1004 - Amendment, Apr. 18, 2007  
Exhibit 1005 - Miller, an Overview of the ATG Intelligent Systems Program  
Exhibit 1006 - US6085206  
Exhibit 1007 - US5946647  
Exhibit 1008 - US5644735  
Exhibit 1009 - US5963964  
Exhibit 1011 - Deposition of John V. Levy taken Oct. 22, 2014  
Exhibit 1012 - Deposition of Daniel A. Menasce taken Aug. 7, 2014  
Exhibit 1013 - Apple, Google & Motorola's Presentation slides  
Exhibit 2001 - The American Heritage College dictionary - dictionary  
Exhibit 2002 - The American Heritage College Dictionary 3rd Ed – designate  
Exhibit 2003 - Declaration of John V. Levy  
Exhibit 2005 – Arendi's Presentation slides  
2016-07-11 IPR2014-00206 & IPR2014-00207 Federal Circuit Opinion

**0207 IPR '854 Patent**

2013-12-02 Petition for IPR  
2014-03-12 Arendi's Preliminary Response  
2014-06-11 Decision - Institution of IPR  
2014-08-26 Arendi's Response  
2014-11-11 Petitioners' Reply to Patent Owner Response  
2015-02-04 Record of Oral Hearing held Feb. 4, 2015  
2015-06-09 Final Written Decision  
Exhibit 1001 - US7496854  
Exhibit 1002 - Declaration of Daniel A. Menasce  
Exhibit 1003 - Amendment, Jan. 24, 2008  
Exhibit 1004 - Amendment, Apr. 18, 2007  
Exhibit 1005 - Miller, an Overview of the ATG Intelligent Systems Program  
Exhibit 1006 - US5577239  
Exhibit 1007 - US6085206  
Exhibit 1008 - US6377965  
Exhibit 1009 - US5644735  
Exhibit 1010 - Miller & Bonura, From Documents to Objects - An Overview of LiveDoc

Exhibit 1013 - Deposition of John V. Levy taken Oct. 22, 2014  
Exhibit 1014 - Deposition of Daniel A. Menasce taken Aug. 7, 2014  
Exhibit 2001 - The American Heritage College dictionary – dictionary  
Exhibit 2003 - Declaration of John V. Levy Exhibit 2004 - Arendi's Presentation slides for IPR2014-00206 & IPR2014-00207  
2016.07.11 IPR2014-00206, IPR2014-00207 Federal Circuit Opinion

**0203 IPR '993 Patent**

2013-12-02 Petition for IPR  
2014-03-12 Arendi's Preliminary Response  
2014-06-05 Decision Denying Institution of IPR  
2014-07-07 Petitioners' Request for Rehearing  
2014-07-25 Decision on Request for Rehearing  
Exhibit 1001 - US8306993  
Exhibit 1002 - Declaration of Dennis R. Allison  
Exhibit 1003 - US5644735  
Exhibit 1004 - US6247043  
Exhibit 1005 - US6870828  
Exhibit 1006 - Bonura & Miller, Drop Zones an Extension to LiveDoc  
Exhibit 1007 - Magnanelli et al., Academia - An Agent-Maintained Database Based on Information Extraction from Web Documents  
Exhibit 1008 - Dennis Allison CV  
Exhibit 1009 - US5859636  
Exhibit 1010 - US5644735  
Exhibit 1011 - US5754306  
Exhibit 1012 - US5790532  
Exhibit 1013 - Claim Language Comparison  
Exhibit 1014 - Technote 1005 - The Complete Guide to Simple Text  
Exhibit 1015 - 14th European Mtg on Cybermetics & Systems Research  
Exhibit 1016 - ETH Zurich - Computer Science - Publications  
Exhibit 1017 - 14th European Meeting Cybermetics & Systems Research  
Exhibit 2001 - Request for Continued Examination - Appl. No. 11-745186  
Exhibit 2002 - Miller & Bonura, From Documents to Objects - An Overview of LiveDoc

**Accelerated Examination Support Documents**

Accelerated Examination Support Document for '950 Patent  
Accelerated Examination Support Document for '356 Patent  
Accelerated Examination Petition and Support Document for '993 Patent  
Accelerated Examination Support Document for '639 Patent App./Patent Pub. 2011/0214052

**Depositions & Exhibits**

**Atle Hedløy 30(b)(6)**

November 5, 2019 Transcript & Exhibits 37-77  
November 6, 2019 Transcript & Exhibits 78-102  
November 7, 2019 Transcript & Exhibits 103-118

**Atle Hedløy 30(b)(1)**

October 29, 2019 Transcript & Exhibits 1-25  
October 30, 2019 Transcript & Exhibits 26-36

**Anind Dey**

Deposition transcript, Exhibits 1-32

[REDACTED]

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**Infringement Contentions**

2013.12.06 Arendi Claim Charts  
2019.02.13 Arendi Motorola (12-1601) Claim Charts & Exhibits  
2019.02.13 Arendi Google (13-919) Claim Charts & Exhibits

**Invalidity Contentions**

2019.03.27 Defendants' Joint Amended Invalidity Contentions & Exhibits

**Pleadings**

2018.12.18 Amended Complaint  
2019.01.11 Google's Answer to Arendi's Amended Complaint  
2019.07.02 Defendants' Motion for Judgment on the Pleadings  
2019.07.02 Opening Brief ISO Defendant's Motion for Judgment on the Pleadings  
2019.08.13 Arendi's Answering Brief in Opposition to Defendants' Motion for Judgment on Pleadings - 101 Motion Dkt #137  
2019.08.13 Arendi's Answering Brief in Opposition to Defendants' Motion for Judgment on Pleadings - 101 Motion Dkt #139  
The Parties' claim construction briefs, exhibits, and submitted materials  
2019.08.19 Claim Construction Opinion  
2019.08.19 Claim Construction Order  
2019.07.26 Claim Construction Hearing Transcript  
2019.09.05 Reply Brief ISO Defendants' Motion for Judgment on the Pleadings  
2020.01.02 Order on Motion for Judgment on the Pleadings  
2020.01.07 Letter Regarding Remaining Asserted Claims

**Written Discovery**

2013.10.23 Arendi's Responses to Defendants' First Set of Interrogatories  
2018.11.16 Para. 4(a) Identification of Accused Products for Motorola  
2019.02.06 Para. 4(a) Identification of Accused Products for Google  
2019.09.09 Google's Supplemental Response to Interrogatory No. 3  
2019.10.30 Motorola's Supplemental Response to Interrogatory No. 3

**Other Produced Documents**

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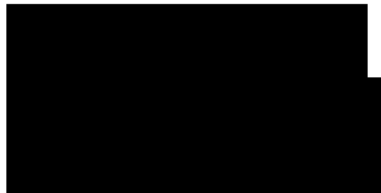
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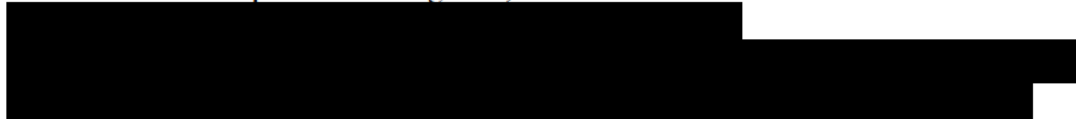
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MS 113733-114433

**Other Materials**

Google I/O Keynote, <https://youtu.be/Y2VF8tmLFHw>  
Marais-Wecker Report dated August 7, 2020



35 U.S.C. § 112

Conversation with Atle Hedloy

“2017 MacWorld - VI1385\_BetacamSPDubMaster\_Combo\_Small (2)”  
AIA 35 U.S.C. § 102(a)

Laptop running Outlook 97 and Word 97 produced by defendants for inspection  
Newton MessagePad 2000  
Apple laptops relied on by Dr. Fox.