

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:15-cv-1460	DATE FILED 8/25/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT The Priceline Group, Inc. and Priceline.com, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,188,100 B2	3/6/2007	Vilox Technolgies, LLC
3 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT ORDERED that all claims brought by Plaintiff in the above-captioned action against Defendants Priceline Group, Inc. and Priceline.com, LLC are hereby dismissed WITH PREJUDICE.

CLERK <i>David A. O'Poole</i>	(BY) DEPUTY CLERK Charlene Hinton	DATE 12/21/15
----------------------------------	--------------------------------------	------------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-1457	DATE FILED 8/25/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Expedia, Inc. and Hotels.com, L.P.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,188,100 B2	3/6/2007	Vilox Technologies, LLC
3 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT IT IS HEREBY ORDERED that all claims brought by Plaintiff in the above-captioned action against Defendants Expedia, Inc., Hotels.com LP, Orbitz Worldwide, Inc., and Orbitz, LLC are hereby dismissed WITH PREJUDICE.
--

CLERK <i>David A. O'Poole</i>	(BY) DEPUTY CLERK Nakisha Love	DATE 1/20/16
----------------------------------	-----------------------------------	-----------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-1459	DATE FILED 8/25/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Orbitz Worldwide, Inc. and Orbitz, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,188,100 B2	3/6/2007	Vilox Technolgies, LLC
3 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

IT IS HEREBY ORDERED that all claims brought by Plaintiff in the above-captioned action against Defendants Expedia, Inc., Hotels.com LP, Orbitz Worldwide, Inc., and Orbitz, LLC are hereby dismissed WITH PREJUDICE.

CLERK <i>David A. O'Poole</i>	(BY) DEPUTY CLERK Nakisha Love	DATE 1/20/16
----------------------------------	-----------------------------------	-----------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ for the Eastern District of Texas, Marshall Division _____ on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:16-cv-01278	DATE FILED 11/16/2016	U.S. DISTRICT COURT for the Eastern District of Texas, Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT MindGeek USA, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 7,188,100 B2	3/6/2007	Vilox Technologies, LLC
3 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT ORDER GRANTING PLAINTIFF'S VOLUNTARY DISMISSAL WITH PREJUDICE
--

CLERK 	(BY) DEPUTY CLERK Nakisha Love	DATE 1/24/17
-----------	-----------------------------------	------------------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court _____ for the Eastern District of Texas, Marshall Division _____ on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:16-cv-01278	DATE FILED 11/16/2016	U.S. DISTRICT COURT for the Eastern District of Texas, Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT MindGeek USA, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 7,188,100 B2	3/6/2007	Vilox Technologies, LLC
3 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-2019	DATE FILED 11/30/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Costco Wholesale Corporation
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,188,100 B2	3/6/2007	Vilox Technologies, LLC
3 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT
 IT IS HEREBY ORDERED that Civil Action No. 2:15-cv-2019 and all claims and defenses of the parties therein are hereby dismissed without prejudice. Each party shall bear its own fees and costs.

CLERK <i>David A. O'Toole</i>	(BY) DEPUTY CLERK Nakisha Love	DATE 3/22/16
----------------------------------	-----------------------------------	-----------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-2025	DATE FILED 11/30/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Express, Inc. and Express, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-2025	DATE FILED 11/30/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Express, Inc. and Express, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT All claims asserted by Plaintiff against Defendants Express, Inc. and Express, LLC are hereby dismissed without prejudice. Each party will bear its own costs and attorneys' fees.
--

CLERK 	(BY) DEPUTY CLERK Nakisha Love	DATE 2/22/16
-----------	-----------------------------------	-----------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.)

DOCKET NO.	DATE FILED 11/30/2015	U.S. DISTRICT COURT for the Eastern District of Texas
PLAINTIFF Ruby Sands LLC		DEFENDANT Woodforest Bank
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 6891633	1/29/2013	Ruby Sands LLC
2		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY	
	<input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued.

DECISION/JUDGEMENT

The Court having considered the motion and for good cause shown, finds that Plaintiff's Motion (Dkt. No. 5) should be and hereby is GRANTED and this matter is dismissed with prejudice.

CLERK <i>David A. D'Poole</i>	(BY) DEPUTY CLERK Nakisha Love	DATE 2/24/16
----------------------------------	-----------------------------------	-----------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-1459	DATE FILED 8/25/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Orbitz Worldwide, Inc. and Orbitz, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,188,100 B2	3/6/2007	Vilox Technolgies, LLC
3 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK
1	
2	
3	
4	
5	

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-1458	DATE FILED 8/25/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Foot Locker, Inc. and Footlocker.com, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 7,188,100 B2	3/6/2007	Vilox Technologies, LLC
2 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY	
	<input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: <p style="text-align: center;">Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450</p>	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
--	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-1460	DATE FILED 8/25/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT The Priceline Group, Inc. and Priceline.com, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,188,100 B2	3/6/2007	Vilox Technologies, LLC
3 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas - Marshall Division on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 2:15-cv-1457	DATE FILED 8/25/2015	U.S. DISTRICT COURT Eastern District of Texas - Marshall Division
PLAINTIFF Vilox Technologies, LLC		DEFENDANT Expedia, Inc. and Hotels.com, L.P.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 6,760,720 B1	7/6/2004	Vilox Technologies, LLC
2 US 7,188,100 B2	3/6/2007	Vilox Technologies, LLC
3 US 7,302,423 B2	11/27/2007	Vilox Technologies, LLC
4 US 7,574,432 B1	8/11/2009	Vilox Technologies, LLC
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Delaware on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

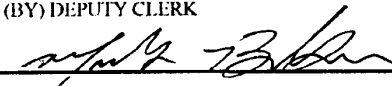
DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
	6/7/2013	Delaware
PLAINTIFF Smart Search Concepts, LLC		DEFENDANT Buy.com Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 7,188,100 B2	3/6/2007	Smart Search Concepts, LLC
2 US 7,302,423 B2	11/27/2007	Smart Search Concepts, LLC
3 US 7,574,432 B1	8/11/2009	Smart Search Concepts, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY	
	<input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT <p style="font-size: 1.2em; font-family: cursive;">Dismissed - See Attached</p>

CLERK John A Cerino, Clerk United States District Court 844 N. King Street, Unit 18 Wilmington, DE 19801	(BY) DEPUTY CLERK 	DATE 12/12/14
--	---	------------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SMART SEARCH CONCEPTS, LLC,)
 Plaintiff,)
)
v.) Civil Action No. 1:13-cv-1034-GMS
)
BUY.COM INC.,)
 Defendant.)
_____)

STIPULATED MOTION FOR DISMISSAL

The plaintiff Smart Search Concepts, LLC and defendant Buy.com, Inc. (now Rakuten Commerce LLC d/b/a Buy.com) pursuant to Fed. R. Civ. P. 41(a)(2) and (c), hereby move for an order dismissing all of Plaintiff's claims in this action WITH PREJUDICE and all of Defendant's counterclaims in this action WITHOUT PREJUDICE, subject to the terms of that certain agreement entitled "**SETTLEMENT AND LICENSE AGREEMENT**" and dated October 23, 2014, with each party to bear its own costs, expenses and attorneys' fees.

STAMOULIS & WEINBLATT LLC

/s/ Richard C. Weinblatt

Stamatios Stamoulis #4606
stamoulis@swdelaw.com

Richard C. Weinblatt #5080
weinblatt@swdelaw.com

Two Fox Point Centre
6 Denny Road, Suite 307
Wilmington, DE 19809
(302) 999-1540

*Attorneys for Plaintiff
Smart Search Concepts, LLC*

MORGAN LEWIS & BOCKIUS LLP

/s/ Jody C. Barillare

Jody C. Barillare (#5107)
jbarillare@morganlewis.com

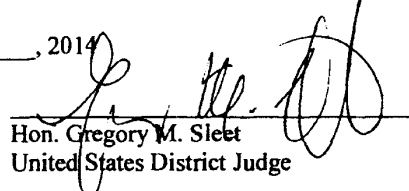
The Nemours Building
1007 North Orange Street, Suite 501
Wilmington, DE 19801
Telephone: (302) 574-3000

Jason C. White (admitted *pro hac vice*)
jwhite@morganlewis.com
Scott D. Sherwin (admitted *pro hac vice*)
ssherwin@morganlewis.com

MORGAN LEWIS & BOCKIUS LLP
77 West Wacker Drive
Chicago, IL 60601
Telephone: (312) 324-1000

*Attorneys for Defendant
Buy.com Inc.*

SO ORDERED, this 2nd day of Dec, 2014


Hon. Gregory M. Sleet
United States District Judge

IFW

PATENT 7,302,423



In re the Application of

Joseph L. DE BELLIS

Application No.: 09/935,565

Filed: August 24, 2001

Group Art Unit: 2164

Examiner: Leslie Wong

Docket No.: 5607

Confirmation No. 9677

For: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

NOTICE UNDER 37 C.F.R. §1.27(g)

Mail Stop: Post Issuance
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22323-1450

Sir:

Applicant hereby notifies the Office of a loss of entitlement to small entity status with respect to the above-identified patent application, now U.S. Patent 7,302,423.

Respectfully submitted,

A handwritten signature in cursive script that reads "John K. Harrop".

John K. Harrop
Registration No. 41,817

Date: January 20, 2015

John K. Harrop
PO Box 320171
Alexandria, VA 22320

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Delaware on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

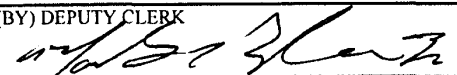
DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
	6/7/2013	Delaware
PLAINTIFF		DEFENDANT
Smart Search Concepts, LLC		Wal-Mart Stores, Inc. and Sam's West, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 7,188,100 B2	3/6/2007	Smart Search Concepts, LLC
2 US 7,302,423 B2	11/27/2007	Smart Search Concepts, LLC
3 US 7,574,432 B1	8/11/2009	Smart Search Concepts, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY
	<input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK
1	
2	
3	
4	
5	

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT <i>Dismissed - See Attached</i>

CLERK John A Cerino, Clerk United States District Court 844 N. King Street, Unit 18 Wilmington, DE 19801	(BY) DEPUTY CLERK 	DATE 7/8/14
--	---	----------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

To:	Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
-----	---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Southern District of California on the following: X Patents or Trademarks:

DOCKET NO.	DATE FILED	US District Court Southern District of California
3:14-cv-00267-MMA-NLS	2/4/14	San Diego, CA
PLAINTIFF		DEFENDANT
Dart Neuroscience LLC		Dart Therapeutics, Inc., et al.
PATENT OR TRADEMARK NO.	PATENT OR TRADEMARK NO.	PATENT OR TRADEMARK NO.
1. 3,836,770	6.	11.
2. 3,836,769	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.

In the above-entitled case, the following patents(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY	
	<input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	PATENT OR TRADEMARK NO.	PATENT OR TRADEMARK NO.
1.	6.	11.
2.	7.	12.
3.	8.	13.
4.	9.	14.
5.	10.	15.

In the above-entitled case, the following decision has been rendered or judgment issued:

DECISION/JUDGMENT	Notice of Voluntary Dismissal
--------------------------	-------------------------------

CLERK	(BY) DEPUTY CLERK	DATE
John Morrill, Acting Clerk of Court	A. Garcia	07/08/2014

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Delaware on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.)

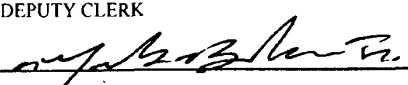
DOCKET NO.	DATE FILED 6/7/2013	U.S. DISTRICT COURT Delaware
PLAINTIFF Smart Search Concepts, LLC		DEFENDANT Neiman Marcus, Inc., The Neiman Marcus Group, Inc. and Bergdorfgoodman.com, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 7,188,100 B2	3/6/2007	Smart Search Concepts, LLC
2 US 7,302,423 B2	11/27/2007	Smart Search Concepts, LLC
3 US 7,574,432 B1	8/11/2009	Smart Search Concepts, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY	<input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT <i>Dismissed - See Attached</i>

CLERK John A Cerino, Clerk United States District Court 844 N. King Street, Unit 18 Wilmington, DE 19801	(BY) DEPUTY CLERK 	DATE 5/21/14
---	---	-----------------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Delaware on the following
 Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED 6/7/2013	U.S. DISTRICT COURT Delaware
PLAINTIFF Smart Search Concepts, LLC		DEFENDANT Neiman Marcus, Inc., The Neiman Marcus Group, Inc. and Bergdorfgoodman.com, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 7,188,100 B2	3/6/2007	Smart Search Concepts, LLC
2 US 7,302,423 B2	11/27/2007	Smart Search Concepts, LLC
3 US 7,574,432 B1	8/11/2009	Smart Search Concepts, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	--

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Delaware on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED 6/7/2013	U.S. DISTRICT COURT Delaware
PLAINTIFF Smart Search Concepts, LLC		DEFENDANT Buy.com Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 7,188,100 B2	3/6/2007	Smart Search Concepts, LLC
2 US 7,302,423 B2	11/27/2007	Smart Search Concepts, LLC
3 US 7,574,432 B1	8/11/2009	Smart Search Concepts, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Delaware on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED 6/7/2013	U.S. DISTRICT COURT Delaware
PLAINTIFF Smart Search Concepts, LLC		DEFENDANT Wal-Mart Stores, Inc. and Sam's West, Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 7,188,100 B2	3/6/2007	Smart Search Concepts, LLC
2 US 7,302,423 B2	11/27/2007	Smart Search Concepts, LLC
3 US 7,574,432 B1	8/11/2009	Smart Search Concepts, LLC
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading		
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK	
1			
2			
3			
4			
5			

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
-------	-------------------	------

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

PATENT ASSIGNMENT

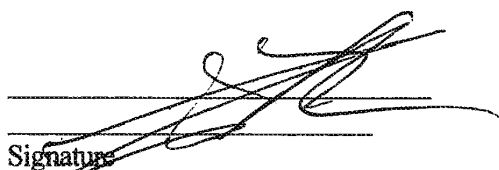
Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Joseph L De Bellis	02/20/2013
RECEIVING PARTY DATA	
Name:	Pedestrian Concepts LLC
Street Address:	80 Sanford Place
City:	Southampton
State/Country:	NEW YORK
Postal Code:	11968
PROPERTY NUMBERS Total: 1	
Property Type	Number
Patent Number:	7302423
CORRESPONDENCE DATA	
Fax Number:	
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
Phone:	202-714-8670
Email:	harrop5512@yahoo.com
Correspondent Name:	John K. Harrop
Address Line 1:	PO Box 320171
Address Line 4:	Alexandria, VIRGINIA 22320
ATTORNEY DOCKET NUMBER:	5607
NAME OF SUBMITTER:	John K. Harrop
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 1	
source=423 ASSIGNMENT#page1.tif	

OP \$40.00 7302423

ASSIGNMENT

For valuable consideration, I, Joseph L. De Bellis of Southampton, New York, hereby assign to Pedestrian concepts LLC, a corporation of Delaware having a place of business at 80 Sanford Place, Southampton, New York; and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of a United States Patent 7,302,423 signed by me, entitled Search-On-The-Fly With Merge Function, filed August 24, 2001; and I agree for myself and my respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.



Signature

Date: 2/20/13

Joseph L. DeBellis
Typed or Printed Name

Attorney Dkt. 5607



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/935,565	08/24/2001	Joseph De Bellis	5607

38598
ANDREWS KURTH LLP
1350 I STREET, N.W.
SUITE 1100
WASHINGTON, DC 20005

CONFIRMATION NO. 9677
MISCELLANEOUS NOTICE



Date Mailed: 11/02/2011

A communication which cannot be delivered in electronic form has been mailed to the applicant.


UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/935,565	08/24/2001	Joseph De Bellis	5607

38598
 ANDREWS KURTH LLP
 1350 I STREET, N.W.
 SUITE 1100
 WASHINGTON, DC 20005

CONFIRMATION NO. 9677


OC00000050711310

Cc: John K. Harrop
 PO Box 320171
 Alexandria, VA 22320

Date Mailed: 11/01/2011

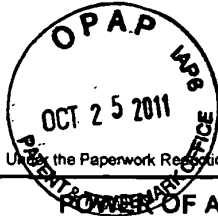
DENIAL OF REQUEST FOR POWER OF ATTORNEY

The request for Power of Attorney filed 10/25/2011 is acknowledged. However, the request cannot be granted at this time for the reason stated below.

- The Power of Attorney you provided did not comply with the new Power of Attorney rules that became effective on June 25, 2004. See 37 CFR 1.32.
- The revocation is not signed by the applicant, the assignee of the entire interest, or one particular principal attorney having the authority to revoke.
- The Power of Attorney is from an assignee and the Certificate required by 37 CFR 3.73(b) has not been received.
- The person signing for the assignee has omitted their empowerment to sign on behalf of the assignee.
- The inventor(s) is without authority to appoint attorneys since the assignee has intervened as provided by 37 CFR 3.71.
- The signature(s) of _____, a co-inventor in this application, has been omitted. The Power of Attorney will be entered upon receipt of confirmation signed by said co-inventor(s).
- The person(s) appointed in the Power of Attorney is not registered to practice before the U.S. Patent and Trademark Office.

Questions relating to this Notice should be directed to the Application Assistance Unit.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



PTO/SB/81 (01-09)

Approved for use through 11/30/2011. OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Application Number	09/935,565
	Filing Date	August 24, 2001
	First Named Inventor	Joseph L. DeBellis III
	Title	SEARCH-ON-THE-FLY WITH MERGE FUNCTION
	Art Unit	2177
	Examiner Name	Leslie WONG
	Attorney Docket Number	147747.01

I hereby revoke all previous powers of attorney given in the above-identified application.

A Power of Attorney is submitted herewith.

OR

I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

OR

I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number
John K. Harrop	41,817

Please recognize or change the correspondence address for the above-identified application to:

The address associated with the above-mentioned Customer Number.

OR

The address associated with Customer Number:

<input checked="" type="checkbox"/> Firm or Individual Name	John K. Harrop		
Address	PO Box 320171		
City	Alexandria	State	VA
Country	US	Zip	22320
Telephone	202-714-8670	Email	harrop5512@yahoo.com

I am the:

Applicant/Inventor.

OR

Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____

SIGNATURE of Applicant or Assignee of Record

Signature		Date	10/13/11
Name	Joseph DeBellis	Telephone	631-287-1234
Title and Company	CEO, Pedestrian Concepts, LLC		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

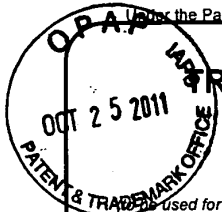
JFCO

PTO/SB/21 (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



TRANSMITTAL FORM <small>to be used for all correspondence after initial filing)</small>		Application Number	09/935,565
		Filing Date	August 24, 2001
		First Named Inventor	Joseph L. DeBellis III
		Art Unit	2177
		Examiner Name	Leslie WONG
Total Number of Pages in This Submission	2	Attorney Docket Number	147747.01

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input checked="" type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please Identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	Remarks	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	John K. Harrop		
Signature			
Printed name	John K. Harrop		
Date	October 25, 2011	Reg. No.	41,817

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature			
Typed or printed name		Date	

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

HW



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Joseph L. DE BELLIS

Group Art Unit: 2164

Application No.: 09/935,565

Examiner: L. WONG

Filed: August 24, 2001

Docket No.: 147747.01

For: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

NOTICE OF CHANGE OF ADDRESS

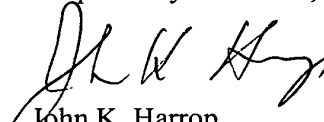
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please address all future communications in connection with the above-identified application to:

**OLIFF & BERRIDGE, PLC
CUSTOMER NUMBER 25944**

Respectfully submitted,


John K. Harrop
Registration No. 41,817

JKH/amt

Date: December 30, 2010

**OLIFF & BERRIDGE, PLC
P.O. Box 320850
Alexandria, Virginia 22320-4850
Telephone: (703) 836-6400**

**DEPOSIT ACCOUNT USE
AUTHORIZATION**
Please grant any extension
necessary for entry of this filing;
Charge any fee due to our
Deposit Account No. 15-0461



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P. O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., ISSUE DATE, PATENT NO., ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 09/935,565, 11/27/2007, 7302423, 5607, 9677

38598 7590 11/07/2007
ANDREWS KURTH LLP
1350 I STREET, N.W.
SUITE 1100
WASHINGTON, DC 20005

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 1028 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Joseph De Bellis, Southampton, NY;

PART B- FEE(S) TRANSMITTAL



Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

38598 7590 09/25/2007

ANDREWS KURTH LLP
 1350 I STREET, N.W.
 SUITE 1100
 WASHINGTON, DC 20005

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above, or being facsimile transmitted to the USPTO, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

TITLE OF INVENTION: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	12/26/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS	10/18/2007 AWONDAF2	00000034	502049	09935565
WONG, LESLIE	2164	707-003000	01 FC:2501	720.00 DA		
			02 FC:1504	300.00 DA		
			03 FC:0001	9.00 DA		

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
 Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
 "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list:
 (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
 2 ANDREWS KURTH LLP
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)
 PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.
 (A) NAME OF ASSIGNEE **Pedestrian Concepts LLC**
 (B) RESIDENCE: (CITY and STATE OR COUNTRY) **Dover, DE**

Please check the appropriate assignee category or categories (will not be printed on the patent) individual corporation or other private legal entity government

4a. The following fee(s) are enclosed:
 Issue Fee
 Publication Fee (No small entity discount permitted)
 Advance Order - # of Copies 3

4b. Payment of Fee(s):
 A check in the amount of the fee(s) is enclosed.
 Payment by credit card. Form PTO-2038 is attached.
 The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number **50-2849** (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)
 a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

The Director of the USPTO is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.
 NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature John K. Harrop Date October 17, 2007
 Typed or printed name John K. Harrop Registration No. 41,817

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



ATTORNEY DOCKET NO.: 5607

PATENT APPLICATION

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Joseph De Bellis

Confirmation No.: 9677

Application No.: 09/935,565

Examiner: L. Wong

Filing Date: August 24, 2001

Group Art Unit: 2164

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

ISSUE FEE PAYMENT TRANSMITTAL

Mail Stop Box Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

In accordance with the Notice of Allowance and Issue Fee Due mailed September 25, 2007, applicant is submitting herewith the Issue Fee Transmittal (Part B).

Please charge the Issue Fee, Publication Fee and advanced patent copies fee in the amount of **\$1,009.00** to **Deposit Account No. 50-2849**. In the event any variance exists between the amount authorized to be charged and the Patent Office charges, please charge or credit any such variance to **Deposit Account No. 50-2849**.

ANDREWS KURTH LLP
Intellectual Property Department
1350 I Street, NW
Suite 1100
Washington, D.C. 20005
Telephone No.: (202) 662-2700
Facsimile No.: (202) 662-2739

Respectfully submitted,


John K. Harrop
Attorney/Agent for Applicant(s)
Reg. No. 41,817

Date: **October 17, 2007**



UNITED STATES PATENT AND TRADEMARK OFFICE

ml

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

38598 7590 09/25/2007

ANDREWS KURTH LLP
1350 I STREET, N.W.
SUITE 1100
WASHINGTON, DC 20005

EXAMINER

WONG, LESLIE

ART UNIT PAPER NUMBER

2164

DATE MAILED: 09/25/2007

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

09/935,565 08/24/2001 Joseph De Bellis 5607 9677

TITLE OF INVENTION: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional YES \$700 \$300 \$0 \$1000 12/26/2007

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the **ISSUE FEE** and **PUBLICATION FEE** (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

38598 7590 09/25/2007

ANDREWS KURTH LLP
1350 I STREET, N.W.
SUITE 1100
WASHINGTON, DC 20005

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

TITLE OF INVENTION: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$700	\$300	\$0	\$1000	12/26/2007

EXAMINER	ART UNIT	CLASS-SUBCLASS
WONG, LESLIE	2164	707-003000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. _____ 2</p> <p>_____ 3</p>
--	---

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE _____ (B) RESIDENCE: (CITY and STATE OR COUNTRY) _____

Please check the appropriate assignee category or categories (will not be printed on the patent) : Individual Corporation or other private group entity Government

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
---	--

5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER. Includes application details for Joseph De Bellis and Andrews Kurth LLP.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1028 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1028 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	09/935,565	DE BELLIS, JOSEPH	
	Examiner	Art Unit	
	Leslie Wong	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 09/04/2007.
2. The allowed claim(s) is/are 1-7,9-14,20,22-25,27-31 and now renumbered as 1-23.
3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the abstract:

Replace the term "means" in line 3 with "mechanisms"

In the claims:

Cancel all claims with "withdrawn" status identifier: Claims 15-19, 32-36, 41-45.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (571) 272-4120. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES RONES can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Leslie Wong
Primary Patent Examiner
Art Unit 2164

LW
September 21, 2007



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/935,565
Applicant : Joseph L. DeBellis
Filed : August 24, 2001
Title : SEARCH-ON-THE-FLY WITH MERGE FUNCTION
TC/A.U. : 2164
Examiner : Leslie Wong
Docket No. : 150314
Customer No. : 038598

*Enter AF Amendments
LW
9/18/07*

Mail Stop Amendment
Commissioner of Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450


AMENDMENT

Sir:

In response to the June 1, 2007 Office Action, please amend the above-identified application as follows:


Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 10 of this paper.

Issue Classification 	Application/Control No. 09935565	Applicant(s)/Patent Under Reexamination DE BELLIS, JOSEPH
	Examiner Wong, Leslie	Art Unit 2164

ORIGINAL				INTERNATIONAL CLASSIFICATION							
CLASS		SUBCLASS		CLAIMED				NON-CLAIMED			
707		3		G	0	6	F	17 / 30 (2006.01.01)			
CROSS REFERENCE(S)											
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)										
707	104.1										
345	663										


_____ (Assistant Examiner)	_____ (Date)	LESLIE WONG PRIMARY EXAMINER <i>les</i>	Total Claims Allowed: 23		
_____ (Legal Instruments Examiner)	_____ (Date)	Wong, Leslie (Primary Examiner)	9/21/2007 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 11

Index of Claims 	Application/Control No. 09935565	Applicant(s)/Patent Under Reexamination DE BELLIS, JOSEPH
	Examiner Wong, Leslie	Art Unit 2164

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47


CLAIM		DATE					
Final	Original	09/21/2007					
1	1	=					
2	2	=					
3	3	=					
4	4	=					
5	5	=					
6	6	=					
7	7	=					
	8	-					
8	9	=					
9	10	=					
10	11	=					
11	12	=					
12	13	=					
13	14	=					
	15	N					
	16	N					
	17	N					
	18	N					
	19	N					
14	20	=					
	21	-					
15	22	=					
16	23	=					
17	24	=					
18	25	=					
	26	-					
19	27	=					
20	28	=					
21	29	=					
22	30	=					
23	31	=					
	32	N					
	33	N					
	34	N					
	35	N					
	36	N					

Index of Claims 	Application/Control No. 09935565	Applicant(s)/Patent Under Reexamination DE BELLIS, JOSEPH
	Examiner Wong, Leslie	Art Unit 2164

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE									
Final	Original	09/21/2007									
	37	-									
	38	-									
	39	-									
	40	-									
	41	N									
	42	N									
	43	N									
	44	N									
	45	N									

Search Notes 	Application/Control No. 09935565	Applicant(s)/Patent Under Reexamination DE BELLIS, JOSEPH
	Examiner Wong, Leslie	Art Unit 2164

SEARCHED			
Class	Subclass	Date	Examiner
707	3,4,7,10,102,104.1		LW
709	203,219	9/20/2007	LW
345	663	9/20/2007	LW

SEARCH NOTES		
Search Notes	Date	Examiner
EAST SEARCH (CASS/SUBCLASS with keywords)	9/21/2007	LW

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
707	3,104.1	9/21/2007	LW
345	663	9/21/2007	LW

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	11413	709/203,219.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/09/20 17:57
L2	395	(limited or constraint\$1) with (display or lcd or screen\$3) and (truncat\$3 or reduc\$3) with (character\$1 or output\$1 or result\$1) and (quer\$3 or search\$3) with (database\$1 or data near base\$1 or repositor\$3) and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:12
L3	475	(limited or constraint\$1) with (display\$3 or lcd or screen\$3) and (truncat\$3 or reduc\$3 or threshold) with (character\$1 or output\$1 or result\$1) and (quer\$3 or search\$3) with (database\$1 or data near base\$1 or repositor\$3) and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:10
L4	1	3 and (exceed\$3 or over or threshold) with (all or entire) with (result\$1 or hit\$1 or output)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:11
L5	0	((limited or constraint\$1) with (display or lcd or screen\$3) and (truncat\$3 or reduc\$3) with (character\$1 or output\$1 or result\$1) and (quer\$3 or search\$3) with (database\$1 or data near base\$1 or repositor\$3)).ab. and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:12
L6	3129	((limited or constraint\$1) with (display or lcd or screen\$3)).ab. and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:13
L7	70	6 and (truncat\$3 or reduc\$3) with (size\$1 or entries or character\$1) with (display\$3 or show\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:21
L8	0	7 and (quer\$3 or search\$3) with (database\$1 or data near base\$1) and schema\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:15

EAST Search History

L9	0	7 and (quer\$3 or search\$3) same (database\$1 or data near base\$1) and schema\$1	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:15
L10	0	7 and (quer\$3 or search\$3) same (database\$1 or data near base\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:15
L11	0	8 and (quer\$3 or search\$3) same (database\$1 or data near base\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:15
L12	0	7 and (quer\$3 or search\$3) same (database\$1 or data near base\$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:15
L13	56	6 and (truncat\$3 or reduc\$3) with (field\$1 or data) with (display\$3 or show\$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:27
L14	0	345/663.ccls. and (quer\$3 or search\$3) with (database\$1 or data near base\$1 or repositor\$3) and (reduc\$3 or truncat\$3 or scal\$3) with (limited or constraint\$1) with (display\$3 or screen\$1 or lcd\$1) and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:29
L15	0	345/663.ccls. and (reduc\$3 or truncat\$3 or scal\$3) with (limited or constraint\$1) with (display\$3 or screen\$1 or lcd\$1) and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:29
L16	32	(quer\$3 or search\$3) with (database\$1 or data near base\$1 or repositor\$3) and (reduc\$3 or truncat\$3 or scal\$3) with (limited or constraint\$1) with (display\$3 or screen\$1 or lcd\$1) and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 18:30
S29 6	25235	707/3,4,7,10,102,104.1.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/09/20 15:38

EAST Search History

S29 7	47	S296 and ((search\$3 or retriev\$3) with (reduc\$3 or truncat\$3) with (size or set or hit)) same (field or column or row)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:27
S29 8	13	S297 and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/09/20 16:34
S29 9	48	S296 and ((search\$3 or retriev\$3) with (cut\$4 or reduc\$3 or truncat\$3) with (size or set or hit)) same (field or column or row)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:45
S30 0	13	S299 and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/09/20 16:34
S30 1	2	((search\$3 or retriev\$3) with (cut\$4 or reduc\$3 or truncat\$3) with (size or set or hit)) same (field or column or row) and (overflow or truncat\$3 or eliminat\$3) with search\$3 near (output or result) and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/09/20 16:46

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2000

Application or Docket Number
09/935565
5607

BEST AVAILABLE COPY

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	41	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	41 minus 20 =	21
INDEPENDENT CLAIMS	8 minus 3 =	5
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

SMALL ENTITY TYPE OR OTHER THAN SMALL ENTITY

RATE	FEE	OR	RATE	FEE
BASIC FEE	355.00	OR	BASIC FEE	710.00
X\$ 9=	189	OR	X\$18=	
X40=	200	OR	X80=	
+135=		OR	+270=	
TOTAL	744.00	OR	TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	41 Minus 41	= X
	Independent	8 Minus 8	= X
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

SMALL ENTITY OR OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

9.4/07

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	38 Minus 41	= -
	Independent	8 Minus 8	= -
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total		=
	Independent		=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.



ATTORNEY DOCKET NO.: 150314

JFW
PATENT APPLICATION

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Joseph L. DeBellis

Confirmation No.: 9677

Application No.: 09/935,565

Examiner: Leslie Wong

Filing Date: August 24, 2001

Group Art Unit: 2164

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Response/Amendment | <input type="checkbox"/> Petition to extend time to respond |
| <input type="checkbox"/> New fee as calculated below | <input type="checkbox"/> Supplemental Declaration |
| <input checked="" type="checkbox"/> No additional fee | |
| <input type="checkbox"/> Other: _____ | (fee \$ _____) |

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS	23	MINUS	41	= 0	X \$50	\$ 0
INDEP. CLAIMS	3	MINUS	8	= 0	x \$200	\$ 0
[]	FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM				+ \$360	\$ 0
EXTENSION FEE	1ST MONTH \$120.00 <input type="checkbox"/>	2ND MONTH \$450.00 <input type="checkbox"/>	3RD MONTH \$1,020.00 <input type="checkbox"/>	4TH MONTH \$1,590.00 <input type="checkbox"/>		\$ 0
OTHER FEES						\$ 0
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 0

Please charge **\$0** to **Deposit Account No. 50-2849** to cover the above fees. In the event any difference exists between the amount authorized to be charged and the actual charges, please charge or credit any such difference to **Deposit Account No. 50-2849**.

Respectfully submitted,

[Signature]
John K. Harrop
Attorney/Agent for Applicant(s)
Reg. No. 41,817

ANDREWS KURTH LLP
Intellectual Property Department
1350 I Street, NW
Suite 1100
Washington, D.C. 20005
Telephone No.: (202) 662-2700
Facsimile No.: (202) 662-2739

Date: **September 4, 2007**

- Attach as First Page to Transmitted Papers -



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 09/935,565
Applicant : Joseph L. DeBellis
Filed : August 24, 2001
Title : SEARCH-ON-THE-FLY WITH MERGE FUNCTION
TC/A.U. : 2164
Examiner : Leslie Wong
Docket No. : 150314
Customer No. : 038598

Mail Stop Amendment
Commissioner of Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT

Sir:

In response to the June 1, 2007 Office Action, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 10 of this paper.

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A computer-implemented method for displaying data comprising:

determining a database schema for a database;

providing a list of database fields, wherein the list includes a descriptor indicating a data category;

receiving a search selection for a database field on the provided list of database fields;

determining a number of characters included in each entry in the selected database field; and

if the number of characters included in each entry exceeds a specified amount of characters, displaying a portion of each entry in the selected database field, wherein a number of characters displayed in each portion is less than or equal to the specified amount of characters; and

if the number of characters included in each entry does not exceed the specified amount, displaying each entry in its entirety.

Claim 2 (original): The method of claim 1, further comprising providing a key word search.

Claim 3 (currently amended): A computer-implemented method for formatting data for display, comprising:

generating a list of data fields;

receiving a first data field selection from the list of data fields;

determining a first quantity indicative of a number of characters in each entry of the selected data field;

if the first quantity exceeds a specified limit, reducing a number of characters to be displayed for each entry from the selected data field, comprising:

performing a truncation that reduces the number of characters to be displayed from the selected data filed,

comparing the reduced number of characters to the specified limit, and

if the reduced number of characters exceeds the specified limit, repeating the truncation and comparing steps until the reduced number of characters to be displayed from the selected data field is less than or equal to the specified limits; and

displaying the reduced number of characters for each entry from the selected data field.

Claim 4 (original): The method of claim 3, wherein the specified limit is fixed.

Claim 5 (original): The method of claim 3, wherein the specified limit is variable.

Claim 6 (previously presented): The method of claim 3, wherein each entry from the selected data field is displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

Claim 7 (original): The method of claim 3, wherein the specified limit is a user-determined limit.

Claim 8 (cancelled):

Claim 9 (currently amended): The method of claim 3, wherein a parameter is related to the number of characters to be displayed from the selected data field, and wherein the truncation comprises decrementing the parameter.

Claim 10 (original): The method of claim 9, wherein the parameter is decremented or incremented by a value of one.

Claim 11 (currently amended): The method of claim 3, wherein a parameter is related to the number of characters to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value.

Claim 12 (original): The method of claim 11, wherein the value is two.

Claim 13 (currently amended): The method of claim 3 8, wherein a parameter is related to the number of characters to be displayed from the selected data field, and wherein the truncation comprises multiplying the parameter by a value.

Claim 14 (original): The method of claim 3, further comprising:

receiving a first constraint, wherein the first constraint is related to a data element in a data field; and

receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints.

Claim 15 (withdrawn): A computer-implemented method for searching a database, comprising:

selecting a first search term;

sending the first search term to a search engine;

receiving a first search result;

selecting and sending a second search term to the search engine after the first search result is received; and

receiving a second search result, wherein the second search result represents a combination of the first and the second search terms.

Claim 16 (withdrawn): The method of claim 15, further comprising:

selecting and sending a third search term to the search engine;

dropping a prior search term, wherein the dropped prior search term is one of the first and the second search terms; and

receiving a third search result comprising a combination of the third search term and one of the first and the second search terms.

Claim 17 (withdrawn): The method of claim 15, wherein the first search term is directed to a first database and wherein the second search term is directed to a second database.

Claim 18 (withdrawn): The method of claim 15, wherein the first search result is displayed as a truncated result list.

Claim 19 (withdrawn): The method of claim 18, further comprising specifying a size of the truncation.

Claim 20 (currently amended): A computer-implemented method for searching a database, comprising:

- generating a list of data fields;
- receiving a first data field selection from the list of data fields;
- receiving a first constraint, wherein the first constraint is related to a data element in a data field;
- generating a first search result based on the first constraint;
- displaying a menu, wherein the menu is populated with the first search result;
- receiving one or more subsequent constraints; ~~and~~
- conducting a second search, wherein the one or more subsequent constraints are used to search at least data associated with the first search result to generate a second search result;
- determining a first quantity indicative of a number of entries of the selected data field;
- if the first quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field, comprising:
 - performing a truncation that reduces the size of the data to be displayed from the selected data field,
 - comparing the reduced size to the specified limits, and
 - if the reduced size to the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit; and
- displaying data from the selected data field.

Claim 21 (cancelled):

Claim 22 (currently amended): The method of claim ~~20~~ ~~21~~, wherein the specified limit is fixed.

Claim 23 (currently amended): The method of claim 20 ~~21~~, wherein the specified limit is variable.

Claim 24 (currently amended): The method of claim 20 ~~21~~, wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

Claim 25 (currently amended): The method of claim 20 ~~21~~, wherein the specified limit is a user-determined limit.

Claim 26 (cancelled):

Claim 27 (currently amended): The method of claim 20 ~~26~~, wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises decrementing or incrementing the parameter.

Claim 28 (original): The method of claim 27, wherein the parameter is decremented or incremented by a value of one.

Claim 29 (currently amended): The method of claim 20 ~~26~~, wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value.

Claim 30 (original): The method of claim 29, wherein the value is two.

Claim 31 (original): The method of claim 20 ~~26~~, wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises multiplying the parameter by a value.

Claim 32 (withdrawn): A computer-implemented method for providing search functions in one or more databases, comprising:

- receiving a first search term;
- searching at least a first database using the first search term;

returning a first search result, wherein the first search result comprises a first list of elements in the first database;
receiving a second search term, after the first search result is returned;
conducting a second search by applying the second search term to one of the first list of elements and a second database; and
returning a second search result, wherein the second search result represents a search output based on a combination of the first and the second search terms.

Claim 33 (withdrawn): The method of claim 32, further comprising:

receiving a third search term;
receiving a signal to drop one of the first and the second search terms;
dropping the selected one of the first and the second search terms, wherein dropping the selected one of the first and the second search terms provides a revised list of elements;
searching one of the revised list of elements and one of the second or subsequent databases using the third search term; and
returning a third list of elements, wherein the third list of elements represents the search output based on a combination of the third search term and the non-selected one of the first and the second search terms.

Claim 34 (withdrawn): The method of claim 32, wherein the first search result is returned as a truncated list of elements.

Claim 35 (withdrawn): A computer-implemented method for navigating one or more databases, comprising:

receiving a first attribute associated with elements in one or more of the databases, wherein the first attribute comprises a first search term;
returning a first search result based on the first attribute;
receiving a second attribute associated with elements in one or more of the databases, wherein the second attribute comprises a second search term and is selected from contents of the first search result;
generating a second search result based on the second attribute, wherein the second attribute is used to search at least data associated with the first search result to generate the second search result and the second search result represents a merged search result; and

returning the merged search result.

Claim 36 (withdrawn): The method of claim 35, further comprising: truncating the merged search result based on a display size of a device receiving the merged search result.

Claim 41 (withdrawn): A computer-implemented method for searching one or more databases, wherein each of the one or more databases comprises a plurality of fields, comprising:

getting a first list of fields of a first database;

applying a first filter to the first list of fields, wherein the first filter comprises a first search constraint;

applying a second filter to a result of applying the first filter, wherein the second filter comprises a second search constraint;

applying a third filter to a result of applying the second filter, wherein the third filter comprises a third search constraint;

and

displaying a search result of applying the third filter.

Claim 42 (withdrawn): The method of claim 41, further comprising:

removing at least one of the first, second and third filters, whereby a final search result is generated.

Claim 43 (withdrawn): A computer-implemented method for searching a database, comprising:

displaying a first list of database entries;

receiving a selection of a first search term from the displayed first list of database entries;

sending the first search term to a search engine;

receiving a first search result;

displaying a menu, wherein the menu is populated with the result of the first search;

receiving a selection of a second search term from the displayed menu;

sending the second search term to the search engine, wherein the second search term is used to search at least data associated with the first search result; and

receiving a second search result, wherein the second search result represents a search output based on a combination of the first and the second search terms.

Claim 44 (withdrawn): The method of claim 43, further comprising:

selecting and sending a third search term to the search engine, wherein the third search term is selected from contents of the second search result;

dropping a prior search term, wherein the dropped prior search term is one of the first and the second search terms; and

receiving a third search result, wherein the third search result represents the search output based on a combination of the third search term and one of the first and the second search terms.

Claim 45 (withdrawn): The method of claim 43, wherein the menu is one of a pop-up menu and a pull-down menu.

REMARKS

Claims 1-36 and 41-45 are pending. By this Amendment, claims 1, 3, 9, 11, 13, 20, 22-25, 27, 29, and 31 are amended, claims 8, 21, and 26 are cancelled, and claims 32-36, and 41-45 are withdrawn in response to a restriction requirement. Claims 1 and 2 are allowed and claims 8 and 13 are allowable. In view of the above amendments and remarks that follow, Applicant respectfully requests reconsideration and issuance of a Notice of Allowance.

On page 2 of the Office Action states a restriction requirement. In response, Applicant elects the claims of Group I (claims 1-14 and 20-31), with traverse.

On page 4 of the Office Action reject claims 3 and 14 under 35 U.S.C. §103(a) over U.S. Patent 5,701,453 to Maloney et al. (hereafter Maloney), in view of U.S. Patent 6,593,949 to Chew et al. (hereafter Chew). This rejection is respectfully traversed.

Claim 3 is amended to incorporate all of the features of allowable claim 8 and claim 8 is cancelled. Accordingly, claim 3 now is patentable. Claim 14 depends from patentable claim 3, and for this reason and the additional features it recites, claim 14 also is patentable. Withdrawal of the rejection of claim 3 and 14 under 35 U.S.C. §103(a) is respectfully requested.

On page 5 of the Office Action rejects claims 20 and 21 under 35 U.S.C. §103(a) over Maloney in view of U.S. Patent 6,321,228 to Crandall et al. (hereafter Crandall). This rejection is respectfully traversed.

Claim 20 is amended to incorporate all of the features of claim 21 and also all the features of allowable claim 8. Accordingly, claim 20 also is patentable. Withdrawal of the rejection of claims 20 and 21 is respectfully requested.

On page 7 the Office Action rejects claims 4-7 under 35 U.S.C. §103(a) under Maloney in view of Chew and further in view U.S. Patent 5,848,406 to Mani, et al. (hereafter Mani). This rejection is respectfully traversed.

Claims 4-7 depend from patentable claim 3. For this reason and the additional features they recite, claims 4-7 also are patentable. Withdrawal of the rejection of claims 4-7 under 35 U.S.C. §103(a) is respectfully requested.

On page 9 of the Office Action rejects claims 22-26 under 35 U.S.C. §103(a) under Maloney in view of Crandall and in further view of Mani. This rejection is respectfully traversed.

Claim 26 is cancelled and its rejection is moot. Claims 22-25 depend from patentable claim 20. For this reason and the additional features that they recite, claims 22-25 are

Appl. No. 09/935,565
Amdt. dated September 4, 2007
Reply to Office Action of June 1, 2007

patentable. Withdrawal of the rejection of claims 22-26 under 35 U.S.C. §103(a) is respectfully requested.

On page 11 of the Office Action rejects claims 27-31 under 35 U.S.C. §103(a) over Maloney in view of Crandall and Mani, and further in view of U.S. Patent 4,486,857 to Heckel (herefter Heckel). This rejection is respectfully traversed.

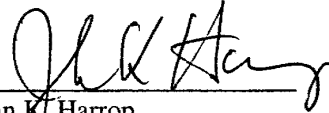
Claims 27-31 depend from patentable claim 20. For this reason and the additional features they recite, claim 27-31 are patentable. Withdrawal of rejection of claims 27-31 under 35 U.S.C. §103(a) is respectfully requested.

In view of the above remarks, Applicant respectfully submits that the application is in condition for allowance. Prompt examination and allowance are respectfully requested.

Should the Examiner believe that anything further is desired in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants undersigned representative at the telephone number listed below.

Date: September 4, 2007

Respectfully submitted,



John K. Harrop
Registration No. 41,817
Andrews Kurth LLP
1350 I Street, N.W.
Suite 1100
Washington, DC 20005
Tel. (202) 662-3050
Fax (202) 662-2739

PALM INTRANET

Application Number Information

Application Number: 09/935565

Examiner Number: 78953 / WONG, LESLIE

Assignments

Filing or 371(c) Date: 08/24/2001 eDan

Group Art Unit: 2164

IFW Madras

Effective Date: 08/24/2001

Class/Subclass: 707/001.000

Application Received: 08/24/2001

Lost Case: NO

Pat. Num./Pub. Num: /20020046209

Interference Number:

Issue Date: 00/00/0000

Unmatched Petition: NO

Date of Abandonment: 00/00/0000

L&R Code: Secrecy Code:1

Attorney Docket Number: 5607

Third Level Review: NO

Secrecy Order: NO

Status: 71 /RESPONSE TO NON-FINAL OFFICE ACTION ENTERED AND FORWARDED TO EXAMINER

Status Date: 03/20/2007

Confirmation Number: 9677

Oral Hearing: NO

Title of Invention: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
----------	---------------	---------------	---------------	----------------	---------------	----------

Appln Info	Contents	Petition Info	Atty/Agent Info	Continuity/Reexam	Foreign Data
------------	----------	---------------	-----------------	-------------------	--------------

Search Another: Application# or Patent#

PCT / / or PG PUBS #

Attorney Docket #

Bar Code #

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

Dp To patent 7,188,100

*Mason X3053
(202) 662-2700*

Update Search

Called 5/17/07 - Haven't receive myler.



UNITED STATES PATENT AND TRADEMARK OFFICE

JD

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

38598 7590 06/01/2007
ANDREWS KURTH LLP
 1350 I STREET, N.W.
 SUITE 1100
 WASHINGTON, DC 20005

EXAMINER

WONG, LESLIE

ART UNIT	PAPER NUMBER
2164	

2164

MAIL DATE	DELIVERY MODE
06/01/2007	PAPER

06/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/935,565	Applicant(s) DE BELLIS, JOSEPH	
	Examiner Leslie Wong	Art Unit 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 June 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-36 and 41-45 is/are pending in the application.
4a) Of the above claim(s) 15-19,32-36 and 41-45 is/are withdrawn from consideration.
- 5) Claim(s) 1 and 2 is/are allowed.
- 6) Claim(s) 3-7,14 and 20-31 is/are rejected.
- 7) Claim(s) 8-13 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Terminal Disclaimer

1. Receipt of Applicant's Terminal Disclaimer, filed 03 June 2005, is acknowledged.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-14 and 20-31, drawn to format and display data, classified in class 707, subclass 104.1.
 - II. Claims 15-19, 32-36, and 41-45, drawn to searching database, classified in class 707, subclass 3.
3. The inventions are distinct, each from the other because of the following reasons:
Inventions I - II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, each of the respective inventions has a separate utility as in a system not having the others. See M.P.E.P. § 806.05(d).
4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for the other Groups, restriction for examination purposes as indicated is proper.

Art Unit: 2164

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

7. During a telephone conversation with Mr. Sumeet Magoon on 21 May 2007, a provisional election was made with traverse to prosecute the invention of claims 1-14 and 20-31. Claims 15-19, 32-36, and 41-45 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected.

8. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if 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. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Chew et al.** (U.S. Patent 6,593,949 B1).

Regarding claim 3, **Maloney et al.** teaches a method for formatting data for display, comprising:

- a). generating a list of data fields (Fig. 18);
- b). receiving a first data field selection from the list of data fields (col. 3, lines 7-10);
- c). determining a first quantity indicative of a number of entries of the selected data field (col. 16, lines 6-8);
- d). **Maloney et al.** does not explicitly teaches a step wherein if the quantity exceeds a specified limit, reducing a number of characters to be displayed for each entry from the selected data field, and displaying the reduced number of characters for each entry from of the database field.

Chew et al., however, teaches wherein if the quantity exceeds a specified limit, reducing a number of characters to be displayed for each entry from the selected data

field, and displaying the reduced number of characters for each entry from of the database field (col. 5, lines 30-41; col. 6, lines 62-66; col. 3, lines 60-64).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Chew et al.** as this would enable the system to manage and control the result to be displayed to the users based on the limited sized screen.

Regarding claim 14, **Chew et al.** further teach a step receiving a first constraint, wherein the first constraint is related to a data element in a data field; and receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints (col. 4, lines 49-58; col. 5, lines 19-22; col. 6, lines 10-27).

12. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1).

Regarding claim 20, **Maloney et al.** teaches a method for searching a database, comprising:

- a). generating a list of data fields (Fig. 18);

Art Unit: 2164

- b). receiving a first data field selection from the list of data fields (col. 3, lines 7-10);
- c). receiving a first constraint, wherein the first constraint is related to a data element in a data field (col. 3, lines 7-10; col. 5, lines 23-26);
- d). generating a first search result based on the first constraint (col. 4, lines 13-14);
- e). displaying a menu, wherein the menu is populated with the first result (col. 4, lines 26-39);

Maloney et al. does not explicitly teach the steps of:

- f). receiving one or more subsequent constraints; and
- g). conducting a second search, wherein the one or more subsequent constraints are used to search at least data associated with the first search result to generate a second search result.

Crandall et al., however, teaches the steps of:

receiving one or more subsequent constraints (col. 5, lines 25-29) and conducting a second search, wherein the one or more subsequent constraints are used to search at least data associated with the first search result to generate a second search result (col. 5, lines 30-41; col. 6, lines 11-12).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of receiving one or more query constraints as

taught by **Crandall et al.** as this would allow user to refine the query to generate the search results to meet user's criteria.

Regarding claim 21, **Maloney et al.** does not explicitly teaches steps of:

- a). determining a first quantity indicative of a number of entries of the selected data field;
- b). if the first quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field; and
- c). displaying data from the selected data field.

Crandall et al., however, teaches wherein if the quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field (col. 6, lines 13-15); and displaying data from the selected data field (col. 8, lines 25-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Crandall et al.** as this would enable the system to manage and control the result to be displayed to the users based on the predetermined threshold.

13. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Chew et al.** (U.S. Patent 6,593,949 B1) as applied to claims 3 and 14 above and further in view of **Mani et al.** (U.S. Patent 5,848,406).

Regarding claims 4, 5, and 7, **Maloney et al. and Crandall et al.**, do not explicitly teach a step wherein the specified limit is fixed, variable, or user-determined limit.

Mani et al., however, teaches a step wherein the specified limit is fixed, variable, or user-determined limit (col. 5, lines 22-25 and lines 35-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the step of defining the display threshold as taught by **Mani et al.** in order to allow a user to make use of very small display surface such as mobile computers or PDA to allow data to fit on the display screen of a specific device.

Regarding claim 6, **Maloney et al. and Crandall et al.**, do not teach a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

However, **Mani et al.** teaches a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal (col. 2, lines 23-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the feature of displaying data based a characteristic of the terminal as taught by **Mani et al.** because it would accommodate various kinds of terminals having different display capabilities.

14. Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1) as applied to claims 20-21 above and further in view of **Mani et al.** (U.S. Patent 5,848,406).

Regarding claims 22, 23, and 25, **Maloney et al. and Crandall et al.**, do not explicitly teach a step wherein the specified limit is fixed, variable, or user-determined limit.

Mani et al., however, teaches a step wherein the specified limit is fixed, variable, or user-determined limit (col. 5, lines 22-25 and lines 35-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the step of defining the display threshold as taught by **Mani et al.** in order to allow a user to make use of very small display surface such as mobile computers or PDA to allow data to fit on the display screen of a specific device.

Regarding claim 24, **Maloney et al. and Crandall et al.**, do not teach a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

However, **Mani et al.** teaches a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal (col. 2, lines 23-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the feature of displaying data based a characteristic of

the terminal as taught by **Mani et al.** because it would accommodate various kinds of terminals having different display capabilities.

Regarding claim 26, **Crandall et al.** further teach a step wherein the method for reducing the size of the data to be displayed from the selected data field comprises:

a). performing a truncation that reduces the size of the data to be displayed from the selected data field (col. 6, lines 13-15);

Maloney et al. and Crandall et al., do not explicitly teach the steps of:

b). comparing the reduced size to the specified limit; and

c). if the reduced size exceeds the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit.

However, **Mani et al.** teaches a step wherein the method for reducing the size of the data to be displayed from the selected data field comprises:

b). comparing the reduced size to the specified limit (col. 5, lines 39-40);

and

c). if the reduced size exceeds the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit (col. 5, lines 39-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the feature of reducing the size exceeds the specified limit and repeating the truncation and comparing steps until the size of the data to be

Art Unit: 2164

displayed from the selected data field is less than or equal to the specified limit as taught by **Mani et al.** in order to adjust the output to fit the display area of various devices.

15. Claims 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1) and in view of **Mani et al.** (U.S. Patent 5,848,406) as applied to claims 4-8 and 27 above and further in view of **Heckel** (U.S. Patent 4,486,857).

Regarding claims 27-31, **Maloney et al.**, **Crandall et al.**, and **Mani et al.**, do not explicitly teach a step wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value and wherein the value is two.

However, **Heckel** teaches a step wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value and wherein the value is integer (col. 5, line 7 – col. 6, line 14).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the data reduction method as taught by **Heckel** to calculate the display capacity of the target terminal and determine if the selected data field need to be adjusted in order to fit on the display.

Allowable Subject Matter

16. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Prior art of record fails to teach a combination of elements including wherein the method for reducing the number of characters to be displayed from the selected data field comprises: performing a truncation that reduces the number of characters to be displayed from the selected data field; comparing the reduced number of characters to the specified limitation; and if the reduced number of characters exceeds the specified limit, repeating the truncation and comparing steps until the reduced number of characters to be displayed from the selected data field is less than or equal to the specified limit.

Claims 9-13 are also objected to as being dependent upon claim 8.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (571) 272-4120. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES RONES can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 09/935,565
Art Unit: 2164

Page 14

A handwritten signature in black ink, appearing to read 'LW', with a long, sweeping horizontal stroke extending to the right.

Leslie Wong
Primary Patent Examiner
Art Unit 2164

LW
May 25, 2007

Notice of References Cited	Application/Control No. 09/935,565	Applicant(s)/Patent Under Reexamination DE BELLIS, JOSEPH	
	Examiner Leslie Wong	Art Unit 2164	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,593,949 B1	07-2003	Chew et al.	715/841
*	B	US-6,272,332 B1	08-2001	Matsumoto et al.	455/412.1
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims



Application/Control No.

09/935,565

Examiner

Leslie Wong

Applicant(s)/Patent under Reexamination

DE BELLIS, JOSEPH

Art Unit

2164

√	Rejected
=	Allowed

-	(Through numeral) Cancelled
+	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected


Claim		Date			
Final	Original				
	1	=			
	2	=			
	3	√			
	4	√			
	5	√			
	6	√			
	7	√			
	8	O			
	9	O			
	10	O			
	11	O			
	12	O			
	13	O			
	14	√			
	15	N			
	16	N			
	17	N			
	18	N			
	19	N			
	20	√			
	21	√			
	22	√			
	23	√			
	24	√			
	25	√			
	26	√			
	27	√			
	28	√			
	29	√			
	30	√			
	31	√			
	32	N			
	33	N			
	34	N			
	35	N			
	36	N			
	37	-			
	38	-			
	39	-			
	40	-			
	41	N			
	42	N			
	43	N			
	44	N			
	45	N			
	46				
	47				
	48				
	49				
	50				

Claim		Date			
Final	Original				
	51				
	52				
	53				
	54				
	55				
	56				
	57				
	58				
	59				
	60				
	61				
	62				
	63				
	64				
	65				
	66				
	67				
	68				
	69				
	70				
	71				
	72				
	73				
	74				
	75				
	76				
	77				
	78				
	79				
	80				
	81				
	82				
	83				
	84				
	85				
	86				
	87				
	88				
	89				
	90				
	91				
	92				
	93				
	94				
	95				
	96				
	97				
	98				
	99				
	100				

Claim		Date			
Final	Original				
	101				
	102				
	103				
	104				
	105				
	106				
	107				
	108				
	109				
	110				
	111				
	112				
	113				
	114				
	115				
	116				
	117				
	118				
	119				
	120				
	121				
	122				
	123				
	124				
	125				
	126				
	127				
	128				
	129				
	130				
	131				
	132				
	133				
	134				
	135				
	136				
	137				
	138				
	139				
	140				
	141				
	142				
	143				
	144				
	145				
	146				
	147				
	148				
	149				
	150				

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	45	(search\$3 or quer\$3) with (database\$1 or data near base\$1) and (truncat\$4 or reduc\$3) with (constraint\$3 or restrict\$3 or limit\$3) with (display\$3 or screen\$1) and (@ad<"20000824")	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/25 17:08

Application Number 	Application/Control No. 09/935,565	Applicant(s)/Patent under Reexamination DE BELLIS, JOSEPH
Document Code - DISQ		Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
Date Filed : 06/03/05	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
meason

U.S. Patent and Trademark Office



**ANDREWS KURTH
1701 PENNSYLVANIA AVENUE NW
SUITE 300
WASHINGTON, DC 20006**

COPY MAILED

JUL 11 2005

In re Application of :
Joseph De Bellis :
Application No. 09/935,565 :
Filed: August 24, 2001 :
Attorney Docket No. 5607 :

**OFFICE OF PETITIONS
ON PETITION**

This is a decision on the petition under 37 CFR 1.137(b), filed June 3, 2005, to revive the above-identified application.

The petition is **GRANTED**.

The above-identified application became abandoned for failure to reply in a timely manner to the non-final Office action mailed August 24, 2004, which set a shortened statutory period for reply of three (3) months. No extensions of time under the provisions of 37 CFR 1.136(a) were obtained. Accordingly, the above-identified application became abandoned on November 25, 2004.

The Change of Correspondence Address filed June 3, 2005 has been entered and made of record.

Telephone inquiries concerning this decision should be directed to Wan Laymon at (571) 272-3220.

This matter is being referred to Technology Center AU 2167.

Wan Laymon
Wan Laymon

Petitions Examiner
Office of Petitions
Office of the Deputy Commissioner
for Patent Examination Policy



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

JK

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

7590 06/07/2005
DORSEY & WHITNEY LLP
Suite 300
1660 International Drive
McLean, VA 22102

EXAMINER

WONG, LESLIE

ART UNIT PAPER NUMBER

2167

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED
JUN 17 2005
Technology Center 2100

Interview Summary	Application No.	Applicant(s)	
	09/935,565	DE BELLIS, JOSEPH	
	Examiner	Art Unit	
	Leslie Wong	2167	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Leslie Wong. (3) _____
(2) Sean Wood and Sumeet Magoon (Applicant's Rep). (4) _____

Date of Interview: 01 June 2005.

Type: a) Telephonic b) Video Conference
c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
If Yes, brief description: _____.

Claim(s) discussed: 1, 3, 15, 20, 32, 35, 41, and 43.

Identification of prior art discussed: _____.

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's representative described the invention and discussed rejected claims and cited prior art. Applicant's representative further discuss how proposed amended claims overcome the prior art of record. Examiner thought that the proposed amended claims appear to overcome the cited prior art. However, the amendment would likely raise new issues that would required further consideration and/or search. Further, Applicant's representative traversed the anticipation double patenting rejection of claims, but would file a Terminal Disclaimer to overcome the obvious double patenting rejection. All in all, the interview was productive in advancing the prosecution. .

Organization TC2100 Bldg./Room RANDOLPH
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. Box 1450
Alexandria, VA. 22313-1450
If Undeliverable Return In Ten Days

Official Business
Penalty For Private Use, \$300

RECEIVED
JUN 17 2005
Technology Center 2100

NO. VA 220
DM
09
2005
U.S. EQUAL OPPORTUNITY ACT

UNITED STATES POSTAGE
U.S. OFFICIAL MAIL
PENALTY FOR PRIVATE USE \$300
\$00.370
02 1A
0004204055 JUN 07 2005
MAILED FROM ZIP CODE 22314

RETURN TO SENDER
JUN 16 2005

NIXIE 201 1 08 06/15/05
RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD
BC: 22313145050 *2092-03036-15-19

22102+4848-99221450

BEST AVAILABLE COPY

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2000

Application or Docket Number

09/935565
5607

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	41	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	41 minus 20 =	21
INDEPENDENT CLAIMS	8 minus 3 =	5
MULTIPLE DEPENDENT CLAIM PRESENT	<input type="checkbox"/>	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	41 Minus	41 = X
	Independent	8 Minus	8 = X
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	Minus	=
	Independent	Minus	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	Minus	=
	Independent	Minus	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE OR

OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	355.00
X\$ 9=	189
X40=	200
+135=	
TOTAL	744.00

RATE	FEE
BASIC FEE	710.00
X\$18=	
X80=	
+270=	
TOTAL	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X40=	
+135=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X80=	
+270=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$ 9=	
X40=	
+135=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X80=	
+270=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$ 9=	
X40=	
+135=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X80=	
+270=	
TOTAL ADDIT. FEE	

BEST AVAILABLE COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

HW

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

7590 06/07/2005
DORSEY & WHITNEY LLP
Suite 300
1660 International Drive
McLean, VA 22102

EXAMINER

WONG, LESLIE

ART UNIT PAPER NUMBER

2167

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary	Application No. 09/935,565	Applicant(s) DE BELLIS, JOSEPH	
	Examiner Leslie Wong	Art Unit 2167	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Leslie Wong. (3) _____
 (2) Sean Wood and Sumeet Magoon (Applicant's Rep). (4) _____

Date of Interview: 01 June 2005.

Type: a) Telephonic b) Video Conference
 c) Personal [copy given to: 1) applicant 2) applicant's representative]

Exhibit shown or demonstration conducted: d) Yes e) No.
 If Yes, brief description: _____.

Claim(s) discussed: 1, 3, 15, 20, 32, 35, 41, and 43.

Identification of prior art discussed: _____.

Agreement with respect to the claims f) was reached. g) was not reached. h) N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



 Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

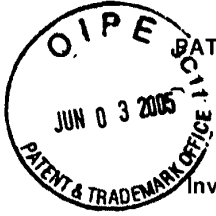
- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's representative described the invention and discussed rejected claims and cited prior art. Applicant's representative further discuss how proposed amended claims overcome the prior art of record. Examiner thought that the proposed amended claims appear to overcome the cited prior art. However, the amendment would likely raise new issues that would required further consideration and/or search. Further, Applicant's representative traversed the anticipation double patenting rejection of claims, but would file a Terminal Disclaimer to overcome the obvious double patenting rejection. All in all, the interview was productive in advancing the prosecution. .



PATENT APPLICATION

Attorney Docket No. 5607

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Joseph L. DeBELLIS

Confirmation No.: 9677

Application No.: 09/935,565

Examiner: L. WONG

Filing Date: August 24, 2001

Group Art Unit: 2177

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED
UNINTENTIONALLY UNDER 37 CFR 1.137(b)

Sir:

1. This application became abandoned on February 24, 2005.
2. This application became abandoned because of an unintentional delay causing a failure to prosecute. The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional.
3. Response or action required: A response under 37 CFR 1.111 is enclosed herewith.
4. Terminal disclaimer 37 CFR 1.137(d): In connection with this Petition, a Terminal Disclaimer is not required because the application was filed after June 8, 1995. A Terminal Disclaimer is enclosed in connection with U.S. Patent No. 6,760,720.

Authorization to charge the Petition to Revive fee required to Deposit Account No. 50-2849 appears in the accompanying transmittal letter. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 50-2849 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 50-2849 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

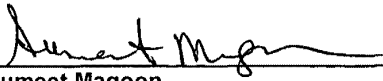
Should the Commissioner require anything further in order to fulfill this petition, he is invited to contact the undersigned at the telephone number listed below.

06/06/2005 SZEWDIE1 00000015 502849 09935565

01 FC:2453 750.00 DA

Customer No. 38598
ANDREWS KURTH LLP
1701 Pennsylvania Avenue, N.W.
Suite 300
Washington, D.C. 20006
Tel. (202) 662-2700
Fax (202) 662-2739

Respectfully submitted,


Sumeet Magoon
Attorney/Agent for Applicant(s)
Reg. No. 43,769

Date: June 3, 2005



ATTORNEY DOCKET NO.: 5607

PATENT APPLICATION

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Joseph L. DeBELLIS

Confirmation No.: 9677

Application No.: 09/935,565

Examiner: L. WONG

Filing Date: August 24, 2001

Group Art Unit: 2177

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TERMINAL DISCLAIMER
RESPONSIVE TO A DOUBLE PATENTING REJECTION

Sir:

Petitioner, Joseph L. DeBellis is the owner of 100 percent interest in the instant application. Petitioner hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 AND 173, as presently shortened by any terminal disclaimer, of prior Patent No. 6,760,720. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 AND 173 of the prior patent, as presently shortened by any terminal disclaimer, in the event that it later: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

For submissions on behalf of an organization (e.g., corporation), the undersigned is empowered to act on behalf of the organization.

06/06/2005 SZEWDIE1 00000015 502849 09935565

02 FC:2814 65.00 DA

TERMINAL DISCLAIMER – DOUBLE PATENTING
(continued)
ATTORNEY DOCKET NO.: 5607

PATENT APPLICATION


I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Please charge the required fee set forth in 37 CFR 1.20(d) of **\$65.00** to Deposit Account **50-2849**. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 50-2849 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 50-2849 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees.

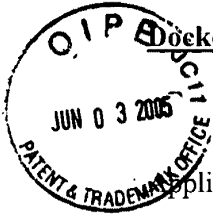
(Note: An attorney or agent of record must sign this document.)

Customer No.: 038598
ANDREWS KURTH LLP
Intellectual Property Department
1701 Pennsylvania Avenue, N.W.
Suite 300
Washington, D.C. 20006
Telephone No.: (202) 662-2700
Facsimile No.: (202) 662-2739

Respectfully submitted,


John K. Harrop
Attorney/Agent for Applicant(s)
Reg. No. 41,817

Date: **June 3, 2005**



Docket No.: 5607

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Joseph L DeBellis

Serial No: 09/935,565

Group No.: 2177

Filed: August 24, 2001

Examiner: WONG, LESLIE

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Mail Stop Amendment

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

AMENDMENT AND RESPONSE

Sir:

In response to the August 24, 2004, Office Action (Paper No. 5), Applicants are enclosing a Petition to Revive by separate cover and respond as follows:

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 10 of this paper.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A computer-implemented method for displaying data comprising:

determining a database schema for a database;
providing a list of database fields, wherein the list includes a descriptor indicating a data category;

receiving a search selection for a database field on the provided list of database fields;
determining ~~a quantity of entries~~ a number of characters included in each entry in the selected database field;

~~if the quantity~~ number of characters included in each entry exceed ~~exceed~~ a specified amount of characters, truncating data, and displaying the truncated data; and displaying a portion of each entry in the selected database field, wherein a number of characters displayed in each portion is less than or equal to the specified amount of characters; and

~~if the quantity~~ number of characters included in each entry does not exceed the specified amount, displaying content from the database field ~~each entry in its entirety.~~

Claim 2 (original): The method of claim 1, further comprising providing a key word search.

Claim 3 (currently amended): A computer-implemented method for formatting data for display, comprising:

generating a list of data fields;
receiving a first data field selection from the list of data fields;
determining a first quantity indicative of a number ~~of entries~~ of characters in each entry of the selected data field;

if the first quantity exceeds a specified limit, reducing ~~a size of data~~ a number of characters to be displayed for each entry from the selected data field; and

displaying ~~data~~ the reduced number of characters for each entry from the selected data field.

Claim 4 (original): The method of claim 3, wherein the specified limit is fixed.

Claim 5 (original): The method of claim 3, wherein the specified limit is variable.

Claim 6 (currently amended): The method of claim 3, wherein ~~the data are~~ each entry from the selected data field is displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

Claim 7 (original): The method of claim 3, wherein the specified limit is a user-determined limit.

Claim 8 (currently amended): The method of claim 3, wherein the method for reducing the ~~size of the data~~ number of characters to be displayed from the selected data field comprises:

performing a truncation that reduces the ~~size of the data to~~ number of characters to be displayed from the selected data field;

comparing the reduced ~~size~~ number of characters to the specified limit; and

if the reduced ~~size~~ number of characters exceeds the specified limit, repeating the truncation and comparing steps until the ~~size of the data~~ reduced number of characters to be displayed from the selected data field is less than or equal to the specified limit.

Claim 9 (currently amended): The method of claim 8, wherein a parameter is related to ~~the size of the data~~ the number of characters to be displayed from the selected data field, and wherein the truncation comprises decrementing the parameter.

Claim 10 (original): The method of claim 9, wherein the parameter is decremented or incremented by a value of one.

Claim 11 (currently amended): The method of claim 8, wherein a parameter is related to ~~the size of the data~~ the number of characters to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value.

Claim 12 (original): The method of claim 11, wherein the value is two.

Claim 13 (currently amended): The method of claim 8, wherein a parameter is related to ~~the size of the data~~ the number of characters to be displayed from the selected data field, and wherein the truncation comprises multiplying the parameter by a value.

Claim 14 (original): The method of claim 3, further comprising:

receiving a first constraint, wherein the first constraint is related to a data element in a data field; and

receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints.

Claim 15 (currently amended): A computer-implemented method for searching a database, comprising:

selecting a first search term;

sending the first search term to a search engine;

receiving a first search result;

selecting and sending a second search term to the search engine after the first search result is received; and

receiving a second search result, wherein the second search ~~results~~ result represents a combination of the first and the second search terms.

Claim 16 (currently amended): The method of claim 15, further comprising:

selecting and sending a third search term to the search engine;

dropping a prior search term, wherein the dropped prior search term ~~is~~ is one of the first and the second search terms; and

receiving a third search result comprising a combination of the third search term and one of the first and the second search terms.

Claim 17 (original): The method of claim 15, wherein the first search term is directed to a first database and wherein the second search term is directed to a second database.

Claim 18 (original): The method of claim 15, wherein the first search result is displayed as a truncated result list.

Claim 19 (original): The method of claim 18, further comprising specifying a size of the truncation.

Claim 20 (currently amended): A computer-implemented method for searching a database, comprising:

generating a list of data fields;
receiving a first data field selection from the list of data fields;
receiving a first constraint, wherein the first constraint is related to a data element in a data field; ~~and~~
generating a first search result based on the first constraint;
displaying a menu, wherein the menu is populated with the first search result;
receiving one or more subsequent constraints; ~~and~~
conducting a second search, wherein the one or more subsequent constraints are used to search at least data associated with the first search result to generate a second search result.
~~wherein search results are generated based on a combination of the first and the one or more subsequent constraints.~~

Claim 21 (original): The method of claim 20, further comprising:

determining a first quantity indicative of a number of entries of the selected data field;
if the first quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field; and displaying data from the selected data field.

Claim 22 (original): The method of claim 21, wherein the specified limit is fixed.

Claim 23 (original): The method of claim 21, wherein the specified limit is variable.

Claim 24 (original): The method of claim 21, wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

Claim 25 (original): The method of claim 21, wherein the specified limit is a user-determined limit.

Claim 26 (original): The method of claim 21, wherein the method for reducing the size of the data to be displayed from the selected data field comprises:

performing a truncation that reduces the size of the data to be displayed from the selected data field;

comparing the reduced size to the specified limit; and

if the reduced size exceeds the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit.

Claim 27 (original): The method of claim 26, wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises decrementing or incrementing the parameter.

Claim 28 (original): The method of claim 27, wherein the parameter is decremented or incremented by a value of one.

Claim 29 (original): The method of claim 26, wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value.

Claim 30 (original): The method of claim 29, wherein the value is two.

Claim 31 (original): The method of claim 26, wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises multiplying the parameter by a value.

Claim 32 (currently amended): A computer-implemented method for providing search functions in one or more databases, comprising:

- receiving a first search term;
- searching at least a first database using the first search term;
- returning a first search result, wherein the first search result comprises a first list of elements in the first database;
- receiving a second search term, after the first search result is returned;
- conducting a second search by applying the second search term to one of the first list of elements and a second database; and
- returning a second search result, wherein the second search ~~results~~ result represents a search output based on a combination of the first and the second search terms.

Claim 33 (currently amended): The method of claim 32, further comprising:

- receiving a third search term;
- receiving a signal to drop one of the first and the second search terms;
- dropping the selected one of the first and the second search terms, wherein dropping the selected one of the first and the second search terms provides a revised list of elements;
- searching one of the revised list of elements and one of the second or subsequent databases using the third search term; and
- returning a third list of elements ~~comprising~~, wherein the third list of elements represents the search output based on a combination of the third search term and the non-selected one of the first and the second search terms.

Claim 34 (original): The method of claim 32, wherein the first search result is returned as a truncated list of elements.

Claim 35 (currently amended): A computer-implemented method for navigating one or more databases, comprising:

receiving a first attribute associated with elements in one or more of the databases, wherein the first attribute comprises a first search term;
~~returning~~returning a first search result based on the first attribute;
receiving a second attribute associated with elements in one or more of the databases, wherein the second ~~attribute~~attribute comprises a second search term and is selected from contents of the first search result;
generating a second search result based on the second attribute, wherein the second attribute is used to search at least data associated with the first search result to generate the second search result and the second search result represents a merged search result; and merging the first and the second search results to provide a merged search result; and returning the merged search result.

Claim 36 (original): The method of claim 35, further comprising: truncating the merged search result based on a display size of a device receiving the merged search result.

Claims 37-40 (canceled).

Claim 41 (currently amended): A computer-implemented method for searching one or more databases, wherein each of the one or more databases comprises a plurality of fields, comprising:

getting a first list of fields of a first database;
applying a first filter to the ~~final~~first list of fields, wherein the ~~final~~first filter comprises a first search constraint;
applying a second filter to ~~the first list of fields~~a result of applying the first filter, wherein the second filter comprises a second search constraint;
applying a third filter to ~~the first list of filters~~a result of applying the second filter, wherein the third filter comprises a third search constraint;
~~removing at least one of the first, second and third filters, whereby a search result is generated~~; and
displaying ~~the~~a search result of applying the third filter.

Claim 42 (new): The method of claim 41, further comprising:

removing at least one of the first, second and third filters, whereby a final search result is generated.

Claim 43 (new): A computer-implemented method for searching a database, comprising:

displaying a first list of database entries;
receiving a selection of a first search term from the displayed first list of database entries;
sending the first search term to a search engine;
receiving a first search result;
displaying a menu, wherein the menu is populated with the result of the first search;
receiving a selection of a second search term from the displayed menu;
sending the second search term to the search engine, wherein the second search term is used to search at least data associated with the first search result; and
receiving a second search result, wherein the second search result represents a search output based on a combination of the first and the second search terms.

Claim 44 (new): The method of claim 43, further comprising:

selecting and sending a third search term to the search engine, wherein the third search term is selected from contents of the second search result;
dropping a prior search term, wherein the dropped prior search term is one of the first and the second search terms; and
receiving a third search result, wherein the third search result represents the search output based on a combination of the third search term and one of the first and the second search terms.

Claim 45 (new): The method of claim 43, wherein the menu is one of a pop-up menu and a pull-down menu.

REMARKS

Claims 1-36 and 41-45 are pending in this application. Claims 1, 3, 6, 8, 9, 11, 13, 15, 16, 20, 32, 33, 35 and 41 are amended. Claims 42-45 are new. Claims 37-40 have been canceled without prejudice to or disclaimer of the underlying subject matter. No new matter is introduced. Reconsideration and issuance of a Notice of Allowance are respectfully requested in view of the foregoing amendments and following remarks.

Applicant thanks Primary Examiner Leslie Wong for the courtesies extended to Applicant's representatives, Sean Wooden and Sumeet Magoon, during the in-person interview on June 1, 2005 (hereinafter "the interview"). During the interview, Applicant's representatives discussed proposed amendments to independent claims 1, 3, 15, 20, 32, 35 and 41 (as shown above). New independent claim 43 was also discussed (added). Applicant's representatives described the differences between the proposed amended claims as well as new claim 41, and the applied references. Examiner Wong agreed that the proposed claim amendments and features of the new claim overcome the applied references.

To further prosecution, Applicant has amended the claims and added new claims as discussed during the interview.

In paragraphs 3-4 of the Office Action, claims 1, 3, 15, 20, 32, 35, 37 and 41 have been rejected based on non-statutory double patenting rejection. The Office Action states that current claims 1, 3, 15, 20, 32, 35, 37 and 41 are anticipated by claims 1, 3, 21, 22 and 39 of U.S. Patent No. 6,760,720 ("the '720 patent"). As discussed during the interview, this rejection is traversed. Claim 37 has been canceled, thus the rejection with respect to claim 37 is moot. Independent claims 1 and 3 (as currently amended) and independent claims 15, 20, 32, 35 and 41 (original and as currently amended) are not anticipated by claims 1, 3, 21, 22 and 39 of the '720 patent. Applicant attaches herewith a terminal disclaimer to overcome the obviousness-type non-statutory double patenting rejection of paragraphs 3-4.

The Office Action rejects under 35 U.S.C. 102(e) claims 15-19 and 32-39 as being anticipated by Crandall et al., U.S. Patent No. 6,321,228 (hereinafter *Crandall*). The Office Action rejects under 35 U.S.C. 103(a) claims 1-3, 14, 20-21 and 41 as being unpatentable over Maloney et al., U.S. Patent No. 5,701,453 (hereinafter *Maloney*), in view of *Crandall*. Claim 40 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Crandall* in view of Mani et al., U.S. Patent No. 5,848,406 (hereinafter *Mani*). Claims 4-8 and 22-26 are rejected under 35

Application No. 09/935,565
Amendment dated June 3, 2005
Reply to Office Action of August 24, 2004

U.S.C. § 103(a) as being unpatentable over *Maloney* in view of in view of *Crandall* and further in view of *Mani*. Claims 9-13 and 27-31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Maloney* in view of *Crandall* and in view of *Mani* and further in view of Heckel, U.S. Patent No. 4,486,857 (hereinafter *Heckel*).

Independent claims 1, 3, 15, 20, 32, 35 and 41 have been amended and new claim 43 has been added as discussed during the interview. The rejections based on prior-art are rendered moot by the amendments and features of new claim 43. Allowance of claims 1-36 and 41-45 is respectfully requested.

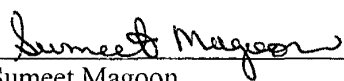
CONCLUSION

In view of the above amendments and remarks, Applicants believe that all of the rejections against this application have been fully addressed and that the application is now in condition for allowance. Therefore, withdrawal of the outstanding objections and rejections and a notice of allowance for the application are respectfully requested.

If the Examiner believes that a personal or telephonic interview would be of value in expediting the prosecution of this application, the Examiner is hereby invited to telephone the undersigned counsel to arrange for such a conference.

Respectfully submitted,

Date: June 3, 2005



Sumeet Magoon
Reg. No. 43,769
ANDREWS KURTH LLP
1701 Pennsylvania Avenue, N.W.
Suite 300
Washington, D.C. 20006
Telephone: (202) 662-2700
Fax: (202) 662-2739

Enclosures



ATTORNEY DOCKET NO.: 5607

PATENT APPLICATION *\$ DAC JFW*

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Joseph DeBELLIS

Confirmation No.: 9677

Application No.: 09/935,565

Examiner: L. WONG

Filing Date: August 24, 2001

Group Art Unit: 2177

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Sir:

Transmitted herewith is/are the following in the above-identified application:

- Response/Amendment Petition to extend time to respond
- New fee as calculated below Correspondence Address Change
- No additional fee
- Other: Petition to Revive (fee \$ 750.00)

CLAIMS AS AMENDED BY OTHER THAN A LARGE ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS	41	MINUS	41	= 0	X \$25	\$ 0
INDEP. CLAIMS	8	MINUS	8	= 0	x \$100	\$ 0
[]	FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM				+ \$180	\$ 0
EXTENSION FEE	1ST MONTH \$60.00 <input type="checkbox"/>	2ND MONTH \$225.00 <input type="checkbox"/>	3RD MONTH \$510.00 <input type="checkbox"/>	4TH MONTH \$795.00 <input type="checkbox"/>		\$ 0
PETITION TO REVIVE FEE						\$ 750
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 750

Please charge **\$750.00** to **Deposit Account No. 50-2849** to cover the above fees. In the event any discrepancy exists between the amount authorized to be charged and the actual charges, please charge or credit any such discrepancy to **Deposit Account No. 50-2849**.

Respectfully submitted,

Sumeet Magoon
Sumeet Magoon
Attorney/Agent for Applicant(s)
Reg. No. 43,769

ANDREWS KÜRTH LLP
Intellectual Property Department
1701 Pennsylvania Avenue, N.W.
Suite 300
Washington, D.C. 20006
Telephone No.: (202) 662-2700
Facsimile No.: (202) 662-2739

Date: **June 3, 2005**

- Attach as First Page to Transmitted Papers -



ATTORNEY DOCKET NO.: 5607

PATENT APPLICATION

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Joseph DeBELLIS

Confirmation No.: 9677

Application No.: 09/935,565

Examiner: L. WONG

Filing Date: August 24, 2001

Group Art Unit: 2177

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CHANGE OF CORRESPONDENCE ADDRESS IN PENDING
APPLICATION UNDER 37 C.F.R. § 1.33(d)


Sir:

Please change the Correspondence Address for the above-identified patent application to:

Customer Number: 038598
ANDREWS KURTH LLP
1701 Pennsylvania Avenue, N.W.
Suite 300
Washington, D.C. 20006
(202) 662-2700 (telephone)
(202) 662-2739 (facsimile)

The undersigned requests this change of Correspondence Address as an Attorney or Agent of record in the above-identified patent application.

Respectfully submitted,


John K. Harrop
Attorney/Agent for Applicant(s)
Reg. No. 41,817

Customer No.: 038598
ANDREWS KURTH LLP
Intellectual Property Department
1701 Pennsylvania Avenue, N.W.
Suite 300
Washington, D.C. 20006
Telephone No.: (202) 662-2700
Facsimile No.: (202) 662-2739

Date: **June 3, 2005**

Organization TC2100 Bldg./Room RANDOLPH

UNITED STATES PATENT AND TRADEMARK OFFICE

P.O. Box 1450

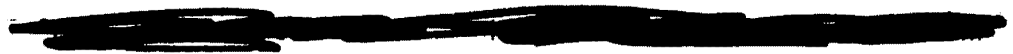
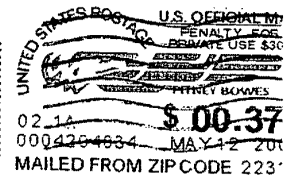
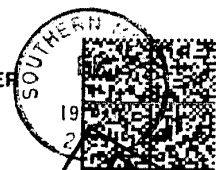
Alexandria, VA. 22313-1450

If Undeliverable Return In Ten Days

Official Business

Penalty For Private Use, \$300

AN EQUAL OPPORTUNITY EMPLOYER
ATTEMPTED,
NOT KNOWN,
RETURN TO SENDER



ITW HAL



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

7590 05/12/2005
DORSEY & WHITNEY LLP
Suite 300
1660 International Drive
McLean, VA 22102



EXAMINER

WONG, LESLIE

ART UNIT PAPER NUMBER

2167

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED
JUN - 3 2005
OIPE/JCWS



Notice of Abandonment

Application No.	Applicant(s)	
09/935,565	DE BELLIS, JOSEPH	
Examiner	Art Unit	
Leslie Wong	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. Applicant's failure to timely file a proper reply to the Office letter mailed on 24 August 2004.
 - (a) A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
 - (c) A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) No reply has been received.

2. Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) The submitted fee of \$_____ is insufficient. A balance of \$_____ is due.
The issue fee required by 37 CFR 1.18 is \$_____. The publication fee, if required by 37 CFR 1.18(d), is \$_____.
 - (c) The issue fee and publication fee, if applicable, has not been received.

3. Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) No corrected drawings have been received.

4. The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

5. The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.

6. The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. The reason(s) below:

See Continuation Sheet

Leslie Wong
Patent Examiner
Art Unit 2167

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

Item 7 - Other reasons for holding abandonment: Examiner contacted applicant's representative, Mr. Aldo Noto, on 6 May 2005 at Dorsey & Whitney LLP and was informed that Mr. Noto is no longer with the firm. The Dorsey & Whitney representative, Joe Hald, at the Denver Office (303) 629-3400 provided the contact information for Mr. Noto as follows: Andrews Kurth LLP (202) 662-2700. On, 10 May 2005, Examiner contacted the representative to inform him that a response to the Office Action that was sent out on 24 August 2004 has not been received. The representative's assistant, Ms. Margaret Jackson, indicated that he did not receive the Office Action because there has been a change of address and that he would file a petition to revive the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

7590 05/12/2005
DORSEY & WHITNEY LLP
Suite 300
1660 International Drive
McLean, VA 22102

EXAMINER

WONG, LESLIE

ART UNIT PAPER NUMBER

2167

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Notice of Abandonment

Application No. 09/935,565	Applicant(s) DE BELLIS, JOSEPH	
Examiner Leslie Wong	Art Unit 2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

1. Applicant's failure to timely file a proper reply to the Office letter mailed on 24 August 2004.
 - (a) A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
 - (c) A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) No reply has been received.
2. Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) The submitted fee of \$_____ is insufficient. A balance of \$_____ is due.
The issue fee required by 37 CFR 1.18 is \$_____. The publication fee, if required by 37 CFR 1.18(d), is \$_____.
 - (c) The issue fee and publication fee, if applicable, has not been received.
3. Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) No corrected drawings have been received.
4. The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. The reason(s) below:

See Continuation Sheet



Leslie Wong
Patent Examiner
Art Unit 2167

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

Item 7 - Other reasons for holding abandonment: Examiner contacted applicant's representative, Mr. Aldo Noto, on 6 May 2005 at Dorsey & Whitney LLP and was informed that Mr. Noto is no longer with the firm. The Dorsey & Whitney representative, Joe Hald, at the Denver Office (303) 629-3400 provided the contact information for Mr. Noto as follows: Andrews Kurth LLP (202) 662-2700. On, 10 May 2005, Examiner contacted the representative to inform him that a response to the Office Action that was sent out on 24 August 2004 has not been received. The representative's assistant, Ms. Margaret Jackson, indicated that he did not receive the Office Action because there has been a change of address and that he would file a petition to revive the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

7590 08/24/2004
DORSEY & WHITNEY LLP
Suite 300
1660 International Drive
McLean, VA 22102

EXAMINER

WONG, LESLIE

ART UNIT PAPER NUMBER

2177

5

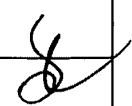
DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED

SEP 08 2004

Technology Center 2100

Office Action Summary	Application No. 09/935,565	Applicant(s) DE BELLIS, JOSEPH	
	Examiner Leslie Wong	Art Unit 2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 August 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-41 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 August 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/Nov04,01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. The Applicant's claim to domestic priority under 35 U.S.C. §120, as a Continuation-in-Part of application 09/513,340, filed 25 February 2000, which claims to domestic priority under 35 U.S.C. §119(e), as a provisional of application serial number 60/227,305, filed on 24 August 2000, is acknowledged.

As a result, a priority date of no later than 24 August 2000¹ is established, and depending upon the specific subject matter claimed, the priority date could be as early as 24 August 2000, 25 February 2000, or 24 August 2000¹.

Information Disclosure Statement

2. Applicants' Information Disclosure Statement, filed 30 November 2001, has been received, entered into the record, and considered. See attached form PTO-1449.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

- 4. Claims 1, 3, 21, 22, and 39 of patent # 6,760,720 B1 contain(s) every element of representative claims 1, 3, 15, 20, 32, 35, and 41 of the instant application and as such anticipate(s) claims 1, 3, 15, 20, 32, 35, and 41 of the instant application.

Patent '720	Instant Application
1	1
3	3
21	15
3	20
21	32,35
22	37
39	41

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " **ELI LILLY AND COMPANY v BARR LABORATORIES, INC.**, United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 15-19, 32-39 are rejected under 35 U.S.C. 102(e) as being anticipated by **Crandall et al.** (U.S. Patent 6,321,228 B1).

Regarding claim 15, **Crandall et al.** teaches a method for searching a database, comprising:

- a). selecting a first search term (col. 5, lines 32-35);
- b). sending the first search term to a search engine (col. 5, lines 23-25);
- c). receiving a first search result (col. 6, lines 11-12);
- d). selecting and sending a second search term to the search engine (col. 5, lines 25-29); and
- e). receiving a second search result, wherein the second search results represents a combination of the first and the second search terms (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claims 16 and 33, **Crandall et al.** further teaches

- a). selecting and sending a third search term to the search engine (col. 5, lines 26-27);
- b). dropping a prior search term, wherein the dropped prior search term in one of the first and the second search terms (col. 5, lines 27-28); and
- c). receiving a third search result comprising a combination of the third search term and one of the first and the second search terms (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 17, **Crandall et al.** teaches wherein the first search term is directed to a first database and wherein the second search term is directed to a second database (col. 5, lines 65-67).

Regarding claims 18 and 34, **Crandall et al.** further teaches wherein the first search result is displayed as a truncated result list (col. 6, lines 13-15).

Regarding claim 19, **Crandall et al.**, further teaches a step specifying a size of the truncation (col. 6, lines 13-15).

Regarding claim 32, **Crandall et al.** teaches a method for providing search functions in one or more databases, comprising:

- a). receiving a first search term (col. 5, lines 32-35);

- b). searching at least a first database using the first search term (col. 5, lines 23-25);
- c). returning a first search result, wherein the first search result comprises a first list of elements in the first database (col. 6, lines 11-12);
- d). receiving a second search term (col. 5, lines 25-29);
- e). conducting a second search by applying the second search term to one of the first list of elements and a second database (col. 5, lines 25-29); and
- f). returning a second search result, wherein the second search results represents a combination of the first and the second search terms (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 35, **Crandall et al.** teaches a method for navigating one or more databases, comprising:

- a). receiving a first attribute associated with elements in one or more of the databases, wherein the first attribute comprises a first search term (col. 5, lines 32-35);
- b). returning a first search result based on the first attribute (col. 6, lines 11-12);
- c). receiving a second attribute associated with elements in one or more of the databases, wherein the second attributes comprises a second search term (col. 5, lines 25-29);
- d). generating a second search result based on the second attribute (col. 5, lines 25-29) ;

- e). merging the first and the second search results to provide a merged search result (col. 5, lines 30-41; col. 6, lines 11-12); and
- f). returning the merged search result (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 36, **Crandall et al.** further teaches truncating the merged search result based on a display size of a device receiving the merged search result (col. 6, lines 13-15).

Regarding claim 37, **Crandall et al.** teaches a method for retrieving data from one or more databases; comprising:

- a). receiving a first constraint, wherein the first constraint relates to a first data attribute (col. 5, lines 32-35);
- b). receiving a second constraint, wherein the second constraint relates to a second data attribute (col. 5, lines 25-29);
- c). determining if the first and the second constraint are in a same merge group (i.e., Boolean AND) (Fig. 4C);
- d). generating a database query based on the determining step (col. 5, lines 30-41; col. 6, lines 11-12); and
- f). returning a first merged search result (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 38, **Crandall et al.** further teaches wherein the first and the second constraints are in the same merge group, further comprising:

generating a Boolean AND as the database query (col. 5, lines 26-29).

Regarding claim 39, **Crandall et al.** further teaches wherein the first and the second constraint are in different merge groups, further comprising:

generating a Boolean OR as the database query (col. 5, lines 26-29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if 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. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 14, 20-21, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1).

Regarding claim 1, **Maloney et al.** teaches a method for displaying data comprising:

- a). determining a database schema for a database (col. 3, lines 1-6);
- b). providing a list of the database fields, wherein the list includes a descriptor indicating a data category (Fig. 18);

c). receiving a search selection for a database field on the provided list of the database fields (col. 3, lines 7-10);

d). determining a quantity of entries in the selected database field (col. 16, lines 6-8);

e). **Maloney et al.** does not explicitly teaches a step wherein if the quantity exceed a specified amount; truncating data, and displaying the truncated data; and if the quantity does not exceed the specified amount, displaying contents of the database field.

Crandall et al., however, teaches wherein if the quantity exceeds a specified amount; truncating data, and displaying the truncated data (col. 6, lines 13-15); and if the quantity does not exceed the specified amount, displaying contents of the database field (col. 8, lines 25-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Crandall et al.** as this would enable the system to manage and control the result to be displayed to the users based on the predetermined threshold.

Regarding claim 2, **Crandall et al.** teaches a step wherein providing a key word search (col. 7, lines 30-39).

Regarding claim 3, **Maloney et al.** teaches a method for formatting data for display, comprising:

- a). generating a list of data fields (Fig. 18);
- b). receiving a first data field selection from the list of data fields (col. 3, lines 7-10);
- c). determining a first quantity indicative of a number of entries of the selected data field (col. 16, lines 6-8);
- d). **Maloney et al.** does not explicitly teaches a step wherein if the quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field, and displaying contents of the database field.

Crandall et al., however, teaches wherein if the quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field (col. 6, lines 13-15); and displaying contents of the database field (col. 8, lines 25-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Crandall et al.** as this would enable the system to manage and control the result to be displayed to the users based on the predetermined threshold.

Regarding claim 14, **Crandall et al.** further teach a step receiving a first constraint, wherein the first constraint is related to a data element in a data field; and

receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints (col. 5, lines 35-41).

Regarding claim 20, **Maloney et al.** teaches a method for searching a database, comprising:

- a). generating a list of data fields (Fig. 18);
- b). receiving a first data field selection from the list of data fields (col. 3, lines 7-10);
- c). receiving a first constraint, wherein the first constraint is related to a data element in a data field (col. 3, lines 7-10; col. 5, lines 23-26); and
- d). **Maloney et al.** does not explicitly teach receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints.

Crandall et al., however, teaches receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints (col. 5, lines 25-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of receiving one or more query constraints as taught by **Crandall et al.** as this would allow user to refine the query to generate the search results to meet user's criteria.

Regarding claim 21, **Maloney et al.** does not explicitly teaches steps of:

- a). determining a first quantity indicative of a number of entries of the selected data field;
- b). if the first quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field; and
- c). displaying data from the selected data field.

Crandall et al., however, teaches wherein if the quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field (col. 6, lines 13-15); and displaying data from the selected data field (col. 8, lines 25-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Crandall et al.** as this would enable the system to manage and control the result to be displayed to the users based on the predetermined threshold.

Regarding claim 41, **Maloney et al.** teaches a method for searching one or more databases, wherein each of the one or more databases comprises a plurality of fields, comprising:

- a). getting a first list of fields of a first database (Fig. 18);
- b). applying a first filter to the final list of fields, wherein the final filter comprises a first search constraint (col. 3, lines 7-10; col. 5, lines 23-26);
- f). displaying the search result (Fig. 5, element 510).

Maloney et al. does not explicitly teach the steps of:

- c). applying a second filter to the first list of fields, wherein the second filter comprises a second search constraint;
- d). applying a third filter to the first list of filters, wherein the third filter comprises a third search constraint;
- e). removing at least one of the first, second and third filters, whereby a search result is generated.

Crandall et al., however, teaches the steps of:

- c). applying a second filter to the first list of fields, wherein the second filter comprises a second search constraint (col. 5, lines 29-37);
- d). applying a third filter to the first list of filters, wherein the third filter comprises a third search constraint (col. 5, lines 29-37);
- e). removing at least one of the first, second and third filters, whereby a search result is generated (col. 5, lines 59-64).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of receiving one or more query constraints as taught by **Crandall et al.** as this would allow user to refine the query to generate the search results to meet user's criteria.

8. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Crandall et al.** (U.S. Patent 6,321,228 B1) as applied to claims 15-19 and 32-39 above and in view of **Mani et al.** (U.S. Patent 5,848,406).

Regarding claim 40, **Crandall et al.** does not explicitly teaches wherein the first and the second constraints are recovered using a wireless connector, and wherein the first merged search result is returned using the wireless connection.

Mani et al., however, teaches a step comprising displaying the data on a terminal, the terminal including one of a handheld device, a cellular phone, a geosynchronous positioning satellite (GPS) device, a wrist-worn device, an interactive phone device, a household appliance, a television, a television set top box, a handheld computer, a main frame computer and a personal computer as presenting information on devices of various sizes such as mobile computers and personal digital assistants (PDAs) (col. 2, lines 22-33). Thus, **Mani et al.** inherently teaches the use of wireless connection for communicating the result the user by teaching displaying data on a handheld device such as a PDA.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the step of displaying data on devices of varying sizes using the wireless connection as taught by **Mani et al.** in order to allow a user freedom to move within the wireless environment while remaining "connected" to a network. Furthermore, a wireless connection to a network allows a portable processor user the convenience of connecting to a network without having to plug into a docking station or use some other method of "hardwiring" to a network as suggested by **Baber et al.** at col. 2, lines 35-41.

9. Claims 4-8 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1) as applied to claims 1-3, 14, 20-21, and 41 above and further in view of **Mani et al.** (U.S. Patent 5,848,406).

Regarding claims 4, 5, 7, 22, 23, and 25, **Maloney et al. and Crandall et al.**, do not explicitly teach a step wherein the specified limit is fixed, variable, or user-determined limit.

Mani et al., however, teaches a step wherein the specified limit is fixed, variable, or user-determined limit (col. 5, lines 22-25 and lines 35-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the step of defining the display threshold as taught by **Mani et al.** in order to allow a user to make use of very small display surface such as mobile computers or PDA to allow data to fit on the display screen of a specific device.

Regarding claims 6 and 24, **Maloney et al. and Crandall et al.**, do not teach a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

However, **Mani et al.** teaches a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal (col. 2, lines 23-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the feature of displaying data based a characteristic of the terminal as taught by **Mani et al.** because it would accommodate various kinds of terminals having different display capabilities.

Regarding claims 8 and 26, **Crandall et al.** further teach a step wherein the method for reducing the size of the data to be displayed from the selected data field comprises:

a). performing a truncation that reduces the size of the data to be displayed from the selected data field (col. 6, lines 13-15);

Maloney et al. and Crandall et al., do not explicitly teach the steps of:

b). comparing the reduced size to the specified limit; and

c). if the reduced size exceeds the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit.

However, **Mani et al.** teaches a step wherein the method for reducing the size of the data to be displayed from the selected data field comprises:

b). comparing the reduced size to the specified limit (col. 5, lines 39-40);

and

c). if the reduced size exceeds the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit (col. 5, lines 39-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the feature of reducing the size exceeds the specified limit and repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit as taught by **Mani et al.** in order to adjust the output to fit the display area of various devices.

10. Claims 9-13 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1) and in view of **Mani et al.** (U.S. Patent 5,848,406) as applied to claims 4-8 and 27 above and further in view of **Heckel** (U.S. Patent 4,486,857).

Regarding claims 9-13 and 27-31, **Maloney et al.**, **Crandall et al.**, and **Mani et al.**, do not explicitly teach a step wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value and wherein the value is two.

However, **Heckel** teaches a step wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value and wherein the value is integer (col. 5, line 7 – col. 6, line 14).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the data reduction method as taught by **Heckel** to calculate the display capacity of the target terminal and determine if the selected data field need to be adjusted in order to fit on the display.

Conclusion

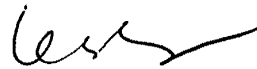
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baber et al. (U.S. Patent 6,279,041B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (703) 305-3018. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leslie Wong
Patent Examiner
Art Unit 2177

LW
August 20, 2004

Notice of References Cited	Application/Control No. 09/935,565	Applicant(s)/Patent Under Reexamination DE BELLIS, JOSEPH	
	Examiner Leslie Wong	Art Unit 2177	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A	US-6,321,228 B1	11-2001	Crandall et al.	707/10
B	US-5,701,453	12-1997	Maloney et al.	707/2
C	US-5,848,406 A	12-1998	Mani et al.	707/2
D	US-6,279,041 B1	08-2001	Baber et al.	709/232
E	US-4,486,857	12-1984	Heckel, Paul C.	715/508
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

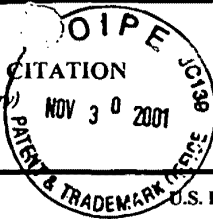
NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



Docket Number (Optional) 5607	Application Number 09/935,565
Applicant(s) Joseph L. DE BELLIS	
Filing Date 8/24/2001	Group Art Unit n/a

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
LW		5,895,476	4/20/99	Orr et al.	707 715	517	
		5,991,791	11/23/99	Siefert	709 718	100	
		6,138,162	10/24/00	Pistriotto et al.	709	229	
		6,170,012	1/2/01	Coss et al.	709	229	
		6,098,172	8/1/00	Coss et al.	713	201	
		6,061,797	5/9/00	Jade et al.	713	201	
		5,848,292	12/8/98	Nathan	395 710	822 2	
		5,893,107	4/6/99	Chan et al.	707	103	
		5,978,790	11/2/99	Buneman et al.	707	2	
		5,974,407	10/26/99	Sacks	707	2	
LW		5,553,285	9/3/96	Krakauer et al.	395 707	600 200	

RECEIVED
DEC 03 2001
GROUP 2100

FOREIGN PATENT DOCUMENTS

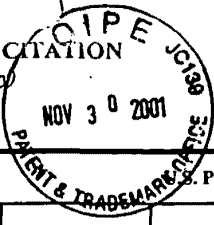
REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER <i>Leslie Wong</i>	DATE CONSIDERED 8/20/01
--------------------------------	----------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)



Docket Number (Optional) 5607	Application Number 09/935,565
Applicant(s) Joseph L. DE BELLIS	
Filing Date 8/24/2001	Group Art Unit n/a

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
LW		5,257,185	10/26/93	Farley et al.	364 707	419 19 100	
		5,450,581	9/12/95	Bergen et al.	355 707	600 9	
		5,519,866	5/21/96	Lawrence et al.	305 717	700 162	
		6,182,083	1/30/2001	Scheifler et al.	707	103	
		6,006,225	12/21/99	Bowman et al.	707	5	
		6,169,986	1/2/2001	Bowman et al.	707	5	
		5,878,423	3/2/99	Anderson et al.	707	100	
		6,119,165	9/12/00	Li et al.	709	229	
		5,951,643	9/14/99	Shelton et al.	709	227	
		5,970,490	10/19/99	Morgensten	707	10	
LW		4,922,486	5/1/90	Lidinsky et al.	370	60 427	

RECEIVED
DEC 03 2001
GROUP 2100

FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER <i>Leslie Wong</i>	DATE CONSIDERED 8/20/04
--------------------------------	----------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

TC2100

PK2

Organization _____ Bldg./Room _____

U. S. DEPARTMENT OF COMMERCE

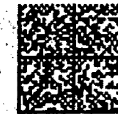
COMMISSIONER FOR PATENTS

P.O. BOX 1450

ALEXANDRIA, VA 22313-1450

IF UNDELIVERABLE RETURN IN TEN DAYS

OFFICIAL BUSINESS



UNITED STATES POSTAGE
U.S. OFFICIAL MAIL
PENALTY FOR
PRIVATE USE \$300
FIRST CLASS
02 1A \$ 01.52
0004202245 AUG 24 2004
MAILED FROM ZIP CODE 22202

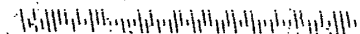
AN EQUAL OPPORTUNITY EMPLOYER

NIXIE 3080 1 13 09/05/04

RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD
RETURN TO SENDER



RETURN TO SENDER





UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,565	08/24/2001	Joseph De Bellis	5607	9677

7590 08/24/2004
DORSEY & WHITNEY LLP
Suite 300
1660 International Drive
McLean, VA 22102

EXAMINER

WONG, LESLIE


ART UNIT PAPER NUMBER

2177

DATE MAILED: 08/24/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/935,565	Applicant(s) DE BELLIS, JOSEPH 
	Examiner Leslie Wong	Art Unit 2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 August 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-41 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-41 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 August 2001 is/are: a) accepted or b) objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/Nov04.01.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Priority

1. The Applicant's claim to domestic priority under 35 U.S.C. §120, as a Continuation-in-Part of application 09/513,340, filed 25 February 2000, which claims to domestic priority under 35 U.S.C. §119(e), as a provisional of application serial number 60/227,305, filed on 24 August 2000, is acknowledged.

As a result, a priority date of no later than 24 August 2000¹ is established, and depending upon the specific subject matter claimed, the priority date could be as early as 24 August 2000, 25 February 2000, or 24 August 2000¹.

Information Disclosure Statement

2. Applicants' Information Disclosure Statement, filed 30 November 2001, has been received, entered into the record, and considered. See attached form PTO-1449.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 3, 21, 22, and 39 of patent # 6,760,720 B1 contain(s) every element of representative claims 1, 3, 15, 20, 32, 35, and 41 of the instant application and as such anticipate(s) claims 1, 3, 15, 20, 32, 35, and 41 of the instant application.

Patent '720	Instant Application
1	1
3	3
21	15
3	20
21	32,35
22	37
39	41

"A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus). " **ELI LILLY AND COMPANY v BARR LABORATORIES, INC.**, United States Court of Appeals for the Federal Circuit, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 15-19, 32-39 are rejected under 35 U.S.C. 102(e) as being anticipated by **Crandall et al.** (U.S. Patent 6,321,228 B1).

Regarding claim 15, **Crandall et al.** teaches a method for searching a database, comprising:

- a). selecting a first search term (col. 5, lines 32-35);
- b). sending the first search term to a search engine (col. 5, lines 23-25);
- c). receiving a first search result (col. 6, lines 11-12);
- d). selecting and sending a second search term to the search engine (col. 5, lines 25-29); and
- e). receiving a second search result, wherein the second search results represents a combination of the first and the second search terms (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claims 16 and 33, **Crandall et al.** further teaches

- a). selecting and sending a third search term to the search engine (col. 5, lines 26-27);
- b). dropping a prior search term, wherein the dropped prior search term in one of the first and the second search terms (col. 5, lines 27-28); and
- c). receiving a third search result comprising a combination of the third search term and one of the first and the second search terms (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 17, **Crandall et al.** teaches wherein the first search term is directed to a first database and wherein the second search term is directed to a second database (col. 5, lines 65-67).

Regarding claims 18 and 34, **Crandall et al.** further teaches wherein the first search result is displayed as a truncated result list (col. 6, lines 13-15).

Regarding claim 19, **Crandall et al.**, further teaches a step specifying a size of the truncation (col. 6, lines 13-15).

Regarding claim 32, **Crandall et al.** teaches a method for providing search functions in one or more databases, comprising:

- a). receiving a first search term (col. 5, lines 32-35);

- b). searching at least a first database using the first search term (col. 5, lines 23-25);
- c). returning a first search result, wherein the first search result comprises a first list of elements in the first database (col. 6, lines 11-12);
- d). receiving a second search term (col. 5, lines 25-29);
- e). conducting a second search by applying the second search term to one of the first list of elements and a second database (col. 5, lines 25-29); and
- f). returning a second search result, wherein the second search results represents a combination of the first and the second search terms (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 35, **Crandall et al.** teaches a method for navigating one or more databases, comprising:

- a). receiving a first attribute associated with elements in one or more of the databases, wherein the first attribute comprises a first search term (col. 5, lines 32-35);
- b). returning a first search result based on the first attribute (col. 6, lines 11-12);
- c). receiving a second attribute associated with elements in one or more of the databases, wherein the second attributes comprises a second search term (col. 5, lines 25-29);
- d). generating a second search result based on the second attribute (col. 5, lines 25-29) ;

- e). merging the first and the second search results to provide a merged search result (col. 5, lines 30-41; col. 6, lines 11-12); and
- f). returning the merged search result (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 36, **Crandall et al.** further teaches truncating the merged search result based on a display size of a device receiving the merged search result (col. 6, lines 13-15).

Regarding claim 37, **Crandall et al.** teaches a method for retrieving data from one or more databases; comprising:

- a). receiving a first constraint, wherein the first constraint relates to a first data attribute (col. 5, lines 32-35);
- b). receiving a second constraint, wherein the second constraint relates to a second data attribute (col. 5, lines 25-29);
- c). determining if the first and the second constraint are in a same merge group (i.e., Boolean AND) (Fig. 4C);
- d). generating a database query based on the determining step (col. 5, lines 30-41; col. 6, lines 11-12); and
- f). returning a first merged search result (col. 5, lines 30-41; col. 6, lines 11-12).

Regarding claim 38, **Crandall et al.** further teaches wherein the first and the second constraints are in the same merge group, further comprising:

generating a Boolean AND as the database query (col. 5, lines 26-29).

Regarding claim 39, **Crandall et al.** further teaches wherein the first and the second constraint are in different merge groups, further comprising:

generating a Boolean OR as the database query (col. 5, lines 26-29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if 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. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 14, 20-21, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1).

Regarding claim 1, **Maloney et al.** teaches a method for displaying data comprising:

- a). determining a database schema for a database (col. 3, lines 1-6);
- b). providing a list of the database fields, wherein the list includes a descriptor indicating a data category (Fig. 18);

c). receiving a search selection for a database field on the provided list of the database fields (col. 3, lines 7-10);

d). determining a quantity of entries in the selected database field (col. 16, lines 6-8);

e). **Maloney et al.** does not explicitly teaches a step wherein if the quantity exceed a specified amount; truncating data, and displaying the truncated data; and if the quantity does not exceed the specified amount, displaying contents of the database field.

Crandall et al., however, teaches wherein if the quantity exceeds a specified amount; truncating data, and displaying the truncated data (col. 6, lines 13-15); and if the quantity does not exceed the specified amount, displaying contents of the database field (col. 8, lines 25-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Crandall et al.** as this would enable the system to manage and control the result to be displayed to the users based on the predetermined threshold.

Regarding claim 2, **Crandall et al.** teaches a step wherein providing a key word search (col. 7, lines 30-39).

Regarding claim 3, **Maloney et al.** teaches a method for formatting data for display, comprising:

- a). generating a list of data fields (Fig. 18);
- b). receiving a first data field selection from the list of data fields (col. 3, lines 7-10);
- c). determining a first quantity indicative of a number of entries of the selected data field (col. 16, lines 6-8);
- d). **Maloney et al.** does not explicitly teaches a step wherein if the quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field, and displaying contents of the database field.

Crandall et al., however, teaches wherein if the quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field (col. 6, lines 13-15); and displaying contents of the database field (col. 8, lines 25-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Crandall et al.** as this would enable the system to manage and control the result to be displayed to the users based on the predetermined threshold.

Regarding claim 14, **Crandall et al.** further teach a step receiving a first constraint, wherein the first constraint is related to a data element in a data field; and

receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints (col. 5, lines 35-41).

Regarding claim 20, **Maloney et al.** teaches a method for searching a database, comprising:

- a). generating a list of data fields (Fig. 18);
- b). receiving a first data field selection from the list of data fields (col. 3, lines 7-10);
- c). receiving a first constraint, wherein the first constraint is related to a data element in a data field (col. 3, lines 7-10; col. 5, lines 23-26); and
- d). **Maloney et al.** does not explicitly teach receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints.

Crandall et al., however, teaches receiving one or more subsequent constraints, wherein search results are generated based on a combination of the first and the one or more subsequent constraints (col. 5, lines 25-29).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of receiving one or more query constraints as taught by **Crandall et al.** as this would allow user to refine the query to generate the search results to meet user's criteria.

Regarding claim 21, **Maloney et al.** does not explicitly teaches steps of:

- a). determining a first quantity indicative of a number of entries of the selected data field;
- b). if the first quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field; and
- c). displaying data from the selected data field.

Crandall et al., however, teaches wherein if the quantity exceeds a specified limit, reducing a size of data to be displayed from the selected data field (col. 6, lines 13-15); and displaying data from the selected data field (col. 8, lines 25-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of truncating the result set when it exceeded the predetermined threshold as taught by **Crandall et al.** as this would enable the system to manage and control the result to be displayed to the users based on the predetermined threshold.

Regarding claim 41, **Maloney et al.** teaches a method for searching one or more databases, wherein each of the one or more databases comprises a plurality of fields, comprising:

- a). getting a first list of fields of a first database (Fig. 18);
- b). applying a first filter to the final list of fields, wherein the final filter comprises a first search constraint (col. 3, lines 7-10; col. 5, lines 23-26);
- f). displaying the search result (Fig. 5, element 510).

Maloney et al. does not explicitly teach the steps of:

- c). applying a second filter to the first list of fields, wherein the second filter comprises a second search constraint;
- d). applying a third filter to the first list of filters, wherein the third filter comprises a third search constraint;
- e). removing at least one of the first, second and third filters, whereby a search result is generated.

Crandall et al., however, teaches the steps of:

- c). applying a second filter to the first list of fields, wherein the second filter comprises a second search constraint (col. 5, lines 29-37);
- d). applying a third filter to the first list of filters, wherein the third filter comprises a third search constraint (col. 5, lines 29-37);
- e). removing at least one of the first, second and third filters, whereby a search result is generated (col. 5, lines 59-64).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to allow the step of receiving one or more query constraints as taught by **Crandall et al.** as this would allow user to refine the query to generate the search results to meet user's criteria.

8. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Crandall et al.** (U.S. Patent 6,321,228 B1) as applied to claims 15-19 and 32-39 above and in view of **Mani et al.** (U.S. Patent 5,848,406).

Regarding claim 40, **Crandall et al.** does not explicitly teaches wherein the first and the second constraints are recovered using a wireless connector, and wherein the first merged search result is returned using the wireless connection.

Mani et al., however, teaches a step comprising displaying the data on a terminal, the terminal including one of a handheld device, a cellular phone, a geosynchronous positioning satellite (GPS) device, a wrist-worn device, an interactive phone device, a household appliance, a television, a television set top box, a handheld computer, a main frame computer and a personal computer as presenting information on devices of various sizes such as mobile computers and personal digital assistants (PDAs) (col. 2, lines 22-33). Thus, **Mani et al.** inherently teaches the use of wireless connection for communicating the result the user by teaching displaying data on a handheld device such as a PDA.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement the step of displaying data on devices of varying sizes using the wireless connection as taught by **Mani et al.** in order to allow a user freedom to move within the wireless environment while remaining "connected" to a network. Furthermore, a wireless connection to a network allows a portable processor user the convenience of connecting to a network without having to plug into a docking station or use some other method of "hardwiring" to a network as suggested by **Baber et al.** at col. 2, lines 35-41.

9. Claims 4-8 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1) as applied to claims 1-3, 14, 20-21, and 41 above and further in view of **Mani et al.** (U.S. Patent 5,848,406).

Regarding claims 4, 5, 7, 22, 23, and 25, **Maloney et al. and Crandall et al.**, do not explicitly teach a step wherein the specified limit is fixed, variable, or user-determined limit.

Mani et al., however, teaches a step wherein the specified limit is fixed, variable, or user-determined limit (col. 5, lines 22-25 and lines 35-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the step of defining the display threshold as taught by **Mani et al.** in order to allow a user to make use of very small display surface such as mobile computers or PDA to allow data to fit on the display screen of a specific device.

Regarding claims 6 and 24, **Maloney et al. and Crandall et al.**, do not teach a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal.

However, **Mani et al.** teaches a step wherein the data are displayed on a terminal, and wherein the specified limit is determined dynamically, based on a characteristic of the terminal (col. 2, lines 23-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the feature of displaying data based a characteristic of the terminal as taught by **Mani et al.** because it would accommodate various kinds of terminals having different display capabilities.

Regarding claims 8 and 26, **Crandall et al.** further teach a step wherein the method for reducing the size of the data to be displayed from the selected data field comprises:

a). performing a truncation that reduces the size of the data to be displayed from the selected data field (col. 6, lines 13-15);

Maloney et al. and Crandall et al., do not explicitly teach the steps of:

b). comparing the reduced size to the specified limit; and

c). if the reduced size exceeds the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit.

However, **Mani et al.** teaches a step wherein the method for reducing the size of the data to be displayed from the selected data field comprises:

b). comparing the reduced size to the specified limit (col. 5, lines 39-40);

and

c). if the reduced size exceeds the specified limit, repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit (col. 5, lines 39-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to include the feature of reducing the size exceeds the specified limit and repeating the truncation and comparing steps until the size of the data to be displayed from the selected data field is less than or equal to the specified limit as taught by **Mani et al.** in order to adjust the output to fit the display area of various devices.

10. Claims 9-13 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maloney et al.** (U.S. Patent 5,701,453) in view of **Crandall et al.** (U.S. Patent 6,321,228 B1) and in view of **Mani et al.** (U.S. Patent 5,848,406) as applied to claims 4-8 and 27 above and further in view of **Heckel** (U.S. Patent 4,486,857).

Regarding claims 9-13 and 27-31, **Maloney et al., Crandall et al., and Mani et al.**, do not explicitly teach a step wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value and wherein the value is two.

However, **Heckel** teaches a step wherein a parameter is related to the size of the data to be displayed from the selected data field, and wherein the truncation comprises dividing the parameter by a value and wherein the value is integer (col. 5, line 7 – col. 6, line 14).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to employ the data reduction method as taught by **Heckel** to calculate the display capacity of the target terminal and determine if the selected data field need to be adjusted in order to fit on the display.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baber et al. (U.S. Patent 6,279,041B1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (703) 305-3018. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leslie Wong
Patent Examiner
Art Unit 2177

LW
August 20, 2004

Notice of References Cited	Application/Control No. 09/935,565	Applicant(s)/Patent Under Reexamination DE BELLIS, JOSEPH	
	Examiner Leslie Wong	Art Unit 2177	Page 1 of 1

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
A	US-6,321,228 B1	11-2001	Crandall et al.	707/10
B	US-5,701,453	12-1997	Maloney et al.	707/2
C	US-5,848,406 A	12-1998	Mani et al.	707/2
D	US-6,279,041 B1	08-2001	Baber et al.	709/232
E	US-4,486,857	12-1984	Heckel, Paul C.	715/508
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

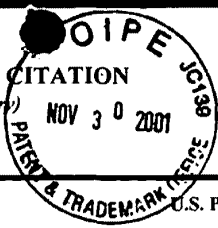
NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)



Docket Number (Optional)
5607

Application Number
09/935,565

Applicant(s)
Joseph L. DE BELLIS

Filing Date
8/24/2001

Group Art Unit
n/a

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
LW		5,895,476	4/20/99	Orr et al.	707 715	517	
		5,991,791	11/23/99	Siefert	709 718	100	
		6,138,162	10/24/00	Pistriotto et al.	709	229	
		6,170,012	1/2/01	Coss et al.	709	229	
		6,098,172	8/1/00	Coss et al.	713	201	
		6,061,797	5/9/00	Jade et al.	713	201	
		5,848,292	12/8/98	Nathan	395 710	822 2	
		5,893,107	4/6/99	Chan et al.	707	103	
		5,978,790	11/2/99	Buneman et al.	707	2	
		5,974,407	10/26/99	Sacks	707	2	
LW		5,553,285	9/3/96	Krakauer et al.	395 707	600 200	

RECEIVED
DEC 03 2001
GROUP 2100

FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

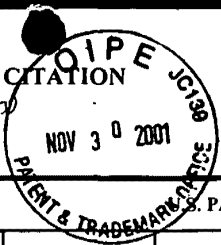
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER *Leslie Wong*

DATE CONSIDERED *8/20/02*

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

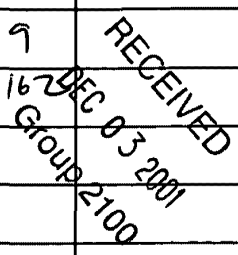
INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)



Docket Number (Optional) 5607	Application Number 09/935,565
Applicant(s) Joseph L. DE BELLIS	
Filing Date 8/24/2001	Group Art Unit n/a

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>lw</i>		5,257,185	10/26/93	Farley et al.	<i>364 707</i>	<i>710 19 100</i>	
		5,450,581	9/12/95	Bergen et al.	<i>355 707</i>	<i>600 9</i>	
		5,519,866	5/21/96	Lawrence et al.	<i>395 717</i>	<i>700 16 200</i>	
		6,182,083	1/30/2001	Scheifler et al.	707	103	
		6,006,225	12/21/99	Bowman et al.	707	5	
		6,169,986	1/2/2001	Bowman et al.	707	5	
		5,878,423	3/2/99	Anderson et al.	707	100	
		6,119,165	9/12/00	Li et al.	709	229	
		5,951,643	9/14/99	Shelton et al.	709	227	
		5,970,490	10/19/99	Morgensten	707	10	
<i>lw</i>		4,922,486	5/1/90	Lidinsky et al.	370	<i>60 427</i>	



FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER <i>Leslie Wong</i>	DATE CONSIDERED <i>8/20/04</i>
--------------------------------	-----------------------------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

L Number	Hits	Search Text	DB	Time stamp
10	2	"6760720"	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 09:27
17	8989	(database\$1 or data near base\$1) and (result\$1 or hit\$1) same (wireless or microwave or radio near communication\$1 or satellite\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 10:25
18	3982	(database\$1 or data near base\$1) and (result\$1 or hit\$1) same (microwave or radio near communication\$1 or satellite\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 10:25
19	1388	(database\$1 or data near base\$1) and (result\$1 or hit\$1) with (radio near communication\$1 or satellite\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 10:25
20	44	(database\$1 or data near base\$1) and (result\$1 or hit\$1) with (wireless near connection\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 10:26
21	8	(database\$1 or data near base\$1) and (search\$3 or quer\$3) with (result\$1 or hit\$1) with (wireless near connection\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 10:28
22	25	(database\$1 or data near base\$1) and (search\$3 or quer\$3) same (result\$1 or hit\$1) same (wireless near connection\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 10:42
23	4	(database\$1 or data near base\$1) and (search\$3 or quer\$3) same (result\$1 or hit\$1) same (wireless near connection\$1) same (advantag\$5 or convenienc\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 10:44
24	132	(database\$1 or data near base\$1) and (search\$3 or quer\$3) and (wireless near connection\$1) same (advantag\$5 or convenienc\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 11:31
25	639	(database\$1 or data near base\$1) and (wireless near connection\$1) same (portable)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 12:12

26	0	(database\$1 or data near base\$1) and (wireless near connection\$1) same (portable same convie\$8)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 12:12
27	49	(database\$1 or data near base\$1) and (wireless near connection\$1) same (portable same conven\$8)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 12:12
30	12258	707/3,4,7,10,102,104.1.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 13:42
31	6503	709/203,219.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 13:42
32	107	707/3,4,7,10,102,104.1.ccls. and (database and (result\$1 or output or return\$3) same (truncat\$3 or reduc\$3) same size) and parameter\$1 and limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 13:44
33	38	709/203,219.ccls. and (database and (result\$1 or output or return\$3) same (truncat\$3 or reduc\$3) same size) and parameter\$1 and limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/08/20 13:44
-	2	("5991713").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 11:09
-	2	("6275301").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/04 14:22
-	2	("6246977").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/04 14:23
-	3	("5890103").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/05 09:30

-	2	("6020972").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/04 14:43
-	2	("6275301").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/04 14:49
-	2	("6020972").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/04 14:50
-	3	("5890103").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/04 14:50
-	0	("database and search\$3 and field\$1 or column\$1 same descriptor\$1 same categor\$3").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/09 11:30
-	0	("database and search\$3 and (field\$1 or column\$1) same descriptor\$1 same categor\$3").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/09 11:30
-	0	("database and search\$3 near refin\$4").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/09 11:30
-	21649	database and search\$3 and field\$1 or column\$1 same descriptor\$1 same categor\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/09 15:14
-	14	database and search\$3 and ((field\$1 or column\$1) same descriptor\$1 same categor\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/09 15:14

	16	("6195689" "6185619" "6253234" "6092196" "5678041" "5696898" "6253193" "6317700" "6141686" "6154777" "6189033" "5950195" "6003083" "6047322" "6046980" "6167445").pn.	USPAT	2002/04/10 11:11
	0	("6195689" "6185619" "6253234" "6092196" "5678041" "5696898" "6253193" "6317700" "6141686" "6154777" "6189033" "5950195" "6003083" "6047322" "6046980" "6167445").pn.) and search near (selection or criteria) and truncat\$3	USPAT	2002/04/10 11:16
	1	("6195689" "6185619" "6253234" "6092196" "5678041" "5696898" "6253193" "6317700" "6141686" "6154777" "6189033" "5950195" "6003083" "6047322" "6046980" "6167445").pn.) and search near (selection or criteria)	USPAT	2002/04/10 11:15

	1	(("6298342" "6094649" "5553281" "5201046" "5802524" "6338056" "5511186" "5634053" "5819264" "5740421" "5963949" "6108648" "5737736" "6058391" "6199062" "6219670").pn.) and search near (selection or criteria) and truncat\$3	USPAT	2002/04/10 11:18
	1	(("6298342" "6094649" "5553281" "5201046" "5802524" "6338056" "5511186" "5634053" "5819264" "5740421" "5963949" "6108648" "5737736" "6058391" "6199062" "6219670").pn.) and search near result\$1 and truncat\$3	USPAT	2002/04/10 11:18
	16	(("6298342" "6094649" "5553281" "5201046" "5802524" "6338056" "5511186" "5634053" "5819264" "5740421" "5963949" "6108648" "5737736" "6058391" "6199062" "6219670").pn.)	USPAT	2002/04/10 13:33

	21	(("6219670" "6233578" "5873074" "5978793" "5870739" "5873079" "5884304" "6167393" "6278992" "5701400" "5734893" "5905988" "5999940" "6098065" "6266675" "6272495" "5603025" "5787416" "5787418" "5819251" "5924089").pn.	USPAT	2002/04/10 13:41
	1	((("6219670" "6233578" "5873074" "5978793" "5870739" "5873079" "5884304" "6167393" "6278992" "5701400" "5734893" "5905988" "5999940" "6098065" "6266675" "6272495" "5603025" "5787416" "5787418" "5819251" "5924089").pn.) and truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 13:45

-	31	("5263167" "5995959" "6038566" "6233586" "5421008" "5428737" "5577239" "5721900" "5721901" "5765147" "5842209" "5930764" "5950192").pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:06
---	----	---	---	---------------------

	117	("5950190" "5995973" "6243703" "5835912" "5826258" "5995974" "6223179" "6223179" "5548749" "5550971" "5615112" "5717924" "5809297" "5428735" "5594641" "5625554" "6198483" "5893095" "5911139" "5913205" "5915250" "6169992" "5210870" "5530883" "5537622" "5537604" "5537603" "5544357" "5548769" "5590362" "5619713" "5710915" "6032151" "6282540" "6334123" "5404510" "5903887" "5664172" "5671436" "5758145" "5787415" "5940822" "5978792" "6052681" "6088524" "6105017" "6112206" "6182079" "6263342" "6272488").pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:07
--	-----	--	---	---------------------

	0	("5950190" "5995973" "6243703" "5835912" "5826258" "5995974" "6223179" "6223179" "5548749" "5550971" "5615112" "5717924" "5809297" "5428735" "5594641" "5625554" "6198483" "5893095" "5911139" "5913205" "5915250" "6169992" "5210870" "5530883" "5537622" "5537604" "5537603" "5544357" "5548769" "5590362" "5619713" "5710915" "6032151" "6282540" "6334123" "5404510" "5903887" "5664172" "5671436" "5758145" "5787415" "5940822" "5978792" "6052681" "6088524" "6105017" "6112206" "6182079" "6263342" "6272488").pn.) and truncat\$3 same search\$3 near (result\$1 or output)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:08
--	---	---	---	---------------------

	0	(("5950190" "5995973" "6243703" "5835912" "5826258" "5995974" "6223179" "6223179" "5548749" "5550971" "5615112" "5717924" "5809297" "5428735" "5594641" "5625554" "6198483" "5893095" "5911139" "5913205" "5915250" "6169992" "5210870" "5530883" "5537622" "5537604" "5537603" "5544357" "5548769" "5590362" "5619713" "5710915" "6032151" "6282540" "6334123" "5404510" "5903887" "5664172" "5671436" "5758145" "5787415" "5940822" "5978792" "6052681" "6088524" "6105017" "6112206" "6182079" "6263342" "6272488").pn.) and truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:09
--	---	---	---	---------------------

-	2995	database and search\$3 and truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:10
-	1357	"15" and truncat\$3 same limit\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:12
-	24	("15" and truncat\$3 same limit\$1) and divid\$3 near value	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:16
-	0	database and search near (result\$1 or output) same truncat\$3 same size	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:19
-	0	database and search near (result\$1 or output or return\$3) same truncat\$3 same size	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:20
-	141	database and (result\$1 or output or return\$3) same truncat\$3 same size	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:20
-	67	(database and (result\$1 or output or return\$3) same truncat\$3 same size) and parameter\$1 and limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:22
-	0	((database and (result\$1 or output or return\$3) same truncat\$3 same size) and parameter\$1 and limit) and decrement\$3 with parameter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:22
-	0	((database and (result\$1 or output or return\$3) same truncat\$3 same size) and parameter\$1 and limit) and decrement\$3 same parameter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:22
-	9	((database and (result\$1 or output or return\$3) same truncat\$3 same size) and parameter\$1 and limit) and decrement\$3 and parameter	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:24

-	193	database and refin\$3 near search	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:25
-	437	(database and refin\$3 near search) and field\$1 or column\$1 with descriptor\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:26
-	7	(database and refin\$3 near search) and (field\$1 or column\$1) with descriptor\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:35
-	0	(database and refin\$3 near search) and (field\$1 or column\$1) with descriptor\$1 with categor\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:35
-	0	(database and refin\$3 near search) and (field\$1 or column\$1) with descriptor\$1 same categor\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:36
-	7	(database and refin\$3 near search) and (field\$1 or column\$1) with descriptor\$1 and categor\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:41
-	20	(database and refin\$3 near search) and truncat\$3 and exceed\$3 and limit\$1 and (reduc\$3 or calculat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:49
-	31762	search\$1 with (result\$1 or page or output) truncat\$3 and exceed\$3 and limit\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:53
-	0	(search\$1 with (result\$1 or page or output) truncat\$3 and exceed\$3 and limit\$1) and caluculat\$3 near limit and parameter near (decrement\$3 or divid\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:54
-	0	(search\$1 with (result\$1 or page or output) truncat\$3 and exceed\$3 and limit\$1) and caluculat\$3 same (decrement\$3 or divid\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/10 14:56

-	47363	search\$3 and (truncat\$3 or exceed\$3 or overflow or thredhold)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 11:04
-	7599	search\$3 and (truncat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 11:06
-	5853	(search\$3 and (truncat\$3)) and (parameter\$1 or value)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 11:08
-	2325	((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 11:10
-	850	((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable) and database	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 11:10
-	32	"6" and (user-specified or user adj specified) near limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:24
-	0	"16" and (user-specified or user adj specified) near limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:24
-	0	"16" and (user-specified or user adj specified) near limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:27
-	0	("(((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable) and database").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:26
-	850	((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable) and database	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:27

-	0	(((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable) and database) and (user-specified or user adj specified) near limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:27
-	559	(((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable) and database) and limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:27
-	436	(((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable) and database) and limit) and specified	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 14:28
-	60	(((search\$3 and (truncat\$3)) and (parameter\$1 or value)) and limit\$3 and fix\$3 and variable) and database) and limit) and user near specified	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:05
-	19	display\$3 with truncat\$3 near (data or result\$1 or output)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:10
-	1491	truncat\$3 near (data or result\$1 or output)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:12
-	9	(truncat\$3 near (data or result\$1 or output)) and exceed\$3 near specified	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:14
-	36	(truncat\$3 near (data or result\$1 or output)) and search\$3 near (result or data or entr\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:16
-	30	search\$3 near (result or data or entr\$3) same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:16
-	201	truncat\$3 near method\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:24

-	4	truncat\$3 near method\$1 and search\$3 near result\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:27
-	5	(database and search\$3 same truncat\$3) and exceed near limit\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:28
-	6	database and search\$3 same truncat\$3 same exceed	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:29
-	211	database and search\$3 same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 15:33
-	70	database same search\$3 same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:06
-	9	(internet or www or web) same search\$3 same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:08
-	33	display\$3 same truncat\$3 near data	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:11
-	279	database and search\$3 and truncat\$3 same display\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:12
-	11	(database and search\$3 and truncat\$3 same display\$3) and user near (determined or specified) with (limit or value)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:18
-	3513	truncat\$3 same (multiply\$3 or divid\$3 or decrement\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:20

-	14	(truncat\$3 same (multiply\$3 or divid\$3 or decrement\$3)) and search near result	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:26
-	37	(truncat\$3 same (multiply\$3 or divid\$3 or decrement\$3)) and exceed\$3 near limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:30
-	305	search\$3 near (result or data or output) same (overflow or exceed\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 18:18
-	0	(search\$3 near (result or data or output) same (overflow or exceed\$3)) and search\$3 near refin\$5	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:36
-	0	search\$3 near (result or data or output) same overflow and exceed\$3 near limit	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 16:37
-	8008	(search\$3 or retriev\$3) same (reduc\$3 or truncat\$3) same (size or set or hit)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 18:20
-	3563	(search\$3 or retriev\$3) same (reduc\$3 or truncat\$3) with (size or set or hit)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 18:22
-	1670	(search\$3 or retriev\$3) with (reduc\$3 or truncat\$3) with (size or set or hit)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 18:23
-	96	((search\$3 or retriev\$3) with (reduc\$3 or truncat\$3) with (size or set or hit)) same (field or column or row)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/11 18:24
-	23	("6356899") or ("5515488") or ("6253188") or ("6144958") or ("6260050") or ("6321228") or ("6169986") or ("6219670") or ("6058391") or ("5842209") or ("6324566").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 10:59

-	5	((("6356899") or ("5515488") or ("6253188") or ("6144958") or ("6260050") or ("6321228") or ("6169986") or ("6219670") or ("6058391") or ("5842209") or ("6324566")).PN.) and (boolean)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 17:58
-	1	("6356899").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 15:51
-	27	search\$3 with (result or hit or set) same truncat\$3 same (Integer or value)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 16:32
-	4	search\$3 with (result or hit or set) same truncat\$3 same (divid\$3 or decrement\$3 or multiply\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 17:36
-	3	("5515488").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 17:36
-	5	truncat\$3 same characteristic near (terminal or display)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:21
-	0	truncat\$3 same handheld near computer	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:21
-	0	truncat\$3 same hand-held near computer	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:22
-	36	truncat\$3 and hand-held near computer	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:31
-	977	truncat\$3 and GPS	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:31

-	112	truncat\$3 same GPS	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:34
-	1	truncat\$3 same display same (limit\$3 or small or narrow) near space	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:36
-	12468	truncat\$3 same (output or hit or result)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:39
-	13	truncat\$3 same result same (small or limited) near (display or area)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:46
-	0	search\$3 same truncat\$3 same (display near constraint)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:48
-	0	(output or result) same truncat\$3 same (display near constraint)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:48
-	1	truncat\$3 same (display near constraint)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:49
-	125	format\$3 with search near request	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:51
-	0	((format\$3 with search near request) and database and field) and search near cycle	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:52
-	1	((format\$3 with search near request) and database and field) and search with cycle	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:52

-	91	(format\$3 with search near request) and database and field	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:58
-	0	refresh\$3 near search adj cycle\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:58
-	0	refresh\$3 with search adj cycle\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 18:59
-	1	refresh\$3 with search near cycle\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 19:00
-	18	reset\$4 with search near cycle\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 19:05
-	1	("6356899").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/12 19:05
-	0	("63431261").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 15:49
-	1	("6341261").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 15:51
-	96	(overflow or truncat\$3 or eliminat\$3) with search\$3 near (output or result)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 15:56
-	33	on-line same test\$3 near tak\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 16:29

-	37	(overflow or truncat\$3 or eliminat\$3) with search\$3 near (output or result) and divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 16:33
-	0	"6326962".uref.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 16:33
-	1	(overflow or truncat\$3 or eliminat\$3) with search\$3 near (output or result) same divid\$3 o	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 16:36
-	248853	divid\$3 same (overflow or truncat\$3 or eliminat\$3 or output)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 16:38
-	0	search\$3 with divid\$3 same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 16:39
-	6	search\$3 with divid\$3 same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 16:41
-	1	"5995543".uref.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:07
-	14	search\$3 with (output or hit or result) and truncat\$3 with divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:13
-	3	truncat\$3 near method with divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:15
-	0	web near result with truncat\$ and divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:16

-	17	web same truncat\$ with divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:17
-	155	output same truncat\$ with divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:24
-	4	truncat\$3 near method same divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:25
-	0	truncat\$ with divid\$3 with search\$3 near result	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:28
-	0	truncat\$ with multiply\$3 with search\$3 near result	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:29
-	104	truncat\$ with multiply\$3 same (result or output or hit)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:31
-	0	(search adj results) near5 (limit\$3 or (maximum adj number))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:31
-	61	(search adj results) near5 (limit\$3 or (maximum adj number))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:44
-	0	(search adj results) near5 (limit\$3 or truncat\$3) same divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:46
-	0	(search adj results) same divid\$3 with truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:46

-	107	(search adj results) same divid\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:50
-	0	(search adj results) same divid\$3 and truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:50
-	10	(search adj results) same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:51
-	4	(search adj output) same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:52
-	0	(search adj (returned or result or page)) same truncat\$3 same (divid\$3 or multiply\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:53
-	7	(search adj (returned or result or page)) and truncat\$3 same (divid\$3 or multiply\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/04/15 17:54
-	13	database same schema same (field or column) same (categor\$3 or descriptor) same (search\$3 or quer\$3 or criteria)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:18
-	66	database same schema same (field or column) and (categor\$3 or descriptor) same (search\$3 or quer\$3 or criteria)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:47
-	330	determin\$3 same database same schema	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:24
-	43	determin\$3 same database same schema same (column or field) same (search\$3 or quer\$3 or retriev\$3 or criteria)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:33

-	2	search near engine same database same schema same (column or field) same (search\$3 or quer\$3 or retriev\$3 or criteria)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:35
-	17	search near engine and database same schema same (column or field) same (search\$3 or quer\$3 or retriev\$3 or criteria)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:39
-	4	search near engine and database same schema same (column or field) and (drill-down or drill near down or cascad\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:41
-	1	(GUI or UI or user near interface) same database same schema same (column or field) same (categor\$3 or descriptor)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:42
-	154	(GUI or UI or user near interface) and database same schema same (column or field) and (categor\$3 or descriptor)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:43
-	498	database same (schema or structure) same (field or column) and (categor\$3 or descriptor) same (search\$3 or quer\$3 or criteria)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:50
-	106	database same (schema or structure) same (field or column or attribut\$2) same (categor\$3 or descriptor) same (search\$3 or quer\$3 or criteria)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2002/11/04 16:51
-	6	database same (determin\$3 same schema) and truncat\$3 same (result\$1 or output or hit\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:13
-	378	database same (determin\$3 same schema)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:14
-	1	(database same (determin\$3 same schema)) and display\$3 same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:16

-	1	(column\$1 or field\$1) same display\$3 same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:18
-	57828	(search\$3 or quer\$3 or retriev\$3) same database	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:18
-	1518	((search\$3 or quer\$3 or retriev\$3) same database) and truncat\$3 same (result\$3 or output or hit\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:19
-	243	((search\$3 or quer\$3 or retriev\$3) same database) and truncat\$3 same (result\$3 or output or hit\$1)) and list same (field\$1 or attribute\$1 or column\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:46
-	1	"5864848".PN.	USPAT	2003/04/26 17:30
-	1	"5848385".PN.	USPAT	2003/04/26 17:30
-	1	"5704060".PN.	USPAT	2003/04/26 17:31
-	1	"5640587".PN.	USPAT	2003/04/26 17:31
-	1	"5450538".PN.	USPAT	2003/04/26 17:31
-	1	"5305205".PN.	USPAT	2003/04/26 17:32
-	1	"5231579".PN.	USPAT	2003/04/26 17:32
-	1	"4486857".PN.	USPAT	2003/04/26 17:33
-	0	(laptop or pda) and truncat\$3 same (display\$3 or print\$3) same constraint\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:48
-	3	(laptop or pda) and truncat\$3 same (display\$3 or print\$3) same constraint\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:49
-	297	truncat\$3 same (display\$3 or print\$3) same (limit\$2 or constraint\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:50

-	36	(truncat\$3 same (display\$3 or print\$3) same (limit\$2 or constraint\$1)) and (search\$3 or quer\$3) same (field\$1 or column\$1 or attribut\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 17:56
-	3	6279018.uref.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:03
-	1	"6279018".PN.	USPAT	2003/04/26 17:58
-	1	"6272332".PN.	USPAT	2003/04/26 17:59
-	1	"6131103".PN.	USPAT	2003/04/26 18:00
-	1	"5231579".PN.	USPAT	2003/04/26 18:01
-	1	"4486857".PN.	USPAT	2003/04/26 18:02
-	7491	(search\$3 or quer\$3) and device same (constraint or limit\$2) same (area or space or display)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:05
-	628	(search\$3 or quer\$3) same device same (constraint or limit\$2) same (area or space or display)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:05
-	3	(search\$3 or quer\$3) same device same (constraint or limit\$2) same truncat\$3 same (area or space or display)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:07
-	0	(search\$3 or quer\$3) same device same (constraint or limit\$2) same cascad\$3 same menu\$1 same (area or space or display)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:08
-	163	(search\$3 or quer\$3) same (result\$1 or output or hit\$1) same (display\$3 or output\$3) same cascad\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:10
-	2967	(search\$3 or quer\$3) same (result\$1 or output or hit\$1) same (display\$3 or output\$3) same (limit\$3 or truncat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:10

-	116	(search\$3 or quer\$3) same (result\$1 or output or hit\$1) same (display\$3 or output\$3) same (limit\$3 or truncat\$3) same (constraint or limit\$3) same space	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:14
-	2234	(display\$3 or output\$3) same (result\$1 or output or hit\$1) same (device or area) same (constraint or limit\$3) same space	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:15
-	210	(display\$3 or output\$3) with (result\$1 or output or hit\$1) with (device or area) with (constraint or limit\$3) with space	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:18
-	46	database same (search\$3 or quer\$3) same (result\$3 or output\$3 or hit\$1) same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:24
-	70	database same (search\$3 or quer\$3) same (result\$3 or output\$3 or hit\$1) same roll\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:29
-	17	database same (search\$3 or quer\$3) same (result\$3 or output\$3 or hit\$1) same (displa\$3 or cop\$3) same space same (limit\$3 or constraint\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:32
-	139	(phonebook or pager or electornic near device or pda) and (display\$3 same truncat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:42
-	50	database same (result\$1 or hit\$1 or output\$1) same (exceed\$3 or over or pass\$3) and (display\$3 same truncat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/26 18:43
-	2	("4486837").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 10:20
-	2	("5450538").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 10:22

-	2	("5231579").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 10:22
-	656	(web or internet or online) and (determin\$3 same schema\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 10:23
-	196	(web or internet or online) and (determin\$3 same schema\$1) and display\$3 same (constraint or limit\$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 10:24
-	155	((web or internet or online) and (determin\$3 same schema\$1) and display\$3 same (constraint or limit\$2)) and (trunct\$3 or delet\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 10:24
-	156	((web or internet or online) and (determin\$3 same schema\$1) and display\$3 same (constraint or limit\$2)) and (trunct\$3 or delet\$3 or abbreviat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 10:48
-	99	(determin\$3 or scan\$4) same schema\$1 same (select\$3 or pick\$3 or highlight\$3 or choos\$3) same (field\$1 or column\$1 or attribute\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:31
-	1	"5193182".PN.	USPAT	2003/04/28 11:02
-	1	"4967341".PN.	USPAT	2003/04/28 11:02
-	1	"5257185".PN.	USPAT	2003/04/28 11:03
-	1	"5418950".PN.	USPAT	2003/04/28 11:03
-	1	"5428776".PN.	USPAT	2003/04/28 11:03
-	4	(search\$3 or quer\$3) same (exceed\$3 or beyond or over) same limit\$3 same (display\$3 or print\$3) same (truncat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:33
-	3730	(search\$3 or quer\$3) same (exceed\$3 or beyond or over) same limit\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:33

-	415	(search\$3 or quer\$3) same (exceed\$3 or beyond or over) same limit\$3 same display\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:34
-	130	(search\$3 or quer\$3) same (exceed\$3) same limit\$3 same display\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:35
-	5	(search\$3 or quer\$3) same (exceed\$3) same limit\$3 same display\$3 same space	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:35
-	13	(search\$3 or quer\$3) same (exceed\$3) same limit\$3 same display\$3 same area	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:38
-	2	("5701453").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:37
-	7	(search\$3 or quer\$3) same (result\$1 or hit\$1 or output) same (exceed\$3) same limit\$3 same display\$3 same (space or area)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:40
-	2	("6279018").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:48
-	406	database and truncat\$3 same (search\$3 or quer\$3) same (result\$3 or output or hit\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:49
-	46	database same truncat\$3 same (search\$3 or quer\$3) same (result\$3 or output or hit\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:59
-	60	database same (truncat\$3 or cut-off) same (search\$3 or quer\$3) same (result\$3 or output or hit\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 15:05

-	14	(database same (truncat\$3 or cut-off) same (search\$3 or quer\$3) same (result\$3 or output or hit\$1)) not (database same truncat\$3 same (search\$3 or quer\$3) same (result\$3 or output or hit\$1))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 14:59
-	460	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same exceed\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 15:05
-	460	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same exceed\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 15:29
-	40	database same (search\$3 or quer\$3) same display\$3 same (result\$3 or output or hit\$1) same exceed\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 15:32
-	1608	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same (thredhold\$1 or limit\$3 or predetermin\$3 or preset)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 15:33
-	6	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same (thredhold\$1 or limit\$3 or predetermin\$3 or preset) same truncat\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 15:35
-	21	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same (thredhold\$1 or limit\$3 or predetermin\$3 or preset) same (truncat\$3 or cut-off or cutoff or shorten\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:33
-	428	(result\$1 or output or hit) same (truncat\$3) same exceed\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:14
-	3	database same (result\$1 or output or hit) same (truncat\$3) same exceed\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:14
-	0	Internet same (result\$1 or output or hit) same (truncat\$3) same exceed\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:14

-	7	(search\$3 or query\$3) same (result\$1 or output or hit) same (truncat\$3) same exceed\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:15
-	11	(search\$3 or query\$3) same (result\$1 or output or hit) same (truncat\$3) same (thredhold or preset or predetermin\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:17
-	537	(search\$3 or query\$3) same (result\$1 or output or hit) same (truncat\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:27
-	1675	((result\$1 or output or hit) same (truncat\$3)).ab,tl.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:27
-	1642	(result\$1 or output or hit) same (truncat\$3).ab.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:28
-	10	((search\$3 or quer\$3) same (result\$1 or output or hit) same (truncat\$3)).ab.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:30
-	0	((search\$3 or quer\$3) same (result\$1 or output or hit) same (truncat\$3)) same (easy with display\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:31
-	8	((search\$3 or quer\$3) same (result\$1 or output or hit) same (truncat\$3)) same (limit\$3 or conRAINT) same (space or area)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:31
-	411	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same (threshold\$1 or llimit\$3 or predetermin\$3 or preset) same (truncat\$3 or cut-off or cutoff or shorten\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:40
-	395	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same (determin\$3) same (number near record\$ or quantity)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:41

-	366	database same (search\$3 or quer\$3) same (result\$3 or output or hit\$1) same (determin\$3) same (quantity)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 16:41
-	2	("5848406").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 17:05
-	2	("5450538").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 17:50
-	225	(online or web or internet) same title\$1 same icon\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 18:41
-	10	(online or on-line) same (text\$1 or title\$1) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 18:44
-	15	(online or on-line or web or internet) same (drag\$4 same drop\$4) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 18:47
-	4	(online or on-line or web or internet) same (result\$1 or output or hit\$1) same (drag\$4 same drop\$4) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 18:57
-	5	(online or on-line or web or internet) and (result\$1 or output or hit\$1) same (drag\$4 same drop\$4) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 18:57
-	78	(online or on-line or web or internet) and (result\$1 or output or hit\$1) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:00
-	7	(online or on-line or web or internet) and (result\$1 or output or hit\$1) same icon\$1 same purchase\$1 same drag\$4	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:05

-	7	(online or on-line or web or Internet) and (result\$1 or output or hit\$1) same icon\$1 same purchase\$1 same (drag\$4 or overlay\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:07
-	11	((online or on-line or web or Internet) and (result\$1 or output or hit\$1) same icon\$1 same purchase\$1 same (mov\$3 or drop\$3 or drag\$4 or overlay\$3)) not ((online or on-line or web or Internet) and (result\$1 or output or hit\$1) same icon\$1 same purchase\$1 same (drag\$4 or overlay\$3))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:07
-	8	(online or on-line or web or Internet) same (result\$1 or output or hit\$1) same icon\$1 same purchase\$1 same (mov\$3 or drop\$3 or drag\$4 or overlay\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:38
-	0	6535888.uref.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:10
-	26	(online or on-line or web or Internet) same (result\$1 or output or hit\$1) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:16
-	8	(online or on-line or web or Internet) same (result\$1 or output or hit\$1) same (mov\$3 or overlay\$4 or drag\$4) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:17
-	23	(result\$1 or output or hit\$1) same (mov\$3 or overlay\$4 or drag\$4) same icon\$1 same purchase\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:28
-	109	(on-line or online) with purchase\$1 and (mov\$3 or overlay\$4 or drag\$4) same icon\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:36
-	7	(on-line or online) with purchase\$1 same (mov\$3 or overlay\$4 or drag\$4) same icon\$1	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:36
-	18	(online or on-line or web or Internet) and (result\$1 or output or hit\$1) same icon\$1 same purchase\$1 same (mov\$3 or drop\$3 or drag\$4 or overlay\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/28 19:39

-	13	(on-line or online) same (drag\$4 or mov\$3 or overlay\$4) same Icon\$1 same (purchas\$3)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/29 09:04
-	2	("5848406").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/04/29 10:02
-	3569	(database or data near base) and (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3) and (limit\$3 or constraint\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 11:09
-	148	(database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3) same (limit\$3 or constraint\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 11:39
-	4	707/3,4,7,10,102,104.1.ccls. and (database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3) same (Includ\$3 or contain\$3 or consist\$3) same (all or every) same (data or result\$1 or output\$1 or record\$1 or row\$1 or tuple\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 11:46
-	49	(database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3) same (Includ\$3 or contain\$3 or consist\$3) same (all or every) same (data or result\$1 or output\$1 or record\$1 or row\$1 or tuple\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 11:49
-	80	(database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3) same (all or every) same (data or result\$1 or output\$1 or record\$1 or row\$1 or tuple\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 11:52
-	246	(database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3) same (field\$1 or column\$1 or character\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 12:03
-	75	((database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3) same (field\$1 or column\$1 or character\$1)) and (threshold\$1 or limit\$3 or exceed\$3 or over) same display\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 11:58

Search History 8/20/04 1:44:59 PM Page 33

C:\APPS\EAST\Workspaces\09935565.wsp

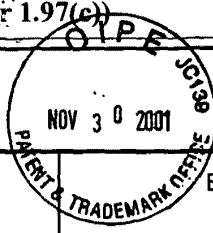
-	1297	(database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3 cut-off)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 12:04
-	202	(database or data near base) same (search\$3 or quer\$3 or retriev\$3) same (result\$1 or output\$1 or hit\$1) same (truncat\$3 or reduc\$3 cut-off) same (vertically or field\$1 or attribute\$1)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/20 12:04

2177#4

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.
5607

In Re Application Of: **Joseph L. DE BELLIS**



Serial No.	Filing Date	Examiner	Group Art Unit
09/935,565	8/24/2001	n/a	n/a

Title: **SEARCH-ON-THE-FLY WITH MERGE FUNCTION**

Address to:
Assistant Commissioner for Patents
Washington, D.C. 20231

RECEIVED
DEC 03 2001
Group 2100

37 CFR 1.97(b)

1. The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

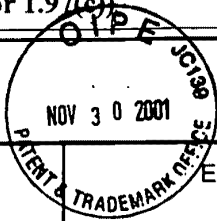
37 CFR 1.97(c)

2. The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:
- the statement specified in 37 CFR 1.97(e);
- OR**
- the fee set forth in 37 CFR 1.17(p).

TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT
(Under 37 CFR 1.97(b) or 1.97(e))

Docket No.
5607

In Re Application: **Joseph L. DE BELLIS**



Serial No.
09/935,565

Filing Date
8/24/2001

Examiner
n/a

Group Art Unit
n/a

SEARCH-ON-THE-FLY WITH MERGE FUNCTION

RECEIVED
DEC 03 2001
Group 2100

Payment of Fee

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- A check in the amount of _____ is attached.
- The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. _____ as described below. A duplicate copy of this sheet is enclosed.
 - Charge the amount of _____
 - Credit any overpayment.
 - Charge any additional fee required.

Certificate of Transmission by Facsimile*

I certify that this document and authorization to charge deposit account is being facsimile transmitted to the United States Patent and Trademark Office (F

(Date)

Signature

Typed or Printed Name of Person Signing Certificate

Certificate of Mailing by First Class Mail

I certify that this document and fee is being deposited with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

Signature of Person Mailing Correspondence

Typed or Printed Name of Person Mailing Certificate

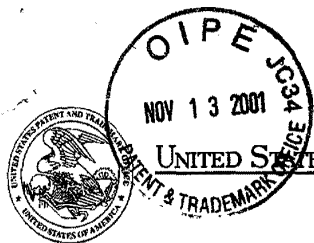
*This certificate may only be used if paying by deposit account.

Signature

Dated: November 30, 2001

Ami P. Shah, Reg. No. 42,143
DORSEY & WHITNEY LLP
1660 International Drive
Suite 400
McLean, VA 22102
(703) 288-5240
Fax (703) 288-5260

cc:



APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/935,565	08/24/2001	Joseph L. De Bellis	5607

COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20231
 www.uspto.gov

CONFIRMATION NO. 9677

FORMALITIES LETTER



OC00000006538420

DORSEY & WHITNEY LLP
 Suite 300
 1660 International Drive
 McLean, VA 22102

Date Mailed: 09/10/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION


FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.
- **The balance due by applicant is \$ 65.**

*A copy of this notice **MUST** be returned with the reply.*



 Customer Service Center
 Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

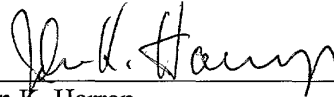
11/14/2001 55ESHE1 00000023 041425 09935565
 01 FC:205 65.00 CH

Application No.: 09/935,565

or insufficiency to the above deposit account number in connection with this communication. A duplicate copy of this letter is transmitted for that purpose

Respectfully submitted,

Date: November 13, 2001



John K. Harrop
Reg. No.: 41,817
DORSEY & WHITNEY LLP
1001 Pennsylvania Avenue, N.W.
Suite 300 South
Washington, D.C. 20004
(202) 824-8800/(703) 288-5247
(202) 824-8990 facsimile

TELETYPE

Docket No.
5607

Declaration and Power of Attorney For Patent Application

English Language Declaration



As a below inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled
SEARCH-ON-THE-FLY WITH MERGE FUNCTION

the specification of which

(check one)

- is attached hereto.
- was filed on August 24, 2001 as United States Application No. or PCT International Application Number 09/935,565 and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)			Priority Not Claimed
_____	_____	_____	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	
_____	_____	_____	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	
_____	_____	_____	<input type="checkbox"/>
(Number)	(Country)	(Day/Month/Year Filed)	

FOR THE OFFICE OF THE SECRETARY OF COMMERCE

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

60/227,305	August 24, 2000
(Application Serial No.)	(Filing Date)
_____	_____
(Application Serial No.)	(Filing Date)
_____	_____
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

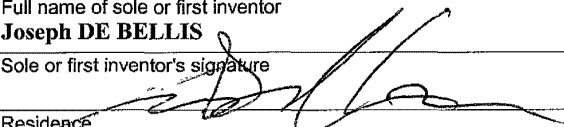
All Attorneys listed under Customer Number 27082

Send Correspondence to:

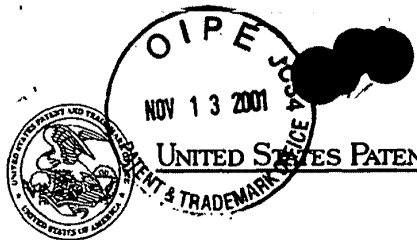
Dorsey & Whitney LLP
1001 Pennsylvania Avenue, N.W., Suite 300 South
Washington, D.C. 20004

Direct Telephone Calls to: (name and telephone number)

John K. Harrop (202) 824-8800/(703) 288-5247

Full name of sole or first inventor	Joseph DE BELLIS	
Sole or first inventor's signature		Date 11/8/01
Residence	Southampton, New York 11968	
Citizenship	U.S.A.	
Post Office Address	N/A	

Full name of second inventor, if any		
Second inventor's signature		Date
Residence		
Citizenship		
Post Office Address		



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/935,565	08/24/2001	Joseph L. De Bellis	5607

CONFIRMATION NO. 9677

FORMALITIES LETTER



OC00000006538420

DORSEY & WHITNEY LLP
Suite 300
1660 International Drive
McLean, VA 22102

Date Mailed: 09/10/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.
- **The balance due by applicant is \$ 65.**

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center
Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

11/14/2001 SSESHE1 00000023 041425 09935565
01 FC:205 65.00 CH

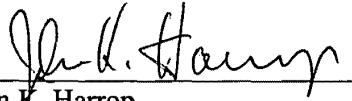
OFFICE 53560

Application No.: 09[REDACTED],565

or insufficiency to the above deposit account number in connection with this communication. A duplicate copy of this letter is transmitted for that purpose

Respectfully submitted,

Date: November 13, 2001



John K. Harrop
Reg. No.: 41,817
DORSEY & WHITNEY LLP
1001 Pennsylvania Avenue, N.W.
Suite 300 South
Washington, D.C. 20004
(202) 824-8800/(703) 288-5247
(202) 824-8990 facsimile

662-3090

FOR THE RECORD



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20231
 www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/935,565	08/24/2001	Joseph L. De Bellis	5607

CONFIRMATION NO. 9677

FORMALITIES LETTER



OC000000006538420

DORSEY & WHITNEY LLP
 Suite 300
 1660 International Drive
 McLean, VA 22102

Date Mailed: 09/10/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is missing.
A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$65 for a small entity in compliance with 37 CFR 1.27, must be submitted with the missing items identified in this letter.
- **The balance due by applicant is \$ 65.**

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center
 Initial Patent Examination Division (703) 308-1202

PART 3 - OFFICE COPY

UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
5607

Total Pages in this Submission

TO THE ASSISTANT COMMISSIONER FOR PATENTS

Box Patent Application
Washington, D.C. 20231

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

SEARCH-ON-THE-FLY WITH MERGE FUNCTION

and invented by:

Joseph L. De Bellis

11003 U.S. PTO
09/935565
08/24/01

If a **CONTINUATION APPLICATION**, check appropriate box and supply the requisite information:

Continuation Divisional Continuation-in-part (CIP) of prior application No.: 09/513,340

Which is a:

Continuation Divisional Continuation-in-part (CIP) of prior application No.: _____

Which is a:

Continuation Divisional Continuation-in-part (CIP) of prior application No.: _____

Enclosed are:

Application Elements

1. Filing fee as calculated and transmitted as described below
2. Specification having 40 pages and including the following:
 - a. Descriptive Title of the Invention
 - b. Cross References to Related Applications (if applicable)
 - c. Statement Regarding Federally-sponsored Research/Development (if applicable)
 - d. Reference to Microfiche Appendix (if applicable)
 - e. Background of the Invention
 - f. Brief Summary of the Invention
 - g. Brief Description of the Drawings (if drawings filed)
 - h. Detailed Description
 - i. Claim(s) as Classified Below
 - j. Abstract of the Disclosure

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.

5607

Total Pages in this Submission

Application Elements (Continued)

3. Drawing(s) *(when necessary as prescribed by 35 USC 113)*
a. Formal b. Informal Number of Sheets 55
4. Oath or Declaration
a. Newly executed *(original or copy)* Unexecuted
b. Copy from a prior application (37 CFR 1.63(d)) *(for continuation/divisional application only)*
c. With Power of Attorney Without Power of Attorney
d. DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. 1.63(d)(2) and 1.33(b).
5. Incorporation By Reference *(usable if Box 4b is checked)*
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
6. Computer Program in Microfiche
7. Genetic Sequence Submission *(if applicable, all must be included)*
a. Paper Copy
b. Computer Readable Copy
c. Statement Verifying Identical Paper and Computer Readable Copy

Accompanying Application Parts

8. Assignment Papers *(cover sheet & documents)*
9. 37 CFR 3.73(b) Statement *(when there is an assignee)*
10. English Translation Document *(if applicable)*
11. Information Disclosure Statement/PTO-1449 Copies of IDS Citations
12. Preliminary Amendment
13. Acknowledgment postcard
14. Certificate of Mailing
 First Class Express Mail *(Specify Label No.):* _____

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
5607

Total Pages in this Submission

Accompanying Application Parts (Continued)

- 15. Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
- 16. Small Entity Statement(s) - Specify Number of Statements Submitted: _____
- 17. Additional Enclosures *(please identify below):*

Claim to Priority of U.S. Provisional Patent Application No.: 60/227,305 filed August 24, 2000.

Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

- 18. Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.

Warning

An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
5607

Total Pages in this Submission

Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	41	- 20 =	21	x \$9.00	\$189.00
Indep. Claims	8	- 3 =	5	x \$40.00	\$200.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$355.00
OTHER FEE (specify purpose)					\$0.00
TOTAL FILING FEE					\$744.00

- A check in the amount of _____ to cover the filing fee is enclosed.
- The Commissioner is hereby authorized to charge and credit Deposit Account No. **04-1425** as described below. A duplicate copy of this sheet is enclosed.
- Charge the amount of **\$744.00** as filing fee.
 - Credit any overpayment.
 - Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
 - Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: **August 24, 2001**



Signature

**Aldo Noto, Reg. No.: 35,628
DORSEY & WHITNEY LLP
1660 International Drive, Suite 300
McLean, VA 22102
Tel. (703) 288-5250
Fax (703) 288-5260**

cc:

1 parameters to be narrowed. When large amounts of data are presented, the display may
2 take many “pages” before all data is seen by the user. The time and expense involved in
3 such a data review may be significant, inconvenient, not user friendly or efficient.

4 **Summary**

5 Sort-on-the-Fly/Search-on-the-Fly data retrieval methods and apparatus (hereafter,
6 search-on-the-fly) provide an intuitive means for accessing or searching databases,
7 allowing a user to access or obtain information about data in the database without having
8 to know anything about the database structure. Sort-on-the-Fly/Search-on-the-Fly is an
9 information gathering process or analysis process about data stored in one or more
10 databases. The on-the-fly methods and apparatus often use or include sorting and
11 searching. While Sort-on-the-Fly/Search-on-the-Fly may be a search engine or part of a
12 search engine, it may also stand alone or make calls to a search engine. For example,
13 database search engines may be used in conjunction with on-the-fly methods and
14 apparatus.

15 Using Sort-on-the-Fly/Search-on-the-Fly, a user selects a desired term, and the
16 user is delivered all instances of the desired term, even if a specific file or table does not
17 contain the instance. For example, if a user wants to enter a database using the name of a
18 specific individual as a database entry point, a database manager or other software will
19 access the database using the desired name, and will organize the results so that all entries
20 associated with that name are displayed. The database need not have a specific file (in a
21 flat database) or a table (in a relational database) of names. The user may perform further
22 on-the-fly searches or information retrieval to narrow or focus the results, or for other
23 reasons. For example, given results for all names that include the name “Smith,” the user
24 may then decide to obtain information for all “Smiths” that include an association to an
25 address in New Jersey. Search-on-the-fly then conducts a further information gathering
26 using this criteria and produces a second result. Further narrowing or broadening of the
27 analysis is permitted, with search-on-the-fly returning results based on any new criteria.

28 In an embodiment, search-on-the-fly uses graphical user interfaces (GUIs) and
29 one or more icons to make the information gathering process as efficient as possible. The
30 GUIs may incorporate one or more pull down menus of available sorting terms. As a user
31 selects an item from a first pulldown menu, a subsequent pulldown menu displays choices
32 that are available for sorting or searching. The process may be continued or repeated
33 until Sort-on-the-Fly/Search-on-the-Fly has retrieved or displayed a discrete data entry
34 from the database. The pulldown menus are not pre-formatted. Instead, the pulldown

1 menus are created "on-the-fly" as the user steps through the sort and/or search process.
 2 Thus, search-on-the-fly is inherently intuitive, and allows a user with little or no
 3 knowledge of the database contents, its organization, or a search engine search routine to
 4 execute comprehensive analysis, sorting and/or searches that return generally accurate
 5 results.

6 Search-on-the-fly also searches on key words specified by the user. Search-on-
 7 the-fly can be used to exclude certain items. Search-on-the-fly incorporates other
 8 advanced features such as saving results by attaching a cookie to a user's computer, and
 9 associating icons with the results.

10 Search-on-the-fly may be used with both internal and external databases. For
 11 example, Search-on-the-fly may be used with a company internal database and one or
 12 more databases accessible through the Internet.

13 Search-on-the-fly is user-friendly. With one interface, many different types of
 14 databases or database schemas may be searched or sorted.

15 Finally, the search-on-the-fly technique, and other techniques discussed above
 16 may be used in conjunction with a method of doing business, particularly a business
 17 method that uses the Internet as a communications backbone.

18 **Description of the Drawings**

19 The detailed description will refer to the following figures, in which like numerals
 20 refer to like objects, and in which:

21 Figure 1 is a block diagram of a system that uses a search-on-the-fly/sort-on-the-
 22 fly process;

23 Figure 2 is another overall block diagram of the system of Figure 1;

24 Figure 3 is a detailed block diagram of the search engine used with the system of
 25 Figure 2;

26 Figure 4 is an example of a search-on-the-fly using the search engine of Figure 3;

27 Figures 5 - 9 are detailed block diagrams of components of the search engine of
 28 Figure 3;

29 Figure 10 is another example of a search-on-the-fly using the search engine of
 30 Figure 3;

31 Figures 11 - 15b are additional examples of a search-on-the-fly using the search
 32 engine of Figure 3;

33 Figures 16 - 20 are flow charts illustrating operations of the search engine of
 34 Figure 3;

1 Figure 21 illustrates a further function of the search engine of Figure 3 in which
 2 results of more than one search are combined;

3 Figures 22 - 26 illustrate graphical user interfaces that may be displayed in
 4 conjunction with operation of the system of Figure 1;

5 Figure 27 is a flowchart illustrating an alternate operation of a query generator
 6 used with the search engine of Figure 3;

7 Figure 28 is a flowchart illustrating an alternate operation of the truncator used
 8 with the search engine of Figure 3;

9 Figures 29 - 36 illustrate user interfaces with search results from a search on the
 10 fly and a merge function;

11 Figures 37 - 39 illustrate a keyword search result form a search on the fly with the
 12 merge function;

13 Figures 40-49 illustrate additional search results;

14 Figure 50 illustrates a cellular phone incorporating the search-on-the fly with
 15 merge function;

16 Figure 51 illustrates a personal data assistant incorporating the search-on-
 17 the-fly with merge function;

18 Figures 52a – 52l illustrate search-on-the-fly as displayed on the cellular phone of
 19 Figure 50; and

20 Figure 53 illustrates a computer-readable medium having the search-on-the-fly
 21 with merge function loaded thereon.

22 **Detailed Description**

23 Ordinary search engines place constraints on any search. In particular, a partial
 24 ordering of available search criteria limits application of the search engine only to certain
 25 search sequences. The user is given a choice of search sequences, and the order in which
 26 individual search steps in the search sequence become available limits the direction of the
 27 search. A user who desires to take a vacation cruise may use an Internet search engine to
 28 find a desired vacation package. The search begins with presentation of a list of general
 29 categories, and the user clicks on “travel,” which produces a list of subcategories. The
 30 user then clicks on “cruises” from the resulting list of subcategories, and so on in a
 31 cumulative narrowing of possibilities until the user finds the desired destination, date,
 32 cruise line, and price. The order in which choices become available amounts to a
 33 predefined “search tree,” and the unspoken assumption of the search engine designer is

1 that the needs and thought processes of any user will naturally conform to this predefined
2 search tree.

3 To an extent, predefined constraints are helpful in that predefined constraints
4 allow a search engine to logically and impersonally order the user's thoughts in such a
5 way that if the user has a clear idea of what object the user wants, and if the object is
6 there to be found, then the user is assured of finding the object. Indeed, the user may
7 want to know that choosing any available category in a search sequence will produce an
8 exhaustive and disjunctive list of subcategories from which another choice can be made.
9 Unfortunately, an unnecessarily high cost is too often paid for this knowledge: The user
10 is unnecessarily locked into a limited set of choice sequences, and without sufficient prior
11 knowledge of the object being sought, this limitation can become a hindrance.
12 Specifically, where prescribed search constraints are incompatible with the associative
13 relationships in the user's mind, a conflict can arise between the thought processes of the
14 user and the function of the search engine.

15 At one time, such conflicts were written off to the unavoidable differences
16 between computers and the human mind. However, some "differences" are neither
17 unavoidable nor problematic. In the case of search engine design, the solution is elegant:
18 upon selecting a category or entering a keyword, the user can be given not only a list of
19 subcategories, but the option to apply previously available categories as well. In slightly
20 more technical terms, the open topology of the search tree can be arbitrarily closed by
21 permitting search sequences to loop and converge. Previous lists can be accessed and
22 used as points of divergence from which new sub-sequences branch off, and the attributes
23 corresponding to distinct sub-sequences can later be merged.

24 Sort-on-the-fly/search-on-the-fly data analysis, sorting access and retrieval
25 methods and apparatus (hereafter, search-on-the-fly search engine) provide an intuitive
26 means for analyzing various types of databases, allowing a user to obtain information
27 about and/or access data in the database without having to know anything about the
28 database structure. A user selects a desired term, and a database manager reviews the
29 database for all instances of the desired term, even if a specific file or table does not
30 contain the instance. For example, if a user wants to analyze the database using the name
31 of a specific individual as a database entry point, the database manager will search the
32 database or index using the desired name, and will organize the results so that all entries
33 associated with that name are displayed. The database need not have a specific file (in a
34 flat database) or a table (in a relational database) of names. The user may perform further

1 requests 114 from the terminal 14 (not shown in Figure 3) and sends out updated requests
2 115 to a query generator 150. A status control 140 receives a status update signal 116 and
3 a request status control signal 118 and sends out a request status response 119 to the
4 request analyzer 130. The status control 140 also keeps track of search cycles, that is, the
5 number of search iterations performed. The query generator 150 receives the updated
6 requests 115 from the request analyzer 130 and sends a database access signal 151 to a
7 database driver 170. The query generator 150 receives results 153 of a search of the
8 database 12 (not shown in Figure 3) from the database driver 170. The query generator
9 150 provides a display signal 175 to the terminal 14. The database driver 170 sends a
10 database access signal 171 to the database 12. Finally, a database qualifier 160 receives
11 information 161 from the database driver 170 and provides a list 163 of available data
12 fields from the database 12. As will be described later, the list of available data fields 163
13 may be displayed to a user at the terminal 14, and may be sorted and processed using the
14 request analyzer 130 in conjunction with the database qualifier 160. The database
15 qualifier 160 also receives search information and other commands 131 from the request
16 analyzer 130.

17 The search engine 125 may identify a database schema by simply using a trial and
18 error process. Alternatively, the search engine 125 may use other techniques know in the
19 art. Such techniques are described, for example, in U.S. Patent 5,522,066, "Interface for
20 Accessing Multiple Records Stored in Different File System Formats," and U.S. Patent
21 5,974,407, "Method and Apparatus for Implementing a Hierarchical Database
22 Management System (HDBMS) Using a Relational Database Management System
23 (RDBMS) ad the Implementing Apparatus," the disclosures of which is hereby
24 incorporated by reference.

25 The search engine 125 provides search-on-the-fly search capabilities and more
26 conventional search capabilities. In either case, the search engine 125 may perform a
27 preliminary database access function to determine if the user has access to the database
28 12. The search engine 125 also determines the database schema to decide if the schema is
29 compatible with the user's data processing system. If the database schema is not
30 compatible with the user's processing system, the search engine 125 may attempt to
31 perform necessary translations so that the user at the terminal 14 may access and view
32 data in the database 12. Alternatively, the search engine 125 may provide a prompt for
33 the user indicating incompatibility between the terminal 14 and a selected database.

1 The search engine 125 may conduct a search using one or more search cycles. A
2 search cycle includes receipt of a request 114, any necessary formatting of the request
3 114, and any necessary truncation steps. The search cycle ends when a result list 175 is
4 provided to the terminal 14. The search engine 125 may retain a status of each past and
5 current search cycle so that the user can modify the search at a later time. The user may
6 also use this feature of retaining a status of past and current search cycles to combine
7 results of multiple searches, using, for example, a Boolean AND function, a Boolean OR
8 function, or other logic function. The above listed functions will be described in more
9 detail later.

10 The search-on-the-fly function of the search engine 125 begins by determining
11 available data fields of the database 12. The database 12 may have its data organized in
12 one or more data fields, tables, or other structures, and each such data field may be
13 identified by a data field descriptor. In many cases, the data field descriptor includes
14 enough text for the user at the terminal 14 to determine the general contents of the data
15 field. The list of data fields may then be presented at the terminal 14, for example, in a
16 pull down list. An example of such a data field result list is shown in Figure 4, which is
17 from a federal database showing data related to managed health care organizations. This
18 database is available at <http://tobaccopapers.org/dnld.htm>. In Figure 4, the first data field
19 listed is "PlanType," which is shown in result list 156. Other data field descriptors show
20 the general categories of data in the database.

21 Using the terminal 14, the user may select one of the data field descriptors to be
22 searched. For example, the user could select "city." If a number of entries, or records, in
23 the city data field is short, a further result list of complete city names may be displayed.
24 If the entries are too numerous to be displayed within a standard screen size, for example,
25 the search engine 125 may, in an iterative fashion, attempt to reduce, or truncate, the
26 result list until the result list may be displayed. In the example shown in Figure 4, entries
27 in the city data field are so numerous (the database includes all U.S. cities that have a
28 managed health care organization) that the search engine 125 has produced a result list
29 157 that shows only a first letter of the city. Based on the available database data fields,
30 the user may then perform a further search-on-the-fly. In this case, the user may choose
31 cities whose first initial is "N." The search engine 125 then returns a result list 158 of
32 cities whose names start with the letter "N." Because in this instance the result list 158 is
33 short, no further truncation is necessary to produce a manageable list.

1 Figure 5 is a more detailed block diagram of the request analyzer 130. A protocol
 2 analyzer 133 receives the request 114 and provides an output 135 to a constraint collator
 3 136. The protocol analyzer 133 examines the received request 114, determines a format
 4 of the request 114, and performs any necessary translations to make the request format
 5 compatible with the database to be accessed. If the database to be accessed by the
 6 terminal 14 is part of a same computer system as the terminal 14, then the protocol
 7 analyzer 133 may not be required to perform any translations or to reformat the request
 8 114. If the database to be accessed is not part of the same computer system as the
 9 terminal 14, then the protocol analyzer 133 may be required to reformat the request 114.
 10 The reformatting may be needed, for example, when a request 114 is transmitted over a
 11 network, such as the Internet, to a database coupled to the network.

12 The constraint collator 136 provides the updated request 115 (which may be an
 13 initial request, or a subsequent request) to the query generator 150. The constraint
 14 collator 136 is responsible for interpreting the request 114. The constraint collator 136
 15 performs this function by comparing the request 114 against information stored in the
 16 status control 140. In particular, the constraint collator 136 sends the request status
 17 control signal 118 to the status control 140 and receives the request status response 119.
 18 The constraint collator 136 then compares the request status response 119 to constraint
 19 information provided with the request 114 to determine if the constraint status should be
 20 updated (e.g., because the request 114 includes a new constraint). In an embodiment, the
 21 constraint collator 136 compares constraint information in a current request 114 to
 22 constraint information residing in the status control 140, and if the current request 114
 23 includes a new constraint, such as a new narrowing request (for example, when the user
 24 clicks, touches or points over a field shown in a last search cycle), then the constraint
 25 collator 136 adds the updated information and sends the updated request 115 to the query
 26 generator 150. If the constraint status should be updated, the constraint collator 136 sends
 27 the status update 118 to the status control 140. If the request 114 is a refresh request, the
 28 constraint collator 136 sends a reset command 131 to the database qualifier 160. The
 29 updated request 115 (possibly with a new constraint) is then sent to the query analyzer
 30 150 for further processing.

31 Figure 6 is a block diagram of the query generator 150. The overall functions of
 32 the query generator 150 are to scan a database, such as the database 12, using the database
 33 driver 170, and to collect search results based on constraints supplied by the request

1 For example, a user could then select Riv for a further search-on-the-fly. The result list
 2 returned would then list two cities, namely Riverhead and Riverdale.

3 In another embodiment, a fixed format is imposed such that all queries generated
 4 against a database will have preset limits corresponding to the capacity of the terminal 14.

5 In yet another embodiment, the truncator 152 may adjust the field size by division
 6 or other means. For example, if the display limit has been reached, the truncator 125 may
 7 reduce the field size, X by a specified amount. In an embodiment, X may be divided by
 8 two. Alternatively, X may be multiplied by a number less than 1, such as 3/4, for
 9 example. Adjusting the field size allows the search engine 125 to perform more focused
 10 searches and provides more accurate search results.

11 In another embodiment, the truncator first attempts to display information without
 12 truncation. If that is not appropriate, the truncator may attempt truncation by beginning
 13 with one character (26 letters and perhaps 10 digits) and incrementing to two characters
 14 and then three, four, until a failure to display is reached.

15 In still another embodiment, the user may select a limit that will cause the
 16 truncator 152 to adjust the field size. For example, the user could specify that a
 17 maximum of ten entries should be displayed.

18 For certain data fields, a terminal of a hand-held device, may have a very limited
 19 display capacity. For example, a personal data assistant (POA – see Figure 52) or a
 20 cellular phone (see Figure 50) may be used to search a database, with the results
 21 displayed on a small screen. Alternatively a user may specify a limit on the number of
 22 entries for display. In the illustrated cases, the search engine 125 may return a result list
 23 175 of the request 114 on multiple display pages, and the user may toggle between these
 24 multiple display pages. As an example, if the terminal 14 is limited to displaying a
 25 maximum of ten entries, and if the request 114 results in a return of a data field
 26 comprising the 400 largest cities in the United States, the truncator 152 will produce a list
 27 of 23 entries comprising 23 alphabetical characters (no cities that begin with Q, Y or Z -
 28 see Figure 4). The search engine 125 may then display the results on three pages.
 29 Alternatively, the truncator 152 could produce a list of letter groups into which the cities
 30 would fall, such as A-D, E-G, H-M, N-R, and R-X, for example. In another alternative,
 31 the search engine 125 may send a notice to the terminal that the request 114 cannot be
 32 accommodated on the terminal 14 and may prompt the user to add an additional
 33 constraint to the request 114, so that a search result may be displayed at the terminal 14.

1 constraint collator 136 sends a request status query 116 to the index module 144. The
 2 status data module 142 contains information related to all past and current search cycles,
 3 which are referenced by the index module 144, and delivers a status response 119 for the
 4 most recent search cycle to the constraint collator 136. When a new constraint is sent to
 5 the query generator 150, the status data module 142 is updated 118 by the constraint
 6 collator 136. Specific structures of the request 114, the request status query 116, the
 7 status response 119 and the request status control 118 will be provided later.

8 The status data module 142 may be reset by the database qualifier 160 with all
 9 available fields when a refresh function is used. In an embodiment, the refresh function
 10 may be used to clear all past search cycles and the current search cycle from the status
 11 control 140. In such an event, the search results, such as the search results shown in
 12 Figure 4, will no longer be displayed at the terminal 14, and data related to the past and
 13 the current search cycles may not be used for future search cycles. In effect, the refresh
 14 function may cause the entire search to be discarded. The refresh function may be
 15 activated when a user selects a refresh button (see Figure 4) on a displayed result list, or
 16 on another portion of a GUI. Alternatively, the refresh function may discard selected
 17 search cycles. In this alternative embodiment, the user may, for example, move a cursor
 18 to a desired result list from a past search cycle and activate a refresh, reset, back, or drop
 19 button. All data associated with search cycles subsequent to the selected search cycle,
 20 including all displayed result lists may then be discarded.

21 Figure 8 is a block diagram showing the database qualifier 160. The database
 22 qualifier 160 provides data field information at the start of a search or when the search
 23 engine 125 is refreshed. A field assessor 162 access the database 12 using the database
 24 driver 170, and identifies and accesses discrete data fields and other information in the
 25 database 12. A field converter 164 structures the data field information into a usable
 26 (searchable/sortable) structure and sends 163 the formatted data field information to the
 27 status control 140. Techniques for identifying and accessing the data fields, and for
 28 formatting the data field information are well known in the art. Such techniques are
 29 described, for example, in U.S. Patent 5,222,066, Interface for Accessing Multiple
 30 Records Stored in Different File System Formats, the disclosure of which is hereby
 31 incorporated by reference.

32 Figure 9 is a block diagram of the database driver 170. The database driver 170
 33 is the universal interface with the database 12, which can be a local or a remote database.

1 Figure 10 is an example of a search-on-the-fly using the search engine 125. In
2 Figure 10, a database 200 includes information related to a number of individuals. The
3 information in the database 200 may be presented at the terminal 14 using a series of
4 screens or menus 201 - 230. The user first accesses the database 200 and is presented
5 with a list 201 of the information or data fields contained in the database 200. The result
6 list 201 is generated by the field assessor 162, and is provided for display at the terminal
7 14 by the query generator 150. As shown in Figure 10, a user has selected the data field
8 "City" for display of information. However, the number of "cities" listed in the database
9 200 is too large to conveniently display at one time (i.e., on one page) at the terminal 14.
10 Accordingly, the truncator 152 will loop a required number of times until an adequate
11 display is available. In Figure 10, the menu 203 shows the results of the truncation with
12 only the first letter of a city name displayed.

13 Using the menu 203, the user has selected cities beginning with the letter "A."
14 The results are shown in menu 205. Now, the user elects to conduct another search-on-
15 the-fly, by selecting the "sort-on-the-fly" option 206. The query generator 150 displays
16 all the information fields available from the database 200, except for the information field
17 already displayed, namely "City." The results are displayed in menu 207. The user then
18 elects to further search on the data field "State." The query generator 150 returns the
19 requested information as displayed in menu 209, listing five states by their common two-
20 letter abbreviation. The user then chooses New York from the menu 209, and the query
21 generator 150 returns a list of cities in New York, menu 211.

22 Next, the user elects to conduct another search-on-the-fly, option 212, and the
23 query generator 150 returns only the remaining data fields for display in menu 215. From
24 the menu 215, the user selects "Address" for the next data field to search, and the query
25 generator 150 returns an menu 217 showing only first letters of the address. This
26 signifies that the data field "Address" was too large to be easily displayed on the terminal
27 14. The user then elects to search on all addresses that begin with "C." The query
28 generator 150 returns a list of addresses by displaying only street names, menu 219.

29 The user then elects to conduct a further search-on-the-fly, option 220, and the
30 remaining two data fields, "Name" and "Phone" are displayed as options in menu 221.
31 The user selects name, and the query generator returns a further breakdown of the data by
32 last name and by first name, menu 223. This process continues, with further menus being
33 used to select a last name and a first name from the database 200. When the final

1 selection is made, information from the database 200 related to the individual is displayed
2 in window 230.

3 In the example shown in Figure 10, the user could have refreshed the search
4 engine 125 at any time, and the search would have recommenced at the beginning.
5 Alternatively, the user could, by simply selecting a prior menu, such as the menu 215,
6 have changed the course of the search. In this alternative, if the user had gone back to the
7 menu 215 and instead of selecting "Address" selected "Phone," then the menus 217 - 229
8 would be removed from display at the terminal 14, and the search would begin over from
9 the point of the menu 215.

10 Figures 11 – 15b illustrate exemplary searches of a remote database, such as the
11 database 13 shown in Figure 1. The database in the illustrated example is for an Internet
12 website 232 that sells books. The examples illustrated are based on a Barnes & Noble™
13 website. In Figure 11, the user has applied the search engine 125 to the website 232
14 database, and the query generator 150 has returned a list 233 of data fields from which the
15 user may select to access data from the website 232 database. The list 233, and other lists
16 described below, may be displayed as overlays on the website 232. In the example
17 illustrated, the user selects "Title" for the first search cycle. Because the list of titles is
18 too large to easily display at the terminal 14, the truncator 152 loops until an
19 alphanumeric list 234 is created. The list 234 is then returned to the terminal 14. For the
20 next search cycle, the user selects titles that begin with the letter "C." Again, the data
21 field contains too many entries to conveniently display at the terminal 14, and the
22 truncator 152 loops as appropriate until list 235 is created. The process continues with
23 subsequent lists 236 and 237 being returned to the terminal 14.

24 Figures 12 - 15b illustrate alternate searches that may be completed using the
25 website 232 database.

26 For the search results shown in Figures 11 – 15b, the status control 140 may
27 iterate as follows:

28 Status Control Started...
29 Key: Title1 Option: Title Level: 1 Filter: Field: Title
30 Key: A2 Option: A Level: 2 Filter: SUBSTRING([Title],1,1) = 'A' Field:
31 Title
32 Key: AA3 Option: AA Level: 3 Filter: SUBSTRING([Title],1,2) = 'AA'
33 AND SUBSTRING([Title],1,1) = 'A' Field: Title

1 Key: F4 Option: F Level: 4 Filter: SUBSTRING([Title],1,1) = 'F' Field:
 2 Title
 3 Key: Fa5 Option: Fa Level: 5 Filter: SUBSTRING([Title],1,2) = 'Fa'
 4 AND SUBSTRING([Title],1,1) = 'F' Field: Title
 5 Key: Favo6 Option: Favo Level: 6 Filter: SUBSTRING([Title],1,4) =
 6 'Favo' AND SUBSTRING([Title],1,2) = 'Fa' AND SUBSTRING([Title],1,1) = 'F'
 7 Field: Title
 8 Key: C7 Option: C Level: 7 Filter: SUBSTRING([Title],1,1) = 'C' Field:
 9 Title
 10 Key: Ce8 Option: Ce Level: 8 Filter: SUBSTRING([Title],1,2) = 'Ce'
 11 AND SUBSTRING([Title],1,1) = 'C' Field: Title
 12 Key: Cells9 Option: Cells Level: 9 Filter: SUBSTRING([Title],1,5) =
 13 'Cells' AND SUBSTRING([Title],1,2) = 'Ce' AND SUBSTRING([Title],1,1) = 'C'
 14 Field: Title
 15 Key: Cellula10 Option: Cellula Level: 10 Filter: SUBSTRING([Title],1,7)
 16 = 'Cellula' AND SUBSTRING([Title],1,2) = 'Ce' AND SUBSTRING([Title],1,1)
 17 = 'C' Field: Title
 18 Key: CC11 Option: CC Level: 11 Filter: SUBSTRING([Title],1,2) = 'CC'
 19 AND SUBSTRING([Title],1,1) = 'C' Field: Title
 20 Status Control Terminated.
 21 Figure 15b shows the results for a search for a low-fat cookbook using the search
 22 engine 125 as applied to a remote database. In this example, the remote database is
 23 coupled to a Barnes & Noble web page. The first query, and resulting message strings,
 24 are illustrated by the following:
 25 Query Analyzer
 26 Message Received: ACK
 27 Status Control: Refresh
 28 Dispatcher
 29 Message Sent: Categories~~Title~~Author~~ISBN~SubTitle~Format~Date
 30 Published~Stock Status~Recommended
 31 Age~Pages~Ratings~Price~Retail~Savings~~~Publisher
 32 Query Analyzer
 33 Message Received: CLK#0#1#Categories
 34 Status Control received an update:

1 Key: Categories1 Option: Categories Level: 1 Filter: Field: Categories
 2 Query Generator
 3 Request is not cached, processing
 4 Generated Query: SELECT DISTINCT [Categories] FROM Books ORDER BY
 5 [Categories]
 6 Number of Matching Records: 2032
 7 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,82) FROM Books
 8 ORDER BY SUBSTRING([Categories],1,82)
 9 Number of Matching Records: 2022
 10 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,61) FROM Books
 11 ORDER BY SUBSTRING([Categories],1,61)
 12 Number of Matching Records: 1995
 13 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,45) FROM Books
 14 ORDER BY SUBSTRING([Categories],1,45)
 15 Number of Matching Records: 1751
 16 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,33) FROM Books
 17 ORDER BY SUBSTRING([Categories],1,33)
 18 Number of Matching Records: 1251
 19 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,24) FROM Books
 20 ORDER BY SUBSTRING([Categories],1,24)
 21 Number of Matching Records: 799
 22 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,18) FROM Books
 23 ORDER BY SUBSTRING([Categories],1,18)
 24 Number of Matching Records: 425
 25 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,13) FROM Books
 26 ORDER BY SUBSTRING([Categories],1,13)
 27 Number of Matching Records: 319
 28 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,9) FROM Books
 29 ORDER BY SUBSTRING([Categories],1,9)
 30 Number of Matching Records: 147
 31 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,8) FROM Books
 32 ORDER BY SUBSTRING([Categories],1,8)
 33 Number of Matching Records: 111

1 techniques, or any other way of entering data. The process then moves to block 284. In
 2 block 276, if a key word search option was not selected, the constraint collator 136 enters
 3 the new constraint to the existing list of constraints, block 278. The process then moves
 4 to block 284.

5 Returning to Figure 16, the constraint collator 136 next updates the status control
 6 140, block 290. In block 292, using the updated constraints, the query generator 150
 7 generates a next query of the database 12, block 292. The database driver 170 then
 8 extracts the result list from the database 12, according to the latest query, block 294. In
 9 block 296, the truncator 152 determines if the result list may be displayed at the terminal
 10 14. If the result list cannot be displayed, the process moves to block 298, and a truncation
 11 routine is executed. The process then returns to block 294. If the result list in block 296
 12 is small enough, the result list is provided by the dispatcher 154 to the terminal 14, block
 13 258.

14 As noted above, the request analyzer 130 determines the nature of the request,
 15 including any special commands. A special command may include a command to
 16 conduct a search-on-the-fly. Alternatively, the search engine 125 may adopt a search-on-
 17 the-fly mechanism as a default value. The search engine 125 also may incorporate other
 18 special search commands, such as a Boolean search, for example.

19 Figures 18 - 20 are flowcharts illustrating alternate truncation subroutines 298. In
 20 Figure 18, the subroutine 298 adjusts a size of a data field by decrementing a parameter
 21 TP related to entries in a selected data field. For example, if the data field comprises a list
 22 of U.S. cities by name, the parameter TP may be the number of alphabetical characters in
 23 a name. The results of such a truncation is shown in the example of Figure 4. The
 24 subroutine 298 starts at block 301. In block 303, the parameter TP is set to equal a size of
 25 the data field being searched. The truncator 152 then determines the list of records sized
 26 by the parameter TP, block 305. In block 307, the truncator 152 determines if the result
 27 list can be displayed at the terminal 14. If the result list cannot be displayed at the
 28 terminal 14, the truncator 152 decrements the parameter TP, block 309. Processing then
 29 returns to block 305, and the truncator 152 gets a reduced result list using the truncated
 30 parameter TP. If the result list can be displayed at the terminal 14, the process moves to
 31 block 311 and the subroutine 298 ends.

32 Figure 19 is a flowchart illustrating an alternate truncation routine 298'. The
 33 process starts in block 313. In block 315, the truncator 152 sets the parameter TP to a
 34 size of the data field being searched. In block 317, the truncator 152 determines the list

1 of records sized by the parameter TP. In block 319, the truncator 152 determines if the
 2 result list can be displayed at the terminal 14. If the result list cannot be displayed, the
 3 truncator 152 adjusts the size of the data field by dividing the parameter TP by a set
 4 amount, for example, by dividing the parameter TP by two, block 321. Processing then
 5 returns to block 317, and repeats. If the result list can be displayed at the terminal 14, the
 6 process moves to block 323 and the subroutine 298' ends.

7 Figure 20 shows yet another alternative truncation subroutine 298" The process
 8 starts in block 325. In block 327, the truncator 152 sets the parameter TP to equal the size
 9 of the data field being searched. In block 329, the truncator 152 determines the list of
 10 records sized by the parameter TP. The truncator 152 then determines if the result list can
 11 be displayed at the terminal 14, block 331. If the result list cannot be displayed at the
 12 terminal 14, the truncator 152 determines if the parameter TP is less then ten, block 333.
 13 If the parameter TP is not less than ten, the truncator 152 adjusts the parameter TP by
 14 multiplying the parameter TP by a number less than one, block 337. In an embodiment,
 15 the number may be 3/4. The process then returns to block 329 and repeats. In block 333,
 16 if the value of the parameter TP is less than ten, the truncator 152 decrements the
 17 parameter TP by one, block 335. Processing then returns to block 329 and repeats. In
 18 block 331, if the list can be displayed at the terminal 14, the process moves to block 339
 19 and the subroutine 298"ends.

20 The examples illustrated in Figures 18 - 20 are but a few examples of the
 21 truncations subroutine. One of ordinary skill in the art could conceive of other methods
 22 to adjust the field size. In addition to using a truncation subroutine, the user may specify
 23 a limit for the field size.

24 As noted above, the search engine 125 may be used for multiple searches and may
 25 be used to search multiple databases, including databases with different schemas. The
 26 results of individual searches, including the control data provided in the status control
 27 140, are saved. The search engine 125 may then be used to further sort (search), or
 28 otherwise operate on, the results of these multiple searches. In an embodiment, the search
 29 engine 125 may perform a Boolean AND operation on two search results. The result of
 30 the Boolean AND operation would be a list of records, or entries, that are common to the
 31 two search results. Figure 21 illustrates such a Boolean AND operation.

32 In Figure 21, a GUI 400 displays local database selections 410, including a
 33 database of recordings (compact discs - CDs) 412 and a database of contacts 414. The
 34 databases 412 and 414 may be shown by text descriptions and an appropriate icon, for

1 example. The database selections in this example are resident on a user's terminal, such
 2 as the terminal 14 shown in Figure 1. Also displayed on the GUI 400 is a remote
 3 database selection 420 that represents databases, such as the databases 13 and 15 shown
 4 in Figure 1, that are located remotely from the terminal 14. In the example shown in
 5 Figure 21, the remote database selection 420 includes a database 422 for online record
 6 sales, which is represented by an icon (a CD) and a text title of the online retailer. The
 7 remote databases shown in the remote database selection 420 may include those databases
 8 for which the user has already established a link. In the example shown, the user may
 9 already have entered an Internet address for the online retailer. In addition to any
 10 returned web pages from the online retailer, the terminal 14 may then display a
 11 representation of the database 422.

12 Continuing with the example, the user may use the search engine 125 to conduct a
 13 search-on-the-fly of the recordings database 412 and the Virgin Records™ database 422.
 14 The user may search both databases 412 and 422 for titles of recordings that are classified
 15 as "blues." The search engine 125 may return search results 416 and 424 for searches of
 16 both databases 412 and 422, respectively. The search results 416 and 424 may be
 17 displayed in a window section 430 of the GUI 400. The results 416 and 424 may also be
 18 represented by CD icons, such as the icons 432 and 434. The search results 416 and 424
 19 may be stored as lists in one or more temporary databases, as represented by the windows
 20 417 and 427. The search results 416 and 424 may also be stored in a scratch pad database
 21 418. At this point, the user may wish to determine which recordings from the list 424 are
 22 contained in the list 416. The search engine may support this function by performing a
 23 Boolean AND operation of the lists 416 and 424. The results of the Boolean AND
 24 operation are represented by the icon 436 displayed in the window 430. To execute the
 25 Boolean AND operation, the user may simply drag the icon 432 over the icon 434, and
 26 then select AND from a pop-up menu 438 that appears when the icons 432 and 434
 27 intersect. Other techniques to execute the Boolean AND (or another Boolean function)
 28 may include typing in a command in a window, using voice recognition techniques, and
 29 other methods. In addition, other Boolean functions may be used.

30 The result represented by the icon 436 of the Boolean AND operation may then be
 31 stored in a database at the terminal 14, such as in the scratch pad database 418 or may be
 32 stored at another location. The result may then be subjected to further search-on-the-fly
 33 operations.

1 Also shown in Figure 21 is an online-purchase module 435 that may be used to
 2 consummate purchase of a product referenced in an online database such as the database
 3 422. To initiate such a purchase, the user may drag an iconic or text representation of a
 4 desired product listed in the search result 424 over an icon 436 in the online-purchase
 5 module 435. This drag-and-drop overlaying these icon may initiate and complete the
 6 online purchase for the desired product.

7 Use of the search engine 125 may be facilitated by one or more GUIs that are
 8 displayed on the terminal 14. Figures 22 - 26 are examples of such GUIs. In Figure 22, a
 9 GUI 450 includes a display section 452 and one or more database sections such as local
 10 database section 470 and remote database section 460. The local database section 470
 11 includes databases local to the terminal 14. In the example shown, the local databases
 12 include a patients database 472, a general contacts database 474, a pharmacy database
 13 476, a medicines database 478 and a scratch pad database 480. The remote databases
 14 include an Amazon.com database 462, an online record retailer database 464, a
 15 Physician's Desk Reference database 466 and an American Medical Association (AMA)
 16 online database 468. The remote and local databases may be represented by a text title
 17 and an icon, both contained in a small window as shown. A user may access one of the
 18 remote or local databases by moving a cursor over the desired window and then selecting
 19 the database. In the example shown, the local medicines database 478 has been selected,
 20 and a list 490 of data fields in the medicines database 478 is displayed in the display
 21 section 452. Also included on the display section 452 is a keyword button 492 that may
 22 be used to initiate a key word search of the medicines database 478.

23 Figure 23 shows the GUI 450 with a user selection of a category data field from
 24 the list 490. The category data field is indicated as selected by an arrow adjacent to the
 25 data field name. When the category data field is selected, a category list 494 is displayed
 26 on display section 452. The category list 494 includes four entries, as shown.

27 The user may continue to search the medicines database 478 using key word
 28 techniques and search-on-the-fly techniques. Figure 24 shows the GUI 450 with results
 29 of several search cycles displayed.

30 Figure 25 illustrates a search of the PDR database 466. Such a search may be
 31 initiated by dragging a cursor to the window having the PDR 466 symbol (text or icon),
 32 and then operating a "select" button. Figure 26 shows a search of the Amazon database
 33 462. This search may also be initiated by a "drag-and-drop" operation.

1 subtractive with respect to the filters. So it is better to refer to operations among
2 attributes (filters, lenses, etc.) as “filtrative” or “infonegative, and to those among sets
3 (paints, lights, etc.) as “constructive” or “infopositive”. CF duality can now be rephrased
4 as follows: every infonegative entity (attribute) descriptively characterizes an associated
5 infopositive entity (set/object), and every infopositive entity instantiates or is
6 descriptively characterized by an associated infonegative entity.

7 The search engine 125 may include iconization (iconic representation) of an
8 algebra or calculus of relations defined on Boolean lattices. This representation begins
9 with a set of primitive icons extracted from base tables and defines new icons (derived
10 tables, virtual databases) by means of simple user-executed operations. The icons can be
11 effortlessly translated into lists of data corresponding to the icons, and it is these lists that
12 comprise the real substance of any search procedure.

13 When search chains are branched into to chains A and B, the filters subsequently
14 applied to each chain can be the same or different, and merging can signify any of two or
15 more Boolean relationships (relational operations) defined on a relational database.
16 Specifically, when chains merge, sets of filters can be added or intersected. Since filters
17 are constraints, adding them amounts to intersecting their images, while adding their
18 images amounts to intersecting the filters (infopositive-infonegative distinction).
19 Equivalently, one may consider positive and negative filters effecting deduction and
20 induction respectively; the filters are descriptive, while the images are substantive. The
21 extent to which the images of filters can intersect depends on the commonality
22 (predicative non-exclusivity) of domains. Icon algebras (of iconic operators) are “object-
23 oriented” on the GUI level; they are UI extensions of the innate object-orientation of
24 relational databases themselves, wherein the objects are records, attributes, tables, virtual
25 databases and so on, and the operations are those of any relational algebra.

26 The looping and merging of search chains is to some extent algebraic. First, since
27 actual topology is being changed, such transformations do not directly form a topological
28 homeomorphisin group; the algebra remains Boolean, and the “homeomorphism” is
29 defined on the operator graph of the Boolean algebra (of which the initial search tree is
30 generally only a subspace). Icons representing sets of nested predicates are “Boolean
31 objects”; when decision chains converge or diverge, objects merge or split, and these
32 objects represent (combinatorially) unique search paths. Thus, operations among paths
33 can be reduced to operations among objects; e.g., regress-diverge is just an object-
34 splitting operation. Continuous looping applies “inverse deductive filters” to achieve

1 induction by descriptive intersection of filter constraints, permitting the retrograde
 2 convergence of paths to identical ancestral objects (inductive merging of objects), while
 3 inductive looping is just direct regression to an ancestral object preparatory to splitting it
 4 and thus effecting divergence of paths (deductive splitting of objects). Deductive
 5 convergence of paths is “natural” if iconic image sets intersect and “forced” if not; if
 6 natural, then there has been non-exclusivity of subobjects, and paths are not unique (even
 7 though identical filters can apply to divergent paths without impairing uniqueness). So all
 8 deductive merging is forced, and this entails a decision regarding which filters are to be
 9 conserved and which discarded. Any such operation will effectively “rewrite the paths”,
 10 and doing this optimally is NP-complete.

11 More specifically, icons are subject to CF duality. The merge control thus has a
 12 “switch” toggling between “Qualities / Objects”. When the switch is in the “qualities”
 13 position, merging icons performs a qualified deductive conjunction of filters and yields a
 14 set intersect; when it is in the “objects” position, merging the icons performs a disjunction
 15 of filters and an inductive union of sets, yielding a more general attribute (the general
 16 qualities created by the object-merge operation will be produced by sets of filters applied
 17 disjunctively). The search engine 125 is therefore capable of inductive and deductive
 18 information processing. A quality-merge in which filters do not cross the line between
 19 composite icons equates to an object merge; the set thus selected is characterized by a
 20 more general quality which amounts to the descriptive (filtrative) union. There is also a
 21 modified quality-merge in which filters in either icon applicable to both iconized sets are
 22 applied to both, thus crossing the line between icons. In this case, a true merging of paths
 23 occurs, as opposed to path icons. The search engine 125 allows users to choose which
 24 filters are to cross the inter-icon line and which are not, resulting in complex Boolean
 25 expressions and the sets they characterize (determining consistency of complex
 26 expressions can amount to LSAT; sets of inconsistent expressions will simply yield a null
 27 return.

28 Icons may reside in the first menu box to appear, being transferred from menu to
 29 menu as the path is generated and filters are accumulated. When a direct regress occurs,
 30 the path is regarded as “complete” and is stored in a holding module. Prior to the
 31 merging operation, the quality/object switch is set; and icon subfilters or subsets
 32 individually displayed. A “lattice navigator” will keep track of position and equivalence,
 33 folding the search graph in case a node of the original tree is inductively encountered in
 34 the course of an object-merge; otherwise, the icon remains in “internodal space” (which is

1 to be regarded as a virtual space realized only in the event that the search tree is
 2 nondisjunctive in its nodes and therefore incomplete with respect to the semantic net
 3 generated by the tree).

4 Figure 27 is a flow chart illustrating an alternative operation 600 of the query
 5 generator 150 of Figure 6. In the illustrated operation, the query generator 150 is adapted
 6 to receive multiple selections of items within a same menu function and within a same
 7 merge function. To provide this functionality of the query generator 150, the request
 8 analyzer 130 (see Figure 5) may be adapted to receive a collection of user choices.

9 The operation 600 begins in block 601. In block 603, the request analyzer 130
 10 receives constraints collected from the constraint collator 136, and the updated request
 11 115, which may be an initial request or a subsequent request, is provided to the query
 12 generator 150. In block 605, the query generator 150 determines if the constraints (the
 13 request 115) are in the same merge group. If the query generator 150 determines that the
 14 request 115 is in the same merge group, the process moves to block 607 and the query
 15 generator 150 generates the query with a Boolean AND. If the request is not in the same
 16 merge group, the query generator 150 generates the query with a Boolean OR, block 609.

17 In block 611, the items selected within the same unit are Or'ed and the default
 18 truncator may be used depending on the size of the returned items. In block 613, the
 19 generated query is executed. In block 615, the number of records to be displayed is
 20 checked. If the number is within a specified limit, the process moves to block 617 and
 21 the search results are returned for display. The operation 600 then ends, block 625. In
 22 block 625, if the number of records to be displayed is too large, the process moves to
 23 block 621, and a truncation routine is executed.

24 The truncation routine may be any of the previously-described truncation routines
 25 illustrated in Figures 18-20. Figure 28a illustrates an alternate truncation routine 630.
 26 The routine 630 begins in block 631 with the truncator 152 receiving the request 115. In
 27 block 633, the truncation is set to the size of the field being viewed on the GUI, and sets
 28 the False Flag. The query is then run against the database using the selected truncator,
 29 block 635. In block 635, the truncator 152 determines if the number of records that
 30 would be retrieved from the database can be displayed on the existing GUI. If the records
 31 can be displayed, the process moves to block 639, and the truncator 152 determines if the
 32 Flag is set False. If the Flag is set False, the process moves to block 653 and the records
 33 are returned (displayed on the GUI). The process then ends, block 655. In block 637, if
 34 the number of records exceeds the display size of the GUI, the status of the Flag is

1 checked as False. If false, the truncator is set to 1, and the flag is set to true, block 647,
2 and the process returns to block 635. If in block 637. If the flag is not set false, the
3 process moves to block 651, and saved records are retrieved. The retrieved records are
4 then displayed, block 653.

5 In block 639, if the Flag is not set to false, the retrieved records are saved, and the
6 truncator 152 is incremented. The process then returns to block 635.

7 Figure 28b illustrates another alternative truncation routine 700. In block 701, the
8 truncator 152 receives the constraints, the view by field and the maximum of number of
9 display items (MNDI). In block 702, the truncation is set to zero (no truncation), and the
10 Flag is set to True. Next, the query is generated in block 702. In block 703a, query
11 generator receives the constraints, the view by field, and the truncator as parameters, and
12 the query generator returns the query. The query is then run against the database, and the
13 counter is set to zero, block 704. In block 705, the truncator 152 fetches the next record
14 and increments the counter. If the end of file is reached, block 706, and the truncation
15 equals zero, block 710, the truncator 152 sends the list of fields to the client, block 712.
16 However, if the truncation is not zero, block 710, the truncator 152 is incremented, block
17 709, and the process returns to block 703. On the other hand, if the end of file is not
18 reached, block 706, and the counter is smaller than MNDI, block 707, the process goes
19 back to block 705, in which the truncator 152 fetches the next record and increments the
20 counter. However, if the counter is larger than MNDI, block 707, and the saved list of
21 fields exist, block 708, the truncator sends the list to the client, block 712. Conversely, if
22 the saved list of fields do not exist, block 708, the truncator 152 is incremented, block
23 709, and the process goes back to block 703 again.

24 Table 1 illustrates an example of the alternate truncation routine 700. This routine
25 begins by attempting not to truncate the records.

1 Table 1

	Records		1st Round		2nd Round		3rd Round
1	Armandia	1	Armandia	1	A	1	AR
2	Armonk	2	Armonk	2	N	2	NE
3	Armonk	3	New Orleans	3	R	3	RI
4	New Orleans	4	New York			4	RO
5	New Orleans						
6	New York						
7	New York						
8	New York						
9	Riverdale						
10	Riverdale						
11	Riverdale						
12	Rockfort						

2 In this example, the maximum number (n) of displayable results is three, and the
 3 database contains twelve instances of six different cities. First, the database is queried for
 4 the full city field with no truncation, and records are fetched. Records are fetched until
 5 four (n+1) records are fetched from the database. Since the number of different cities (4)
 6 is greater than n, fetching is halted and the process moves to truncation. Then the
 7 database is queried for only the first letter of the cities (truncation is incremented so that it
 8 equals one). For this query the database manager may simply review its index. The
 9 compiled list from the query is saved as "A", "N", and "R". Next, the database is queried
 10 for the first two letters of the city field (truncation is incremented so that it equals two).
 11 Again, the database manager may simply review its index to locate this information about
 12 the data field. This query for two letters or characters is continued until the number of
 13 two letter combinations exceeds n. When the number of different combinations (4) is
 14 again greater than n, the routine halts and nothing is saved. The system now returns to
 15 the previous saved list. Therefore, the saved list ("A", "N", and "R") is returned to the
 16 client for display or process.

17 Figures 29 - 38 illustrate graphical user interfaces and search on the fly results
 18 using the search engine 125 with a merge function. In Figure 29, a search of a patent
 19 database has been executed to search for patents by primary examiner. The Primary
 20 Examiner results table lists the arabic numerals 0 - 7 and the letters A-Z, indicating that
 21 the database contains names of primary examiners beginning with these numerals/letters.
 22 To quickly narrow the search, the user selects the letter O, and results are returned listing
 23 last and first names all primary examiners whose last name begins with O. As can be
 24 seen by the returned results, the database lists several primary examiner instances of
 25 O'Dea. This could indicate an error in the database. The search engine 125 allows these

1 802, and other controls 803 that may be used to navigate one or more data buses using the
2 search-on-the-fly search engine 125.

3 Figure 51 illustrates a personal data assistant (PDA) 800 that may use the search-
4 on-the-fly search engine 125. The PDA 800 includes a display area 811 and an input area
5 812.

6 Figures 52a – 52l illustrate a search sequence using the cellular telephone 800
7 configured to use the search-on-the-fly search engine 125. In the example illustrated, the
8 U.S. Patent and Trademark Office patent database is selected. Using the cellular
9 telephone 800, the user conducts a search of the U.S. Patent and Trademark Office
10 database using a series of filters. Each time a filter is applied, a search result may be
11 returned and displayed on the display 801. Using the controls 802, the user may add or
12 subtract filters. The display 801 shows the accumulative result of the filtering process.
13 When the data to be returned is too large to fit the display 801, the returned data may be
14 truncated as illustrated in Figures 52f-52k.

15 Figure 53 illustrates a general purpose personal computer system 850 that may be
16 used for search-on-the-fly of a plurality of databases. The system 850 includes a
17 processor section 851, a display and a control section coupled to the processor section
18 851, and a computer readable medium 855, which may be read by components of the
19 processor section 851. The computer readable medium 855 may include the software
20 routine required to implement the search-on-the-fly with merge function method.

21 In specific embodiments, the search engine 125 is implemented as a program
22 executed on a general purpose computer, such as a personal computer. The search engine
23 may also be implemented as a routine attached to a database structure. In addition, the
24 search engine may be implemented on any processor capable of executing the routines of
25 the program. In alternative embodiments, the search engine 125 may be implemented as
26 a single special purpose integrated circuit (e.g., ASIC) having a main or central processor
27 section for overall, system level control, and separate circuits dedicated to performing
28 various different specific functions, computations and other processes under control of the
29 central processor section. Those of ordinary skill in the art will appreciate that the search
30 engine 125 may also be implemented using a plurality of separated dedicated or
31 programmable integrated circuits, or other electronic circuits or devices (e.g., hardwired
32 electronic or logic circuits such as discrete elements circuits, or programmable logic
33 devices, such as PLDs, PLAs, or PALs). In general, any device or assembly of devices

- 1 In the claims:
- 2 1. A method for displaying data comprising:
- 3 determining a database schema for a database;
- 4 providing a list of database fields, wherein the list includes a descriptor indicating
- 5 a data category;
- 6 receiving a search selection for a database field on the provided list of database
- 7 fields;
- 8 determining a quantity of entries in the selected database field;
- 9 if the quantity exceed a specified amount,
- 10 truncating data, and
- 11 displaying the truncated data; and
- 12 if the quantity does not exceed the specified amount, displaying content from the
- 13 database field.
- 14 2. The method of claim 1, further comprising providing a key word search.
- 15 3. A method for formatting data for display, comprising:
- 16 generating a list of data fields;
- 17 receiving a first data field selection from the list of data fields;
- 18 determining a first quantity indicative of a number of entries of the selected data
- 19 field;
- 20 if the first quantity exceeds a specified limit, reducing a size of data to be
- 21 displayed from the selected data field; and
- 22 displaying data from the selected data field.
- 23 4. The method of claim 3, wherein the specified limit is fixed.
- 24 5. The method of claim 3, wherein the specified limit is variable.
- 25 6. The method of claim 3, wherein the data are displayed on a terminal, and wherein
- 26 the specified limit is determined dynamically, based on a characteristic of the terminal.
- 27 7. The method of claim 3, wherein the specified limit is a user-determined limit.
- 28 8. The method of claim 3, wherein the method for reducing the size of the data to be
- 29 displayed from the selected data field comprises:
- 30 performing a truncation that reduces the size of the data to be displayed from the
- 31 selected data field;
- 32 comparing the reduced size to the specified limit; and

- 1 if the reduced size exceeds the specified limit, repeating the truncation and
2 comparing steps until the size of the data to be displayed from the selected data field is
3 less than or equal to the specified limit.
- 4 9. The method of claim 8, wherein a parameter is related to the size of the data to be
5 displayed from the selected data field, and wherein the truncation comprises
6 decrementing the parameter.
- 7 10. The method of claim 9, wherein the parameter is decremented or incremented by a
8 value of one.
- 9 11. The method of claim 8, wherein a parameter is related to the size of the data to be
10 displayed from the selected data field, and wherein the truncation comprises dividing the
11 parameter by a value.
- 12 12. The method of claim 11, wherein the value is two.
- 13 13. The method of claim 8, wherein a parameter is related to the size of the data to be
14 displayed from the selected data field, and wherein the truncation comprises multiplying
15 the parameter by a value.
- 16 14. The method of claim 3, further comprising:
17 receiving a first constraint, wherein the first constraint is related to a data element
18 in a data field; and
19 receiving one or more subsequent constraints, wherein search results are generated
20 based on a combination of the first and the one or more subsequent constraints.
- 21 15. A method for searching a database, comprising:
22 selecting a first search term;
23 sending the first search term to a search engine;
24 receiving a first search result;
25 selecting and sending a second search term to the search engine; and
26 receiving a second search result, wherein the second search results represents a
27 combination of the first and the second search terms.
- 28 16. The method of claim 15, further comprising:
29 selecting and sending a third search term to the search engine;
30 dropping a prior search term, wherein the dropped prior search term in one of the
31 first and the second search terms; and
32 receiving a third search result comprising a combination of the third search term
33 and one of the first and the second search terms.

- 1 17. The method of claim 15, wherein the first search term is directed to a first
- 2 database and wherein the second search term is directed to a second database.
- 3 18. The method of claim 15, wherein the first search result is displayed as a truncated
- 4 result list.
- 5 19. The method of claim 18, further comprising specifying a size of the truncation.
- 6 20. A method for searching a database, comprising:
- 7 generating a list of data fields;
- 8 receiving a first data field selection from the list of data fields;
- 9 receiving a first constraint, wherein the first constraint is related to a data element
- 10 in a data field; and
- 11 receiving one or more subsequent constraints, wherein search results are generated
- 12 based on a combination of the first and the one or more subsequent constraints.
- 13 21. The method of claim 20, further comprising:
- 14 determining a first quantity indicative of a number of entries of the selected data
- 15 field;
- 16 if the first quantity exceeds a specified limit, reducing a size of data to be
- 17 displayed from the selected data field; and
- 18 displaying data from the selected data field.
- 19 22. The method of claim 21, wherein the specified limit is fixed.
- 20 23. The method of claim 21, wherein the specified limit is variable.
- 21 24. The method of claim 21, wherein the data are displayed on a terminal, and
- 22 wherein the specified limit is determined dynamically, based on a characteristic of the
- 23 terminal.
- 24 25. The method of claim 21, wherein the specified limit is a user-determined limit.
- 25 26. The method of claim 21, wherein the method for reducing the size of the data to
- 26 be displayed from the selected data field comprises:
- 27 performing a truncation that reduces the size of the data to be displayed from the
- 28 selected data field;
- 29 comparing the reduced size to the specified limit; and
- 30 if the reduced size exceeds the specified limit, repeating the truncation and
- 31 comparing steps until the size of the data to be displayed from the selected data field is
- 32 less than or equal to the specified limit.

- 1 27. The method of claim 26, wherein a parameter is related to the size of the data to
2 be displayed from the selected data field, and wherein the truncation comprises
3 decrementing or incrementing the parameter.
- 4 28. The method of claim 27, wherein the parameter is decremented or incremented by
5 a value of one.
- 6 29. The method of claim 26, wherein a parameter is related to the size of the data to
7 be displayed from the selected data field, and wherein the truncation comprises dividing
8 the parameter by a value.
- 9 30. The method of claim 29, wherein the value is two.
- 10 31. The method of claim 26, wherein a parameter is related to the size of the data to
11 be displayed from the selected data field, and wherein the truncation comprises
12 multiplying the parameter by a value.
- 13 32. A method for providing search functions in one or more databases, comprising:
14 receiving a first search term;
15 searching at least a first database using the first search term;
16 returning a first search result, wherein the first search result comprises a first list
17 of elements in the first database;
18 receiving a second search term;
19 conducting a second search by applying the second search term to one of the first
20 list of elements and a second database; and
21 returning a second search result, wherein the second search results represents a
22 combination of the first and the second search terms.
- 23 33. The method of claim 32, further comprising:
24 receiving a third search term;
25 receiving a signal to drop one of the first and the second search terms;
26 dropping the selected one of the first and the second search terms, wherein
27 dropping the selected one of the first and the second search terms provides a revised list
28 of elements;
29 searching one of the revised list of elements and one of the second or subsequent
30 databases using the third search term; and
31 returning a third list of elements comprising a combination of the third search
32 term and the non-selected one of the first and the second search terms.
- 33 34. The method of claim 32, wherein the first search result is returned as a truncated
34 list of elements.

493556 0420" 5955650

1
2
3
4
5
6
7
8
9
10
11
12
13

ABSTRACT

Sort-on-the-Fly/Search-on-the-Fly data retrieval or analysis provides an intuitive means for accessing databases, allowing a user to access or obtain information about data in the database without having to know anything about the database structure. A user selects a desired term, and the method or apparatus delivers all instances of the desired term, even if a specific file or table does not contain the instance. The database need not have a specific file (in a flat database) or a table (in a relational database) of names. The user may specify other criteria, or constraints to narrow the search results, or for other reasons. The method or apparatus then conducts further analysis or searching using this criteria and produces a second result. Further narrowing or broadening of the process is permitted, with search-on-the-fly returning results based on any new constraints. If the returned information would be too large to be conveniently displayed at a terminal, the process executes a truncation routine so that the returned data is easily displayed.

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

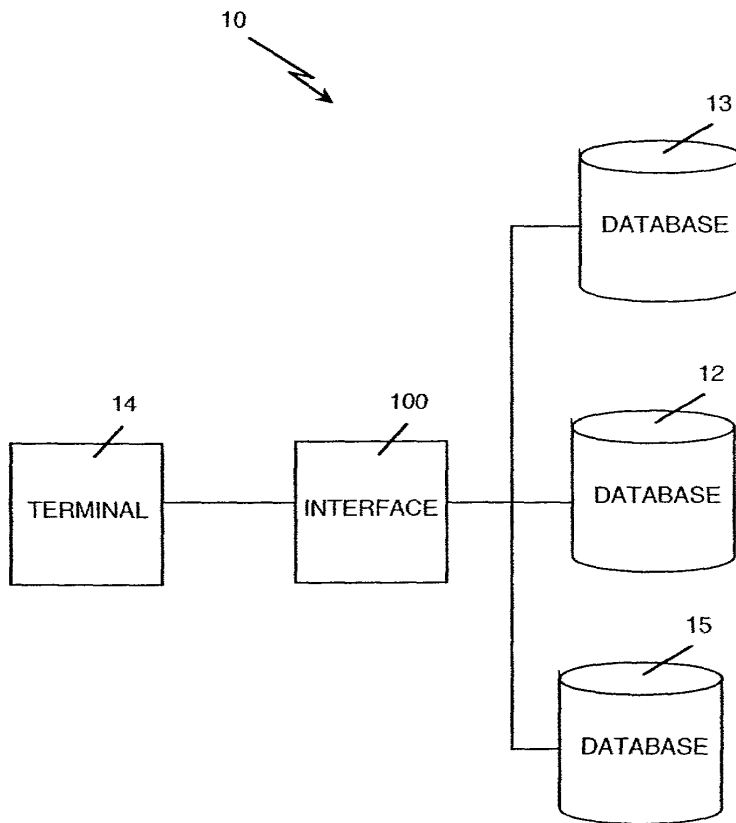


FIG. 1

09955-08401

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

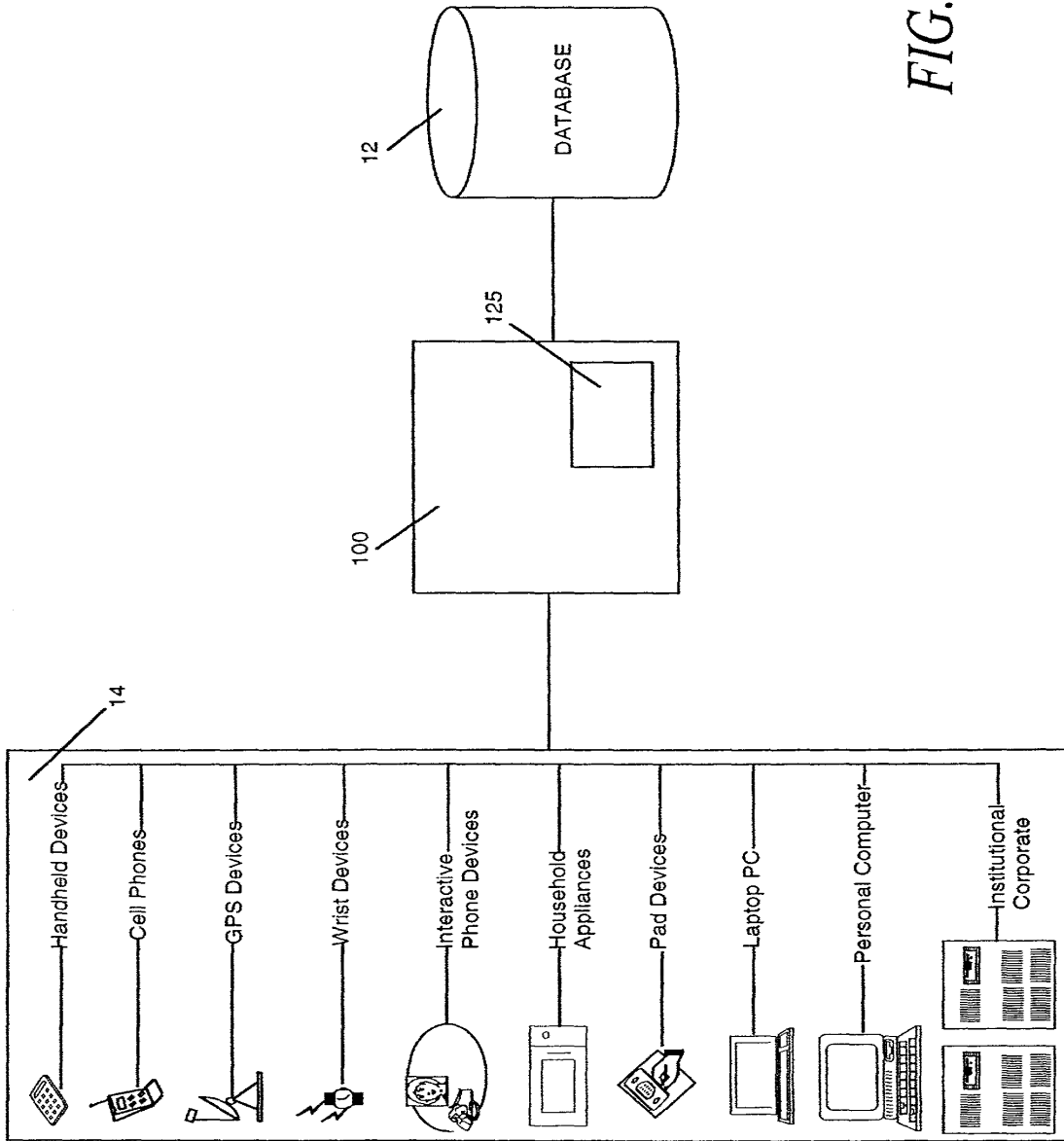


FIG. 2

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

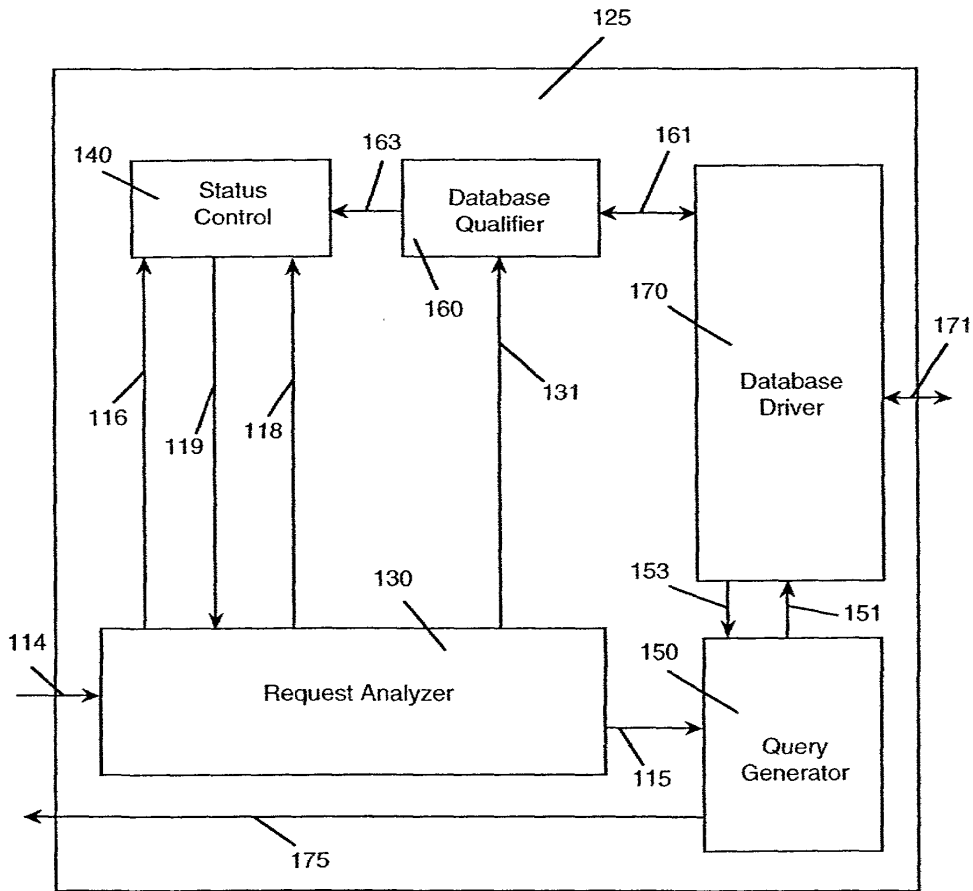


FIG. 3

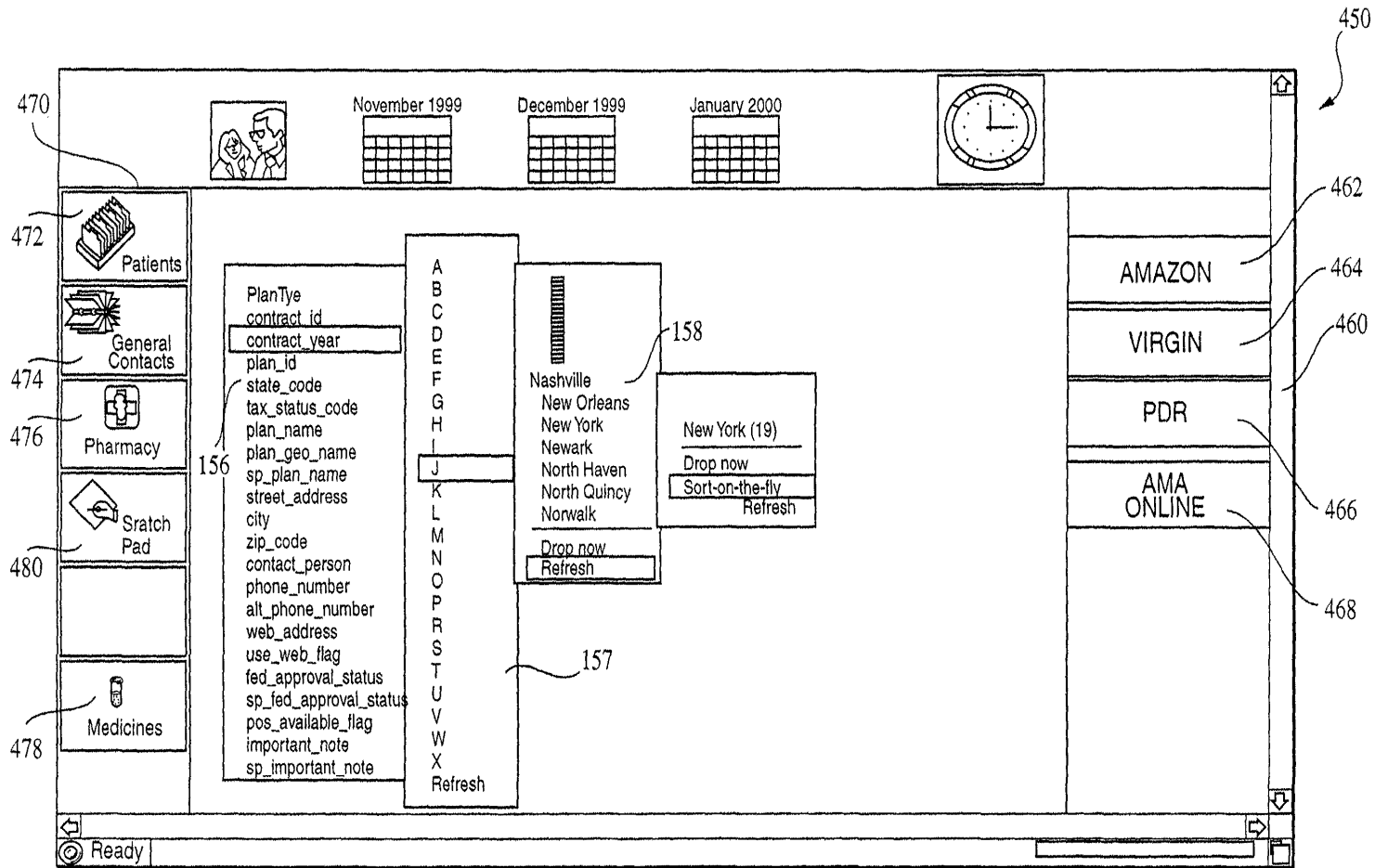


FIG. 4

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

703-288-5250

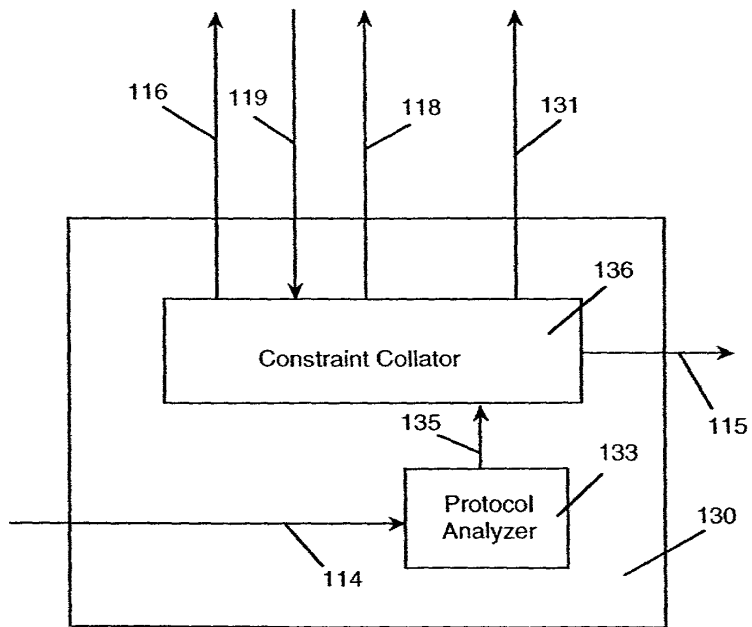


FIG. 5

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

703 288 5250

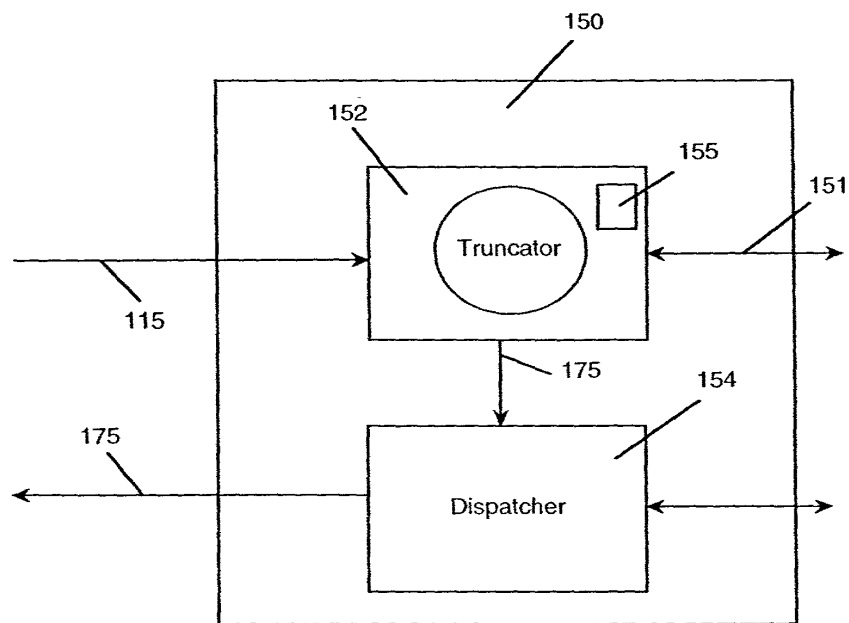


FIG. 6

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FOR "55560"

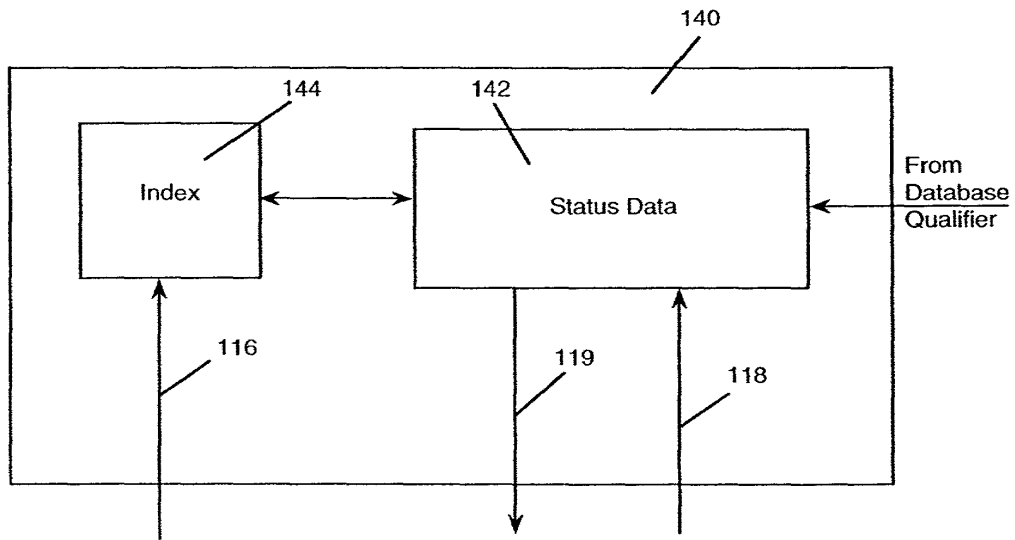


FIG. 7

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

TOP SECRET

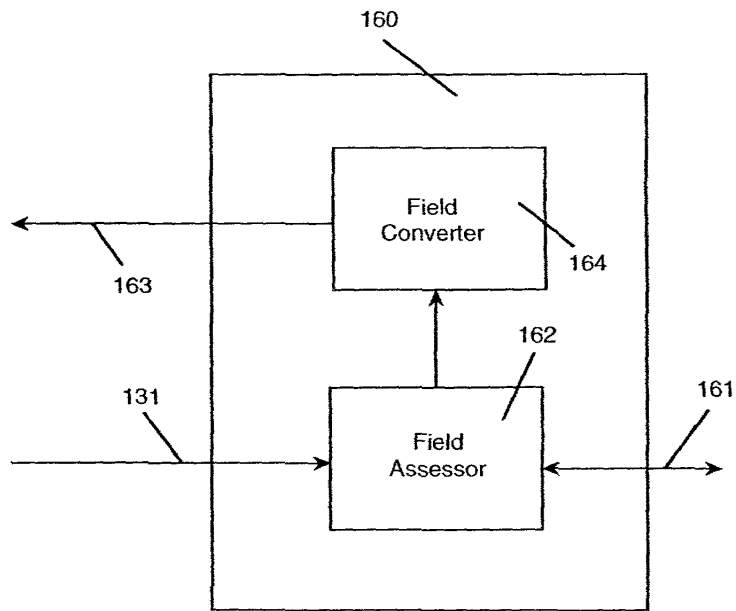


FIG. 8

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

09555555

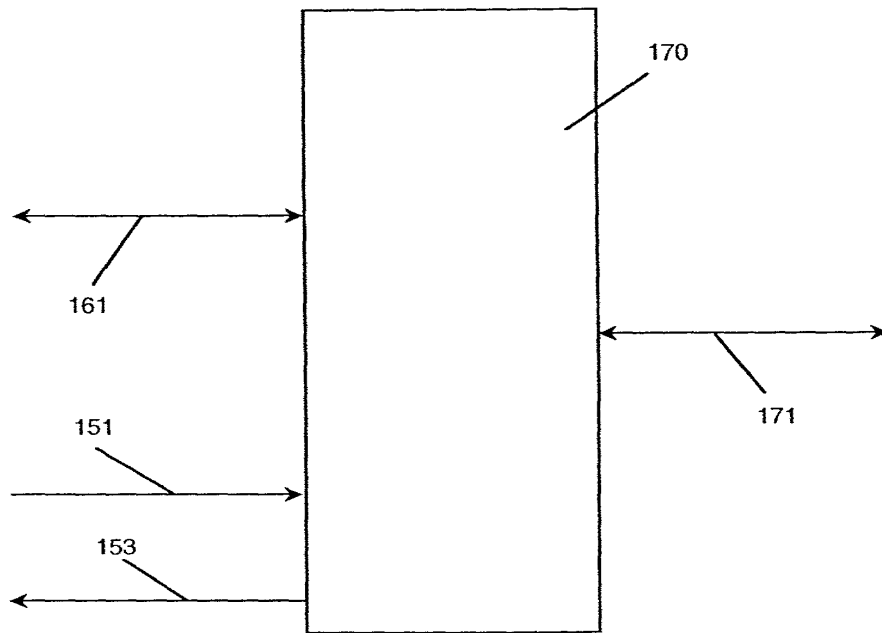


FIG. 9

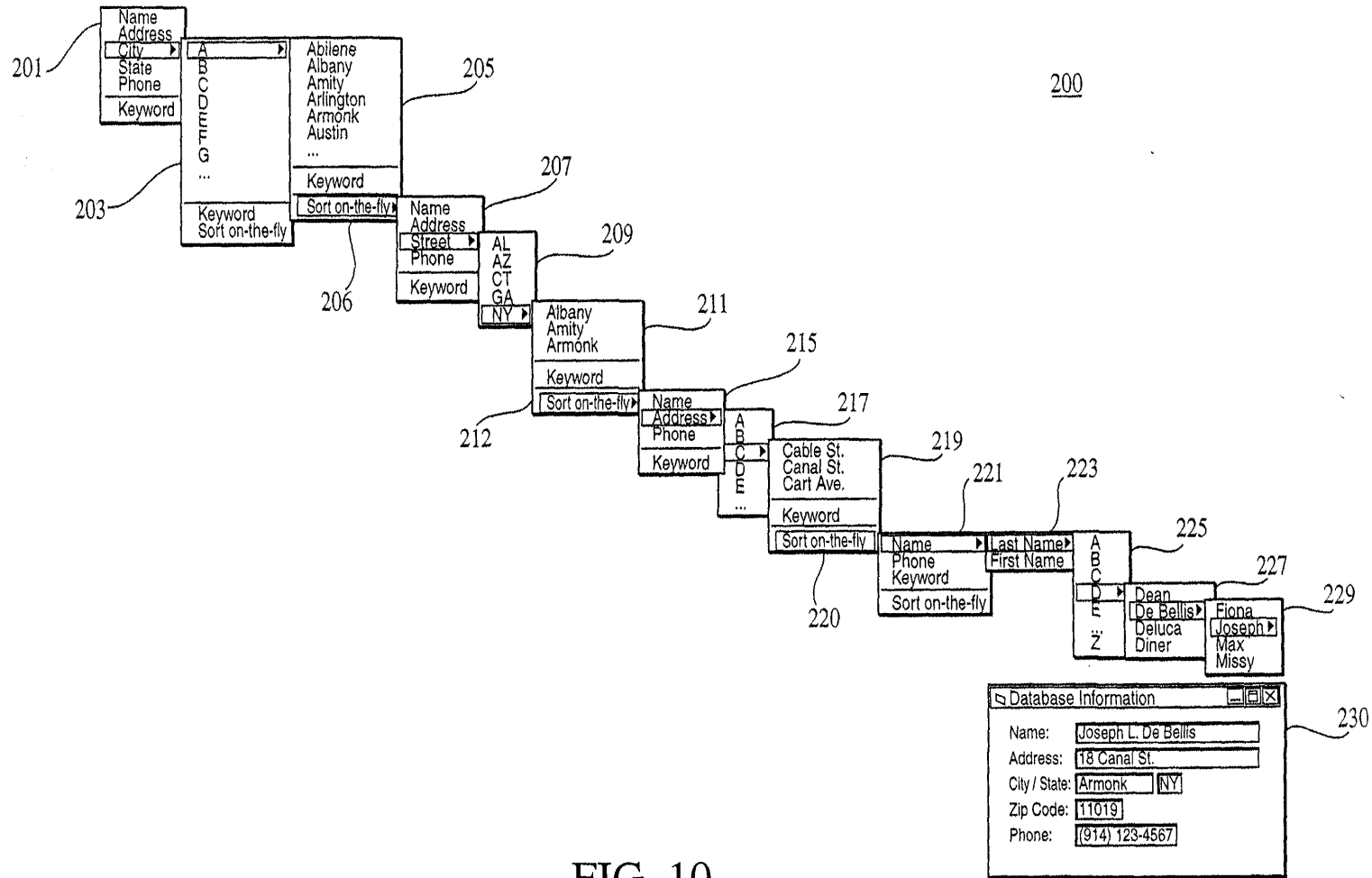


FIG. 10

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

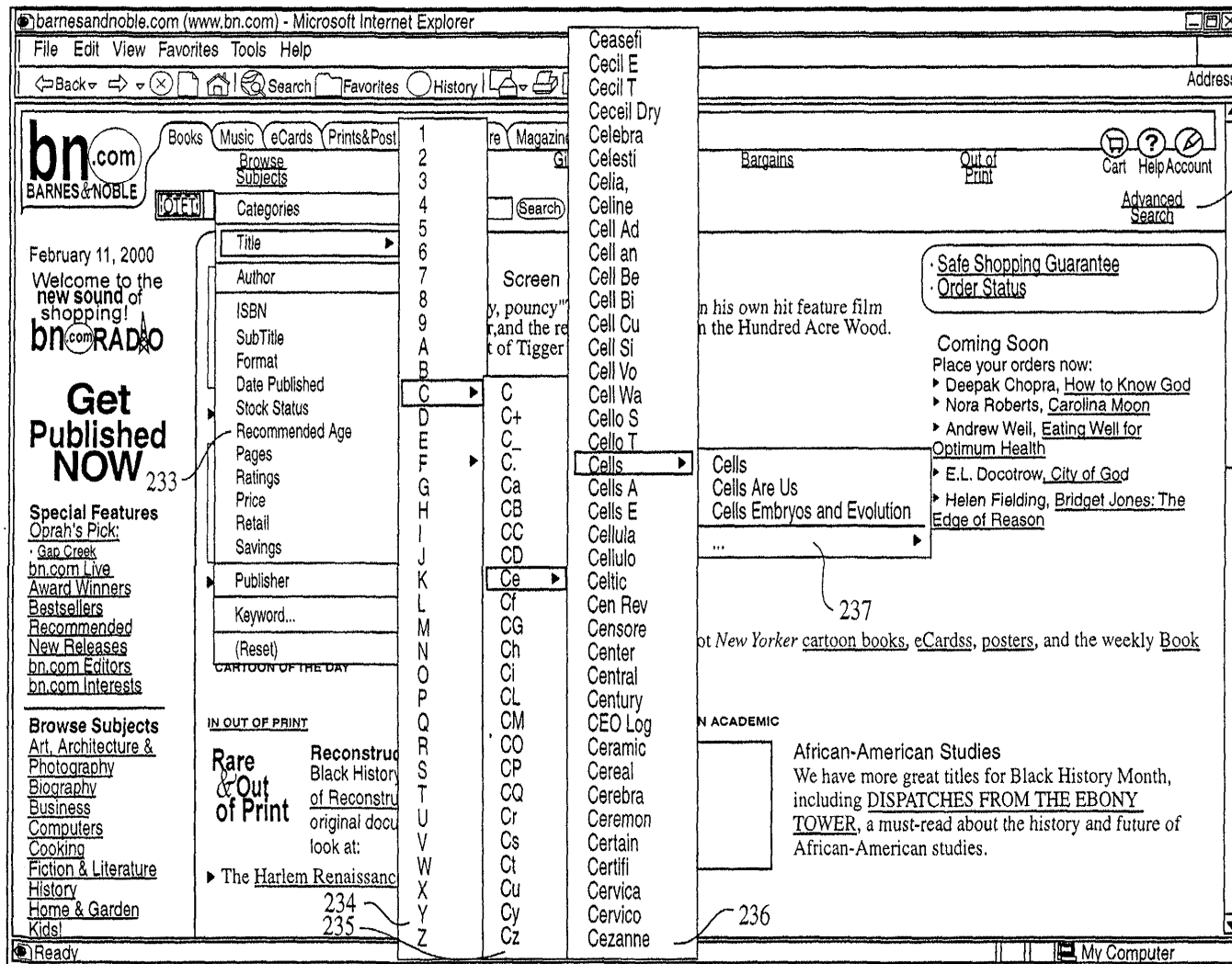


FIG. 11

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

T041230* 5952660

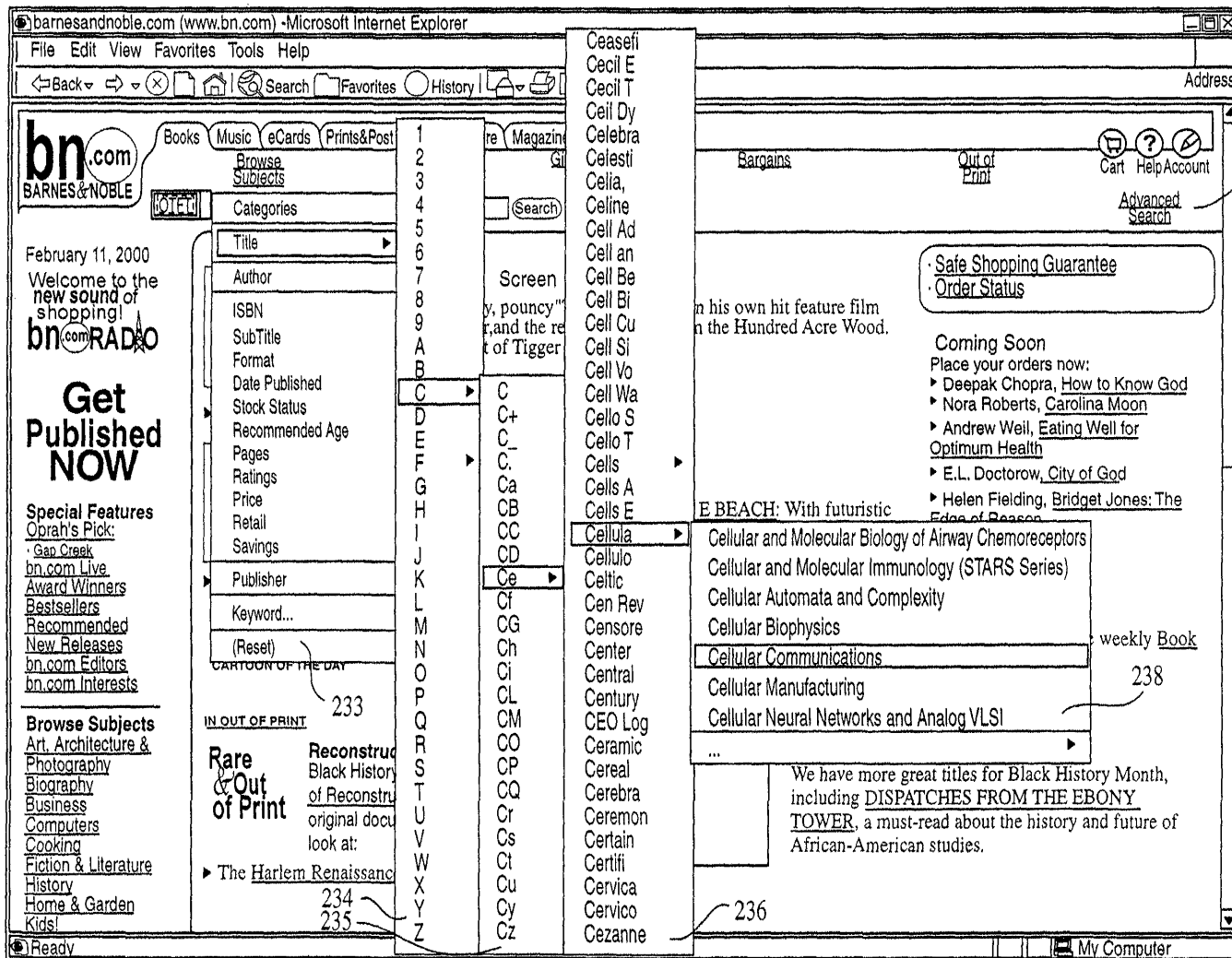


FIG. 12

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FOI#280" 59552660

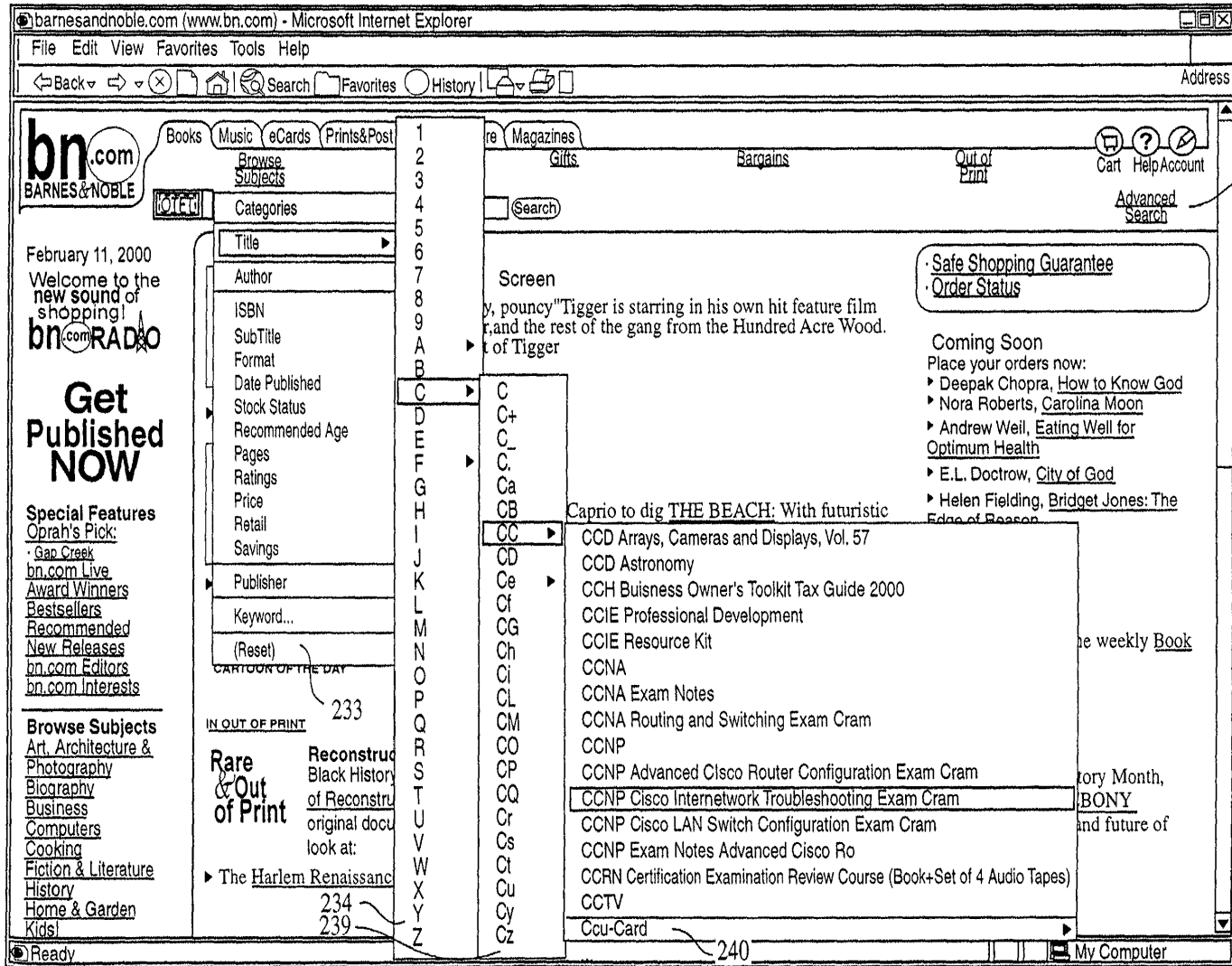


FIG. 13

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

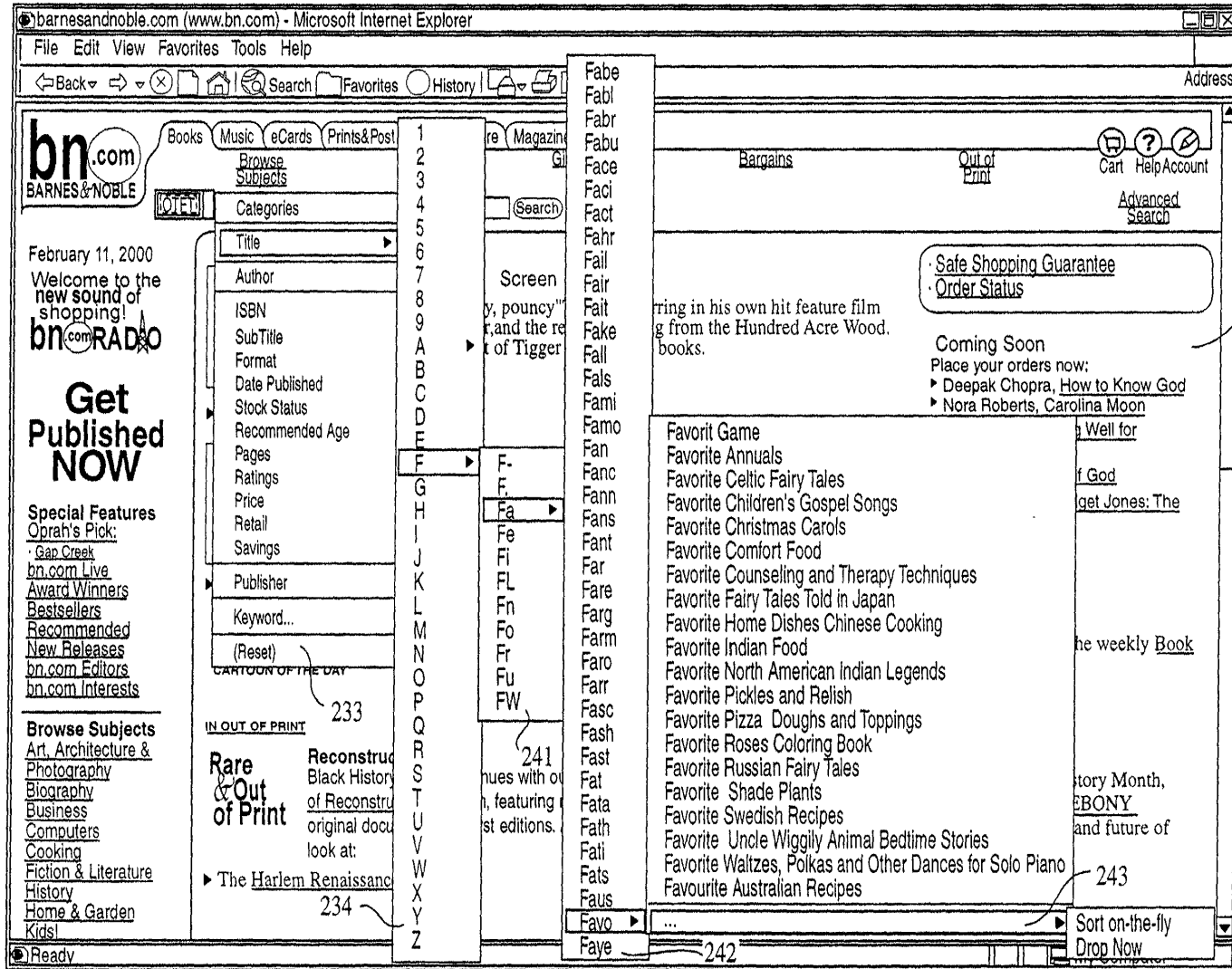


FIG. 14

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

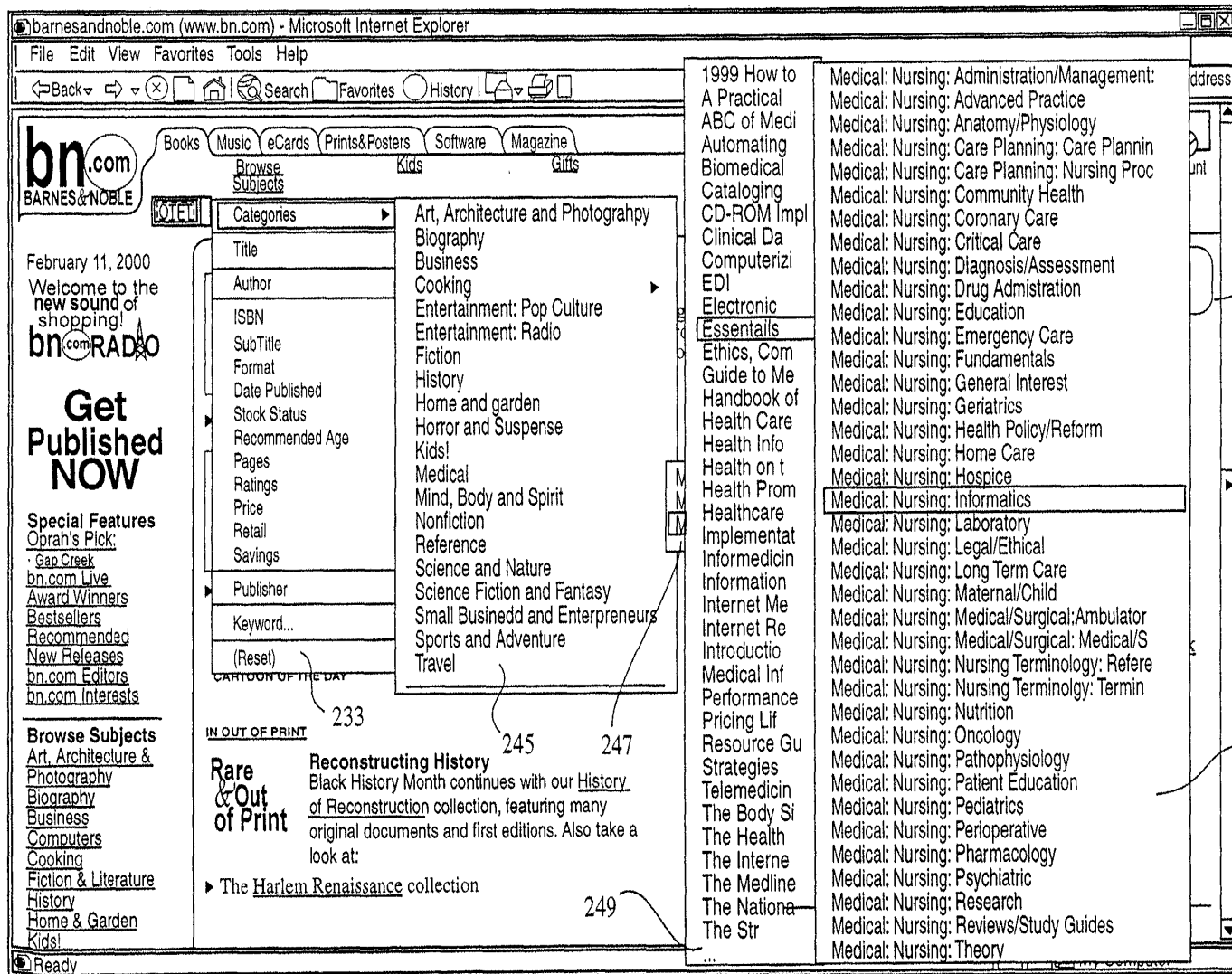


FIG. 15a

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

232

233

245

247

248

249

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

099555-09401

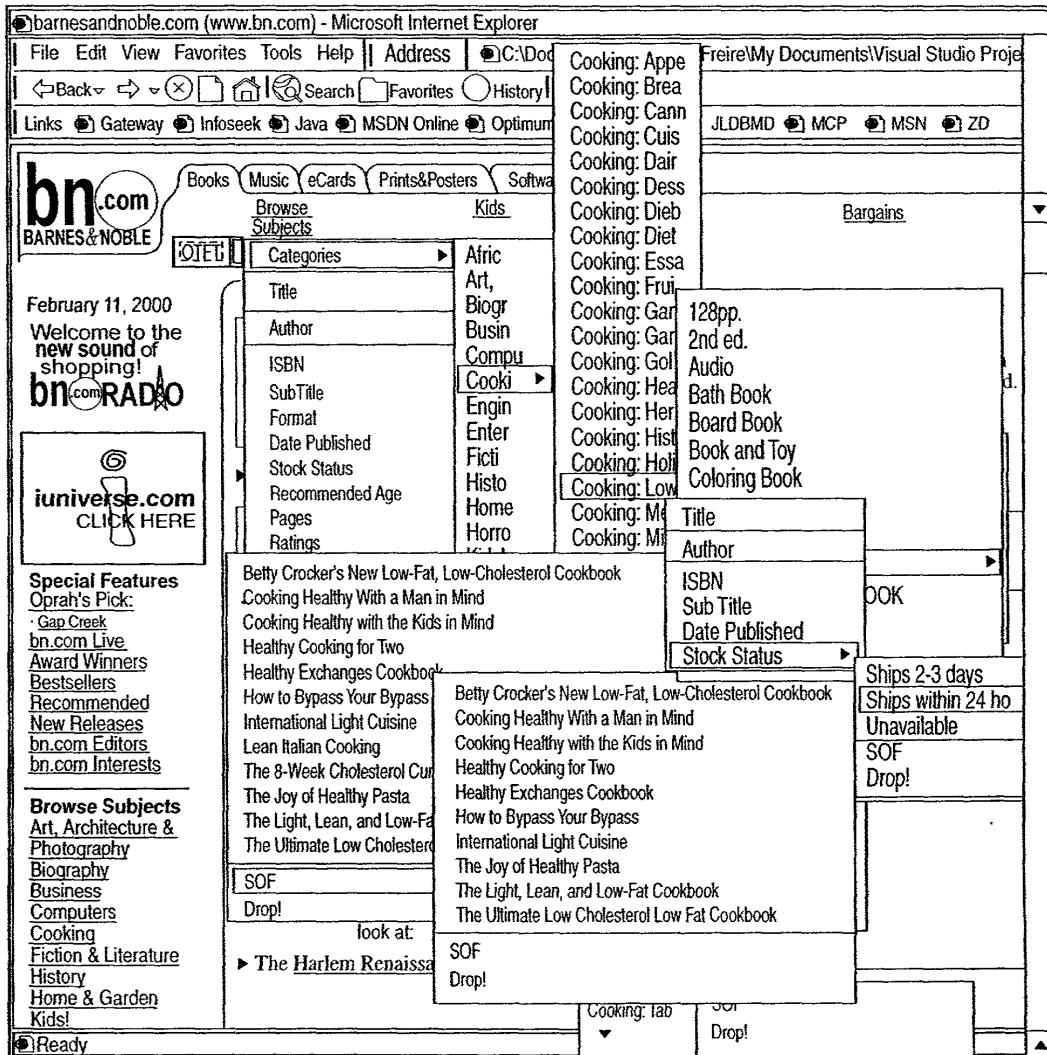


FIG. 15b

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

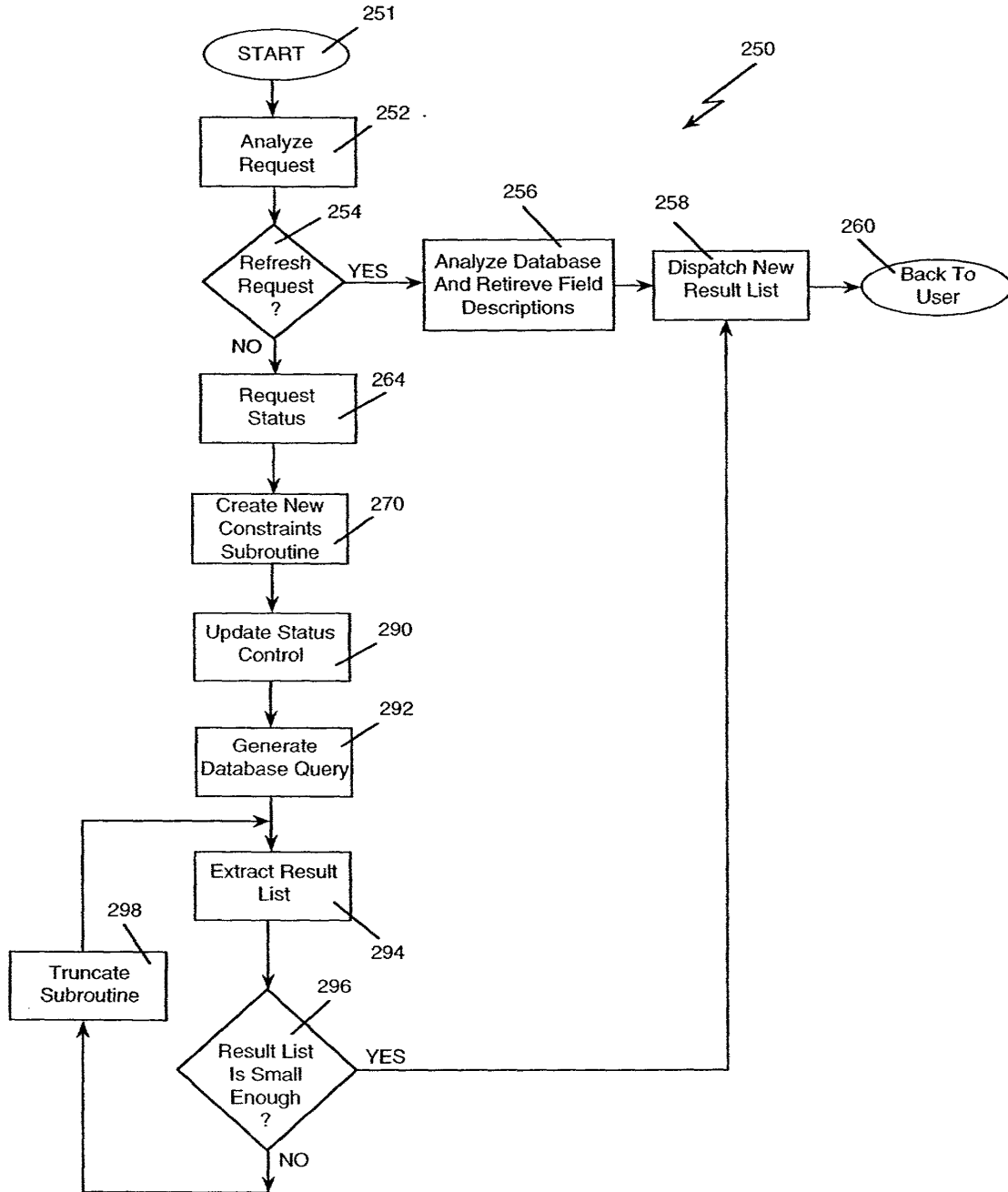


FIG. 16

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FOR PAGES 595-600

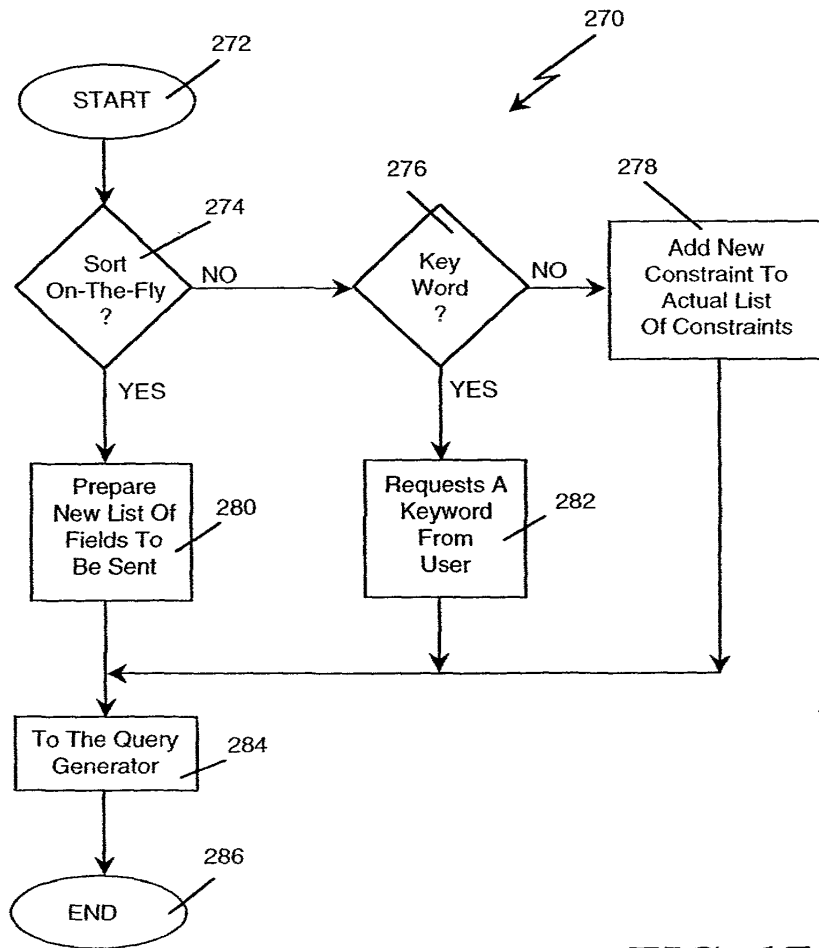


FIG. 17

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FIG. 18

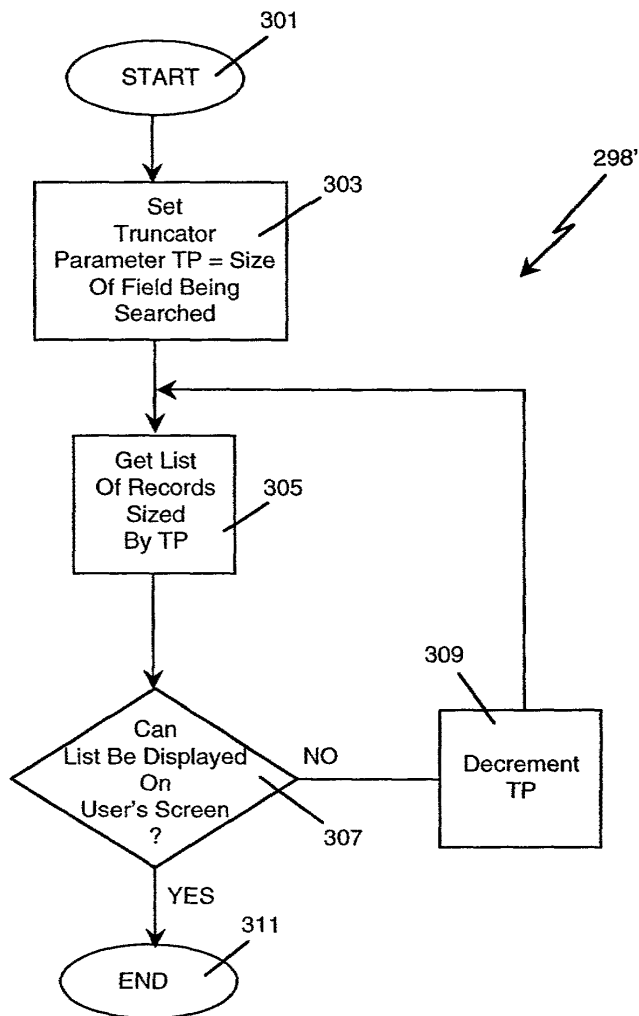


FIG. 18

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

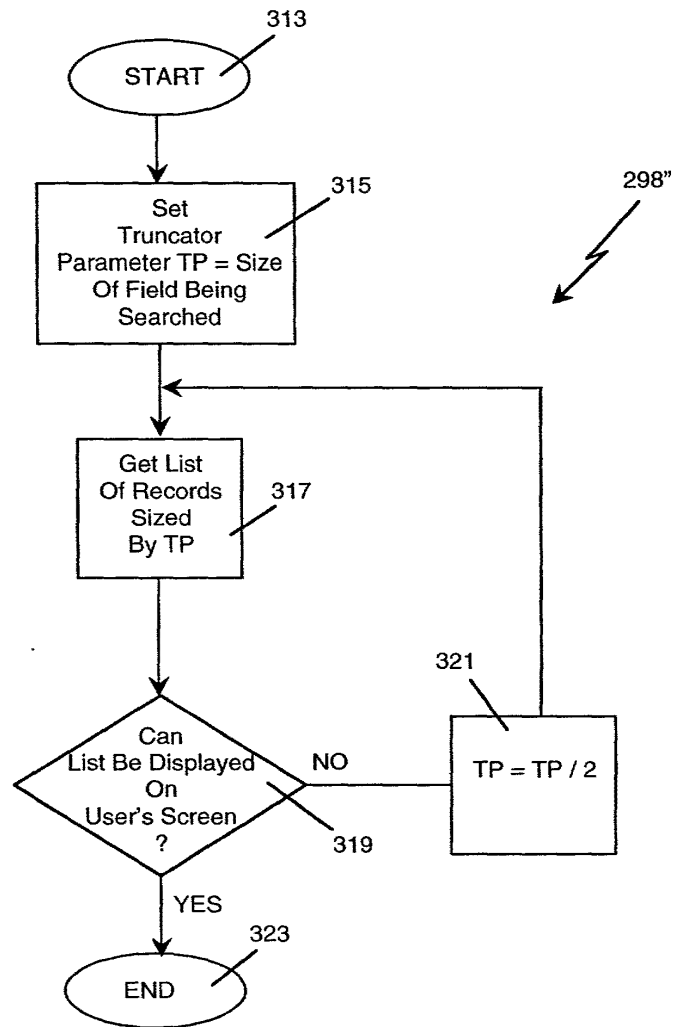


FIG. 19

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FOIA b 7 - DATED 05/05/2010

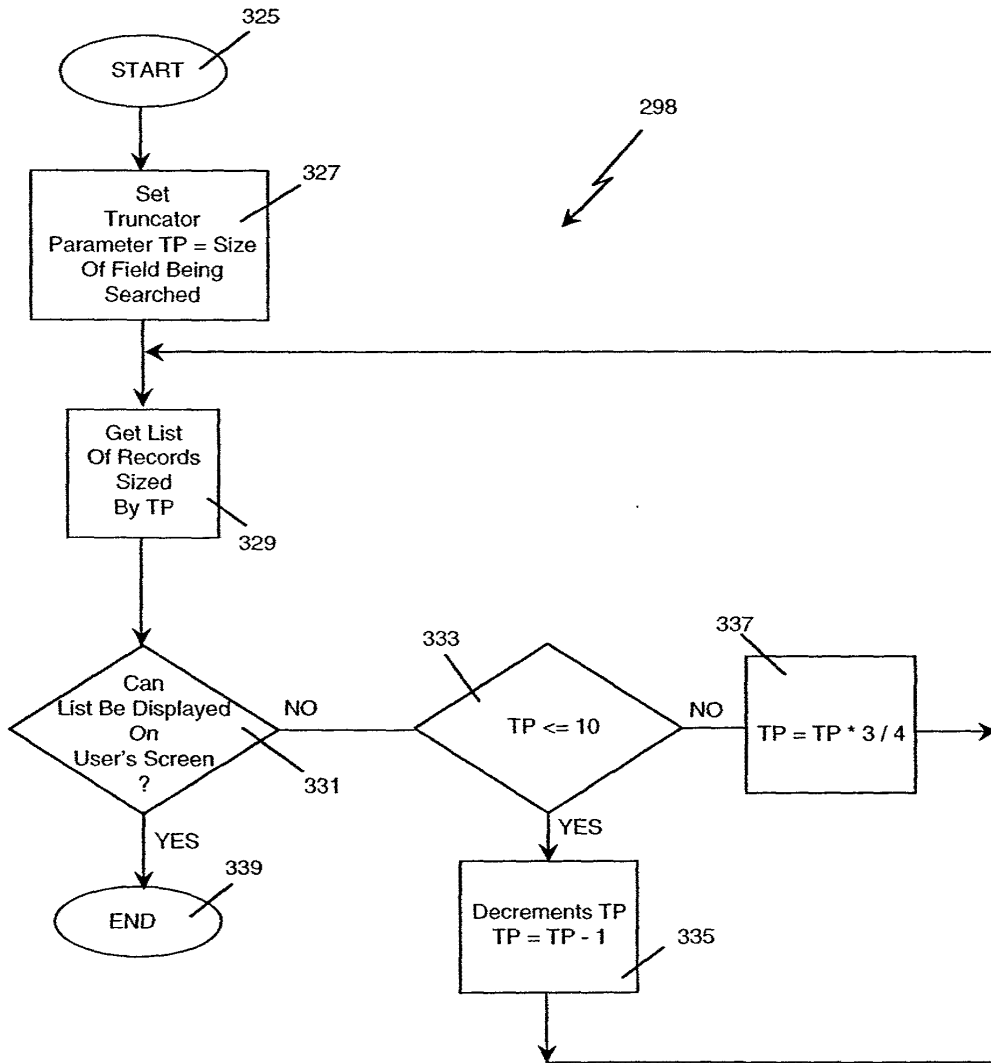


FIG. 20

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FOH280-5955E660

FIG. 21

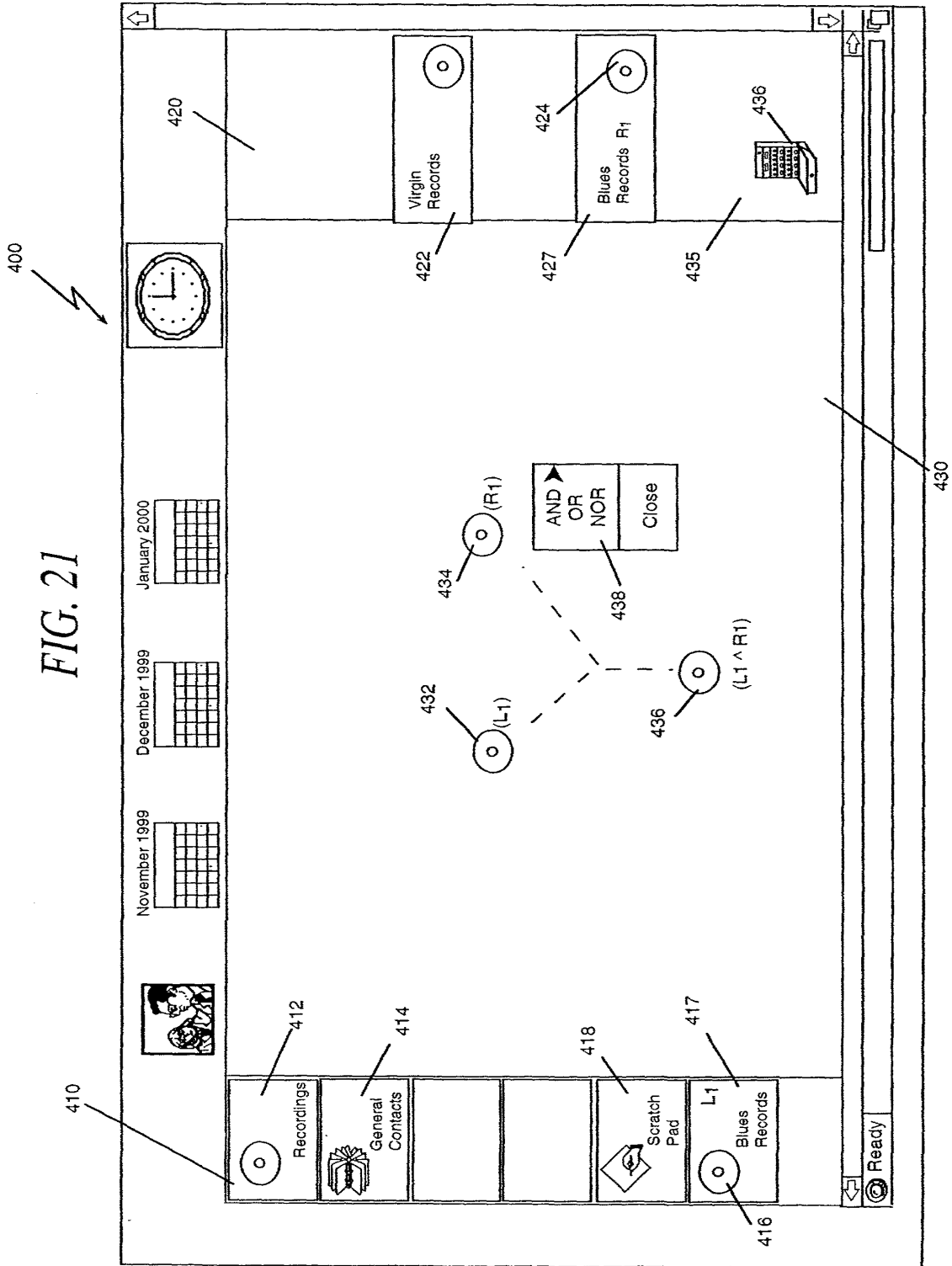
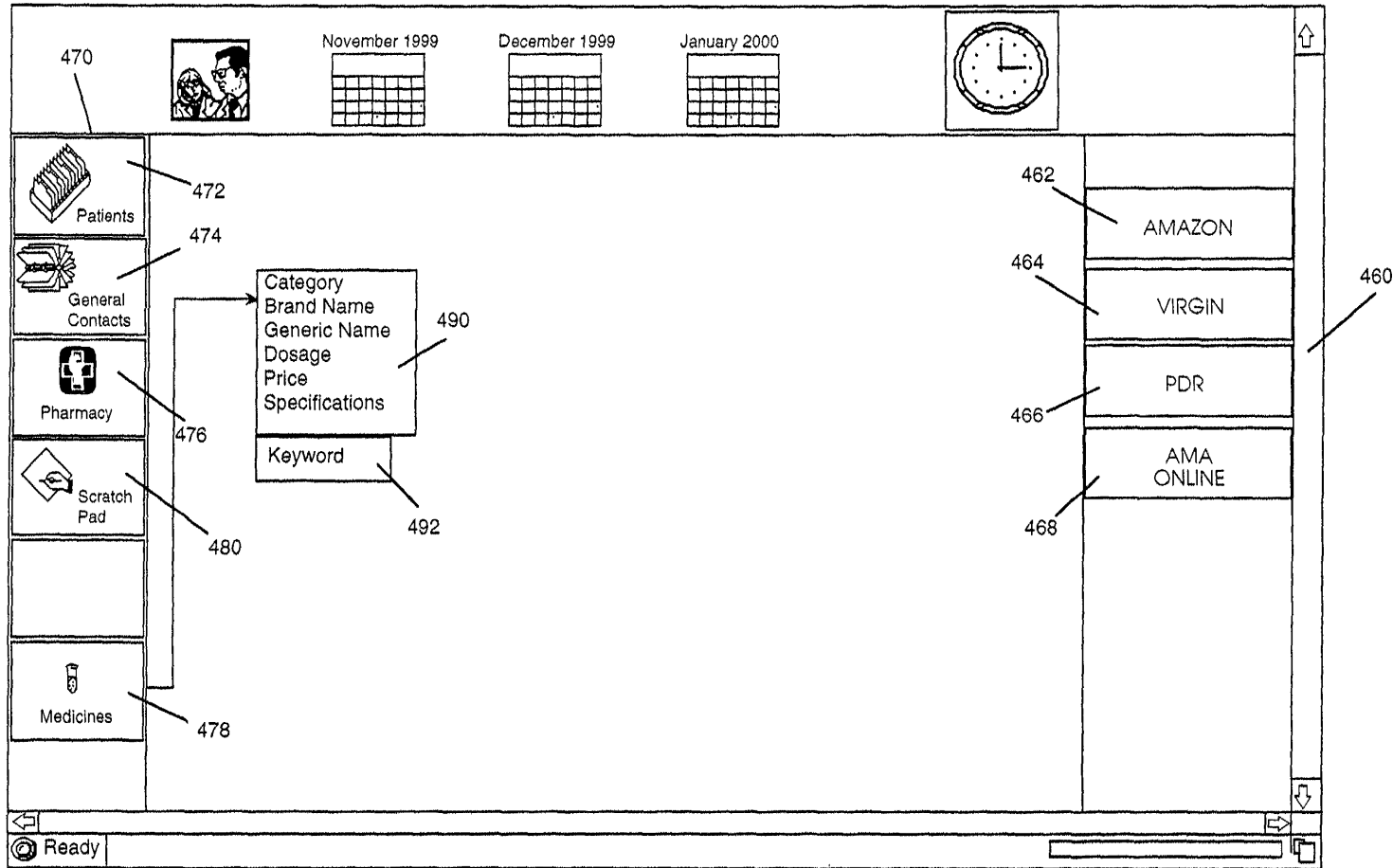


FIG. 22

450

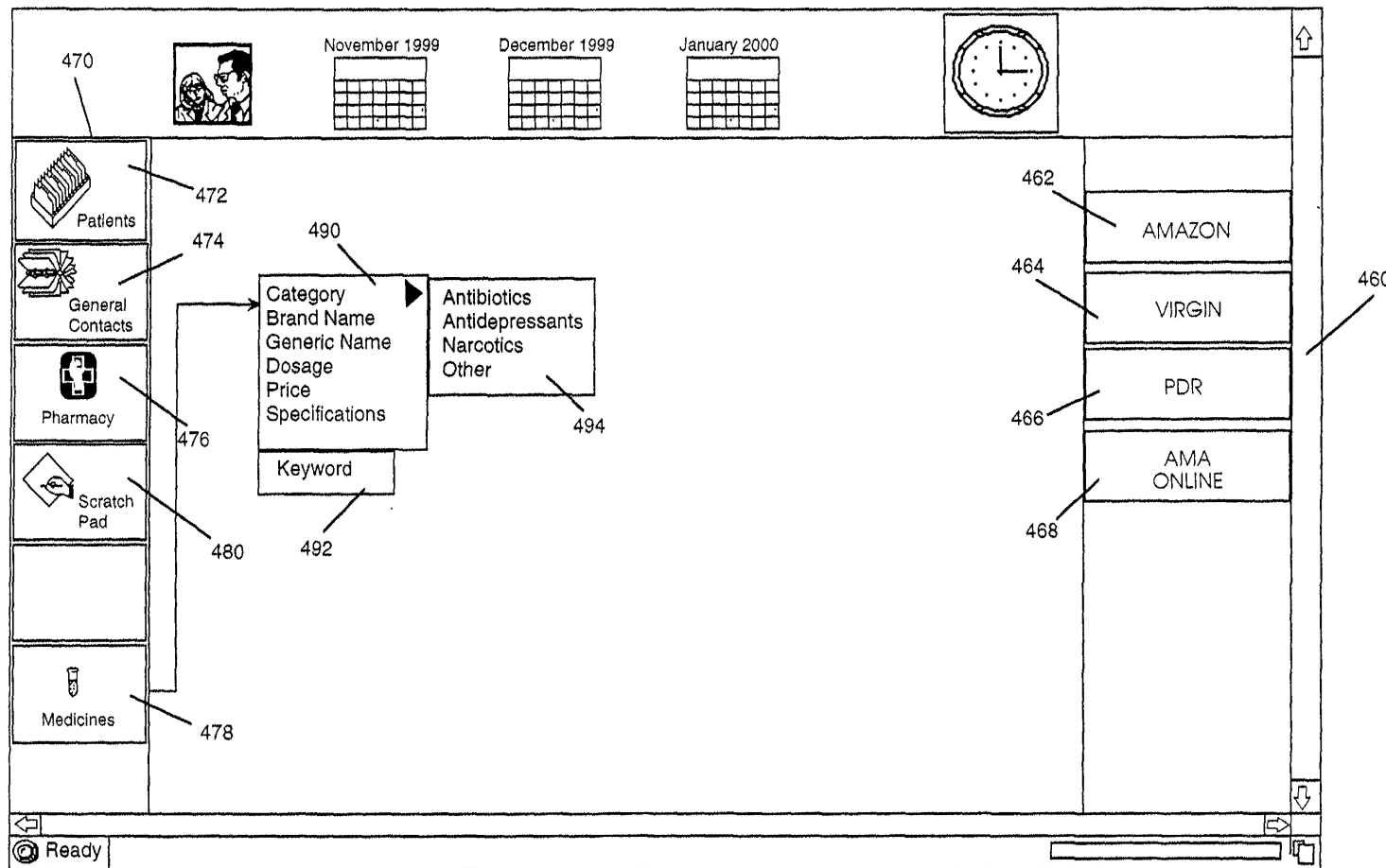


Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

TOH280* 59552660

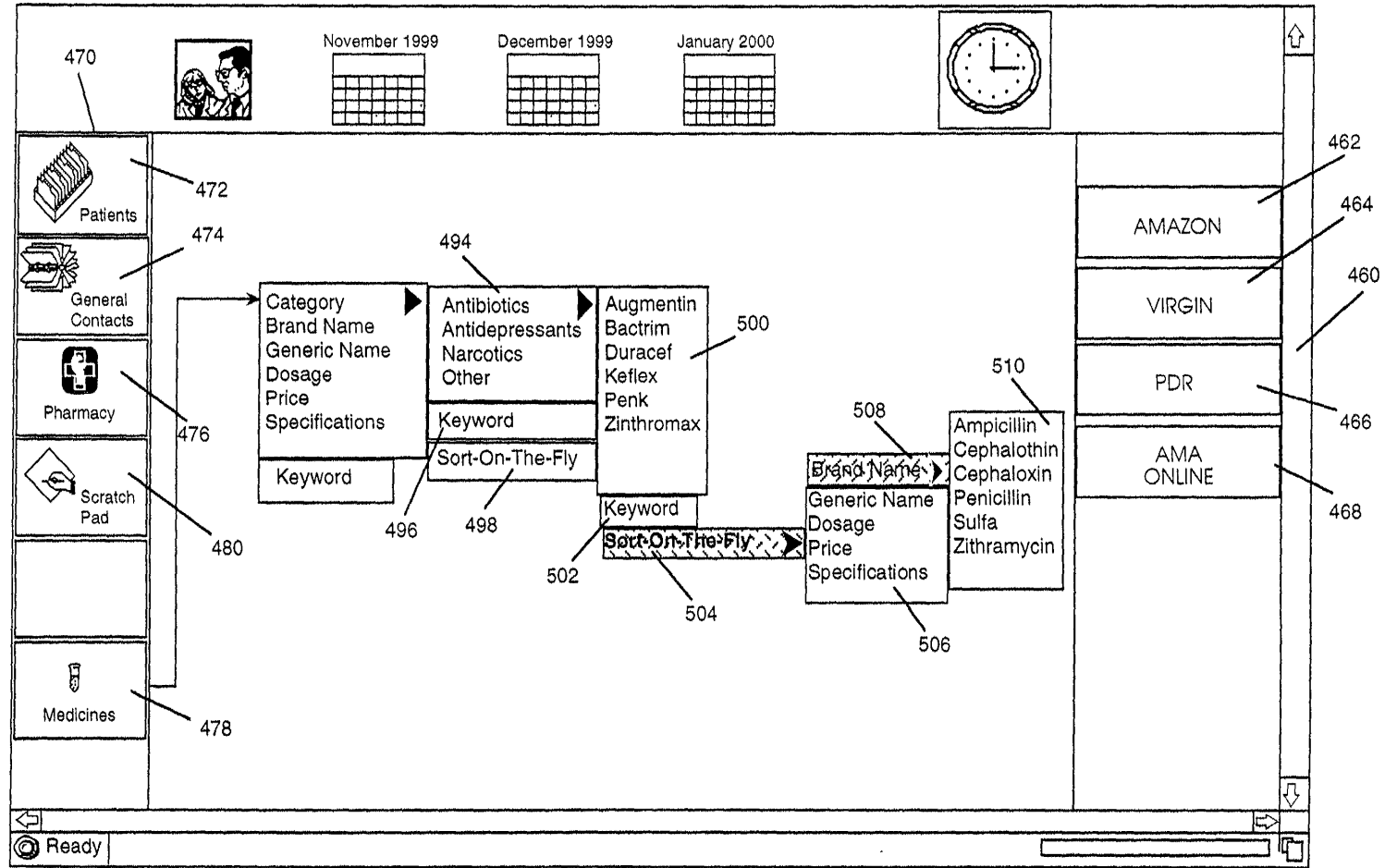
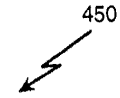
FIG. 23

450



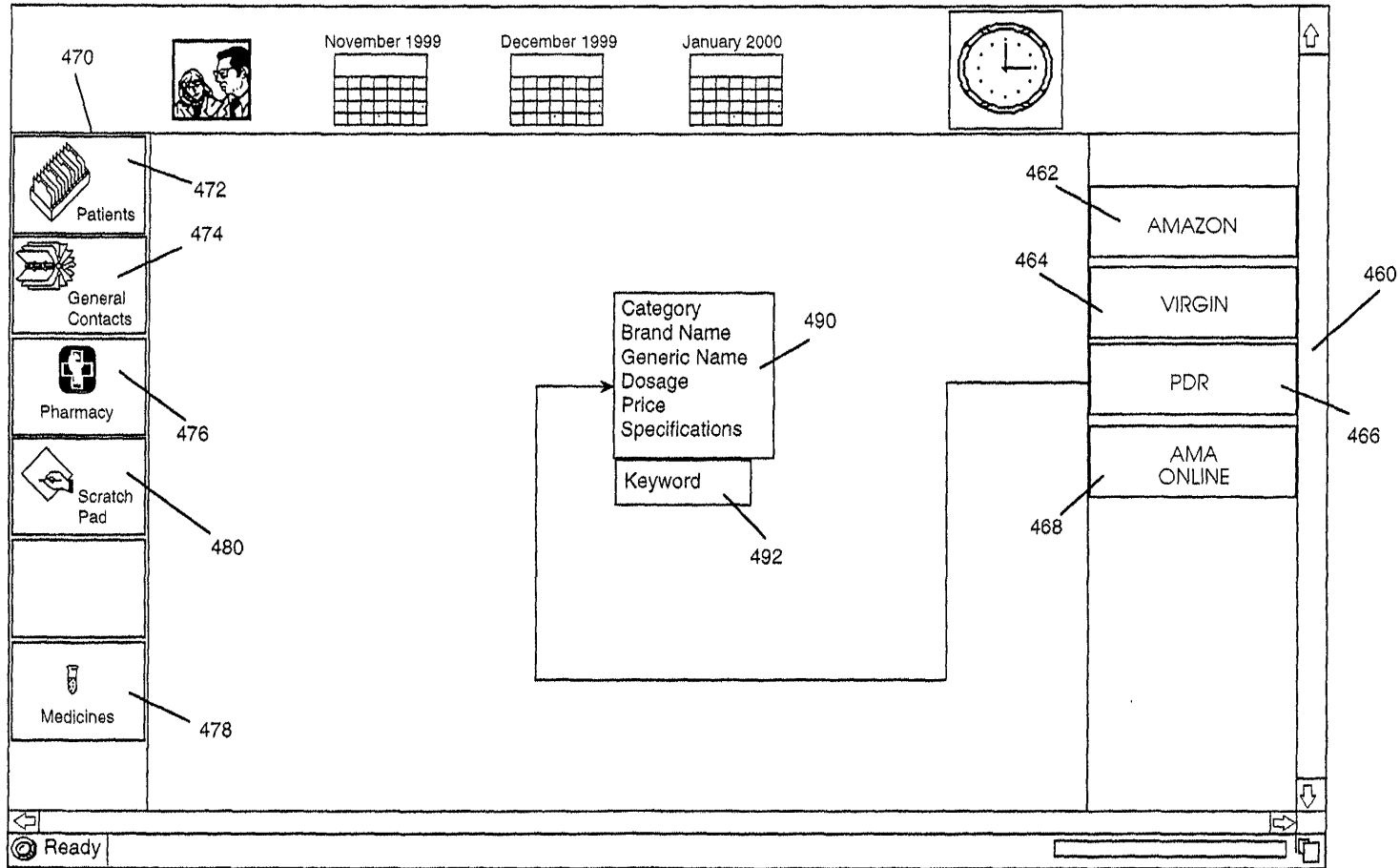
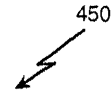
Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

FIG. 24



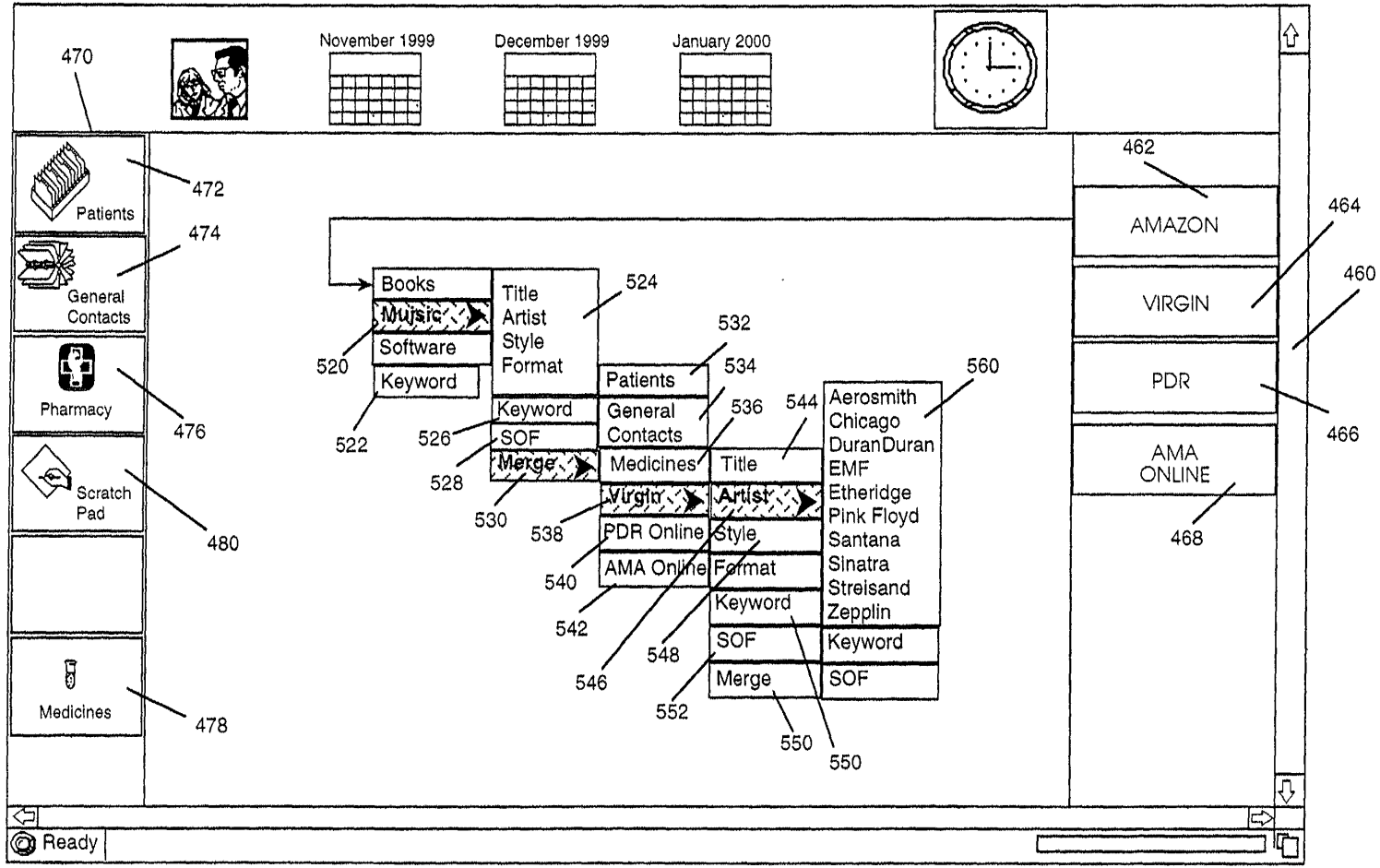
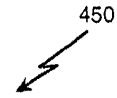
Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 25



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

FIG. 26



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

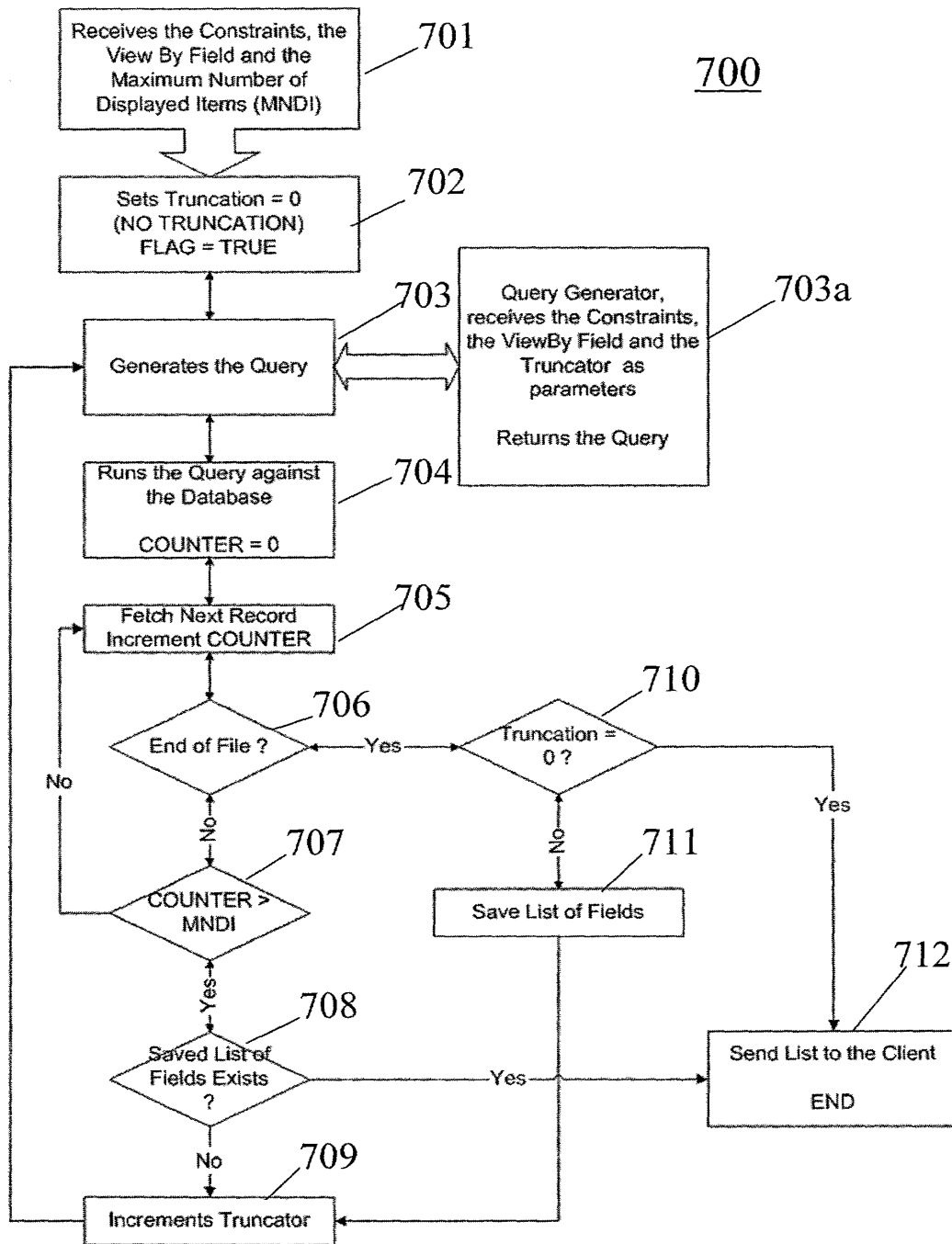
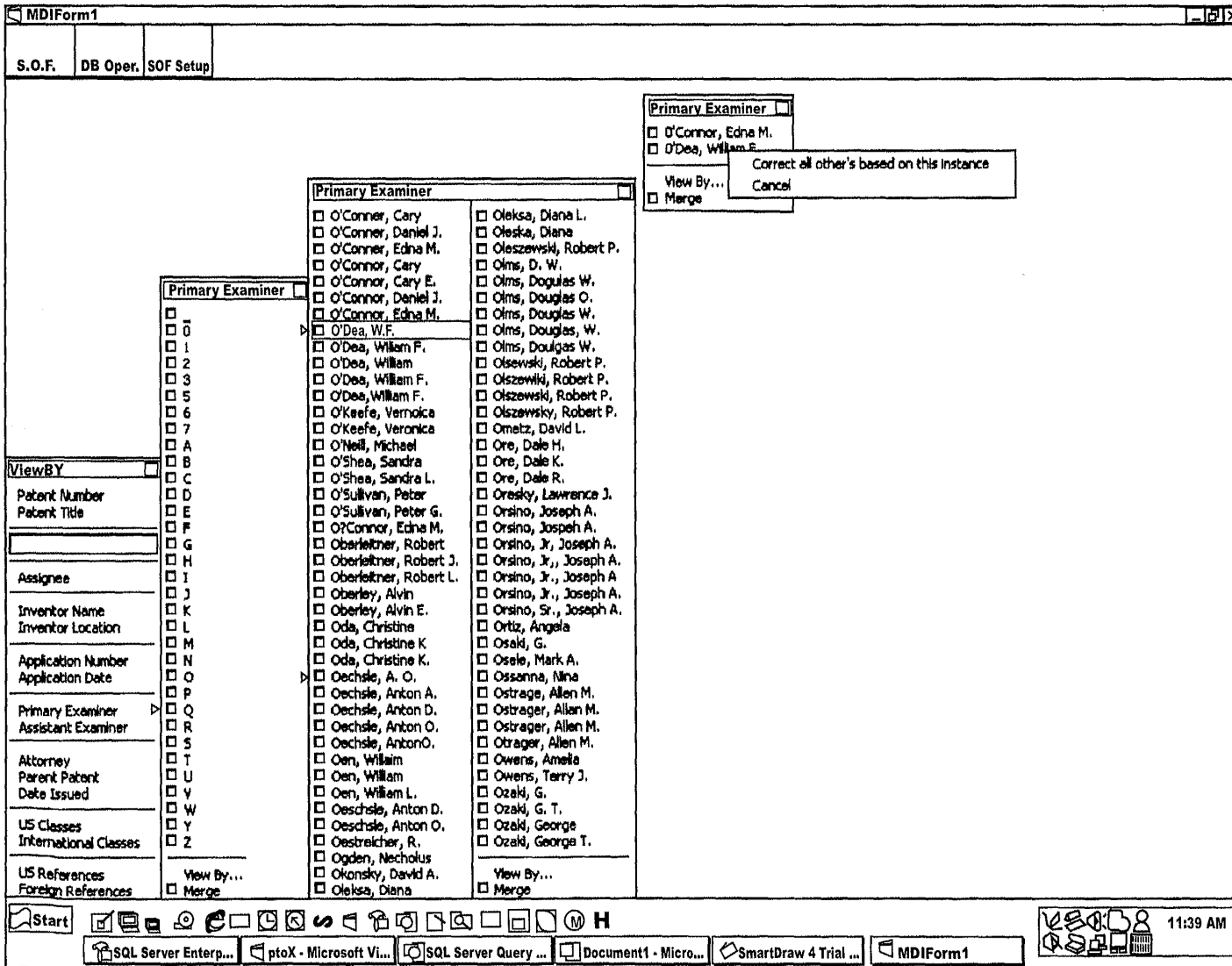
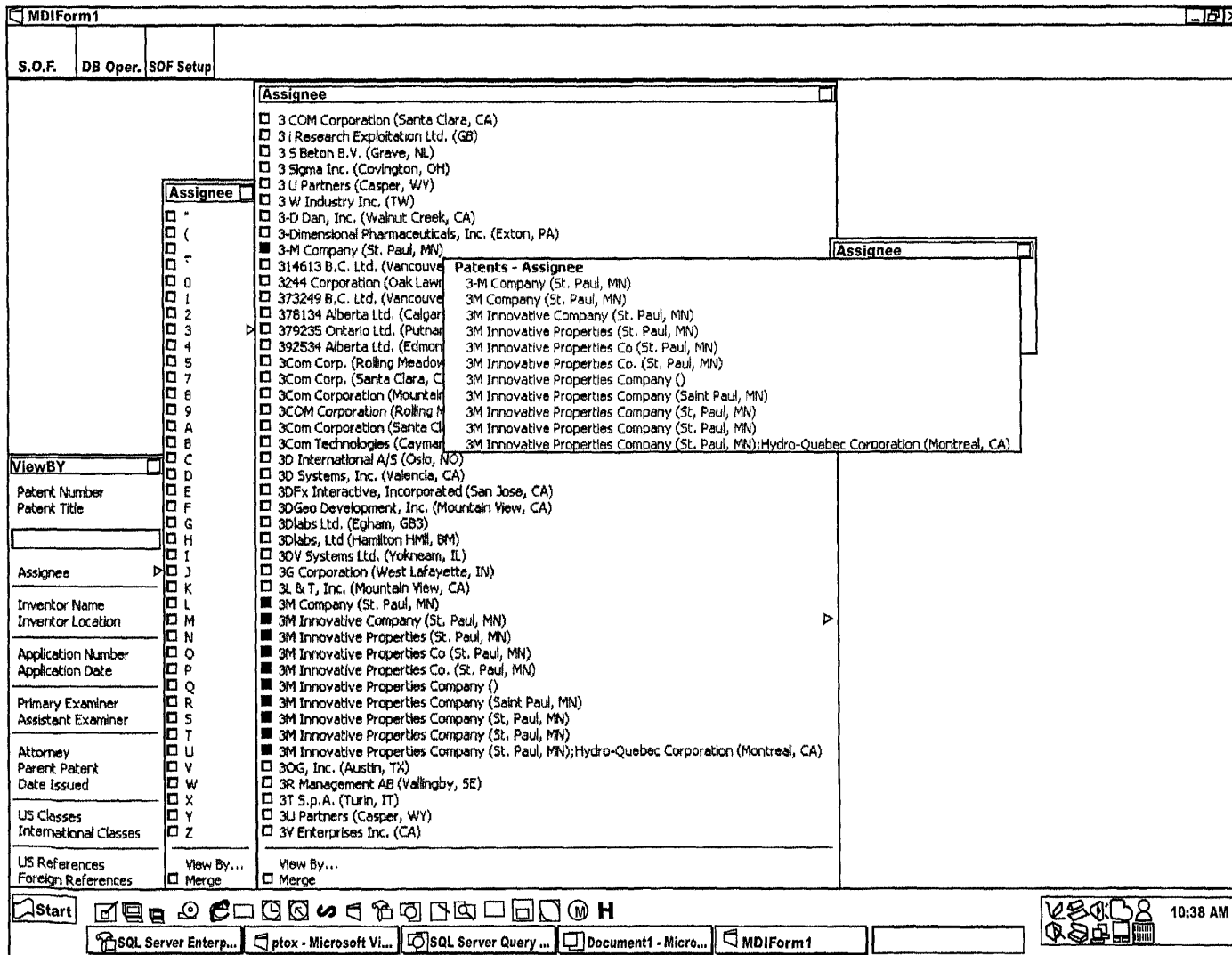


FIG. 28b



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

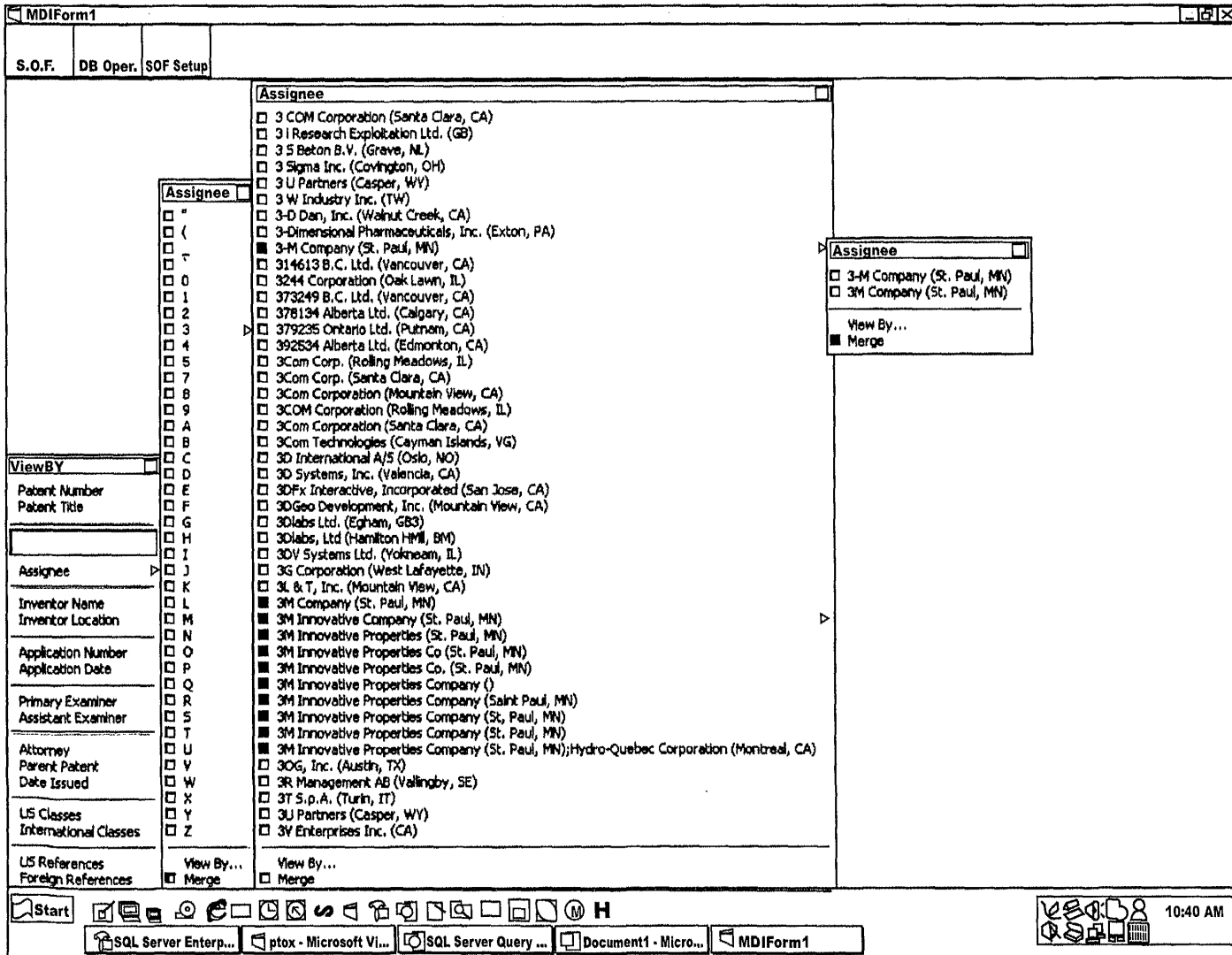
FIG. 29



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

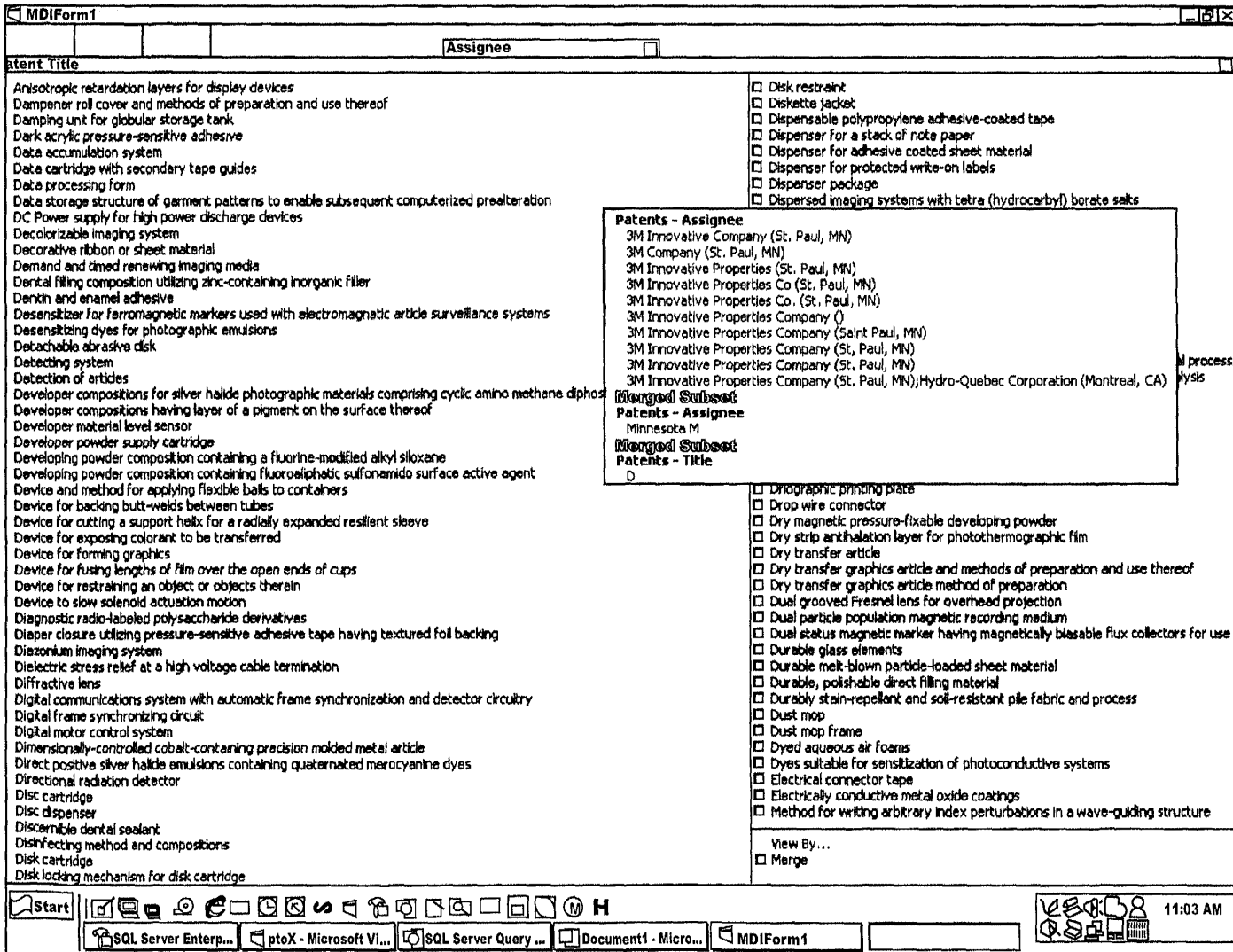
FIG. 30

FOI280 59556660



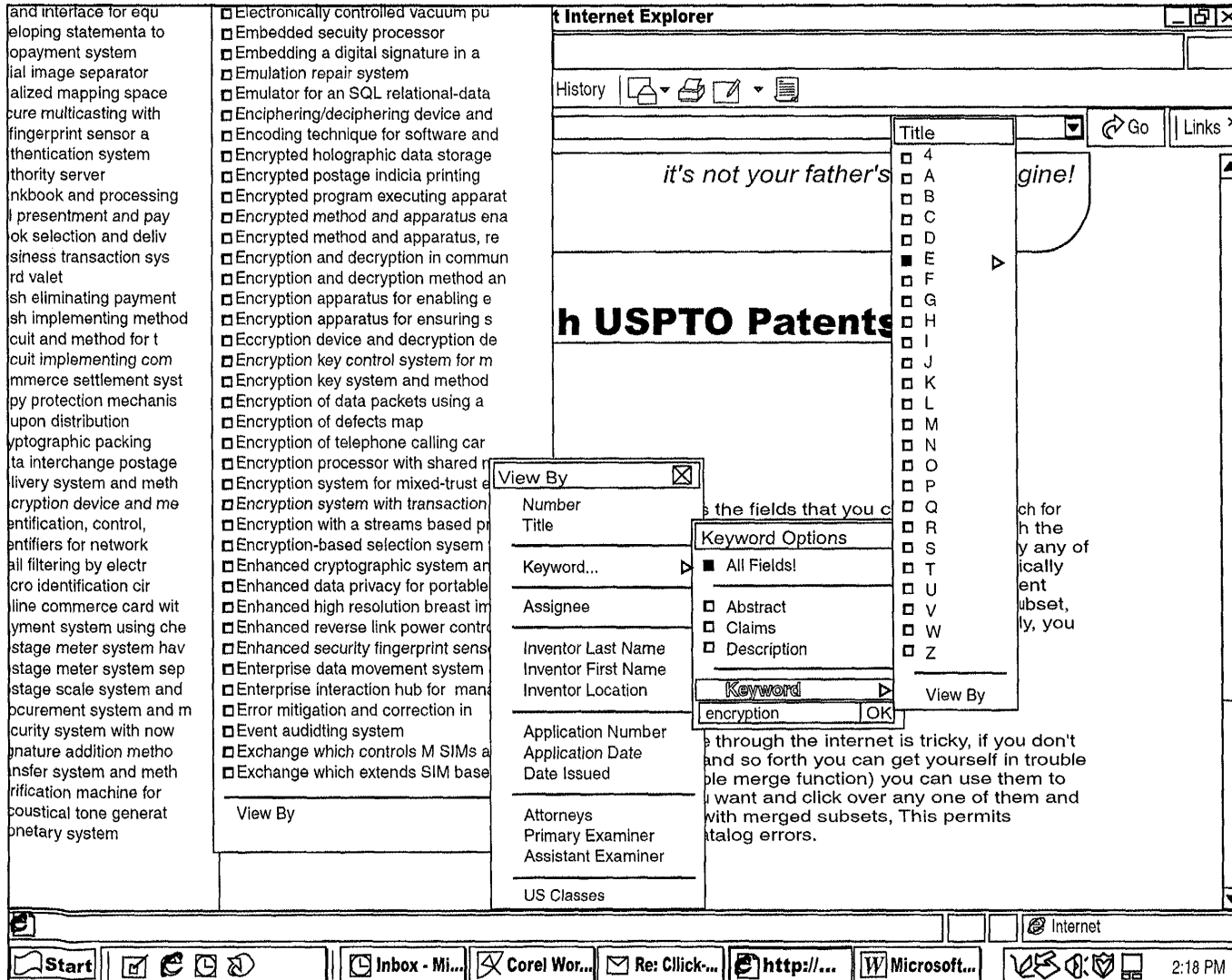
Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

FIG. 31



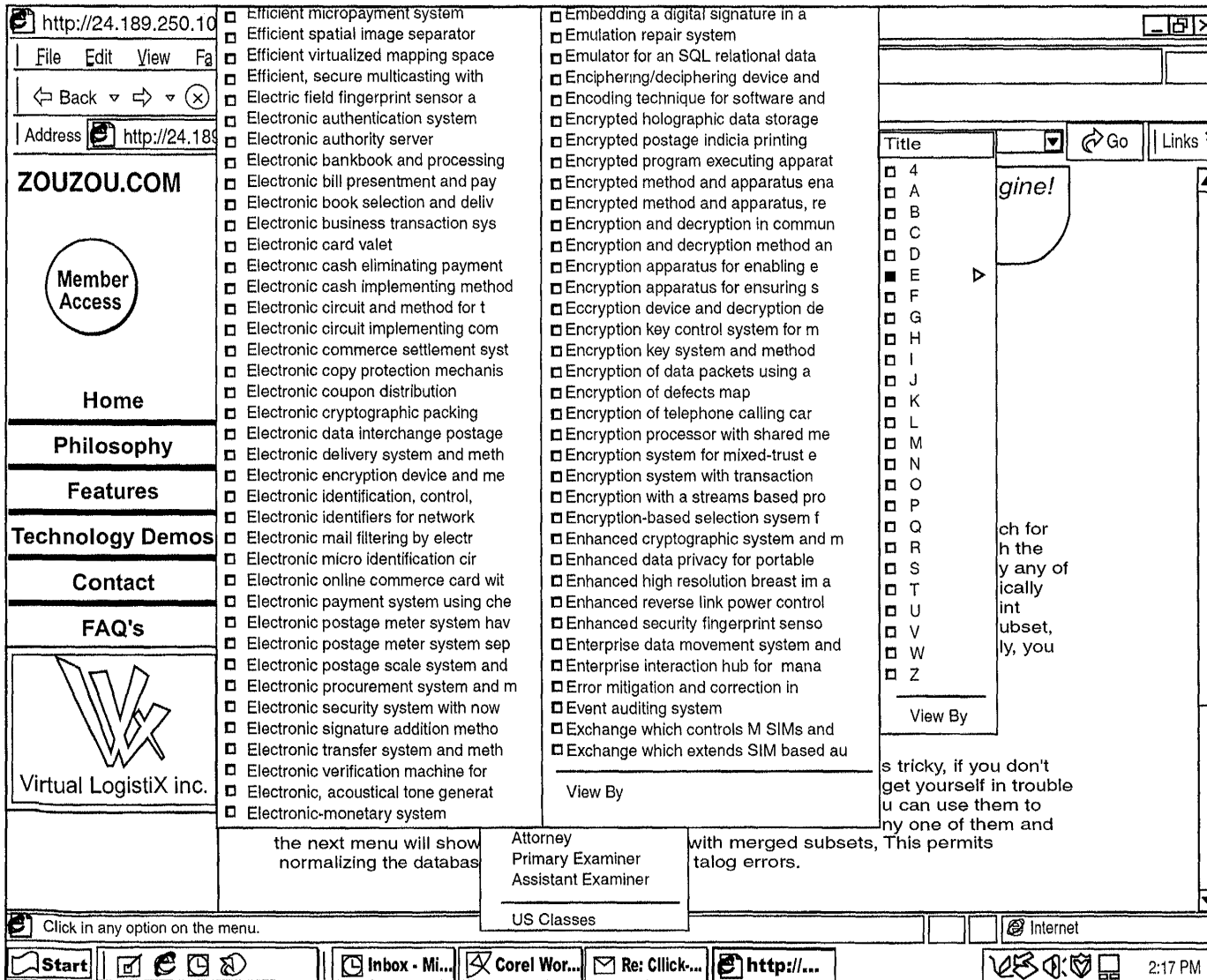
Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 36



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 37



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 38

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

ZOUZOU.COM

it's not your father's search engine!

Patent: 5935246

Electronic copy protection mechanism using challenge and response to prevent unauthorized execution of software

Date Filled:

4/11/1997

Date Issued:

8/10/1999

Application Number:

838620

Go to USPTO.GOV

USPTO

Abstract:

A copy protection mechanism for protecting software against copying, consists of a challenge mechanism embedded in each protected item of software. The challenge mechanism has no access to the customer's private keying material. In operation, the challenge mechanism sends a random challenge to the customer's signature server. The signature server signs the challenge, using the customer's private keying material and then returns the signed challenge to the challenge mechanism. The challenge mechanism then verifies the signed challenge, using the customer's public keying material, and prohibits the customer from using some or all of the protected item of software unless the verification is successful. The mechanism permits every customer to receive an identical copy of the copy protected program with the embedded challenge mechanism.

Inventors:

Benson, Glenn Stuart

Inventor Location:

Munich, DE

Assignee:

International Computers Limited (Limited, GB)

US Classes:

713/200

713/201

International Classes:

US References:

4558176

4926480

4947430

5109413

5146575

5224163

5315657

5371794

5436972

5568552

5724425

Foreign References:

Primary Examiner:

Kizou, Hassan

Assistant Examiner:

Mai, Rijue

Attorney:

Lee, Mann, Smith, McWilliams, Sweeney & Ohlson

Claims:

FIG. 39

0935246

MDIForm1

S.O.F.

ViewBY

- Title
- Patent Number
- Inventor Name
- Inventor's Location
- US References
- Foreign References
- US Classes
- International Classes
- Application Number
- Application Date
- Issue Date
- Primary Examiner
- Assistant Examiner
- Attorney
- Assignee

Inventor Name

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Inventor Name

Ha Ha- Haa Hab Hac Had Hae Haf Hag Hah Hai Haj Hak Hal Ham Han Hao Hap Haq Har Has Hat Hau Hav Haw Hax Hay Haz

Inventor Name

Har Har- Hara Harb Harc Hard Hare Harf Harg Harh Hari Harj Hark Harl Harm Harn Haro Harp Harr Harr- Harra Harra, In Harrel, J Harreid, Harrell, Harrelson Harren, H Harrer, d Harrer, P Harreus, Harrewijn Harri, Eu Harrick, Harries, Harrigan, Harrigill, Harrill, Harriman, Harringto, Harriott, Harris, A Harris, B Harris, C Harris, D Harris, E Harris, F Harris, G Harris, H Harris, I Harris, J Harris, K Harris, L Harris, M Harris, N Harris, O Harris, P Harris, R Harris, S Harris, T Harris, V Harris, W Harrisber Harrison, Harrison- Harritz, J Harrod, A Harrod, D Harrod, E Harrod, L Harrod, M Harroff, Harrold, Harron, R Harrop, D Harrop, R Harrop, W Harrow, C Harrow, G Harrow, T Harrower, Harrowing Harruff, Harrus, A Harry Harry, Al Harry, Ed Harry, le Harry, Je Harry, Jo Harry, Sr

ViewBY

- Title
- Patent Number
- Inventor Name
- Inventor's Location
- US References
- Foreign References
- US Classes
- International Classes
- Application Number
- Application Date

Assignee

- Rohm and Haas Company (Independence Mall West, DE)
- Rohm and Haas Company (Philadelphia, PA)

Start | [Icons] | ptOX - Microso... | MDIForm1 | Document1 - ... | 10:25 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

FIG. 40

MDIForm1		Attorney	
S.O.F.		D'A Div	
		D. Dix	
		Dab Dob	
		Dac Doc	
		Dah Dod	
		Dai Doe	
		Dal Doh	
		Dan Doi	
		Dar Doj	
		Dau Dom	
		Dav Don	
		Daw Doo	
		Day Dor	
		de Dos	
		Dea Dou	
		deB Dow	
		Dec Doy	
		Ded Dra	
		Dee Dre	
		A Deg Dri	
		B Deh Dro	
		C Dei Dru	
		D DeJ Dry	
		E DeL Dub	
		F Dem Duc	
		G Den Dud	
		H DeP Duf	
		I Der Dug	
		J Des Duk	
		K Det Dul	
		L Deu Dum	
		M Dev Dun	
		N Dew Dup	
		O Dex Dur	
		P Dhu Dus	
		Q Dia Dut	
		R Dic Duz	
		S Did Dvo	
		T Die Dwe	
		U Dik Dwo	
		V Dil Dwy	
		W Dim Dyb	
		X Din Dyk	
		Y Dio Dys	
		Z Dip	
		Dis	
		Dit	
		View By...	
ViewBY			
Title			
Patent Number			
Inventor Name			
Inventor's Location			
US References			
Foreign References			
US Classes			
International Classes			
Application Number			
Application Date			
Issue Date			
Primary Examiner			
Assistant Examiner			
Attorney			
Assignee			
	Attorney		
	Dorchak, Frederick J	Inventor Location	
	Dorfman, Herrell and Skillman	10 Cty. Hwy. #4, Wrenshall, MN 56797	Madison, WI
	Dorfman, John C.	1111 Hayden Ave., Altoona, WI 54720	Melbourne, AU
	Dority & Manning	1424 N. Danube Rd., Fridley, MN 55432	Melbourne, Victoria, AU
	Dority, John P., Cleaver, William	1622 Lake Johanna Blvd., Arden Hills, MN 55112	Miami, FL
	Dorman, Ira S.	1925 Noble Dr., Minneapolis, MN 55422	Minneapolis, MN
	Dorman, William S.	2000 Argonne Dr., Minneapolis, MN 55421	Minnetonka, MN
	Dorr, Carson, Sloan & Peterson	31 Alexandra Mansion, 333 Kings Road, London, SW3 5ET, GB	North Melbourne, AU
	Dorr, Carson, Sloan and Peterson	3109 Clinton Ave. South, Minneapolis, MN 55408	Owatonna, MN
	Dorr, Carson, Sloan, & Peterson	48 Woodland Gardens, London, N10 3UA, GB	P.O. Box 66, Edgeley, ND 58433
	Dorsey & Whitney	5188 St. Moritz Dr., Fridley, MN 55421	Philadelphia, PA
	Dorsey, Daniel K.	5437 Elliot Ave. S., Minneapolis, MN 55417	Phoenix, AZ
	Dorsey, Marquart, Windhorst, V	5437 Elliot Ave. South, Minneapolis, MN 55417	Plymouth, MN
	Dorsey, Windhorst, Hannaford	6805 Sheridan Ave. S., Richfield, MN 55423	Prior Lake, MN
	View By...	8000, 18e avenue, Ville Saint-Michel, Montreal, Quebec, CA	R.R. 1, Box 410, Belle Fourche, SD 57717
		Aberdeen, SD	R.R. 2, Elbow Lake, MN 56531
		Afton, MN	Ramsey, MN
		Andover, MN	Rte. 5, Box 245D, Bemidji, MN 56601
		Blaine, MN	Scottsdale, AZ
		Bloomington, MN	Seoul, KR
		Brooklyn Park, MN	Shakopee, MN
		Bundaberg, AU	Southampton, PA
		Burnsville, MN	Springfield, MO
		Chicago, IL	St-Damien, CA
		Circle Pines, MN	St. Louis Park, MN
		Darwin, MN	St. Paul, MN
		Eagan, MN	Stillwater, MN
		Edina, MN	Vadnais Heights, MN
		Embleton, AU	Waseca, MN
		Excelsior, MN	Winsted, MN
		Golden Valley, MN	Zimmerman, MN
		Kardinya, AU	View By..
		Lawrenceville, NJ	

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 41

MDIForm1

S.O.F.	Attorney	Assignee
D'A	Div	Amca International Corporation (St. Paul, MN)
D	Dix	Austoft Industries Limited (Queensland, AU)
Dab	Dob	Bennett Automotive Technology Pty. Ltd. (Melbourne, AU)
Dac	Doc	Bennett Automotive Technology Pty. Ltd. (Melbourne, AU)
Dah	Dod	Bennett Automotive Technology Pty. Ltd. (Victoria, AU)
Dai	Doe	Carlson; Chesley F. (Plymouth, MN)
Dal	Doh	Carter-Day Company (Minneapolis, MN)
Dan	Doi	Chesley F. Carlson Company (Plymouth, MN)
Dar	Dol	Cleanair Engineering Pty. Ltd. (AU)
Dau	Dom	CyberOptics Corporation (Minneapolis, MN)
Dav	Don	E.F. Johnson Company (Waseca, MN)
Daw	Doo	EquiMed Corporation (Plymouth, MN)
Day	Dor	General Mills, Inc. (Minneapolis, MN)
de	Dos	Hutchinson technology, Inc. (Minneapolis, MN)
Dea	Dou	IPL INC. (St-Damien, CA)
deB	Dow	John A. Dalsin & Son, Inc. (Minneapolis, MN)
Dec	Doy	K.O. Lee Company (Aberdeen, SD)
Ded	Dra	KI-On Trading Co.,Ltd. (Seoul, KR)
Dee	Dre	Kroy Inc. (Scottsdale, AZ)
Deg	Dri	Kroy IN. (St. Paul, MN)
Deh	Dro	Loran Maintenance of Way, Inc. (Hamel, MN)
Dei	Dru	National Computer Systems, Inc. (Eden Prairie, MN)
DeJ	Dry	National Computer Systems, Inc. (Minneapolis, MN)
DeL	Dub	Red Devil Equipment Company (Bloomington, MN)
Dem	Duc	Scherping Slystems, Inc. (Winsted, MN)
Den	Dud	Sentry Technologies, Inc. (Chanhassen, MN)
DeP	Duf	Sherping Systems, Inc. (Winstead, MN)
Der	Dug	SystemOne Holdings, Inc. (Houston, TX)
Des	Duk	Toi-O-Matic, Inc. (Minneapolis, MN)
Det	Dul	Waldorf Corporation (St. Paul, MN)
Deu	Dum	Wenger Corporation (Owantonna, MN)
Dev	Dup	
Dew	Dur	
Dex	Dus	
Dhu	Dut	
Dia	Duz	
Dic	Dvo	
Did	Dwe	
Die	Dwo	
Dik	Dwy	
Din	Dyb	
Dio	Dyk	
DIP	Dys	
Dis		
Dit		

Attorney

- Dorchak, Fredrick J.
- Dorfman, Herell and Skillman
- Dorfman, John C.
- Dority & Manning
- Dority, John P., Cleaver, William E., Truex, Marshall M.
- Dorman, Ira S.
- Dorman, William S.
- Dorr, Carson, Sloan & Peterson
- Dorr, Carson, Sloan and Peterson
- Dorr, Carson, Sloan & Peterson
- Dorsey & Whitney
- Dorsey, Daniel K.
- Dorsey, Marquart, Windhorst, West & Halladay
- Dorsey, Windhorst, Hannaford, Whitney & Halladay

Assignee

- Amca International Corporation (St. Paul, MN)
- Austoft Industries Limited (Queensland, AU)
- Bennett Automotive Technology Pty. Ltd. (Melbourne, AU)
- Bennett Automotive Technology Pty. Ltd. (Melbourne, AU)
- Bennett Automotive Technology Pty. Ltd. (Victoria, AU)
- Carlson; Chesley F. (Plymouth, MN)
- Carter-Day Company (Minneapolis, MN)
- Chesley F. Carlson Company (Plymouth, MN)
- Cleanair Engineering Pty. Ltd. (AU)
- CyberOptics Corporation (Minneapolis, MN)
- E.F. Johnson Company (Waseca, MN)
- EquiMed Corporation (Plymouth, MN)
- General Mills, Inc. (Minneapolis, MN)
- Hutchinson technology, Inc. (Minneapolis, MN)
- IPL INC. (St-Damien, CA)
- John A. Dalsin & Son, Inc. (Minneapolis, MN)
- K.O. Lee Company (Aberdeen, SD)
- KI-On Trading Co.,Ltd. (Seoul, KR)
- Kroy Inc. (Scottsdale, AZ)
- Kroy IN. (St. Paul, MN)
- Loran Maintenance of Way, Inc. (Hamel, MN)
- National Computer Systems, Inc. (Eden Prairie, MN)
- National Computer Systems, Inc. (Minneapolis, MN)
- Red Devil Equipment Company (Bloomington, MN)
- Scherping Slystems, Inc. (Winsted, MN)
- Sentry Technologies, Inc. (Chanhassen, MN)
- Sherping Systems, Inc. (Winstead, MN)
- SystemOne Holdings, Inc. (Houston, TX)
- Toi-O-Matic, Inc. (Minneapolis, MN)
- Waldorf Corporation (St. Paul, MN)
- Wenger Corporation (Owantonna, MN)

ViewBY

- Title
- Patent Number
- Inventor Name
- Inventor's Location
- US References
- Foreign References
- US Classes
- International Classes
- Application Number
- Application Date
- Issue Date
- Primary Examiner
- Assistant Examiner
- Attorney
- Assignee

Start | [Icons] | ptoX - Microso... | Harrop 2.doc... | MDIForm1 | [Icons] | 10:38 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 42

MDIForm1

S.O.F.

Primary Examiner

C. A	Clin
Cahn	Coan
Cain	Cobi
Caid	Cock
Call	Codi
Camb	Coe,
Camo	Cois
Camp	Coha
Cang	Cohc
Cann	Cohn
Cape	Cole
Capo	Comb
Capp	Cong
Card	Cook
Caro	Coop
Carr	Corb
Cart	Corc
Casa	Core
Case	Cors
Cash	Cosb
Caso	Coug
Cast	Cous
Caun	Cove
Cape	Cox
Cham	Crai
Chan	Cram
Chap	Cran
Char	Cras
Chat	Cros
Chau	Crow
Chea	Croy
Chen	Cuch
Cher	Cucl
Chi,	Cuda
Chie	Culb
Chil	Culy
Chin	Cuom
Chot	Curt
Chri	Cusb
Chur	Cusi
Ciar	Cust
Cint	Czaj
Clat	Czal
Clar	Czas
Claw	
Clay	

Primary Examiner

0
1
2
3
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
X
Y
Z

Primary Examiner

Casaregola, Louis J.
Casaregola, Louis L.
Casaregola, Louis J.

View By...

ViewBY

Title

Patent Number

Inventor Name

Inventor's Location

US References

Foreign References

US Classes

International Classes

Application Number

Application Date

Issue Date

Primary Examiner

Assistant Examiner

Attorney

Assignee

View By...

Start

ptox - Microso...

Harrop 2.doc...

MDIForm1

10:41 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 45

MDIForm1		Primary Examiner	
S.O.F.		Dahl, Lawren	Didline, Jr.
		Dan, Hoang C	DiPalma, Vic
		Dang, Hoang	Dixon Jr., W
		Dang, Thi	Dixon, Harol
		Danison, Wal	Dixon, Josep
		Daus, Donald	Dixon, Jr.,
		Daus, Donld	Dixon, Willi
		Daus, Dougla	Dixon, Harol
		Dauss, Donal	Dixson, Jr.,
		David Smith,	Dixson, Jr ,
		Davie, James	Dobeck, B.
		Davis Jr., A	Dobeck, Benj
		Davis, Alber	Dobeck, G.
		Davis, C.	Dobeck, H.
		Davis, Curti	Dolinar, And
		Davis, Curt	Doll, John
		Davis, Jenna	Donovan, Lin
		Davis, Jr. A	Dority Carro
		Davis, Jr.,	Dority, Caro
		Davis, C.	Dority, Carr
		Davis, Jr.,	Dority, Jr.
		Davis, Curt	Dority, Jr.,
		Dawson, Robe	Dority, Jr.,
		Dayoan, D.G	Dorner Kenne
		De Boer, Tod	Dorner, Kenn
		Dean, Jr, R	Dost, Gerald
		Dean, R	Dote, Janis
		Dean, R.	Doudreau, Le
		Dean, Richar	Douglas Wins
		Dean, W.	Douglas, Win
		Dear, R	Downey, K.
		DeBoer, Todd	Downey, Kenn
		Dechsle, Ant	Downey, Mary
		Deck, Randal	Draper, Garn
		Dees, Carl F	Draper, Garr
		Dees, Jose	Drezen, Norm
		Dees, Jose G	Drezin, Norm
		Dees, Jose/	Drodge, Jose
		Dees, Josee	Drummond Dou
		Dees, JoseG.	Drummond, Do
		Dehrend, Har	Dugan, Donov
		Demeo, Palme	Dugan, James
		Demers, Arth	Dugga, Donov
		DeMille, Dan	Duggan, Dono
		Denion, Thom	Duzan, James
		Dertz, Berna	Dwyer, James
		Derrington,	Dziehzynski,
		Desmond, Eug	Dzierzynski,
		Di Palma, Vi	
		Diehl, Dwigh	View By...
		Dier, Philip	

Primary Examiner
0
1
2
3
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
Y
Z

ViewBY
Title
Patent Number
Inventor Name
Inventor's Location
US References
Foreign References
US Classes
International Classes
Application Number
Application Date
Issue Date
Primary Examiner
Assistant Examiner
Attorney
Assignee

Primary Examiner
Dees, Jose
Dees, Jose G.
Dees, Jose G.
Dees, Jose/
Dees, Josee G.
Dees, JoseG.
View By...

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

FIG. 46

MDIForm1

S.O.F.

Assignee	Assignee	Assignee
"	U	Ulano Corporation (Brooklyn, NY)
(U-	Uldricks, Charles D. (Newbury Park, CA)
'	Ua	Ulapara Holdings Pty. Ltd. (New South Wales, AU)
1	Ub	Ulinic France (Paris, FR)
2	Uc	Ulrich Baensch (Melle, DT)
3	Ud	Ulrich Luboschik (DE)
5	Ue	Uistein Propeller A/S (NO)
7	Uf	Ultimage Inc. (Quebec, CA)
8	Ug	Ultimate Window Coverings, Inc. (Lakewood, CO)
A	Uh	Ultra Light Arms, Inc. (Granville, WV)
B	Ui	Ultra Mortar, Inc. (Ogden, UT)
C	Um	Ultra Plating Corporation (Green Bay, WI)
D	Un	Ultra-Centrifuge Nederland N.V. (Almelo, NL)
E	Uo	Ultra-Mold Corporation (Willow Grove, PA)
F	Up	Ultra-Precision Manufacturing, Ltd. (Birmingham, MI)
G	Ur	Ultra-Violet Products, Inc. (San Gabriel, CA)
H	Us	Ultracentrifuge Nederland N.V. (The Hague, NL)
I	Ut	Ultradent Products, Inc. (Salt Lake City, UT)
J	Uv	Ultradent Products, Inc. (South Jordan, UT)
K	Uz	Ultrafibre, Inc. (Granville, OH)
L		Ultraküst Electronic GmbH (Ruhmannsfelden, DE)
M		Ultralife Batteries, Inc. (Newark, NY)
N		Ultrasonic Embroidery Machine Company (North Haven, CT)
O		Ultrasonic Equipment Company (Addison, IL)
P		Ultramatrix, Inc. (Los Angeles, CA)
Q		Ultramed Corporation ()
R		ULTRAMET (Pacoima, CA)
S		Ultrasonic Arrays, Inc. (Woodinville, WA)
T		Ultrasonic Energy Corporation (Riverdale, NY)
U		Ultrasonic Systems, Inc. (Farmingdale, NY)
V		Ultratec, Inc. (Madison, WI)
W		Ultratek International, Inc. (Concord, CA)
X		UltraThermics (Redmond, WA)
Y		Ultraviolet Purification Systems (Bedford Hills, NY)
Z		Ultraviolet Purification Systems, Inc. (Bedford Hills, NY)
		Ultrastreams Defense and Space, Inc. (Irvine, CA)
		Ultronic Systems Corporation (Moorestown, NJ)
		Ultror International (Santa Ana, CA)
		Uly-Pak, Inc. (Carbondale, IL)
		Uly-Pak, Inc. (Ulysses, KS)
		Ulysses Corporation (St. George, UT)

ViewBY	ViewBY
Title	Title
Patent Number	Patent Number
	Inventor Name
Inventor Name	Inventor's Location
Inventor's Location	East Islip, Ny
US References	Glen Oaks, NY
Foreign References	Huntington Station, NY
	Riverdale, NY
US Classes	San Rafael, CA
International Classes	Southampton, NY
Application Number	View By...
Application Date	US Refere
Issue Date	Foreign Re
	US Classe
Primary Examiner	Internation
Assistant Examiner	Application
Attorney	Application
Assignee	Issue Date
	Issue Date
	Primary Exar
	Assistant Exa
	Attorney
	Assisnee
	Assignee

Mehtod of ultrasonic cryd
Ultrasonic motors and co
Ultrasonic toothbrush app

Ultrasonic System, Inc. (Farmingdale, NY)

View By...

US Refere
Foreign Re
US Classe
Internation
Application
Application
Issue Date
Primary Exar
Assistant Exa
Attorney
Assisnee

East Islip, Ny
Glen Oaks, NY
Huntington Station, NY
Riverdale, NY
San Rafael, CA
Southampton, NY
View By...
Issue Date
Primary Exar
Assistant Exa
Attorney
Assisnee

FIG. 47

Start | ptoX - Microso... | Harrop 2.doc... | MDIForm1 | 10:44 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

ViewBY

Title
Patent Number

Inventor Name
Inventor's Location ▶ /
US References 1
Foreign References 2
US Classes ▶ 4
International Classes 5
Application Number 7
Application Date 8
Issue Date 9
Primary Examiner ▶ a
Assistant Examiner D
Attorney G
Assignee ▶

US Classes

41
42
43
44 ▶
45
46
47
48
49

US Classes

44/0
44/1 ▶
44/2
44/3
44/4
44/5
44/6
44/7
44/8
44/9
44/D
440
440/
441/
442/
443/
444/
445/
446/
448/
449/
View By...

US Classes

44/10A
44/10B
44/10C
44/10D
44/10E
44/10F
44/10H
44/10J
44/10K
44/10R
44/12
44/13 ▶
44/14
44/15A
44/15A
44/15R
44/16A
44/16D
44/16F
44/16R
44/17
44/19
44/1A
44/1B
44/1C
44/1D
44/1E
44/1F
44/1G
44/1R
44/1SR
View By...

US Classes

44/13
View By...

ViewBY

Title	Title
Patent N	Artificial logs and log-making method and apparatus
	Fire log process and apparatus
	Fuel compacting apparatus
Inventor	Method and apparatus for recovering by-product silt fines from a slurry thereof
Inventor	Method of charging solids into coal gasification reactor
	Process for making low-sulfur and low-ash fueis
US Refe	View By...
Foreign	
US Classes	
International Classes	
Application Number	
Application Date	
Issue Date	
Primary Examiner	
Assistant Examiner	
Attorney	
Assignee	

Start | ptX - Microso... | Harrop 2.doc... | MDIForm1 | 10:52 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5250
Attorney Docket No.: 5607

FIG. 48

MDIForm1

S.O.F.

(4008054) Process for making low-sulfur and low-ash fuels

Title: Process for making low-sulfur and low-ash fuels Patent Number: 4008054

Assignee: Consolidation Coal Company (Pittsburgh, PA)

Attorney: Mkesell, Jr., William A., Fowler, Jr., D. Leigh, Price, Jr., Stanle Application Number: 540310

Examiner: Dees, Carl F. Application Date: 1/10/1975

Assistant Examiner: Issue Date: 2/15/1977

Parent Case Description: 1. Field of the invention This invention relates to a process for converting coal to low-sulfur and low-ash gaseous, liquid and solid fuels, and more particularly, to a process for supplying the energy requirements of a steel plant from an ash- and sulfur-containing coal. 2. Description of the Prior Art The primary source of energy for the steel industry continues to be coke for the blast furnace. The conventional method for coke manufacture, that is, by slot ovens, requires a blend of high and low volatile coals of proper swelling properties to produce a strong coke without damaging the ovens. Beyond these physical properties, there is a need for desirable chemical properties (i.e. low ash and sulfur content) to permit low-cost production of high quality hot metal. With the continued expansion of the world's productive capacity for steel, a growing shortage of good metallurgical coals is developing, particularly those having the essential low volatile coal ingredients. Low-sulfur coals also are

Inventor's: Clancy, James T., Gorin, Everett, Reichl, Eric H., Rice, Charles H.

Inventors Location: Pittsburgh, PA, Pittsburgh, PA, Pittsburgh, PA, Pittsburgh, PA

Classes: References

Web... Exit

8054'.WKU.%25260S=PN/4008054%2526RS=PN/4008054

http://164.195.100.11/netacg/nph-Parse...

FIG. 49

Start | [Icons] | ptoX... | Harrop... | MDIFo... | This is... | 10:56 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

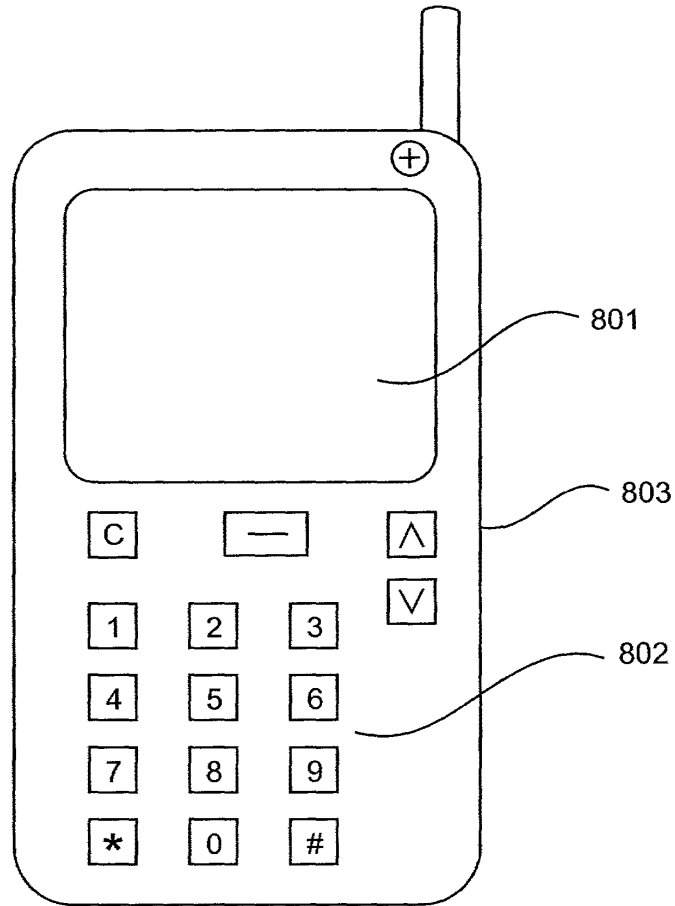
Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

70283" 595E660



800

FIG. 50

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

70260" 595E66

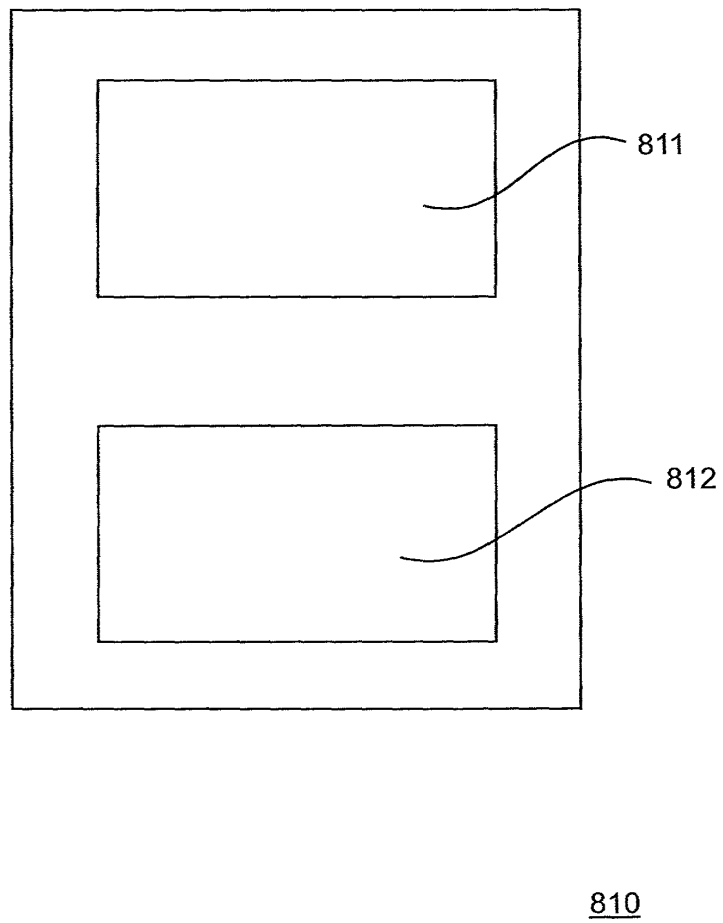


FIG. 51

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

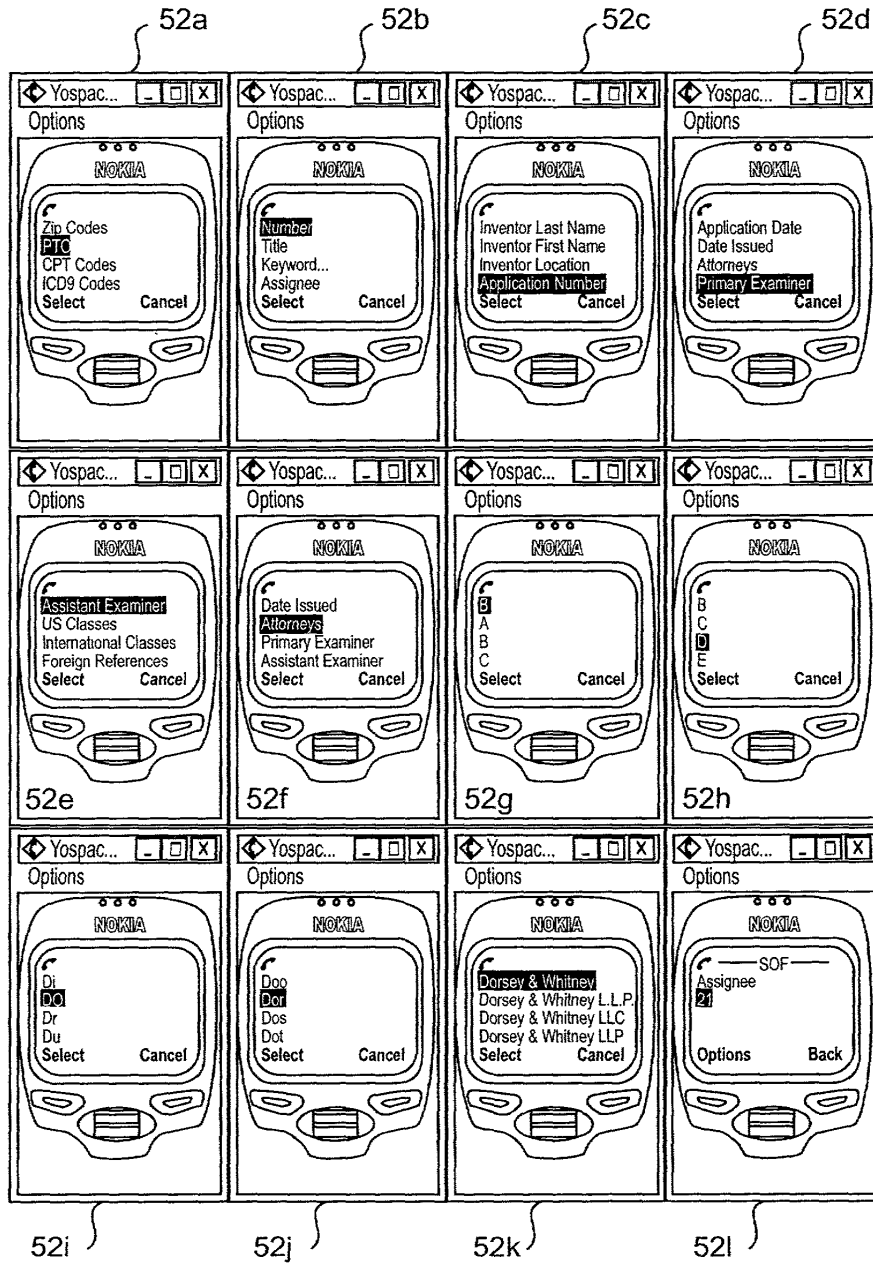


FIG. 52

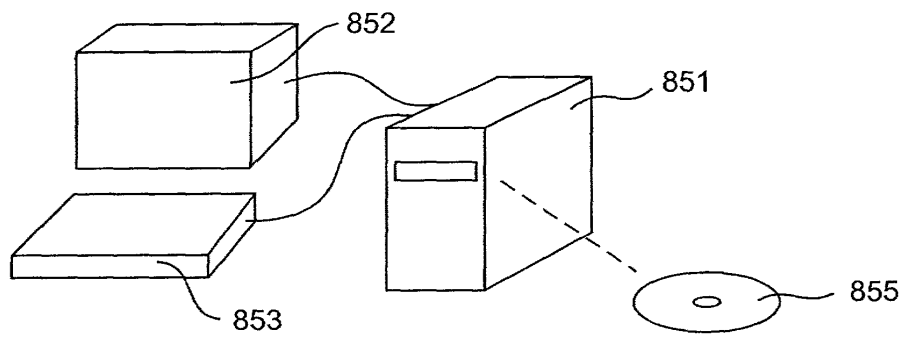
704280 "595660

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607



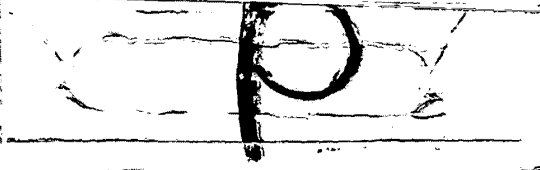
850

FIG. 53

10979 U.S. TO
09/935565

08/24/01

Class	Subclass
ISSUE CLASSIFICATION	



PATENT NUMBER

U.S. UTILITY Patent Application

SCANNED
 O.I.P.E. 102
 O.A. W
 PATENT DATE

21112

APPLICATION NO. 09/935565	CONT/PRIOR D	CLASS 707	SUBCLASS 1	ART UNIT 2177	EXAMINER Wing, L...
APPLICANTS Joseph De Bellis					
TITLE Search-on-the-fly with merge function					

PTO-2040
1299

ISSUING CLASSIFICATION							
ORIGINAL		CROSS REFERENCE(S)					
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
INTERNATIONAL CLASSIFICATION							

Continued on Issue Slip Inside File Jacket

BEST AVAILABLE COPY

<input type="checkbox"/> TERMINAL DISCLAIMER <input type="checkbox"/> The term of this patent subsequent to _____ (date) has been disclaimed. <input type="checkbox"/> The term of this patent shall not extend beyond the expiration date of U.S. Patent. No. _____ <input type="checkbox"/> The terminal _____ months of this patent have been disclaimed.	DRAWINGS Sheets Drwg. Figs. Drwg. Print Fig.			CLAIMS ALLOWED Total Claims Print Claim for O.G.	
	_____ <small>(Assistant Examiner)</small> <small>(Date)</small>			NOTICE OF ALLOWANCE MAILED	
	_____ <small>(Primary Examiner)</small> <small>(Date)</small>			ISSUE FEE Amount Due Date Paid	
	_____ <small>(Legal Instruments Examiner)</small> <small>(Date)</small>			ISSUE BATCH NUMBER	

WARNING:
The information disclosed herein may be restricted. Unauthorized disclosure may be prohibited by the United States Code Title 35, Sections 122, 181 and 368. Possession outside the U.S. Patent & Trademark Office is restricted to authorized employees and contractors only.

Form PTO-438A
(Rev. 6/99)

FILED WITH: DISK (CRF) FICHE CD-ROM
(Attached in pocket on right inside flap)

(FACE)



SEARCHED			
Class	Sub.	Date	Exmr.
707	3, 4, 7, 10, 102, 104.1	8/20/04	LM
709	203, 219	"	"

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	Date	Exmr.
Consulted w/ OMS PAT Sr/ce Result: Not restricted but can do double patenting against 09/513,340.	8/3/04	LM
Double patenting in re Goodman use "representative" and only need to map the independent claims	8/19/04	LM
Enst	8/20/04	LM

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.

BEST AVAILABLE COPY

(RIGHT OUTSIDE)

ISSUE SLIP STAPLE AREA (additional cross references)

POSITION	INITIALS	ID NO.	DATE
FEE DETERMINATION	<i>Sargent</i>		08-27-01
O.I.P.E. CLASSIFIER			
FORMALITY REVIEW	TT	1112	9/10/01
RESPONSE FORMALITY REVIEW	AM	917	11-20-01

INDEX OF CLAIMS

- ✓ Rejected
- = Allowed
- (Through numeral) ... Canceled
- ⊖ Restricted
- N Non-elected
- I Interference
- A Appeal
- O Objected

Claim	Date
Final Original	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	

Claim	Date
Final Original	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	

Claim	Date
Final Original	
101	
102	
103	
104	
105	
106	
107	
108	
109	
110	
111	
112	
113	
114	
115	
116	
117	
118	
119	
120	
121	
122	
123	
124	
125	
126	
127	
128	
129	
130	
131	
132	
133	
134	
135	
136	
137	
138	
139	
140	
141	
142	
143	
144	
145	
146	
147	
148	
149	
150	

BEST AVAILABLE COPY

If more than 150 claims or 10 actions
staple additional sheet here

(LEFT INSIDE)

Express Mail Label No.

Docket No.
5607

UTILITY PATENT APPLICATION TRANSMITTAL (Small Entity)

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Total Pages in this Submission

TO THE ASSISTANT COMMISSIONER FOR PATENTS

**Box Patent Application
Washington, D.C. 20231**

Transmitted herewith for filing under 35 U.S.C. 111(a) and 37 C.F.R. 1.53(b) is a new utility patent application for an invention entitled:

SEARCH-ON-THE-FLY WITH MERGE FUNCTION

and invented by:

Joseph L. De Bellis

If a CONTINUATION APPLICATION, check appropriate box and supply the requisite information:

Continuation Divisional Continuation-in-part (CIP) of prior application No.: 09/513,340

Which is a:

Continuation Divisional Continuation-in-part (CIP) of prior application No.: _____

Which is a:

Continuation Divisional Continuation-in-part (CIP) of prior application No.: _____

Enclosed are:

Application Elements

1. Filing fee as calculated and transmitted as described below
2. Specification having 40 pages and including the following:
 - a. Descriptive Title of the Invention
 - b. Cross References to Related Applications (if applicable)
 - c. Statement Regarding Federally-sponsored Research/Development (if applicable)
 - d. Reference to Microfiche Appendix (if applicable)
 - e. Background of the Invention
 - f. Brief Summary of the Invention
 - g. Brief Description of the Drawings (if drawings filed)
 - h. Detailed Description
 - i. Claim(s) as Classified Below
 - j. Abstract of the Disclosure

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
5607

Total Pages in this Submission

Accompanying Application Parts (Continued)

15. Certified Copy of Priority Document(s) *(if foreign priority is claimed)*
16. Small Entity Statement(s) - Specify Number of Statements Submitted: _____
17. Additional Enclosures *(please identify below)*:

Claim to Priority of U.S. Provisional Patent Application No.: 60/227,305 filed August 24, 2000.

Request That Application Not Be Published Pursuant To 35 U.S.C. 122(b)(2)

18. Pursuant to 35 U.S.C. 122(b)(2), Applicant hereby requests that this patent application not be published pursuant to 35 U.S.C. 122(b)(1). Applicant hereby certifies that the invention disclosed in this application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication of applications 18 months after filing of the application.

Warning

An applicant who makes a request not to publish, but who subsequently files in a foreign country or under a multilateral international agreement specified in 35 U.S.C. 122(b)(2)(B)(i), must notify the Director of such filing not later than 45 days after the date of the filing of such foreign or international application. A failure of the applicant to provide such notice within the prescribed period shall result in the application being regarded as abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the notice was unintentional.

**UTILITY PATENT APPLICATION TRANSMITTAL
(Small Entity)**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Docket No.
5607

Total Pages in this Submission

Fee Calculation and Transmittal

CLAIMS AS FILED

For	#Filed	#Allowed	#Extra	Rate	Fee
Total Claims	41	- 20 =	21	x \$9.00	\$189.00
Indep. Claims	8	- 3 =	5	x \$40.00	\$200.00
Multiple Dependent Claims (check if applicable) <input type="checkbox"/>					\$0.00
BASIC FEE					\$355.00
OTHER FEE (specify purpose) _____					\$0.00
TOTAL FILING FEE					\$744.00

- A check in the amount of _____ to cover the filing fee is enclosed.
- The Commissioner is hereby authorized to charge and credit Deposit Account No. **04-1425** as described below. A duplicate copy of this sheet is enclosed.
- Charge the amount of **\$744.00** as filing fee.
 - Credit any overpayment.
 - Charge any additional filing fees required under 37 C.F.R. 1.16 and 1.17.
 - Charge the issue fee set in 37 C.F.R. 1.18 at the mailing of the Notice of Allowance, pursuant to 37 C.F.R. 1.311(b).

Dated: August 24, 2001



Signature

**Aldo Noto, Reg. No.: 35,628
DORSEY & WHITNEY LLP
1660 International Drive, Suite 300
McLean, VA 22102
Tel. (703) 288-5250
Fax (703) 288-5260**

cc:

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBelli

Contact Name: Aldo Noto (703) 288-5149

Attorney Docket No.: 5607

FOIb280" 5955660

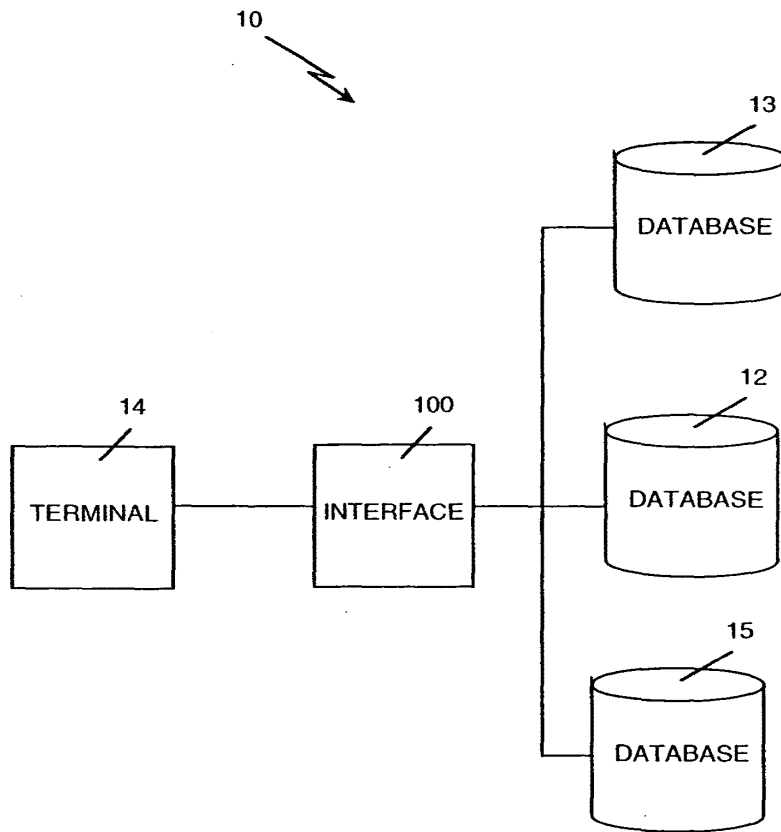


FIG. 1

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FIG. 2

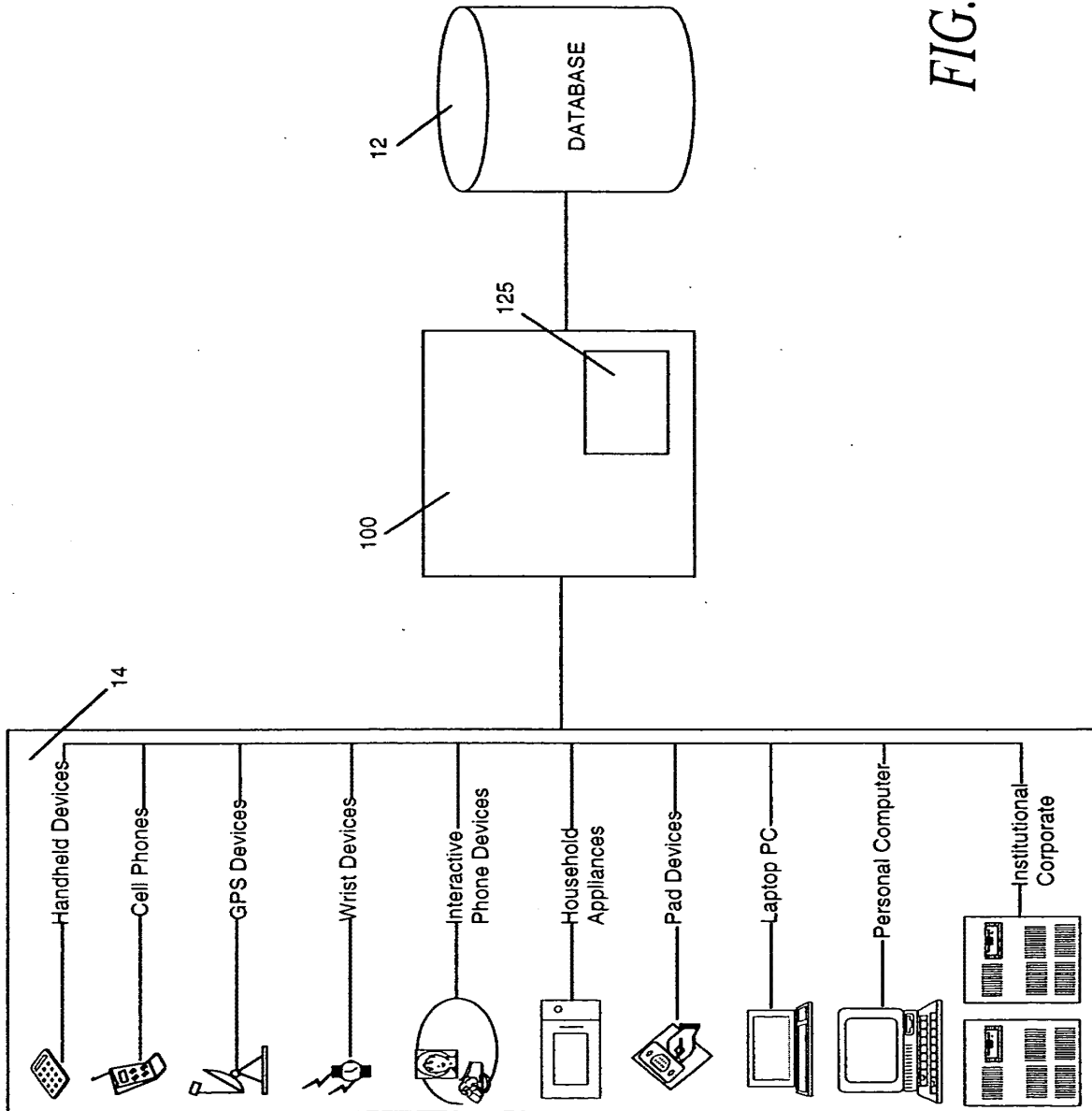


FIG. 2

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FOR PAGES 595-660

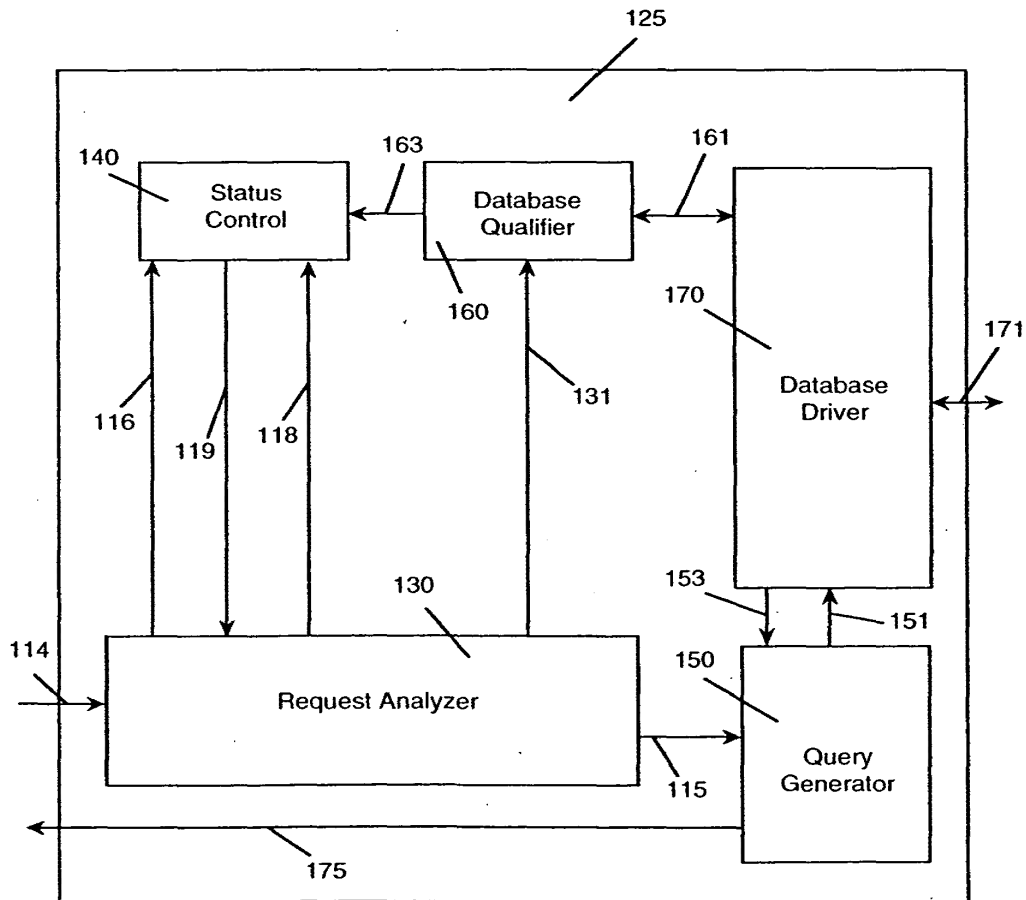


FIG. 3

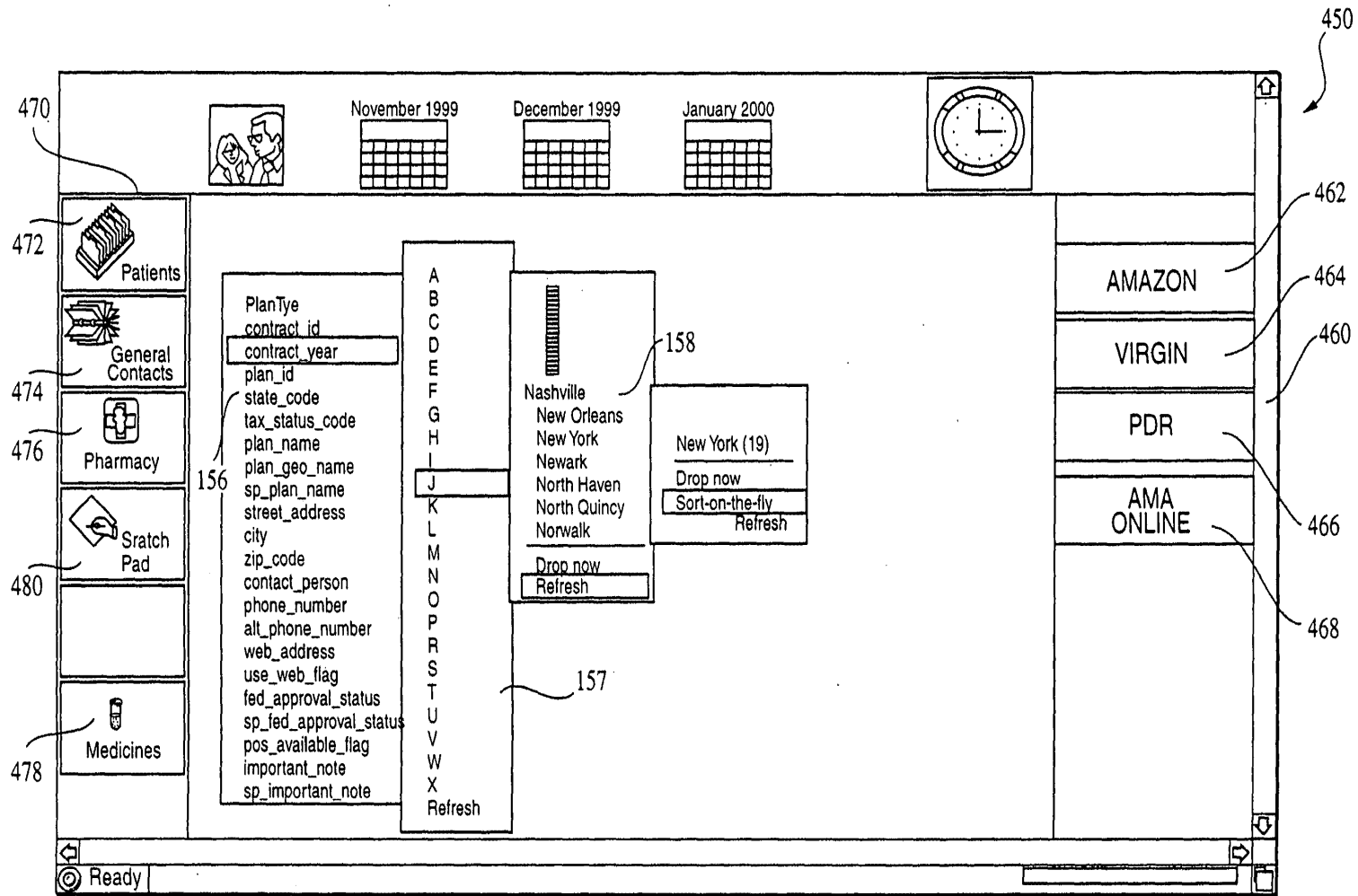


FIG. 4

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5288
 Attorney Docket No.: 5607

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5222

Attorney Docket No.: 5607

FORBID 9955660

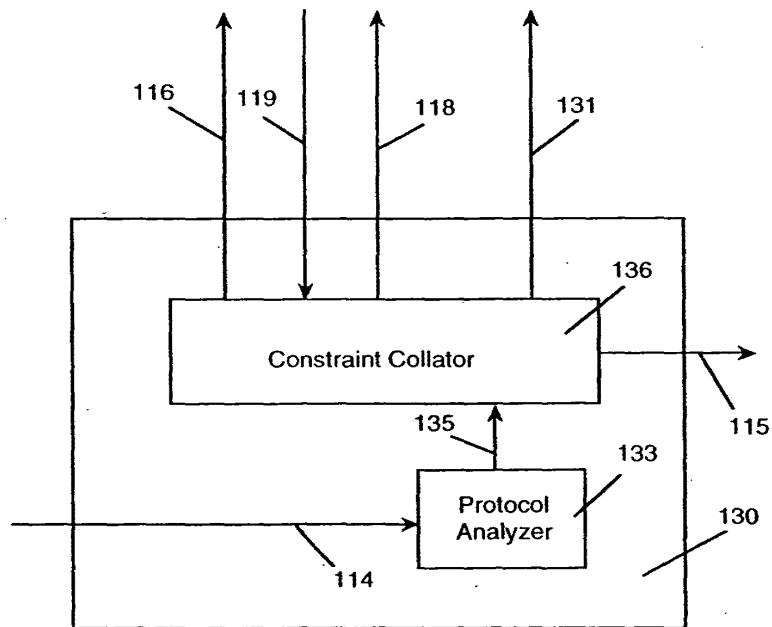


FIG. 5

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FOR "5955E660"

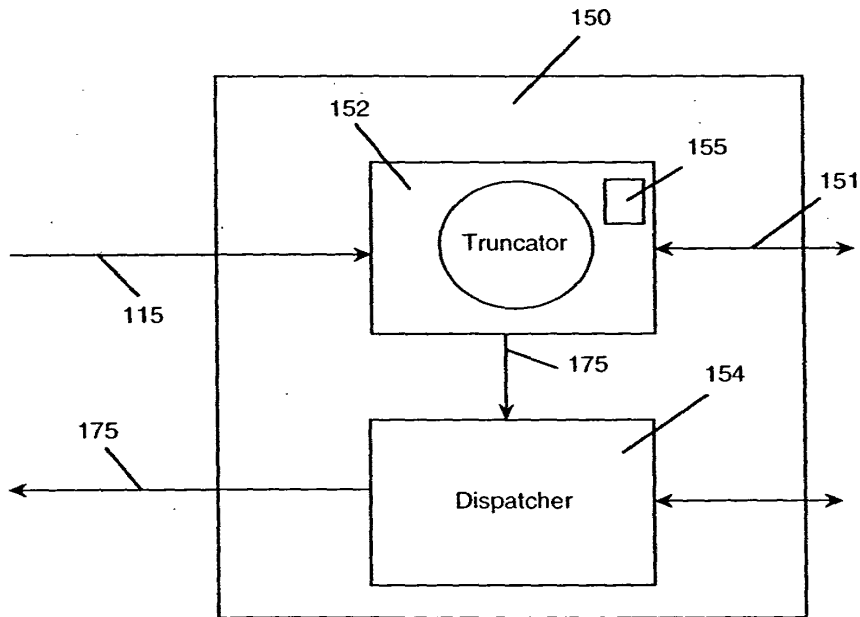


FIG. 6

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

FOIA b 5 - DECLASSIFIED

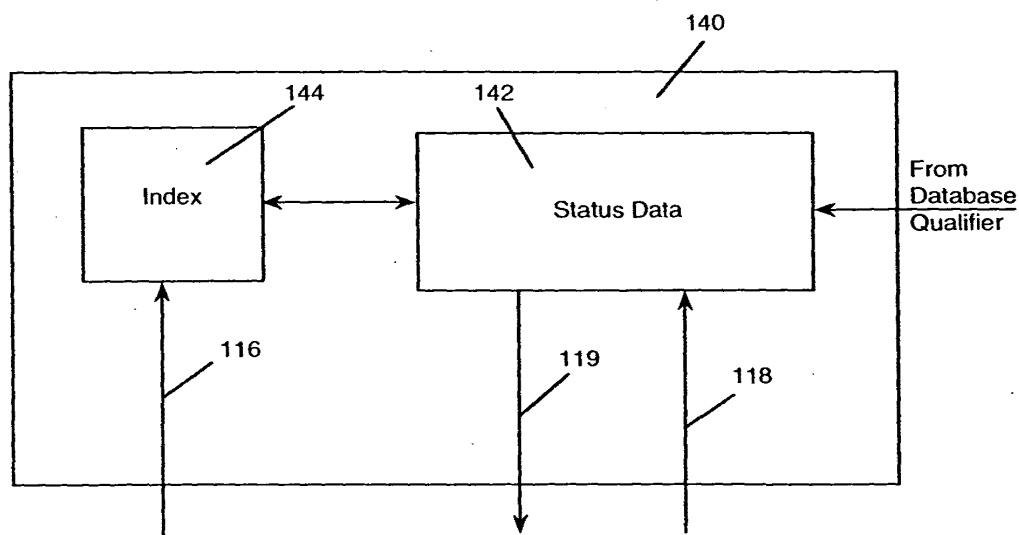


FIG. 7

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5211

Attorney Docket No.: 5607

FIG. 8

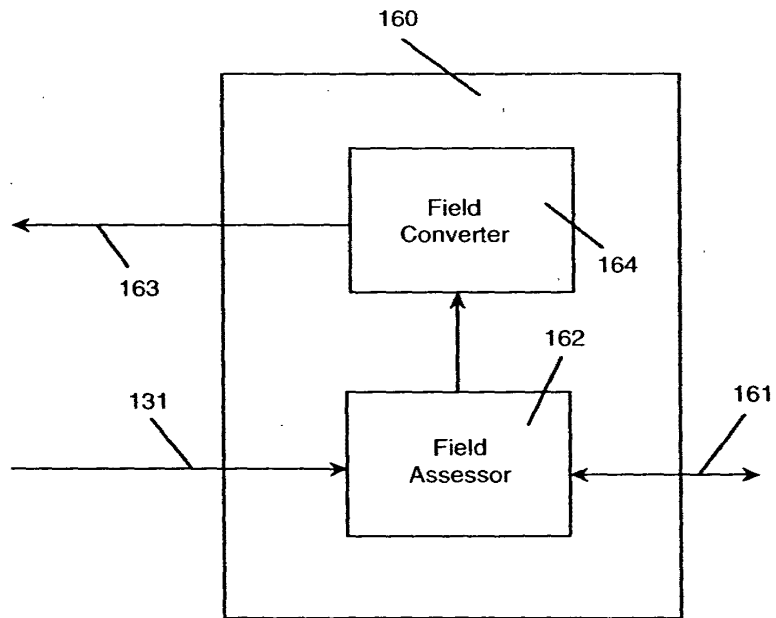


FIG. 8

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FORWARD SEARCHES

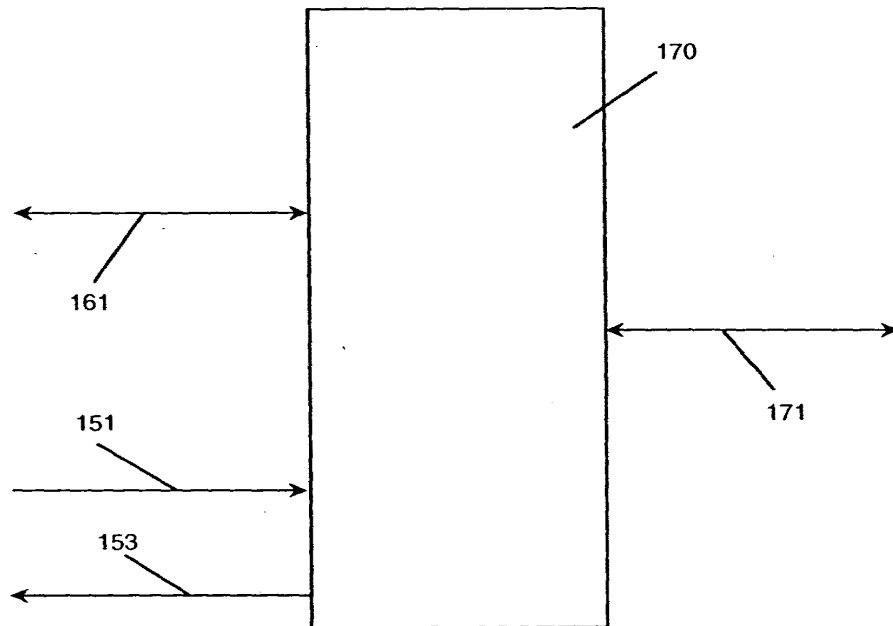


FIG. 9

FOIA b 7 - D

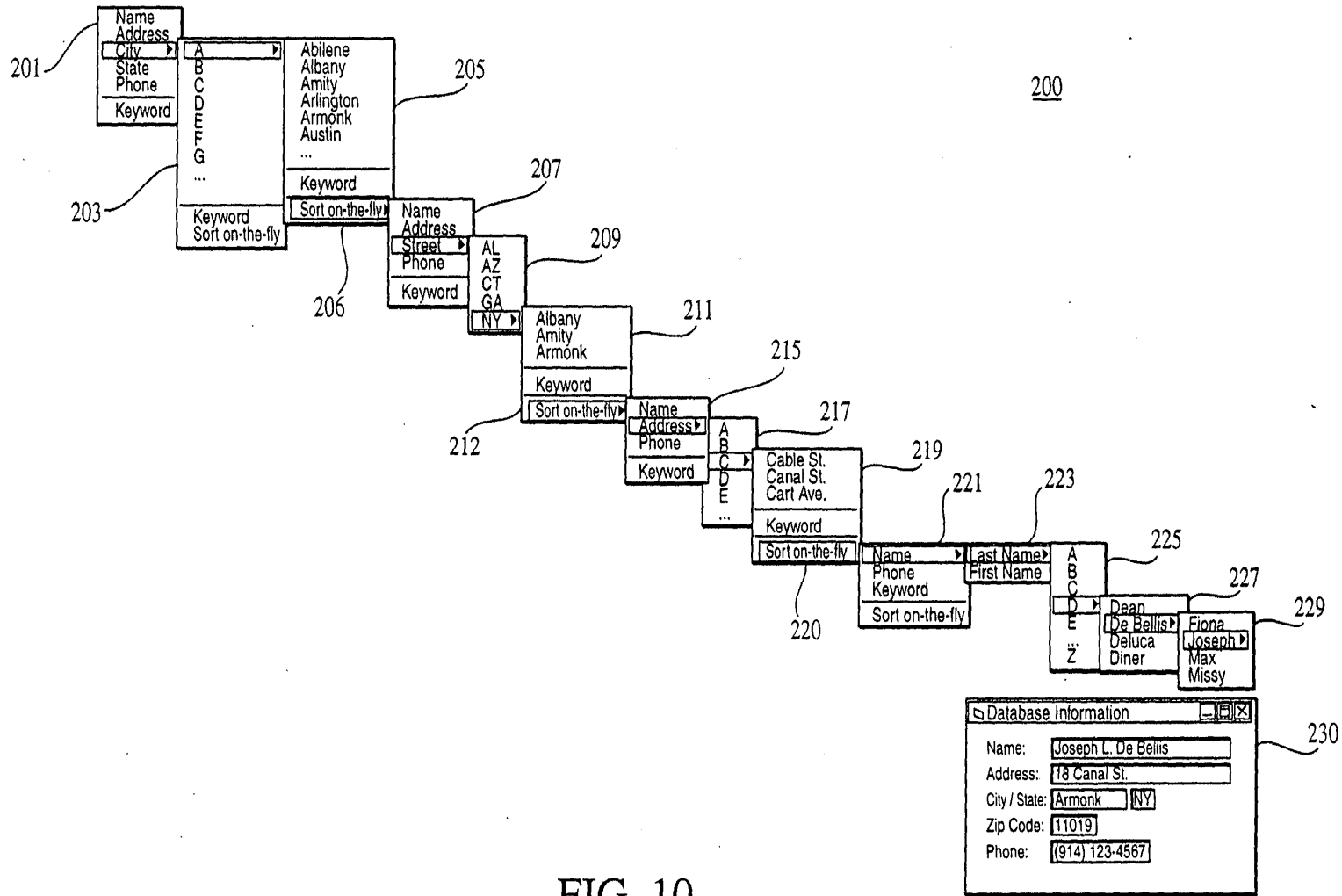
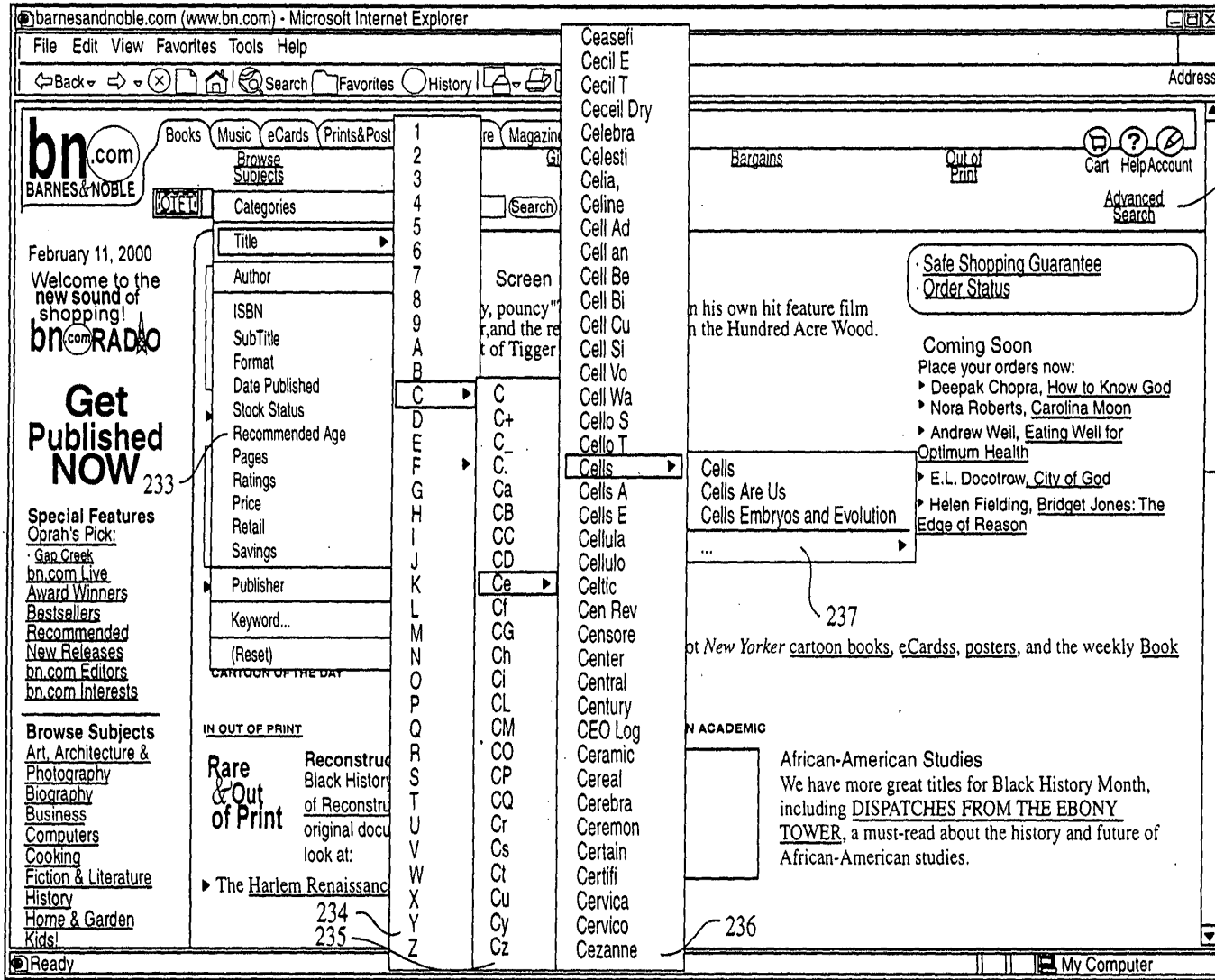


FIG. 10

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5200
Attorney Docket No.: 5607



232

233

237

Rare & Out of Print

Reconstruct
Black History
of Reconstruct
original docu
look at:

The Harlem Renaissance
234
235

236

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5282
 Attorney Docket No.: 5607

FIG. 11

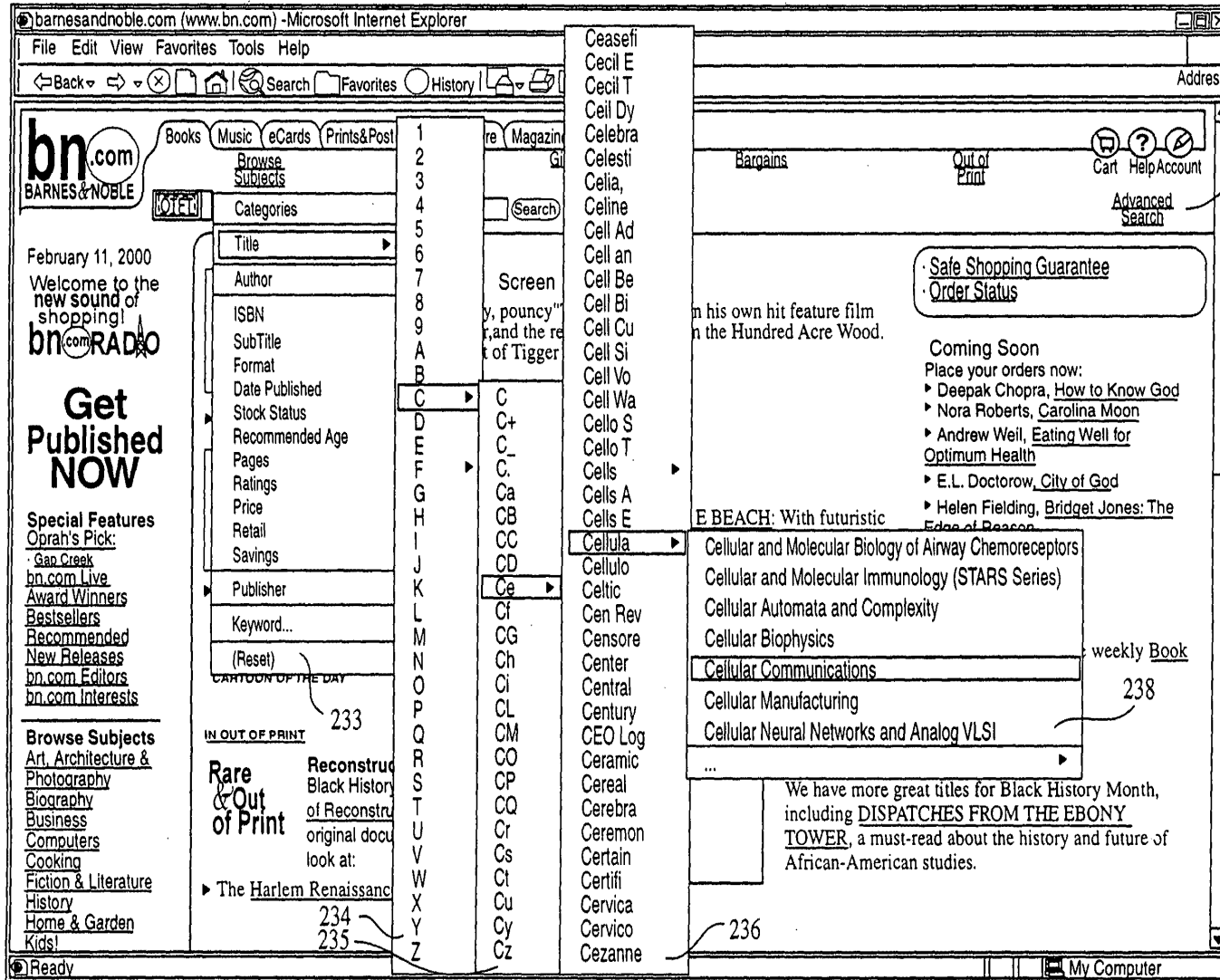


FIG. 12

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5200
Attorney Docket No.: 5607

FOH280" 59552650

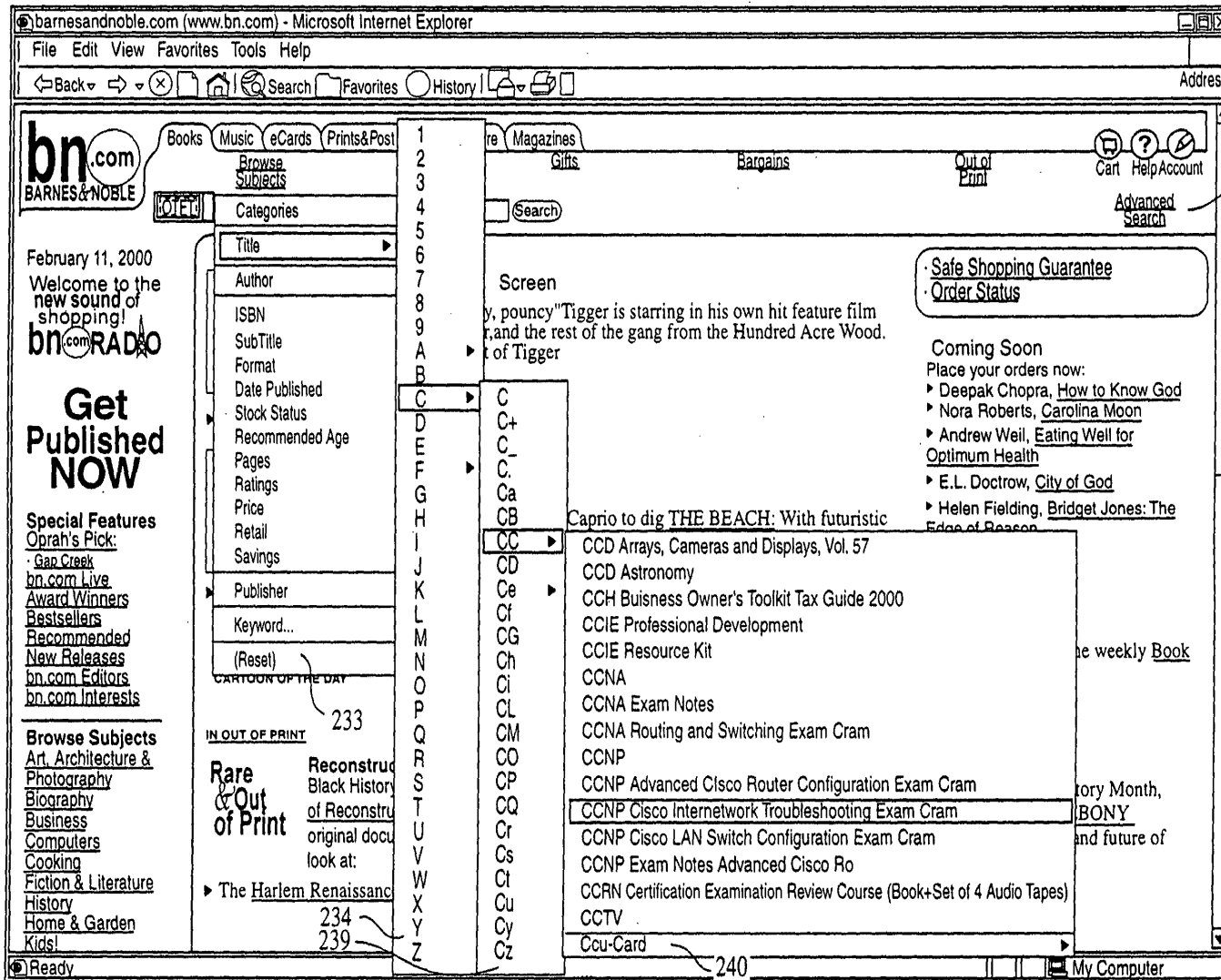


FIG. 13

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5282
 Attorney Docket No.: 5607

FOI 200-5955660

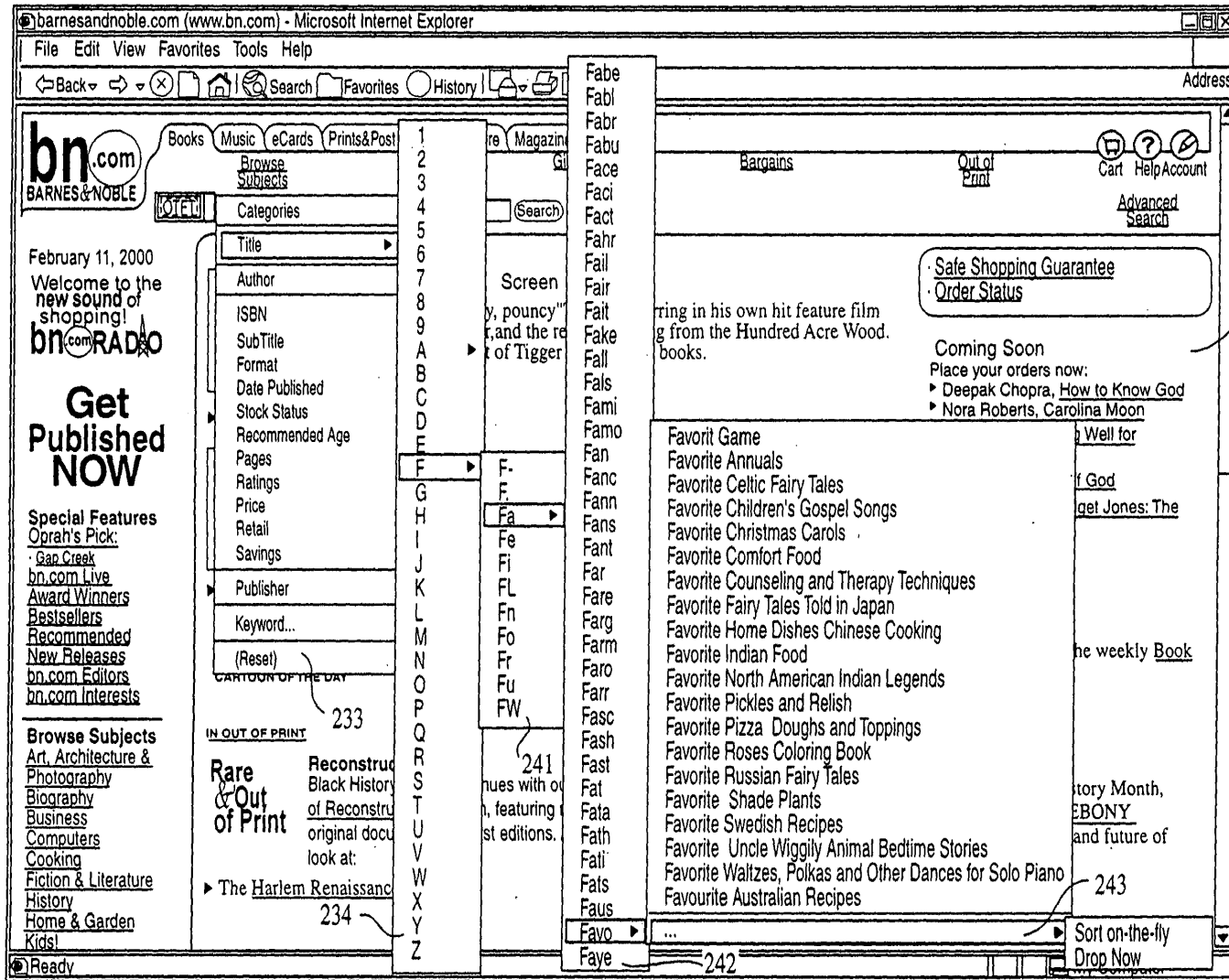


FIG. 14

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5289
 Attorney Docket No.: 5607

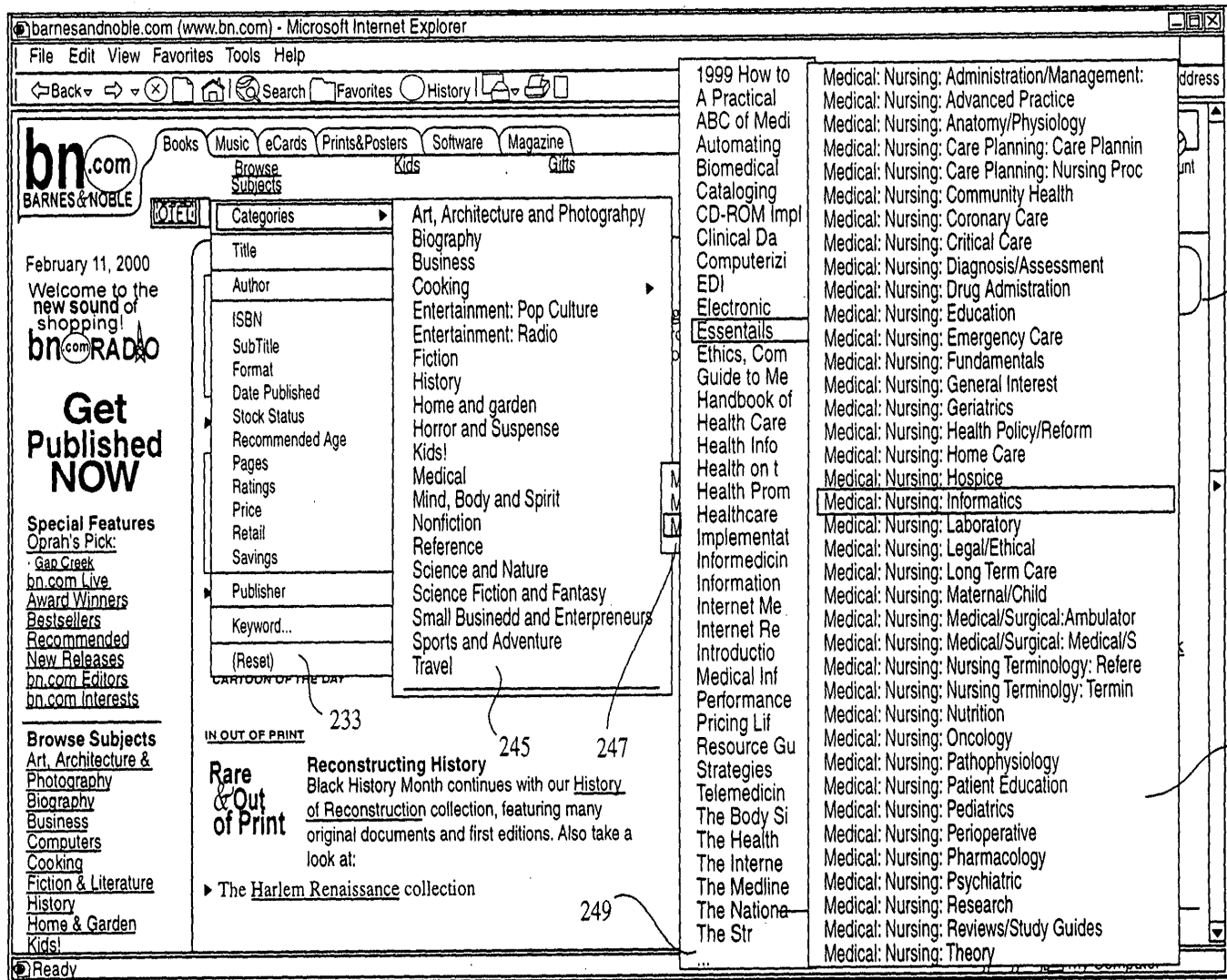


FIG. 15a

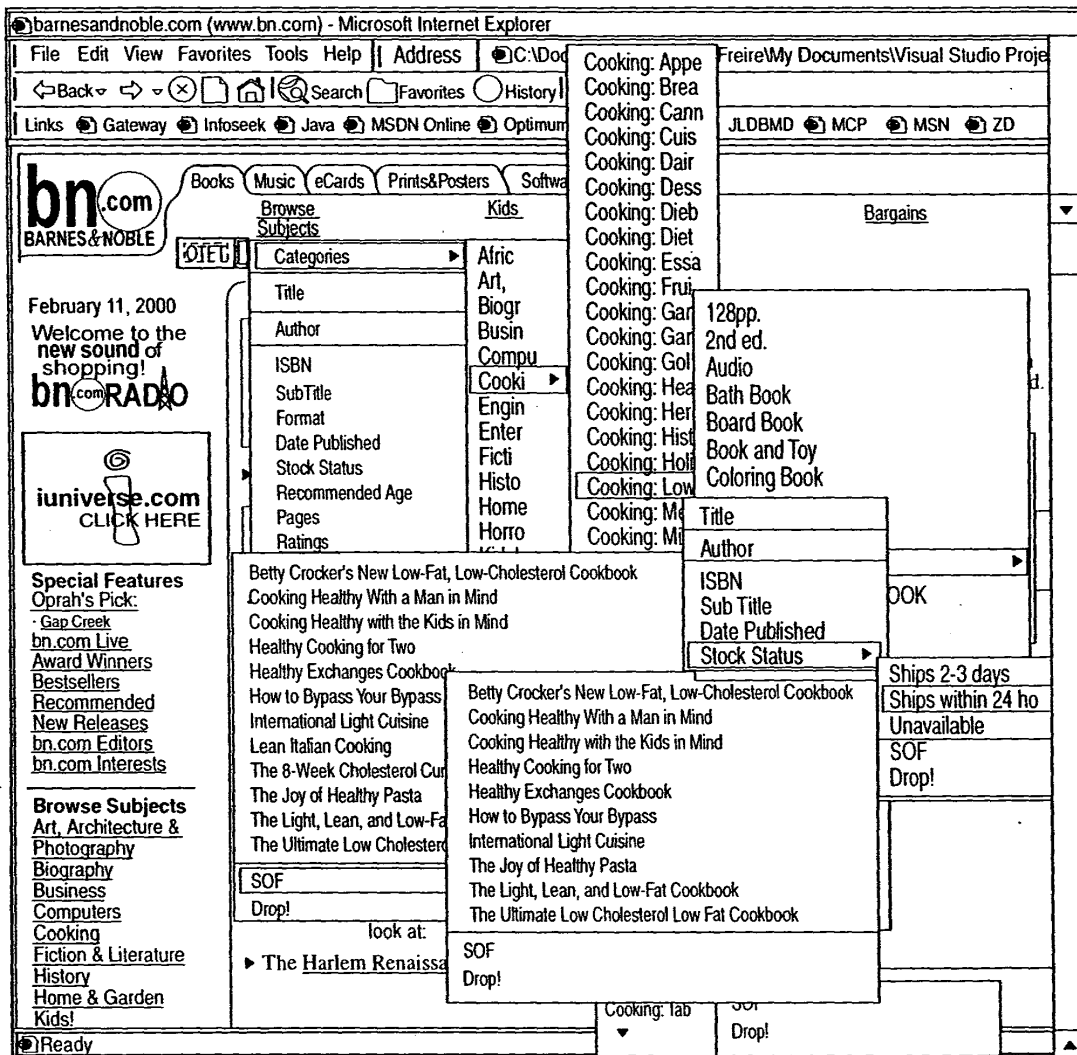
Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5288
 Attorney Docket No.: 5607

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5203

Attorney Docket No.: 5607



009555-00401

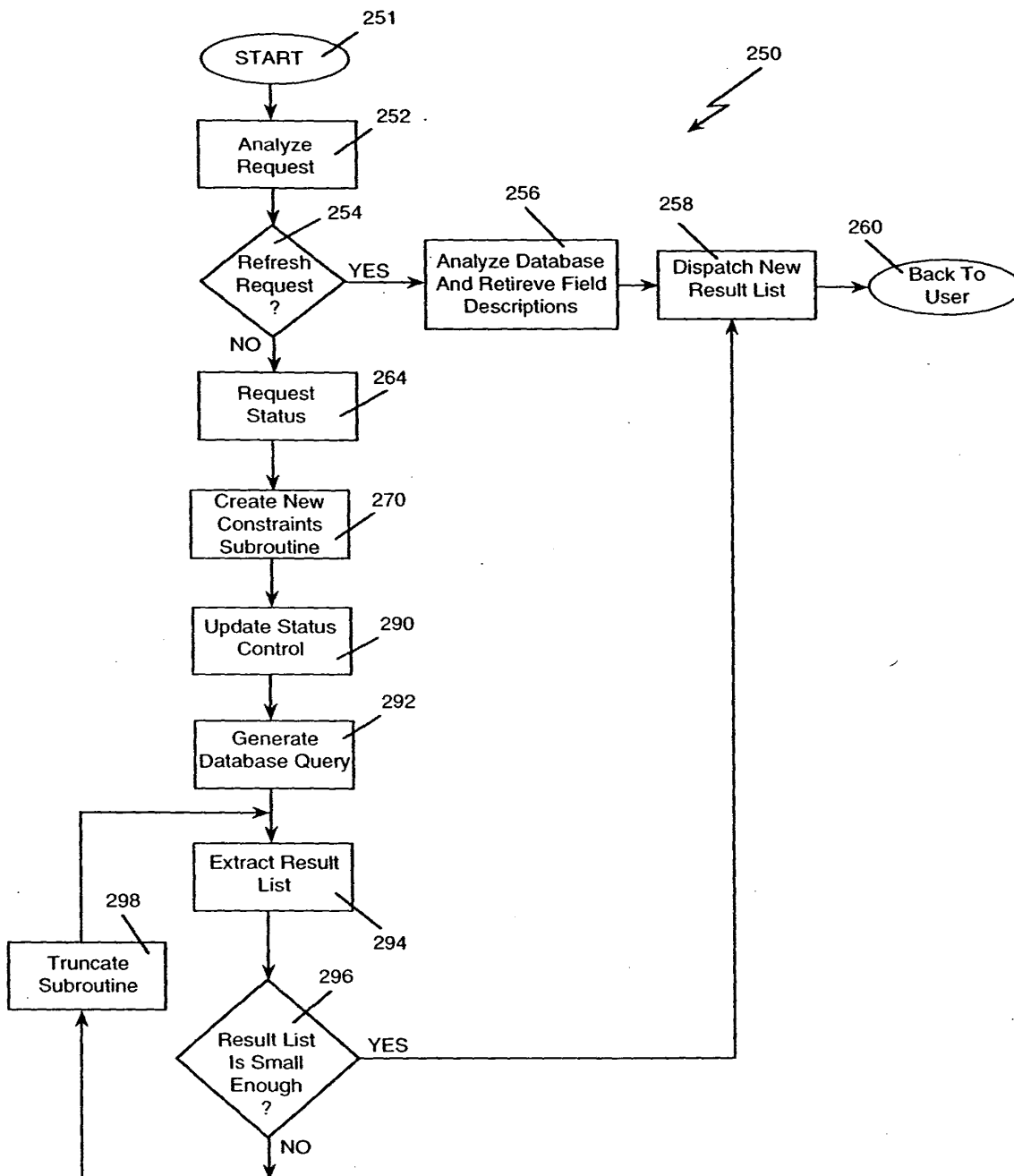
FIG. 15b

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607



FOI b7D - 5959E660

FIG. 16

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FOR PAGES 5955660

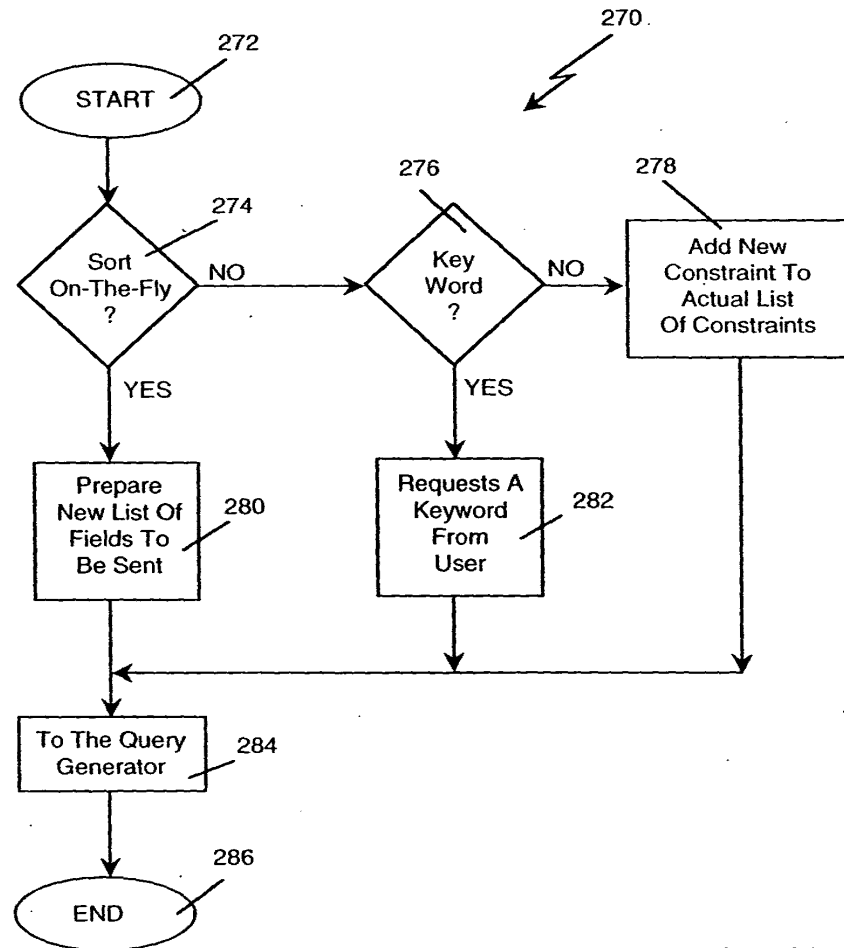


FIG. 17

0935508401

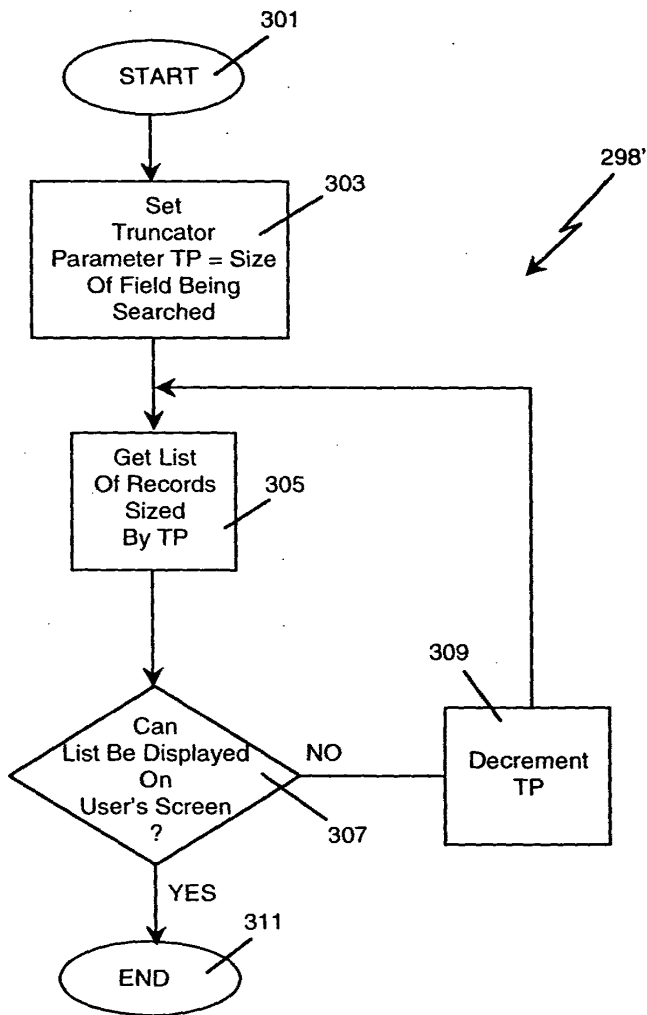


FIG. 18

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FOR "555660"

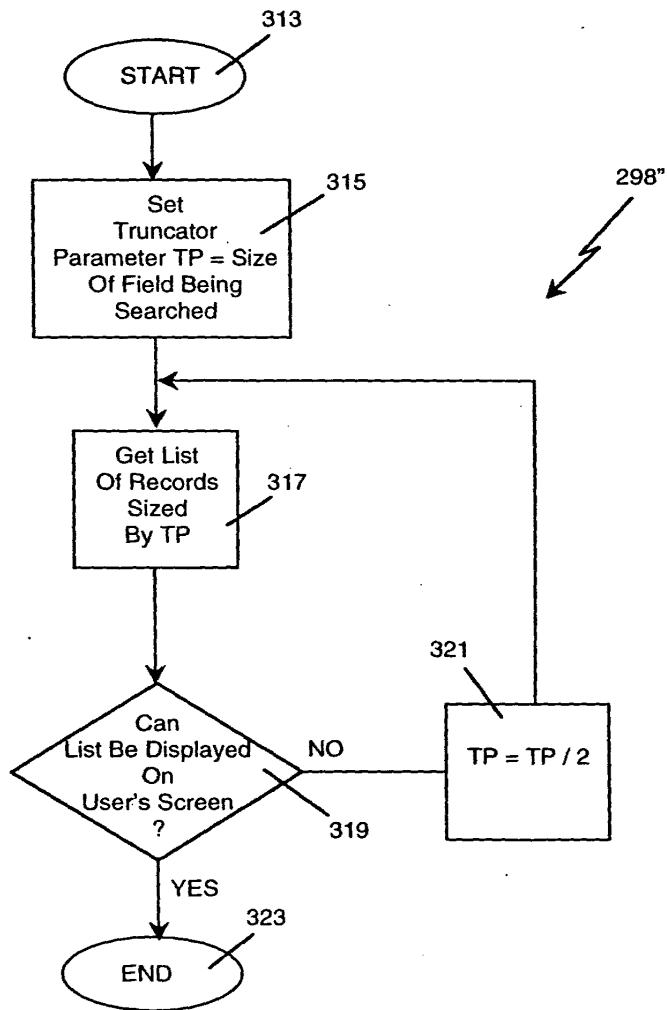


FIG. 19

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FOIA b 7 - DATED 09/25/2013

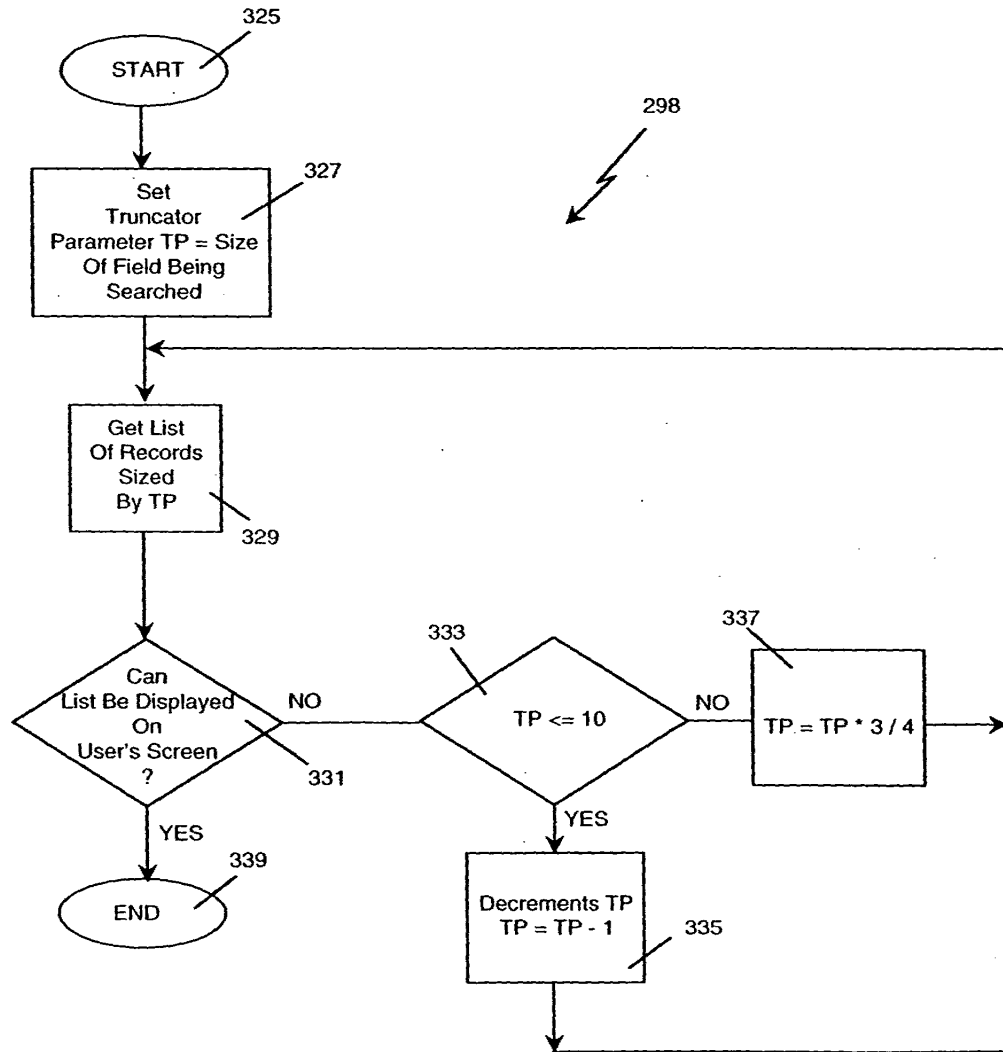
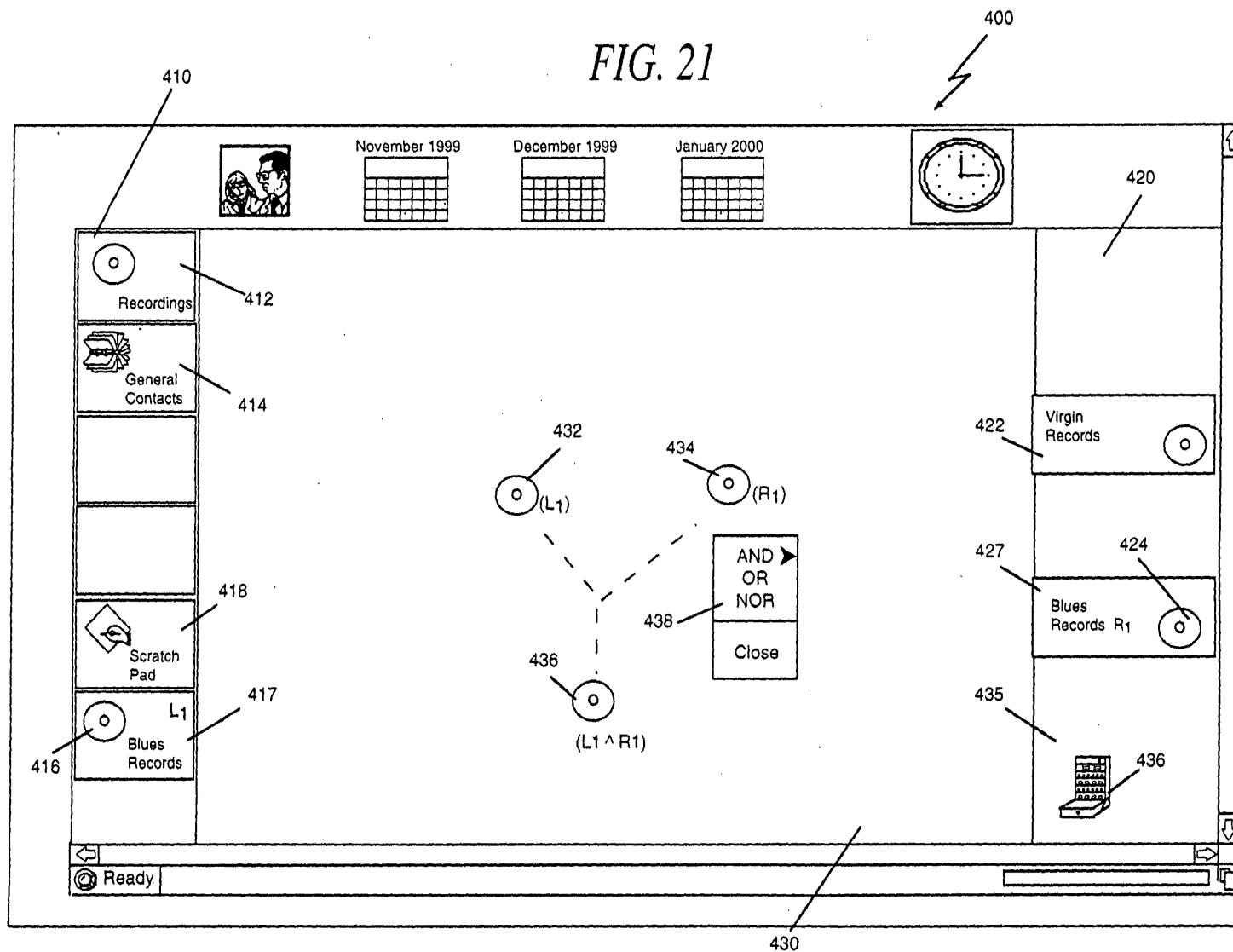


FIG. 20

FOI280 5955660

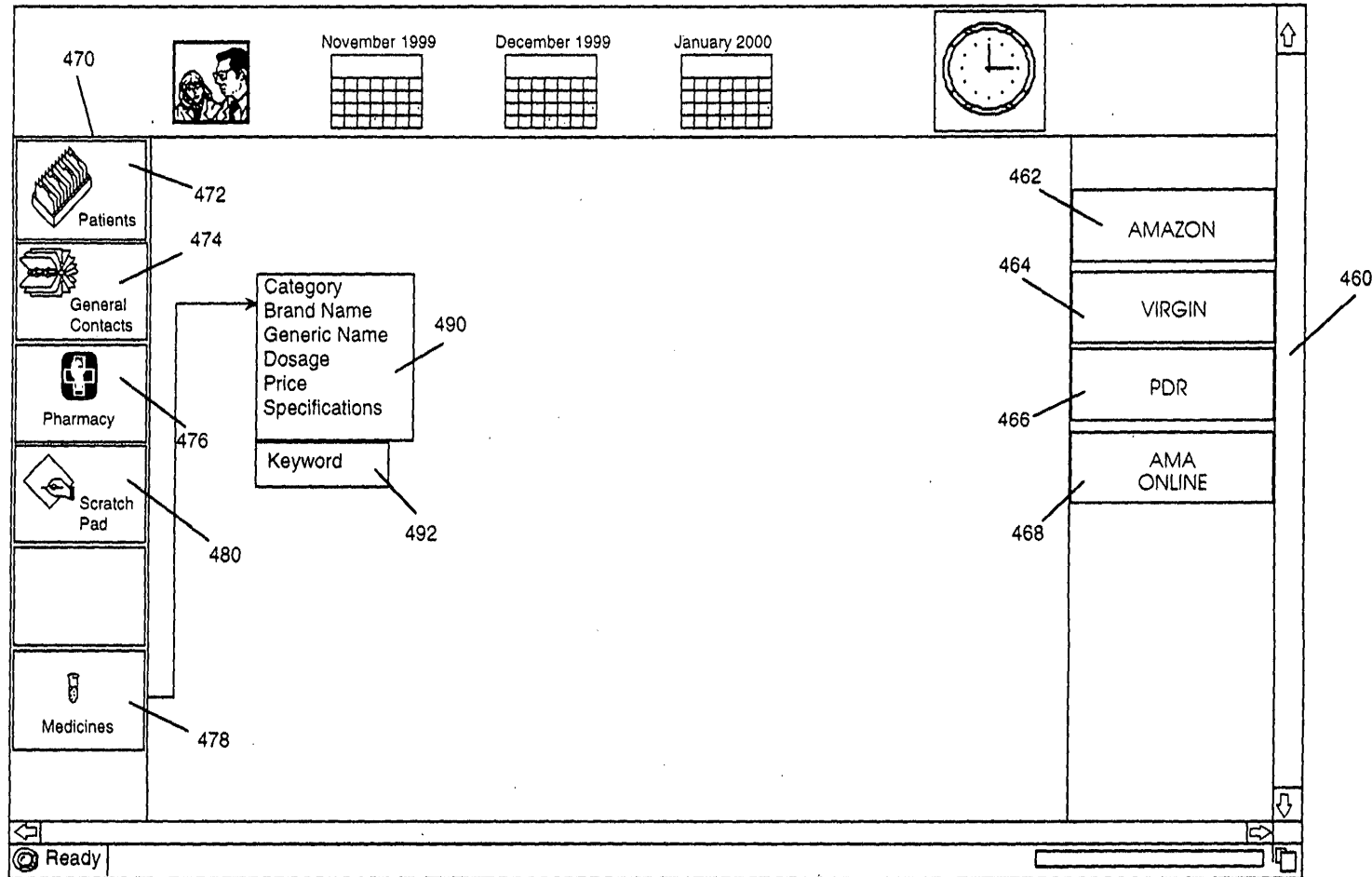
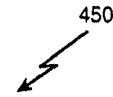
FIG. 21



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5222
Attorney Docket No.: 5607

FOI b2 80" 5955E660

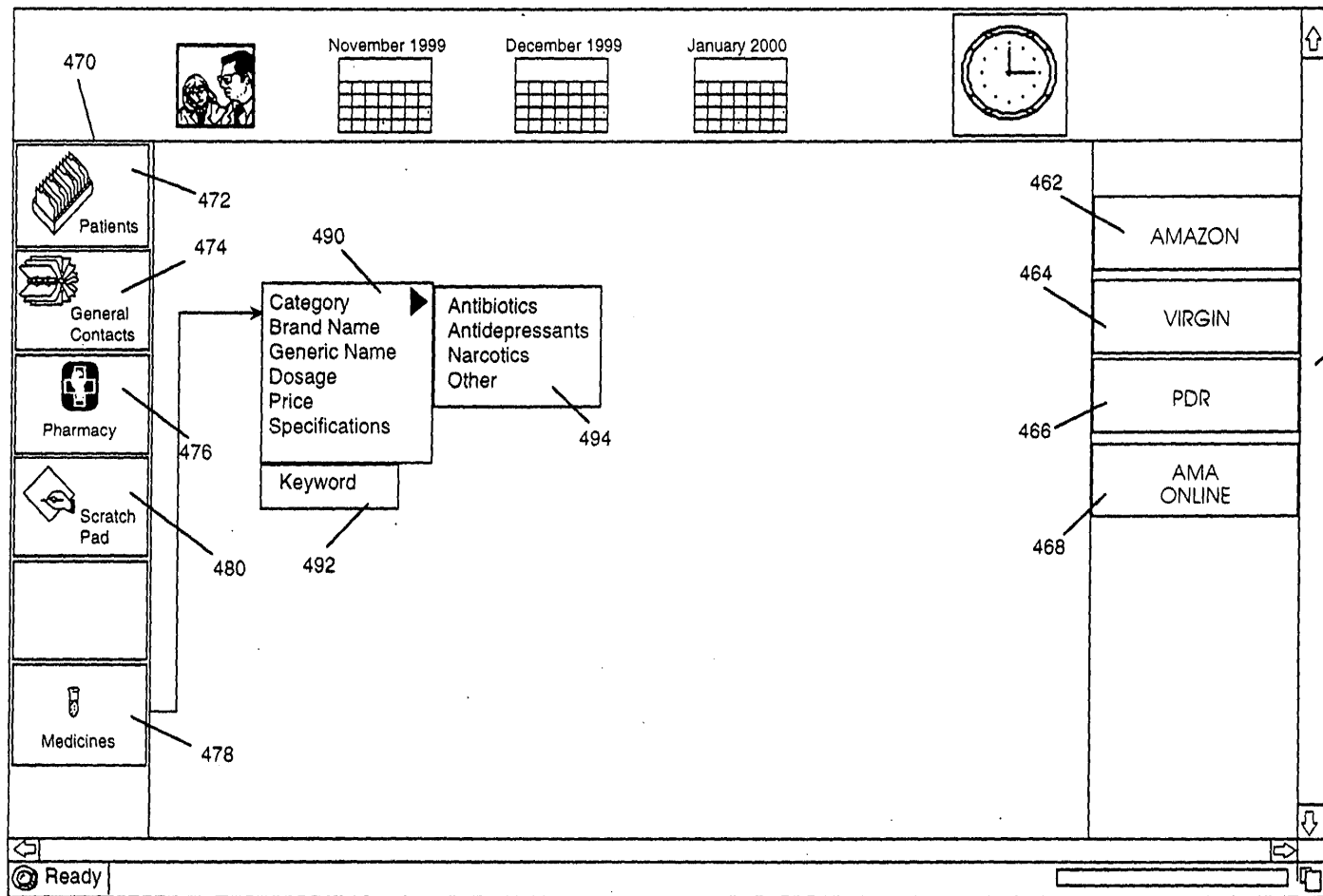
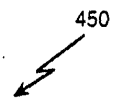
FIG. 22



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5282
Attorney Docket No.: 5607

FOH280* 5955E660

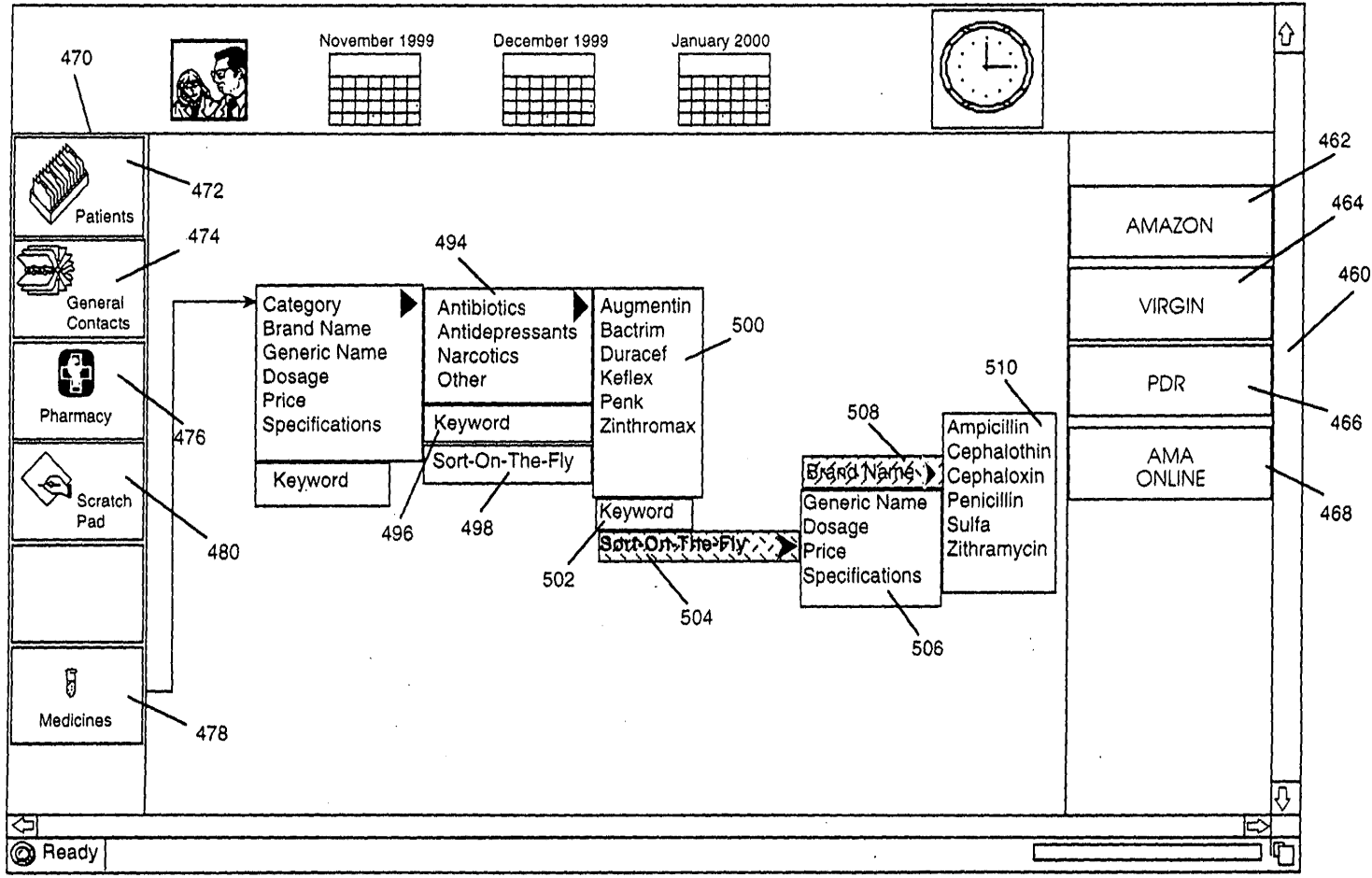
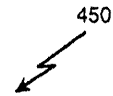
FIG. 23



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5289
Attorney Docket No.: 5607

704280" 59552660

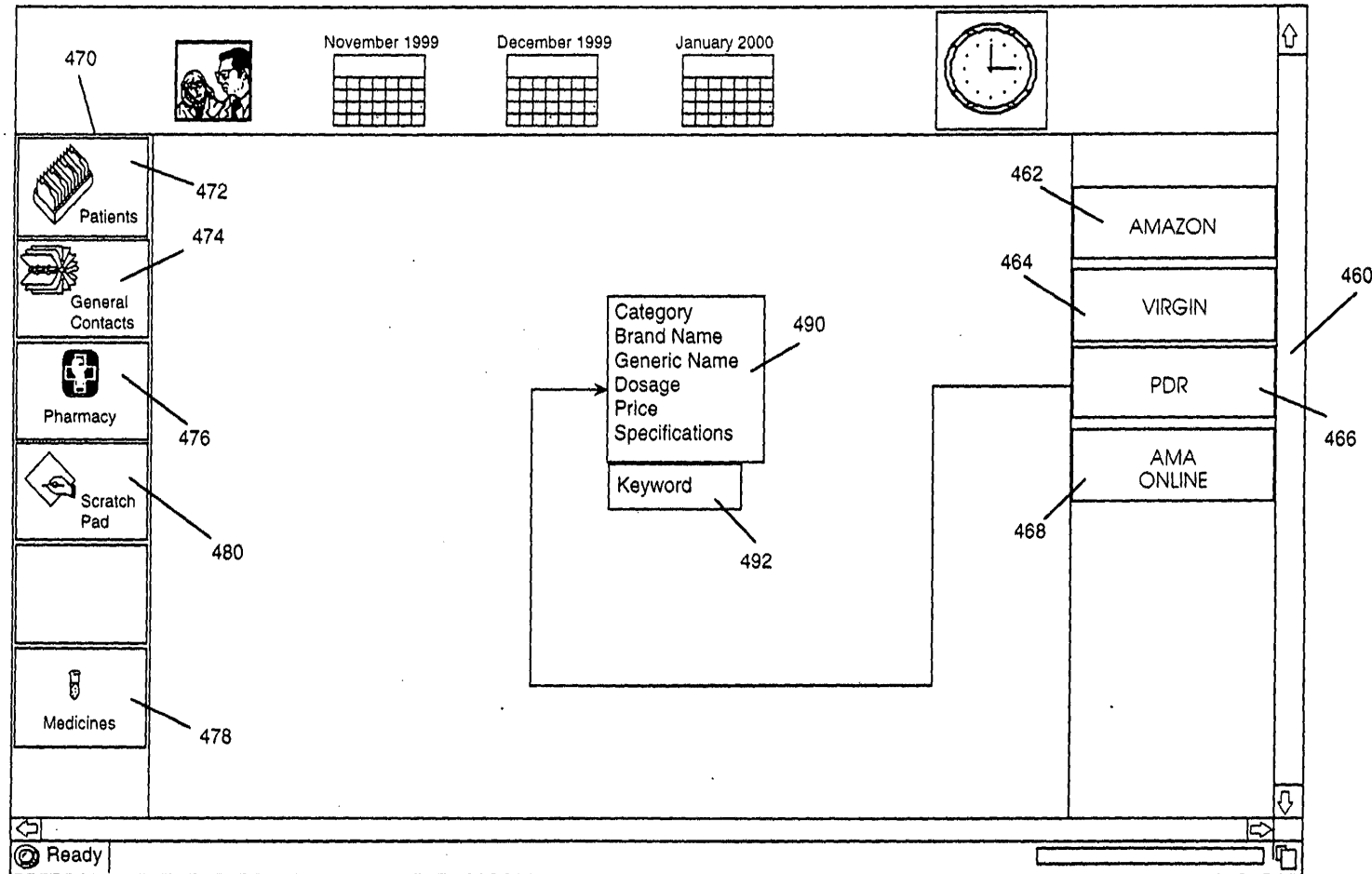
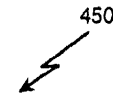
FIG. 24



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5200
 Attorney Docket No.: 5607

FOH280* 5955E660

FIG. 25

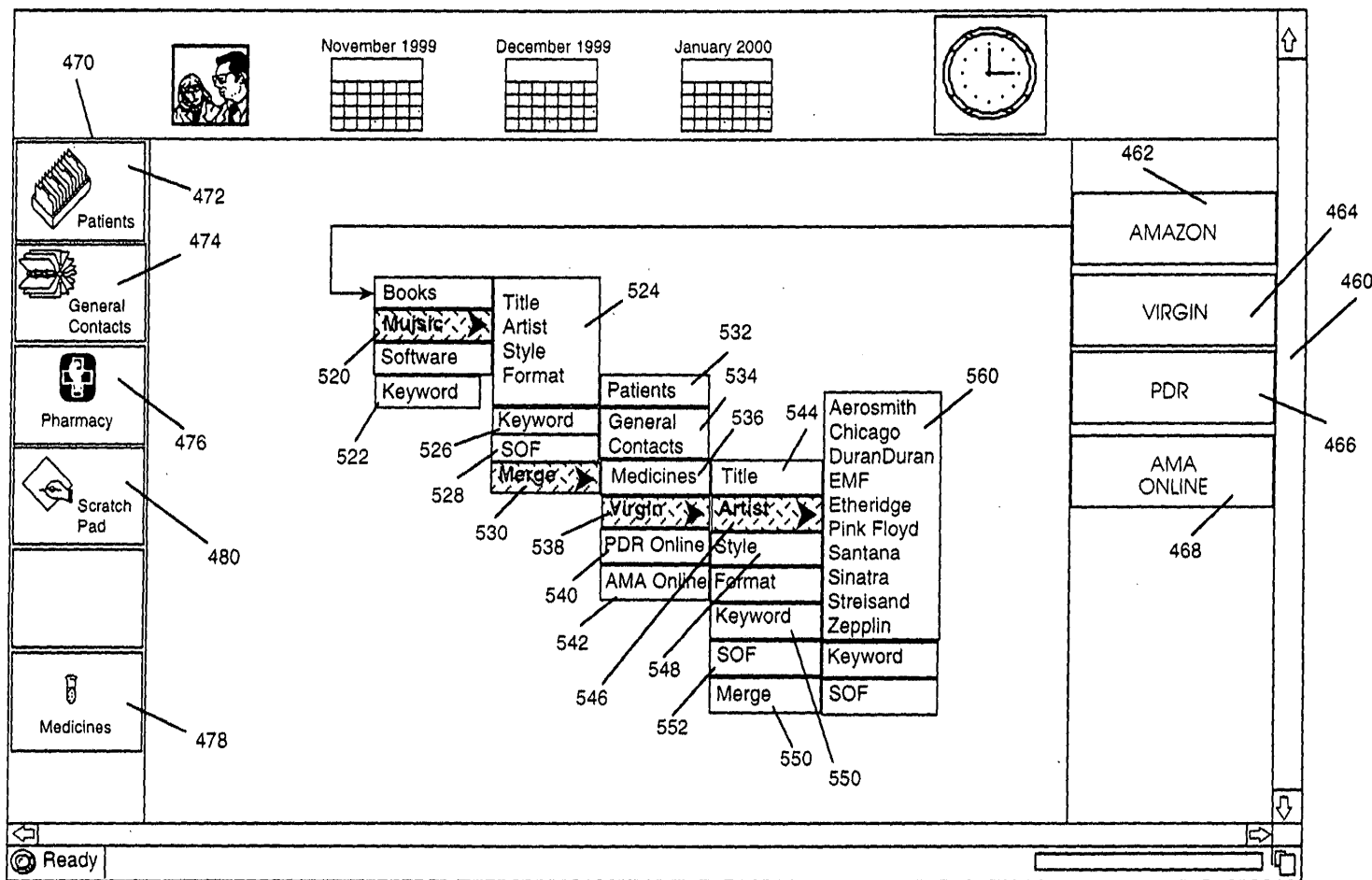


Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5282
Attorney Docket No.: 5607

FOI#280 5955660

FIG. 26

450



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5200
 Attorney Docket No.: 5607

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5299

Attorney Docket No.: 5607

FORWARD SEARCHED

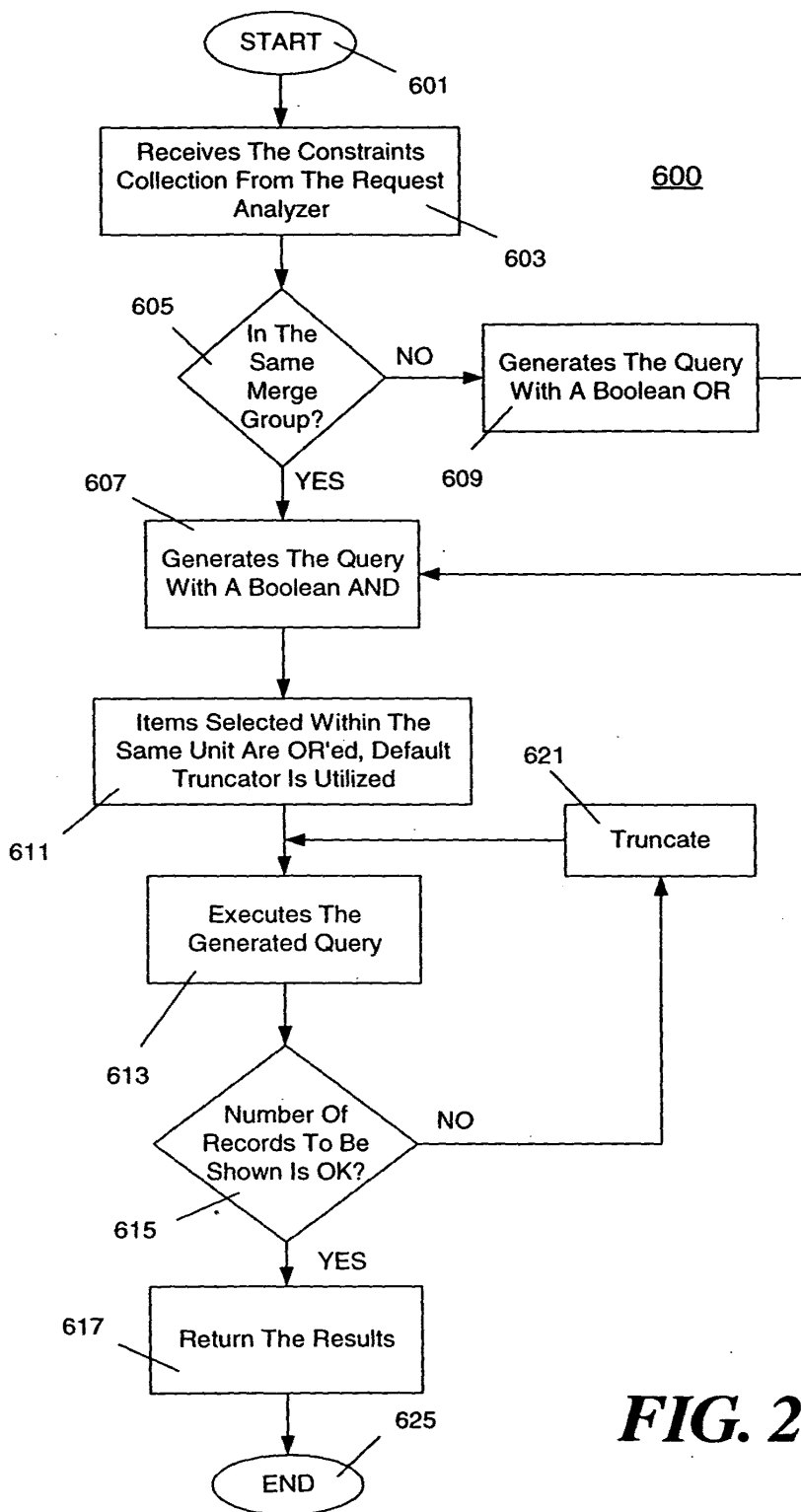


FIG. 27

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FIG. 28a

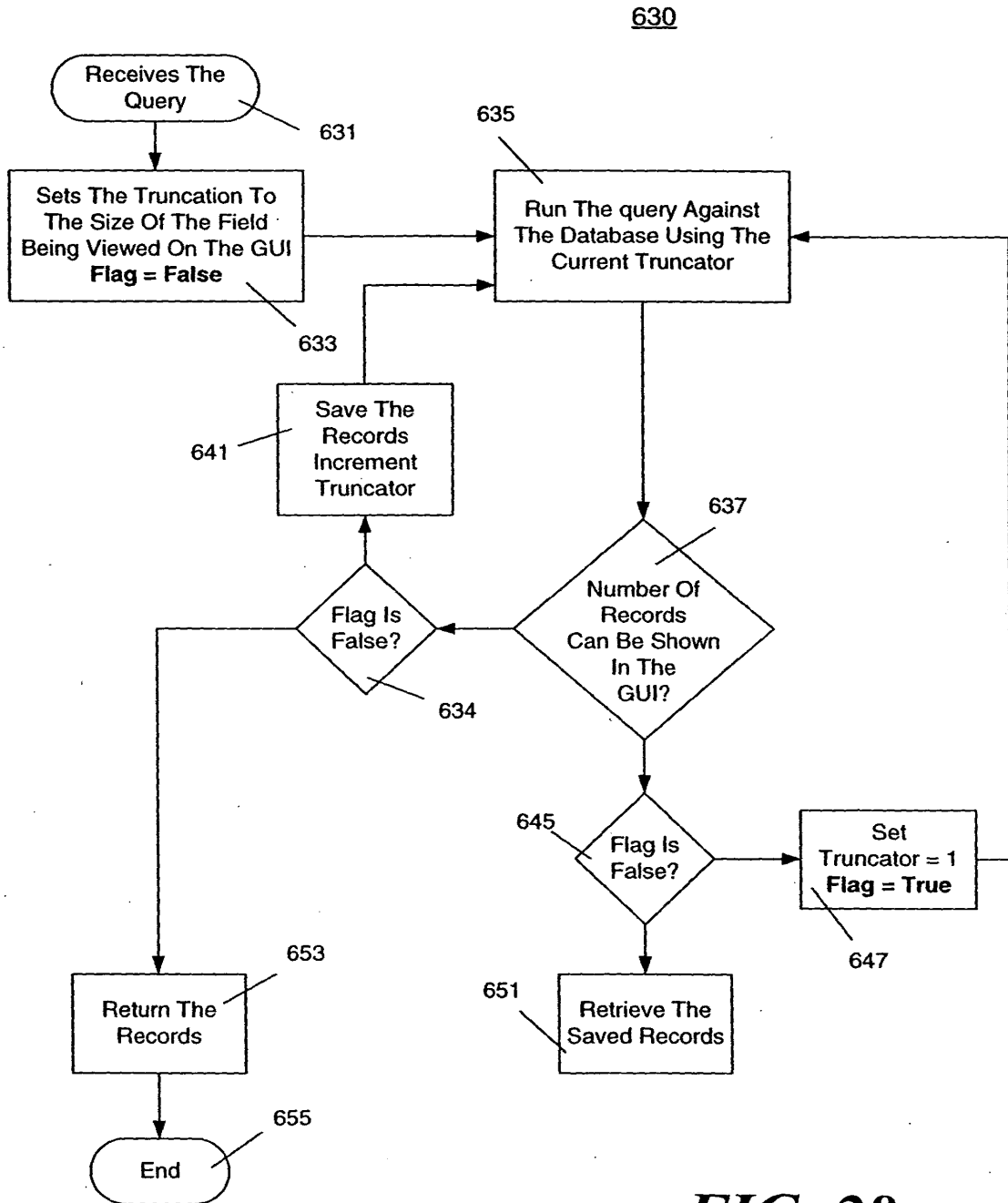


FIG. 28a

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

FOI#280-5355660

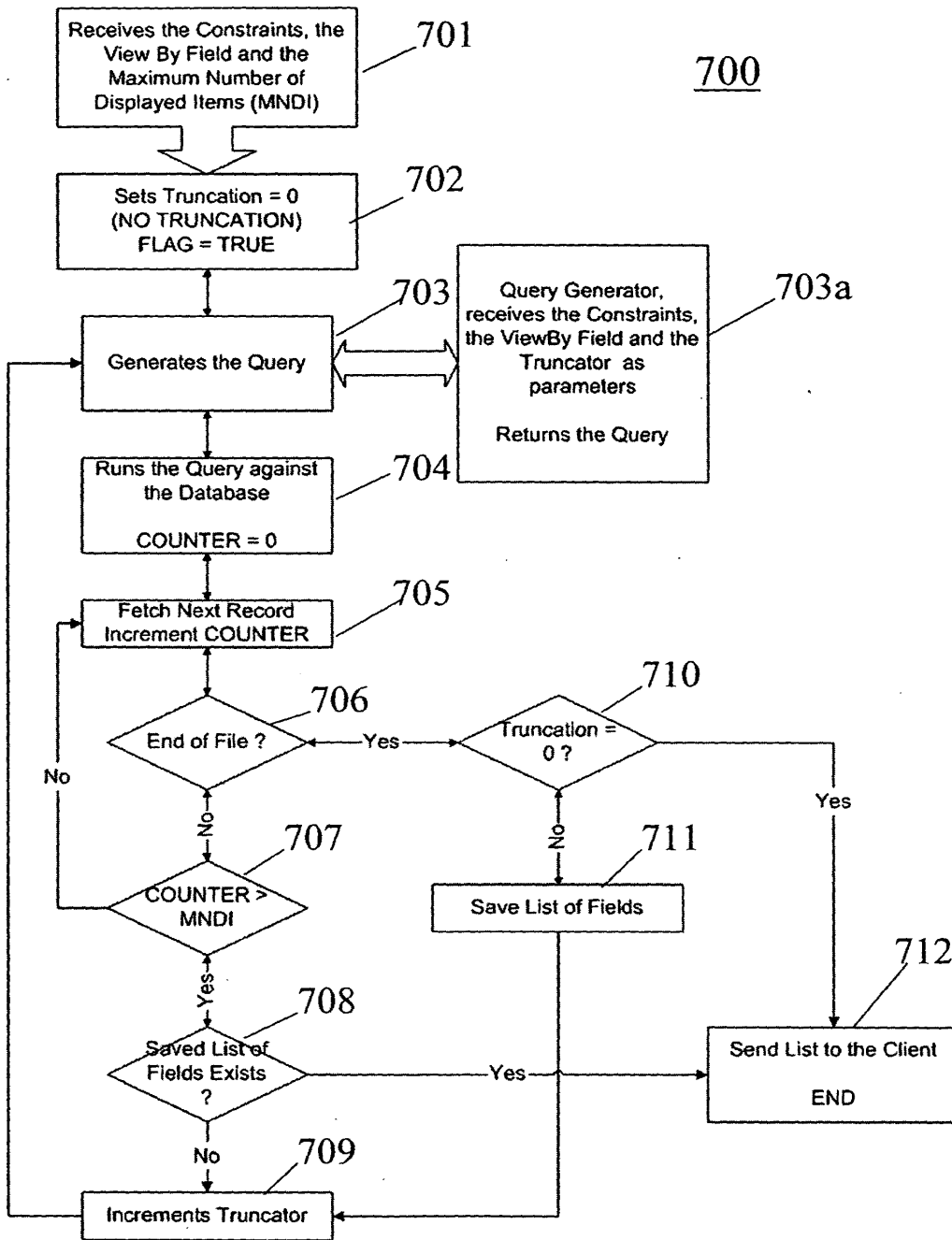


FIG. 28b

FOI 200-59552660

The screenshot shows a software window titled "MDIForm1" with a menu bar containing "S.O.F.", "DB Oper.", and "SOF Setup". The main area displays a list of "Primary Examiner" names, each with a checkbox. A context menu is open over the list, showing options: "Primary Examiner", "O'Connor, Edna M.", "O'Dea, William F.", "View By...", "Merge", and "Correct all other's based on this instance".

Primary Examiner	Primary Examiner
<input type="checkbox"/> O'Connor, Cary	<input type="checkbox"/> Oleksa, Diana L.
<input type="checkbox"/> O'Connor, Daniel J.	<input type="checkbox"/> Oleksa, Diana
<input type="checkbox"/> O'Connor, Edna M.	<input type="checkbox"/> Oleszewski, Robert P.
<input type="checkbox"/> O'Connor, Cary	<input type="checkbox"/> Olms, D. W.
<input type="checkbox"/> O'Connor, Cary E.	<input type="checkbox"/> Olms, Douglas W.
<input type="checkbox"/> O'Connor, Daniel J.	<input type="checkbox"/> Olms, Douglas O.
<input type="checkbox"/> O'Connor, Edna M.	<input type="checkbox"/> Olms, Douglas W.
<input type="checkbox"/> O'Dea, W.F.	<input type="checkbox"/> Olms, Douglas W.
<input type="checkbox"/> O'Dea, William F.	<input type="checkbox"/> Olms, Douglas W.
<input type="checkbox"/> O'Dea, William	<input type="checkbox"/> Olsewski, Robert P.
<input type="checkbox"/> O'Dea, William F.	<input type="checkbox"/> Olszewski, Robert P.
<input type="checkbox"/> O'Dea, William F.	<input type="checkbox"/> Olszewski, Robert P.
<input type="checkbox"/> O'Keefe, Vernice	<input type="checkbox"/> Olszewsky, Robert P.
<input type="checkbox"/> O'Keefe, Veronica	<input type="checkbox"/> Ometz, David L.
<input type="checkbox"/> O'Neill, Michael	<input type="checkbox"/> Ore, Dale H.
<input type="checkbox"/> O'Shea, Sandra	<input type="checkbox"/> Ore, Dale K.
<input type="checkbox"/> O'Shea, Sandra L.	<input type="checkbox"/> Ore, Dale R.
<input type="checkbox"/> O'Sullivan, Peter	<input type="checkbox"/> Orasky, Lawrence J.
<input type="checkbox"/> O'Sullivan, Peter G.	<input type="checkbox"/> Orsino, Joseph A.
<input type="checkbox"/> O'Connor, Edna M.	<input type="checkbox"/> Orsino, Joseph A.
<input type="checkbox"/> Oberlechner, Robert	<input type="checkbox"/> Orsino, Jr., Joseph A.
<input type="checkbox"/> Oberlechner, Robert J.	<input type="checkbox"/> Orsino, Jr., Joseph A.
<input type="checkbox"/> Oberlechner, Robert L.	<input type="checkbox"/> Orsino, Jr., Joseph A.
<input type="checkbox"/> Oberley, Alvin	<input type="checkbox"/> Orsino, Jr., Joseph A.
<input type="checkbox"/> Oberley, Alvin E.	<input type="checkbox"/> Orsino, Sr., Joseph A.
<input type="checkbox"/> Oda, Christine	<input type="checkbox"/> Ortiz, Angela
<input type="checkbox"/> Oda, Christine K.	<input type="checkbox"/> Ozaki, G.
<input type="checkbox"/> Oda, Christine K.	<input type="checkbox"/> Osiele, Mark A.
<input type="checkbox"/> Oechsle, A. O.	<input type="checkbox"/> Ossanna, Nina
<input type="checkbox"/> Oechsle, Anton A.	<input type="checkbox"/> Ostrage, Allen M.
<input type="checkbox"/> Oechsle, Anton D.	<input type="checkbox"/> Ostrager, Allen M.
<input type="checkbox"/> Oechsle, Anton O.	<input type="checkbox"/> Ostrager, Allen M.
<input type="checkbox"/> Oechsle, Anton O.	<input type="checkbox"/> Ostrager, Allen M.
<input type="checkbox"/> Oen, William	<input type="checkbox"/> Owens, Amelia
<input type="checkbox"/> Oen, William	<input type="checkbox"/> Owens, Terry J.
<input type="checkbox"/> Oen, William L.	<input type="checkbox"/> Ozaki, G.
<input type="checkbox"/> Oeschle, Anton D.	<input type="checkbox"/> Ozaki, G. T.
<input type="checkbox"/> Oeschle, Anton O.	<input type="checkbox"/> Ozaki, George
<input type="checkbox"/> Oestreich, R.	<input type="checkbox"/> Ozaki, George T.
<input type="checkbox"/> Ogden, Nicholas	
<input type="checkbox"/> Okansky, David A.	
<input type="checkbox"/> Oleksa, Diana	

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5220
Attorney Docket No.: 5607

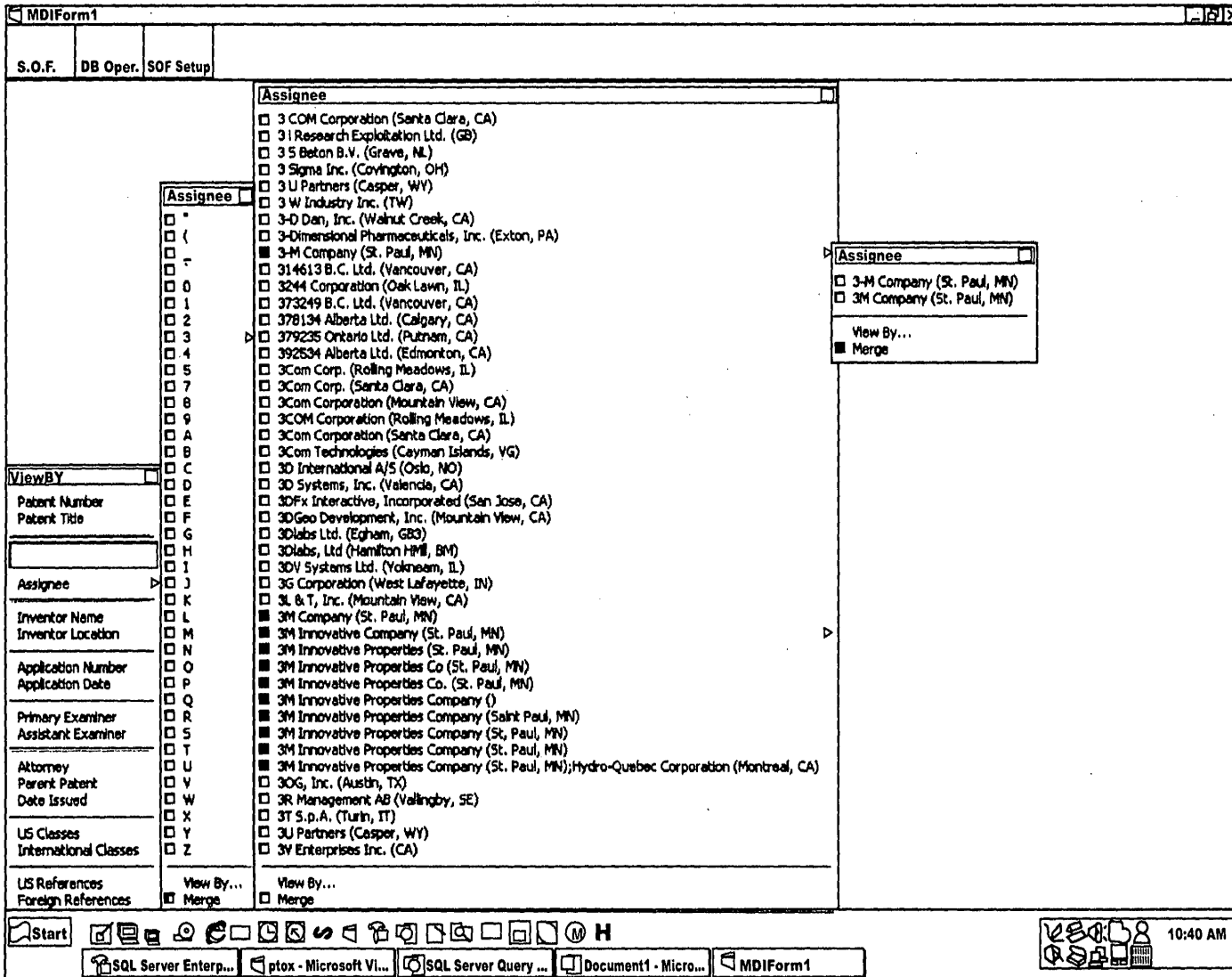
FIG. 29

FOI280" 59552660

The screenshot shows a software window titled "MDIForm1" with a menu bar containing "S.O.F.", "DB Oper.", and "SOF Setup". The main area is divided into several panes. On the left is a "ViewBY" pane with a list of fields: Patent Number, Patent Title, Assignee, Inventor Name, Inventor Location, Application Number, Application Date, Primary Examiner, Assistant Examiner, Attorney, Parent Patent, Date Issued, US Classes, International Classes, US References, and Foreign References. The "Assignee" field is selected. The main pane displays a list of assignees, including "3 COM Corporation (Santa Clara, CA)", "3i Research Exploitation Ltd. (GB)", "3 5 Beton B.V. (Grave, NL)", "3 Sigma Inc. (Covington, OH)", "3 U Partners (Casper, WY)", "3 W Industry Inc. (TW)", "3-D Dan, Inc. (Walnut Creek, CA)", "3-Dimensional Pharmaceuticals, Inc. (Exton, PA)", "3-M Company (St. Paul, MN)", "314613 B.C. Ltd. (Vancouver)", "3244 Corporation (Oak Lawn)", "373249 B.C. Ltd. (Vancouver)", "378134 Alberta Ltd. (Calgar)", "379235 Ontario Ltd. (Putnar)", "392534 Alberta Ltd. (Edmon)", "3Com Corp. (Rolling Meadow)", "3Com Corp. (Santa Clara, C)", "3Com Corporation (Mountai)", "3COM Corporation (Rolling h)", "3Com Corporation (Santa Cl)", "3Com Technologies (Caymar)", "3D International A/S (Oslo, NO)", "3D Systems, Inc. (Valencia, CA)", "3DFx Interactive, Incorporated (San Jose, CA)", "3DGeo Development, Inc. (Mountain View, CA)", "3Dlabs Ltd. (Egham, GB)", "3Dlabs, Ltd (Hamilton HM8, BM)", "3DV Systems Ltd. (Yokneam, IL)", "3G Corporation (West Lafayette, IN)", "3L & T, Inc. (Mountain View, CA)", "3M Company (St. Paul, MN)", "3M Innovative Company (St. Paul, MN)", "3M Innovative Properties (St. Paul, MN)", "3M Innovative Properties Co (St. Paul, MN)", "3M Innovative Properties Co. (St. Paul, MN)", "3M Innovative Properties Company ()", "3M Innovative Properties Company (Saint Paul, MN)", "3M Innovative Properties Company (St. Paul, MN)", "3M Innovative Properties Company (St. Paul, MN)", "3M Innovative Properties Company (St. Paul, MN)", "3M Innovative Properties Company (St. Paul, MN);Hydro-Quebec Corporation (Montreal, CA)", "3OG, Inc. (Austin, TX)", "3R Management AB (Vallingby, SE)", "3T S.p.A. (Turin, IT)", "3U Partners (Casper, WY)", and "3V Enterprises Inc. (CA)". A "Patents - Assignee" pane is also visible, showing a list of assignees for specific patents. The bottom of the window features a taskbar with icons for Start, SQL Server Enterprise, ptox - Microsoft Vi..., SQL Server Query ..., Document1 - Micro..., and MDIForm1. The system clock shows 10:38 AM.

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5280
Attorney Docket No.: 5607

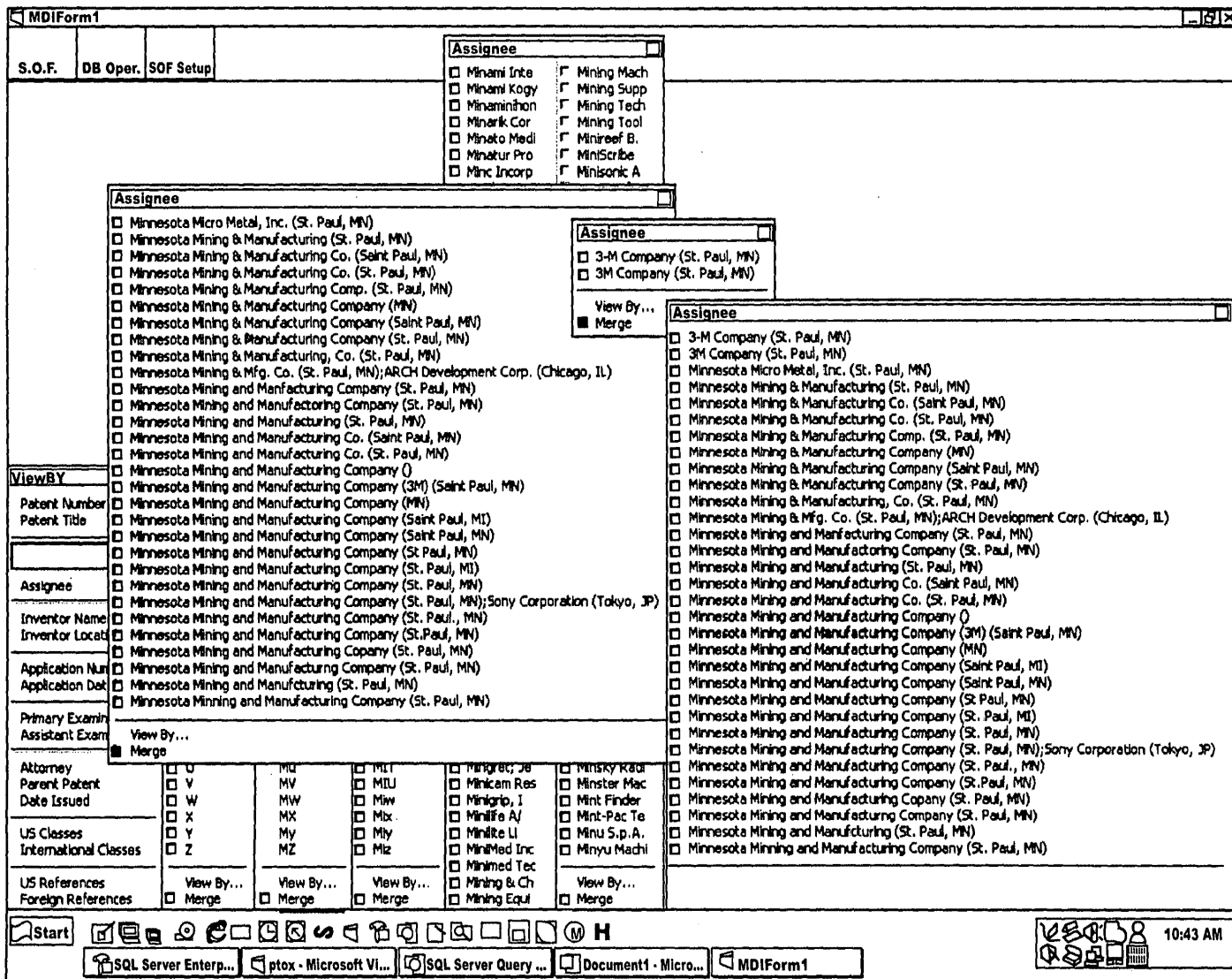
FIG. 30



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5280
 Attorney Docket No.: 5607

FIG. 31

FOH280" 5959E660



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5288
 Attorney Docket No.: 5607

FIG. 32

FOH230" 5955660

The screenshot displays the MDIForm1 application window. The main area is divided into several panes:

- Assignee:** A list of companies including 3M Company (St. Paul, MN), 3M Innovative Properties Company (St. Paul, MN), and 3i Research Exploration Ltd.
- Patents - Assignee:** A list of patent entries, including 3M Innovative Properties (St. Paul, MN), 3M Innovative Properties Co. (St. Paul, MN), and 3M Innovative Properties Company (Saint Paul, MN).
- Patents - Assignee (Detailed):** A list of patent entries with names of inventors, such as Alexander, Sell, Seidt & DeLaHunt, Alexander, Sell, Seidt & DeLaHunt, and Alexander, Sell, Seidt & DeLaHunt.
- Patent List:** A large list of patent entries, each with a checkbox and a name, such as Sell, D. M., Smith, J. A., Litman, Sell, D. M., Smith, J. A., Litke, Sell, D. M., Smith, J. A., Tamke, etc.

The interface includes a menu bar at the top with options like S.O.F., DB Oper., SOF Setup, Assignee, and Patents - Assignee. A toolbar at the bottom contains icons for Start, SQL Server Enterprise, ptoX - Microsoft Vi..., SQL Server Query..., Document1 - Micro..., and MDIForm1. The system tray shows the time as 11:01 AM.

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FIG. 35

MDIForm1

Assignee

Patent Title

Anisotropic retardation layers for display devices
 Dampener roll cover and methods of preparation and use thereof
 Damping unit for globular storage tank
 Dark acrylic pressure-sensitive adhesive
 Data accumulation system
 Data cartridge with secondary tape guides
 Data processing form
 Data storage structure of garment patterns to enable subsequent computerized prealteration
 DC Power supply for high power discharge devices
 Decolorizable imaging system
 Decorative ribbon or sheet material
 Demand and timed renewing imaging media
 Dental filling composition utilizing zinc-containing inorganic filler
 Dentin and enamel adhesive
 Desensitizer for ferromagnetic markers used with electromagnetic article surveillance systems
 Desensitizing dyes for photographic emulsions
 Detachable abrasive disk
 Detecting system
 Detection of articles
 Developer compositions for silver halide photographic materials comprising cyclic amino methane diphosphonates
 Developer compositions having layer of a pigment on the surface thereof
 Developer material level sensor
 Developer powder supply cartridge
 Developing powder composition containing a fluorine-modified alkyl siloxane
 Developing powder composition containing fluoroaliphatic sulfonamido surface active agent
 Device and method for applying flexible balls to containers
 Device for backing butt-welds between tubes
 Device for cutting a support helix for a radially expanded resilient sleeve
 Device for exposing colorant to be transferred
 Device for forming graphics
 Device for fusing lengths of film over the open ends of cups
 Device for restraining an object or objects therein
 Device to slow solenoid actuation motion
 Diagnostic radio-labeled polysaccharide derivatives
 Diaper closure utilizing pressure-sensitive adhesive tape having textured foil backing
 Diazonium imaging system
 Dielectric stress relief at a high voltage cable termination
 Diffractive lens
 Digital communications system with automatic frame synchronization and detector circuitry
 Digital frame synchronizing circuit
 Digital motor control system
 Dimensionally-controlled cobalt-containing precision molded metal article
 Direct positive silver halide emulsions containing quaternated merocyanine dyes
 Directional radiation detector
 Disc cartridge
 Disc dispenser
 Discernible dental sealant
 Disinfecting method and compositions
 Disk cartridge
 Disk locking mechanism for disk cartridge

Disk restraint
 Diskette jacket
 Dispensable polypropylene adhesive-coated tape
 Dispenser for a stack of note paper
 Dispenser for adhesive coated sheet material
 Dispenser for protected write-on labels
 Dispenser package
 Dispersed imaging systems with tetra (hydrocarbyl) borate salts

Patents - Assignee
 3M Innovative Company (St. Paul, MN)
 3M Company (St. Paul, MN)
 3M Innovative Properties (St. Paul, MN)
 3M Innovative Properties Co (St. Paul, MN)
 3M Innovative Properties Co. (St. Paul, MN)
 3M Innovative Properties Company ()
 3M Innovative Properties Company (Saint Paul, MN)
 3M Innovative Properties Company (St. Paul, MN)
 3M Innovative Properties Company (St. Paul, MN)
 3M Innovative Properties Company (St. Paul, MN);Hydro-Quebec Corporation (Montreal, CA)

Merged Subset
Patents - Assignee
 Minnesota M

Merged Subset
Patents - Title
 D

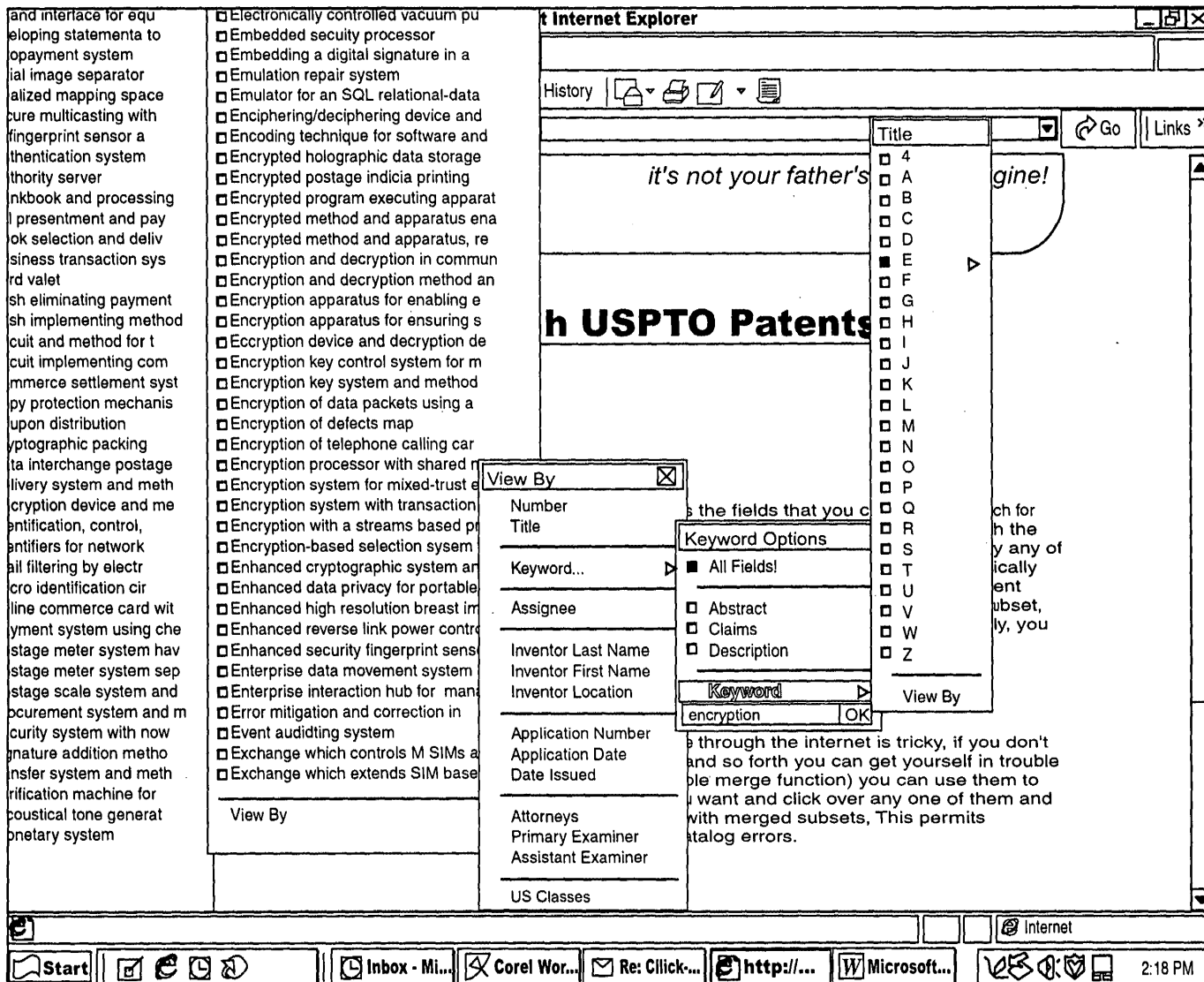
Driographic printing plate
 Drop wire connector
 Dry magnetic pressure-fixable developing powder
 Dry strip antihalation layer for photothermographic film
 Dry transfer article
 Dry transfer graphics article and methods of preparation and use thereof
 Dry transfer graphics article method of preparation
 Dual grooved Fresnel lens for overhead projection
 Dual particle population magnetic recording medium
 Dual status magnetic marker having magnetically biasable flux collectors for use
 Durable glass elements
 Durable melt-blown particle-loaded sheet material
 Durable, polishable direct filling material
 Durably stain-repellant and soil-resistant pile fabric and process
 Dust mop
 Dust mop frame
 Dyed aqueous air foams
 Dyes suitable for sensitization of photoconductive systems
 Electrical connector tape
 Electrically conductive metal oxide coatings
 Method for writing arbitrary index perturbations in a wave-guiding structure

View By...
 Merge

Start | SQL Server Enterp... | ptOX - Microsoft Vi... | SQL Server Query ... | Document1 - Micro... | MDIForm1 | 11:03 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5288
 Attorney Docket No.: 5607

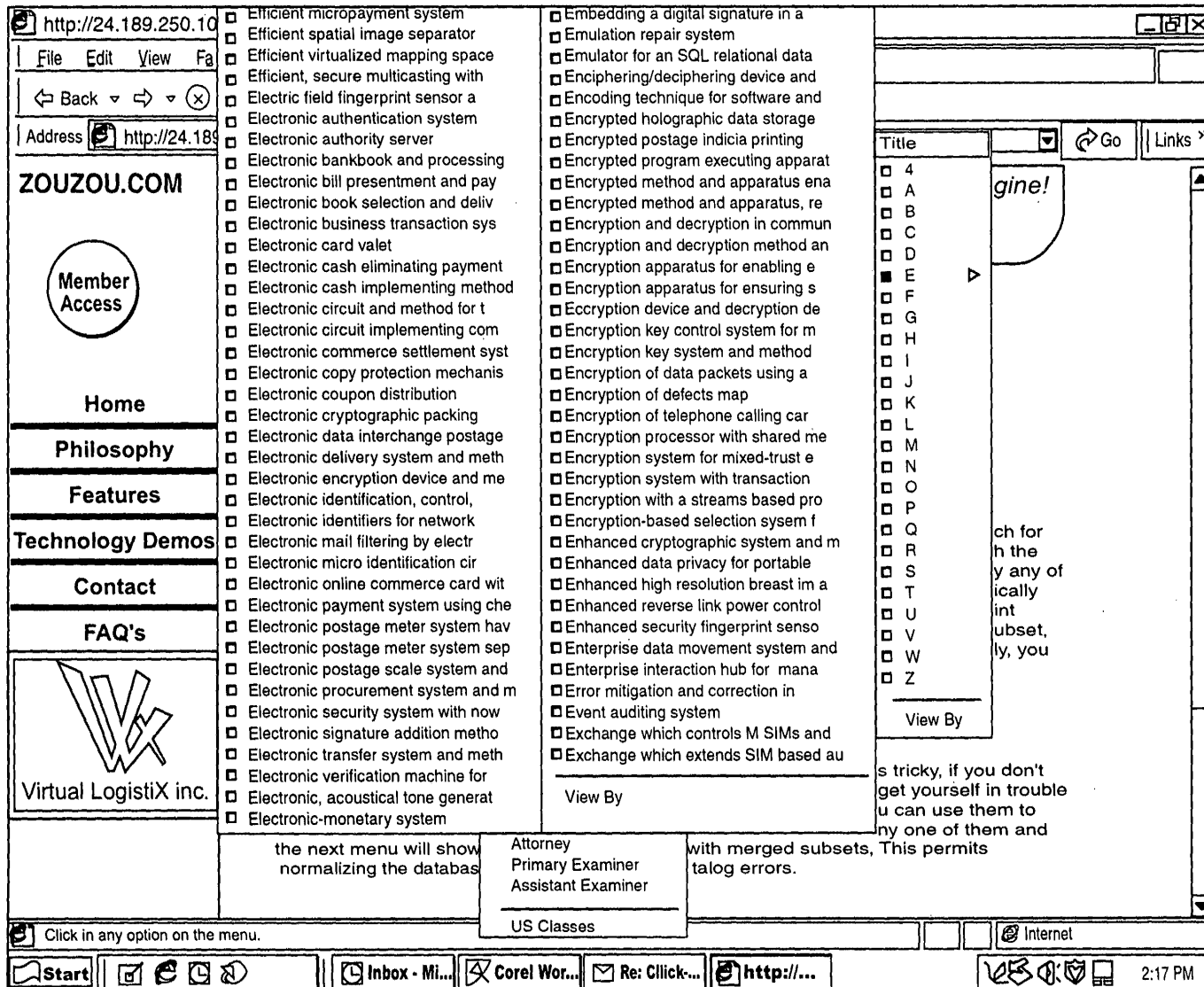
FIG. 36



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5200
Attorney Docket No.: 5607

FIG. 37

FOH280" 5959E660



Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5289
 Attorney Docket No.: 5607

FIG. 38

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

ZOUZOU.COM

it's not your father's search engine!

Patent: 5935246

Electronic copy protection mechanism using challenge and response to prevent unauthorized execution of software

Date Filled:

Date Issued:

Application Number:

Go to USPTO.GOV

4/11/1997

8/10/1999

838620

USPTO

Abstract:

A copy protection mechanism for protecting software against copying, consists of a challenge mechanism embedded in each protected item of software. The challenge mechanism has no access to the customer's private keying material. In operation, the challenge mechanism sends a random challenge to the customer's signature server. The signature server signs the challenge, using the customer's private keying material and then returns the signed challenge to the challenge mechanism. The challenge mechanism then verifies the signed challenge, using the customer's public keying material, and prohibits the customer from using some or all of the protected item of software unless the verification is successful. The mechanism permits every customer to receive an identical copy of the copy protected program with the embedded challenge mechanism.

Inventors:

Benson, Glenn Stuart

Inventor Location:

Munich, DE

Assignee:

International Computers Limited (Limited, GB)

US Classes:

713/200

713/201

International Classes:

US References:

4558176

4926480

4947430

5109413

5146575

5224163

5315657

5371794

5436972

5568552

5724425

Foreign References:

Primary Examiner:

Kizou, Hassan

Assistant Examiner:

Mai, Rijue

Attorney:

Lee, Mann, Smith, McWilliams, Sweeney & Ohlson

Claims:

FIG. 39

FOIA b 7 - DATED 09/25/2009

MDIForm1

S.O.F.

ViewBY	
Title	
Patent Number	
Inventor Name	
Inventor's Location	
US References	
Foreign References	
US Classes	
International Classes	
Application Number	
Application Date	
Issue Date	
Primary Examiner	
Assistant Examiner	
Attorney	
Assignee	

Inventor Name	Inventor Name	Inventor Name	Inventor Name	Inventor Name	Inventor Name	Inventor Name	Inventor Name
A	H	Ha	Har	Harr	Harris, J	Harris, J	Harris, J
B	H.	Hae	Harc	Harris, K	Harris, K	Harris, K	Harris, K
C	Ha	Hab	Hare	Harris, L	Harris, L	Harris, L	Harris, L
D	He	Hac	Hari	Harris, M	Harris, M	Harris, M	Harris, M
E	Hi	Had	Harr	Harris, N	Harris, N	Harris, N	Harris, N
F	Hj	Hae	Harr	Harris, O	Harris, O	Harris, O	Harris, O
G	Hk	Haf	Harr	Harris, P	Harris, P	Harris, P	Harris, P
H	Hl	Hag	Harr	Harris, R	Harris, R	Harris, R	Harris, R
I	Hm	Hah	Harr	Harris, S	Harris, S	Harris, S	Harris, S
J	Hn	Hai	Harr	Harris, T	Harris, T	Harris, T	Harris, T
K	Ho	Haj	Harr	Harris, V	Harris, V	Harris, V	Harris, V
L	Hr	Hak	Harr	Harris, W	Harris, W	Harris, W	Harris, W
M	Hs	Hal	Harr	Harrisber	Harrisber	Harrisber	Harrisber
N	Ht	Ham	Harr	Harrison	Harrison	Harrison	Harrison
O	Hu	Han	Harr	Harrison-	Harrison-	Harrison-	Harrison-
P	Hv	Hap	Harr	Harriz, J	Harriz, J	Harriz, J	Harriz, J
Q	Hw	Haq	Harr	Harrod, A	Harrod, A	Harrod, A	Harrod, A
R	Hy	Har	Harr	Harrod, D	Harrod, D	Harrod, D	Harrod, D
S		Har	Harr	Harrod, E	Harrod, E	Harrod, E	Harrod, E
T		Har	Harr	Harrod, L	Harrod, L	Harrod, L	Harrod, L
U		Har	Harr	Harrod, M	Harrod, M	Harrod, M	Harrod, M
V		Har	Harr	Harroff	Harroff	Harroff	Harroff
W		Har	Harr	Harrod	Harrod	Harrod	Harrod
X		Har	Harr	Harron, R	Harron, R	Harron, R	Harron, R
Y		Har	Harr	Harrop, D	Harrop, D	Harrop, D	Harrop, D
Z		Har	Harr	Harrop, R	Harrop, R	Harrop, R	Harrop, R
		Har	Harr	Harrop, W	Harrop, W	Harrop, W	Harrop, W
		Har	Harr	Harrop, William H.	Harrop, William H.	Harrop, William H.	Harrop, William H.
		Har	Harr	Harrop, C	Harrop, C	Harrop, C	Harrop, C
		Har	Harr	Harrop, G	Harrop, G	Harrop, G	Harrop, G
		Har	Harr	Harrop, T	Harrop, T	Harrop, T	Harrop, T
		Har	Harr	Harrower	Harrower	Harrower	Harrower
		Har	Harr	Harrowing	Harrowing	Harrowing	Harrowing
		Har	Harr	Harruff	Harruff	Harruff	Harruff
		Har	Harr	Harrus, A	Harrus, A	Harrus, A	Harrus, A
		Har	Harr	Harry	Harry	Harry	Harry
		Har	Harr	Harry, Al	Harry, Al	Harry, Al	Harry, Al
		Har	Harr	Harry, Ed	Harry, Ed	Harry, Ed	Harry, Ed
		Har	Harr	Harry, le	Harry, le	Harry, le	Harry, le
		Har	Harr	Harry, Je	Harry, Je	Harry, Je	Harry, Je
		Har	Harr	Harry, Jo	Harry, Jo	Harry, Jo	Harry, Jo
		Har	Harr	Harry, Sr	Harry, Sr	Harry, Sr	Harry, Sr
		Har	Harr	Harris, G	Harris, G	Harris, G	Harris, G
		Har	Harr	Harris, H	Harris, H	Harris, H	Harris, H
		Har	Harr	Harris, I	Harris, I	Harris, I	Harris, I

ViewBY
Title
Patent Number
Inventor Name
Inventor's Location
US References
Foreign References
US Classes
International Classes
Application Number
Application Date

Assignee
Rohm and Haas Company (Independence Mall West, DE)
Rohm and Haas Company (Philadelphia, PA)

FIG. 40

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5250
 Attorney Docket No.: 5607

FOI b 7 - D 5955660

S.O.F.		Attorney	
		D'A	Diy
		D	Dix
		Dab	Dob
		Dac	Doc
		Dah	Dod
		Dai	Doe
		Dal	Doh
		Dan	Doi
		Dar	Dol
		Dau	Dom
		Dav	Don
		Daw	Doo
		Day	Dor
		de	Dos
		Dea	Doa
		deB	Dow
		Dec	Doy
		Ded	Dra
		Dee	Dre
		Deg	Dri
		Deh	Dro
		Dei	Dru
		Dej	Dry
		DeL	Dub
		Dem	Duc
		Den	Dud
		DeP	Duf
		Der	Dug
		Des	Duk
		Det	Dul
		Deu	Dum
		Dev	Dun
		Dew	Dup
		Dex	Dur
		Dhu	Dus
		Dia	Dut
		Dic	Duz
		Did	Dvo
		Die	Dwe
		Dik	Dwo
		Dil	Dvy
		Dim	Dyb
		Din	Dyk
		Dio	Dys
		Dip	
		Dis	View By...
		Dit	

Attorney		Inventor Location	
Dorchak, Frederick J.		10 Cty. Hwy. #4, Wrenshall, MN 55797	Madison, WI
Dorfman, Herrell and Skillman		1111 Hayden Ave., Altoona, WI 54720	Melbourne, AU
Dorfman, John C.		1424 N. Danube Rd., Fridley, MN 55432	Melbourne, Victoria, AU
Dority & Manning		1622 Lake Johanna Blvd., Arden Hills, MN 55112	Miami, FL
Dority, John P., Cleaver, William		1925 Noble Dr., Minneapolis, MN 55422	Minneapolis, MN
Dorman, Ira S.		2000 Argonne Dr., Minneapolis, MN 55421	Minnetonka, MN
Dorman, William S.		31 Alexandra Mansion, 333 Kings Road, London, SW3 5ET, GB	North Melbourne, AU
Dorr, Carson, Sloan & Peterson		3109 Clinton Ave. South, Minneapolis, MN 55408	Owatonna, MN
Dorr, Carson, Sloan and Peterson		48 Woodland Gardens, London, N10 3UA, GB	P.O. Box 66, Edgely, ND 58433
Dorr, Carson, Sloan, & Peterson		5198 St. Moritz Dr., Fridley, MN 55421	Philadelphia, PA
Dorsey & Whitney		5437 Elliot Ave. S., Minneapolis, MN 55417	Phoenix, AZ
Dorsey, Daniel K.		5437 Elliot Ave. South, Minneapolis, MN 55417	Plymouth, MN
Dorsey, Marquart, Windhorst,		6805 Sheridan Ave. S., Richfield, MN 55423	Prior Lake, MN
Dorsey, Windhorst, Hannaford		8000, 19e avenue, Ville Saint-Michel, Montreal, Quebec, CA	R.R. 1, Box 410, Belle Fourche, SD 57717
View By...		Aberdeen, SD	R.R. 2, Elbow Lake, MN 56531
		Afton, MN	Ramsey, MN
		Andover, MN	Rte. 5, Box 245D, Bemidji, MN 56601
		Blaine, MN	Scottsdale, AZ
		Bloomington, MN	Seoul, KR
		Brooklyn Park, MN	Shakopee, MN
		Bundaberg, AU	Southampton, PA
		Burnsville, MN	Springfield, MO
		Chicago, IL	St. Damien, CA
		Circle Pines, MN	St. Louis Park, MN
		Darwin, MN	St. Paul, MN
		Eagan, MN	Stillwater, MN
		Edina, MN	Vednais Heights, MN
		Embleton, AU	Waseca, MN
		Excelsior, MN	Winsted, MN
		Golden Valley, MN	Zimmerman, MN
		Kerdinya, AU	
		Lawrenceville, NJ	View By...

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5288
 Attorney Docket No.: 5607

FIG. 41

MDIForm1

S.O.F.	Attorney		
	D'A Div		
	D Dix		
	Dab Dob		
	Dac Doc		
	Dah Dod		
	Dal Doe		
	Dal Doh		
	Dan Doi		
	Dar Dol		
	Dau Dom		
	Dav Don		
	Daw Doo		
	Day Dor		
	de Dos		
	Dea Dou		
	deB Dow		
	Dec Doy		
	Ded Dra		
	Dee Dre		
	Deg Dri		
	Deh Dro		
	Dei Dru		
	DeJ Dry		
	DeL Dub		
	Dam Duc		
	Den Dud		
	DeP Duf		
	Der Dug		
	Des Duk		
	Det Dul		
	Deu Dum		
	Dev Dup		
	Dew Dur		
	Dex Dus		
	Dhu Dut		
	Dia Duz		
	Dic Dvo		
	Did Dwe		
	Die Dwo		
	Dik Dwy		
	Dil Dyb		
	Dim Dyk		
	Din Dys		
	Dio		
	DIP		
	Dis		
	Dit		
	View By...		
		Attorney	Assignee
		Dorchak, Fredrick J.	Amca International Corporation (St. Paul, MN)
		Dorfman, Herell and Skillman	Austoft Industries Limited (Queensland, AU)
		Dorfman, John C.	Bennett Automotive Technology Pty. Ltd. (Melbourne, AU)
		Dority & Manning	Bennett Automotive Technology Pty. Ltd. (Melbourne, AU)
		Dority, John P., Cleaver, William E., Truex, Marshall M.	Bennett Automotive Technology Pty. Ltd. (Victoria, AU)
		Dorman, Ira S.	Carlson; Chesley F. (Plymouth, MN)
		Dorman, William S.	Carter-Day Company (Minneapolis, MN)
		Dorr, Carson, Sloan & Peterson	Chesley F. Carlson Company (Plymouth, MN)
		Dorr, Carson, Sloan and Peterson	Cleanair Engineering Pty. Ltd. (AU)
		Dorr, Carson, Sloan & Peterson	CyberOptics Corporation (Minneapolis, MN)
		Dorsey & Whitney	E.F. Johnson Company (Waseca, MN)
		Dorsey, Daniel K.	EquiMed Corporation (Plymouth, MN)
		Dorsey, Marquart, Windhorst, West & Halladay	General Mills, Inc. (Minneapolis, MN)
		Dorsey, Windhorst, Hannaford, Whitney & Halladay	Hutchinson technology, Inc. (Minneapolis, MN)
		View By...	IPL Inc. (St-Damien, CA)
			John A. Dalsin & Son, Inc. (Minneapolis, MN)
			K.O. Lee Company (Aberdeen, SD)
			KI-On Trading Co., Ltd. (Seoul, KR)
			Kroy Inc. (Scottsdale, AZ)
			Kroy IN. (St. Paul, MN)
			Loran Maintenance of Way, Inc. (Hamel, MN)
			National Computer Systems, Inc. (Eden Prairie, MN)
			National Computer Systems, Inc. (Minneapolis, MN)
			Red Devil Equipment Company (Bloomington, MN)
			Scherping Systems, Inc. (Winsted, MN)
			Sentry Technologies, Inc. (Chanhassen, MN)
			Sherping Systems, Inc. (Winstead, MN)
			SystemOne Holdings, Inc. (Houston, TX)
			Tol-O-Matic, Inc. (Minneapolis, MN)
			Waldorf Corporation (St. Paul, MN)
			Wenger Corporation (Owantonna, MN)
			View By...
ViewBY	Attorney		
Title	/		
Patent Number	0		
	3		
	A		
	B		
	C		
	D		
	E		
	F		
	G		
	H		
	I		
	J		
	K		
Inventor Name	L		
Inventor's Location	M		
	N		
US References	O		
Foreign References	P		
	Q		
US Classes	R		
International Classes	S		
	T		
Application Number	U		
Application Date	V		
Issue Date	W		
	X		
	Y		
Primary Examiner	Z		
Assistant Examiner			
Attorney			
Assignee			
	View By...		

Start | [Icons] | ptX - Microso... | Harrop 2.doc... | MDIForm1 | [Icons] | 10:38 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5289
 Attorney Docket No.: 5607

FIG. 42

FOH200 5955E660

MDIForm1

S.O.F.

Attorney

D'A Div
D. Dix
Dab Dob
Dac Doc
Dah Dod
Dai Doe
Dal Doh
Dan Doi
Dar Dol
Dau Dom
Dav Don
Daw Doo
Day Dor
de Dos
Dea Dou
deB Dow
/ Doy
0 Dra
3 Dee
A Deg
B Dri
C Drom
D DeJ
E Dry
F Dub
G Duc
H DeP Dud
I Der Duf
J Des Dug
K Det Duk
L Deu Dul
M Dev Dum
N Dew Dup
O Dex Dur
P Dhu Dus
Q Dia Dut
R Dic Duz
S Did Dvo
T Die Dwe
U Dik Dwo
V Dil Dwy
W Dim Dyb
X Din Dyk
Y Dio Dys
Z DiP
Dis
Dit

Attorney

Dorchak, Fredrick J.
Dorfman, Herell and Skillman
Dorfman, John C.
Dority & Manning
Dority, John P., Cleaver, William E., Truex, Marshall M.
Dorman, Ira S.
Dorman, William S.
Dorr, Carson, Sloan & Peterson
Dorr, Carson, Sloan and Peterson
Dorr, Carson, Sloan & Peterson
Dorsey & Whitney
Dorsey, Daniel K.
Dorsey, Marquart, Windhorst, West & Halladay
Dorsey, Windhorst, Hannaford, Whitney & Halladay

View By...

Attorney

Dorsey & Whitney

View By...

Assignee

Amca International Corporation (St. Paul, MN)
Austoft Industries Limited
Bennett Automotive Technologies, Inc.
Bennett Automotive Technologies, Inc.
Bennett Automotive Technologies, Inc.
Carlson; Chesley F. (Ply)
Carter-Day Company (N)
Chesley F. Carlson Company
Cleanair Engineering Products, Inc.

Application Date	
4/16/1986	4/29/1988
3/24/1987	5/13/1988
4/15/1987	6/1/1988
4/28/1987	6/27/1988
6/12/1987	8/10/1988
7/20/1987	8/18/1988
8/31/1987	9/22/1988
9/11/1987	10/6/1988
9/25/1987	10/7/1988
10/1/1987	11/9/1988
10/9/1987	11/10/1988
11/5/1987	11/18/1988
11/6/1987	11/29/1988
11/13/1987	12/22/1988
11/19/1987	1/11/1989
12/14/1987	1/19/1989
12/21/1987	2/7/1989
1/14/1988	2/13/1989
1/19/1988	2/23/1989
2/3/1988	5/16/1989
3/9/1988	5/19/1989
3/21/1988	6/16/1989
3/25/1988	8/15/1989
3/28/1988	8/30/1989
3/29/1988	12/21/1989
4/1/1988	7/31/1990
4/5/1988	1/15/1993
4/15/1988	
4/20/1988	View By...
4/28/1988	

ViewBY

Title
Patent Number

Inventor Name
Inventor's Location

US References
Foreign References

US Classes
International Classes

Application Number
Application Date
Issue Date

Primary Examiner
Assistant Examiner
Attorney
Assignee

Start | [Icons] | ptX - Microso... | Harrop 2.doc... | MDIForm1 | 10:42 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5288
 Attorney Docket No.: 5607

FIG. 43

MDIForm1		Attorney	
S.O.F.		Minami International Corp. (New York, NY)	Minnesota Mining and Manufacturing Company (Saint Paul, MI)
		Minato Medical Science Co., Ltd. (Osaka, JA)	Minnesota Mining and Manufacturing Company (Saint Paul, MN)
		Minatur Promotions and Enterprises, Ltd. (Chicago, IL)	Minnesota Mining and Manufacturing Company (St Paul, MN)
		Minc Incorporated (Colorado Springs, CO)	Minnesota Mining and Manufacturing Company (St. Paul, MI)
		Minchoin Magnetic Systems Limited (London, EN)	Minnesota Mining and Manufacturing Company (St. Paul, MN)
		MindCenter Corporation (Palo Alto, CA)	Minnesota Mining and Manufacturing Company (St. Paul, MN); Sony Corporation (Tokyo, JP)
		MindGames, Inc. (Pine Bluff, AR)	Minnesota Mining and Manufacturing Company (St Paul, MN)
		Mine Safety Appliances Company (Pittsburgh, PA)	Minnesota Mining and Manufacturing Copany (St. Paul, MN)
		Minebea Co., Ltd. (Naganô, JP)	Minnesota Mining and Manufacturing Company (St. Paul, MN)
		MineLab Electronic Industries Ltd. (Adelaide, AU)	Minnesota Mining and Manufacturing (St. Paul, MN)
		Minelli AG (CH)	Minnesota Mining and Manufacturing Company (St. Paul, MN)
Ass		Miner Elastomer Products Corporation (Geneva, IL)	Minnesota Scientific, Inc. (Minneapolis, MN)
"		Miner Enterprises, Inc. (Chicago, IL)	Minnesota Scientific, Inc. (West St. Paul, MN)
('		Miner Enterprises, Inc. (Geneva, IL)	Minnesota Valley Engineering, Inc. (New Prague, MN)
1		Mineral Fiber Manufacturing Corporation (Coshocton, OH)	MinhFac, Inc. (Minneapolis, MN)
2		Mineral Recovery Corporation (Pleasantville, NY)	Minntech Corporation (Minneapolis, MN)
3		Mineral Research & Development Corporation (Charlotte, NC)	Mino Yogyo Co., Ltd. (Mizunami, JP)
4		Minerals Research Corporation (Ogden, UT)	Minolta Camera Co. Kabushiki Kaisha (Osaka, JP)
5		Minerac Corporation (New York, NY)	Minolta Camera Co., Ltd. (Osaka, JP)
6		Mines de Potasse d'Alsace S.A. (Mulhouse, FR)	Minolta Camera Co., Ltd. Senri Center (Osaka, JP)
7		Ming Tay Hardware Ind. Co., Ltd. (TW)	Minolta Camera Corporation (Osaka, JA)
8		Mingrip, Inc. (Orangeburg, NY)	Minolta Camera Kabushiki Kaisha (Osaka, JP)
A		Minimed Technologies (Sylmar, CA)	Minolta Camera Kabushiki Kaisha (Osaka, JP)
B		Mining Equipment Division (Fairmont, WV)	Minolta Camera Kabushiki Kaisha (Osaka, JP)
C		Mining Equipment Division of FMC Corporation (Fairmont, WV)	Minolta Camera Kabushiki Kaisha (Azuchi, JA)
D		Mining Technologies, Inc. (Ashland, KY)	Minolta Camera Kabushiki Kaisha (Azuchi, JP)
E		Minireef, B.V. (Foxhol, NL)	Minolta Camera Kabushiki Kaisha (Higashi, JP)
F		MiniScribe Corporation (Longmont, CO)	Minolta Camera Kabushiki Kaisha (JA)
G		Minister of Energy, Mines and Resources Canada (CA)	Minolta Camera Kabushiki Kaisha (JP)
H		Minister of National Defence (CA)	Minolta Camera Kabushiki Kaisha (Osaka)
I		Minister of National Defence of Her Majesty's Canadian Government (Ottawa, CA)	Minolta Camera Kabushiki Kaisha (Osaka, JA)
J		Ministerium fuer Verkehrswesen (Berlin, DD)	Minolta Camera Kabushiki Kaisha (Osaka, JP)
K		Minneapolis Electric Steel Casting Company (Minneapolis, MN)	Minolta Camera Kabushiki Kaisha (Osaka, JP); Copal Company, Ltd. (Tokyo, JP)
L		Minneapolis War Memorial Blood Bank (Minneapolis, MN)	Minolta Camera Kabushiki Kaisha (Osaka, JP); Osaka Municipal Government (Osaka, JP)
M		Minnesota Automation Inc. (Crosby, MN)	Minolta Camera Kabushiki Kaisha (Osaka, JP); Toyo Ink Mfg. Co., Ltd. (Tokyo, JP)
N		Minnesota Automation, Inc. (Crosby, MN)	Minolta Camera Kabushiki Kaisha (Osaka, JA)
O		Minnesota Micro Metal, Inc. (St. Paul, MN)	Minolta Camera Kabushiki Kaisha (Osaka, JP)
P		Minnesota Mining & Manufacturing Co. (Saint Paul, MN)	Minolta Camera Kabushiki Kaisha (Sakai, JP)
Q		Minnesota Mining & Manufacturing Co. (St. Paul, MN)	Minolta Camera Kabushiki Kaisha (Tokyo, JP)
R		Minnesota Mining & Manufacturing Company (MN)	Minolta Camera Kabushiki Kaishi (Osaka, JP)
S		Minnesota Mining & Manufacturing Company (Saint Paul, MN)	Minolta Camera Kabushiki Kasha (Osaka, JP)
T		Minnesota Mining & Manufacturing Company (St. Paul, MN)	Minolta Camera Kaisha (Osaka, JP)
U		Minnesota Mining and Manufacturing Company (St. Paul, MN)	Minolta Camera Kabushiki Kaisha (Osaka, JP)
V		Minnesota Mining and Manufacturing (St. Paul, MN)	Minoru Industrial Co., Ltd. (Okayama, JP)
W		Minnesota Mining and Manufacturing Co. (Saint Paul, MN)	Mint Finder Inc. (Sioux Falls, SD)
X		Minnesota Mining and Manufacturing Co. (St. Paul, MN)	Mint-Pac Technologies, Inc. (North Haven, CT)
Y		Minnesota Mining and Manufacturing Company ()	Minu S.p.A. (Busnato Mi, IT)
Z		Minnesota Mining and Manufacturing Company (3M) (Saint Paul, MN)	
View		Minnesota Mining and Manufacturing Company (MN)	View By...

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5288
 Attorney Docket No.: 5607

FIG. 44

FOH280" 59592660

The screenshot shows a software window titled "MDIForm1" with a search interface. On the left, there is a "ViewBY" menu with options: Title, Patent Number, Inventor Name, Inventor's Location, US References, Foreign References, US Classes, International Classes, Application Number, Application Date, Issue Date, Primary Examiner (selected), Assistant Examiner, Attorney, and Assignee. Below this menu is a "View By..." dropdown. The main area is divided into two columns of primary examiner names. The left column lists names from C.A. to Z. The right column lists names from Clin to Clay. A "Primary Examiner" dropdown menu is open, showing a list of names from 0 to Z, with "E" selected. A "View By..." dropdown menu is also open, showing "Casaregola, Louis J.", "Casaregola, Louis L.", and "Casaregola, Louis J.". The Windows taskbar at the bottom shows the Start button, several icons, and open applications: "ptox - Microso...", "Harrop 2.doc...", and "MDIForm1". The system clock shows "10:41 AM".

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5280
Attorney Docket No.: 5607

FIG. 45

FOH280" 9955E660

MDIForm1		Primary Examiner	
S.O.F.		Dahl, Lawren	Didline, Jr.
		Dan, Hoang C	DiPalma, Vic
		Dang, Hoang	Dixon Jr., W
		Dang, Thi	Dixon, Harol
		Danison, Wal	Dixon, Josep
		Daus, Donald	Dixon, Jr.,
		Daus, Donld	Dixon, Willi
		Daus, Dougla	Dixon, Harol
		Dauss, Donal	Dixson, Jr.,
		David Smith,	Dixson, Jr.,
		Davie, James	Dobeck, B.
		Davis Jr., A	Dobeck, Benj
		Davis, Alber	Dobeck, G.
		Davis, C.	Dobeck, H.
		Davis, Curti	Dolinar, And
		Davis, Curti	Doll, John
		Davis, Jenna	Donovan, Lin
		Davis, Jr. A	Dority Carro
		Davis, Jr.,	Dority, Caro
		Davis, C.	Dority, Carr
		Davis, Jr.,	Dority, Jr.
		Davis, Curti	Dority, Jr.,
		Dawson, Robe	Dority, Jr.,
		Dayoan, D.G	Dorner Kenne
		De Boer, Tod	Dorner, Kenn
		Dean, Jr., R	Dost, Gerald
		Dean, R	Dote, Janis
		Dean, R.	Doudreau, Le
		Dean, Richar	Douglas Wins
		Dean, W.	Douglas, Win
		Dear, R.	Downey, K.
		DeBoer, Todd	Downey, Kenn
		Dechsle, Ant	Downey, Mary
		Deck, Randal	Draper, Garn
		Dees, Carl F	Draper, Garr
		Dees, Jose	Drezen, Norm
		Dees, Jose G	Drezin, Norm
		Dees, Jose/	Drodge, Jose
		Dees, Josee	Drummond Dou
		Dees, JoseG.	Drummond, Do
		Dehrend, Har	Dugan, Donov
		Demeo, Palme	Dugan, James
		Demers, Arth	Dugga, Donov
		DeMille, Dan	Duggan, Dono
		Denion, Thom	Duzan, James
		Dertz, Berna	Dwyer, James
		Derrington,	Dziehzynski,
		Desmond, Eug	Dzierzynski,
		Di Palma, Vi	
		Diehl, Dwigh	
		Dier, Philip	
			View By...

Primary Examiner
0
1
2
3
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
W
Y
Z

ViewBY
Title
Patent Number
Inventor Name
Inventor's Location
US References
Foreign References
US Classes
International Classes
Application Number
Application Date
Issue Date
Primary Examiner
Assistant Examiner
Attorney
Assignee

Primary Examiner
Dees, Jose
Dees, Jose G.
Dees, Jose/
Dees, Josee G.
Dees, JoseG.
View By...

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5200
 Attorney Docket No.: 5607

FIG. 46

MDIForm1

S.O.F.

Assignee	Assignee	Assignee
"	U	Ulano Corporation (Brooklyn, NY)
(U-	Uldricks, Charles D. (Newbury Park, CA)
'	U	Ulapara Holdings Pty. Ltd. (New South Wales, AU)
1	Ua	Ulinic France (Paris, FR)
2	UB	Ulrich Baensch (Melle, DT)
3	UC	Ulrich Luboschik (DE)
5	Ud	Ulstein Propeller A/S (NO)
7	Ue	Ultimage Inc. (Quebec, CA)
8	UF	Ultimate Window Coverings, Inc. (Lakewood, CO)
A	Ug	Ultra Light Arms, Inc. (Granville, WV)
B	UH	Ultra Mortar, Inc. (Ogden, UT)
C	UK	Ultra Plating Corporation (Green Bay, WI)
D	Uj	Ultra-Centrifuge Nederland N.V. (Almelo, NL)
E	Um	Ultra-Mold Corporation (Millow Grove, PA)
F	Un	Ultra-Precision Manufacturing, Ltd. (Birmingham, MI)
G	Uo	Ultra-Violet Products, Inc. (San Gabriel, CA)
H	Up	Ultracentrifuge Nederland N.V. (The Hague, NL)
I	Ur	Ultradent Products, Inc. (Salt Lake City, UT)
J	Us	Ultradent Products, Inc. (South Jordan, UT)
K	Ut	Ultrafibre, Inc. (Granville, OH)
L	Uv	Ultrakust Electronic GmbH (Ruhmannsfelden, DE)
M	Uz	Ultralife Batteries, Inc. (Newark, NY)
N		Ultrasonic Embroidery Machine Company (North Haven, CT)
O		Ultrasonic Equipment Company (Addison, IL)
P		Ultramatrix, Inc. (Los Angeles, CA)
Q		Ultramed Corporation ()
R		ULTRAMET (Pacoima, CA)
S		Ultrasonic Arrays, Inc. (Woodinville, WA)
T		Ultrasonic Energy Corporation (Riverdale, NY)
U		Ultrasonic Systems, Inc. (Farmingdale, NY)
V		Ultratec, Inc. (Madison, WI)
W		Ultratek International, Inc. (Concord, CA)
X		UltraThermics (Redmond, WA)
Y		Ultraviolet Purification Systems (Bedford Hills, NY)
Z		Ultraviolet Purification Systems, Inc. (Bedford Hills, NY)
		Ultrastreams Defense and Space, Inc. (Irvine, CA)
		Ultron Systems Corporation (Moorestown, NJ)
		Utrox International (Santa Ana, CA)
		Uly-Pak, Inc. (Carbondale, IL)
		Uly-Pak, Inc. (Ulysses, KS)
		Ulysses Corporation (St. George, UT)

ViewBY	ViewBY
Title	Title
Patent Number	Patent Number
Inventor Name	Inventor Name
Inventor's Location	Inventor's Location
US References	US References
Foreign References	Foreign References
US Classes	US Classes
International Classes	International Classes
Application Number	Application Number
Application Date	Application Date
Issue Date	Issue Date
Primary Examiner	Primary Examiner
Assistant Examiner	Assistant Examiner
Attorney	Attorney
Assignee	Assignee

ViewBY	ViewBY
Title	Title
Mehtod of ultrasonic cryc	Patent Number
Ultrasonic motors and co	
Ultrasonic toothbrush app	
View By...	Inventor Name
	Inventor's Location
US Refer	East Islip, Ny
Foreign R	Glen Oaks, NY
	Huntington Station, NY
US Classe	Riverdale, NY
Internation	San Rafael, CA
	Southampton, NY
Application	View By...
Application	
Issue Date	Issue Date
Primary Exa	Primary Examiner
Assistant Exa	Assistant Examiner
Attorney	Attorney
Assisnee	Assignee

Start | [Icons] | [ptox - Microso...] | [Harrop 2.doc...] | [MDIForm1] | [Icons] | 10:44 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5200
 Attorney Docket No.: 5607

FIG. 47

FOH280" S955E660

The screenshot shows a software window titled "MDIForm1" with a menu bar containing "S.O.F.". The main area displays a hierarchical tree structure of "US Classes" and a list of patent titles. The "US Classes" tree is organized as follows:

- US Classes
 - 44/0
 - 44/1
 - 44/2
 - 44/3
 - 44/4
 - 44/5
 - 44/6
 - 44/7
 - 44/8
 - 44/9
 - 44/D
 - 44/0
 - 44/1
 - 44/2
 - 44/3
 - 44/4
 - 44/5
 - 44/6
 - 44/7
 - 44/8
 - 44/9
 - 44/10A
 - 44/10B
 - 44/10C
 - 44/10D
 - 44/10E
 - 44/10F
 - 44/10H
 - 44/10J
 - 44/10K
 - 44/10R
 - 44/12
 - 44/13
 - 44/14
 - 44/15A
 - 44/15A
 - 44/15R
 - 44/16A
 - 44/16D
 - 44/16F
 - 44/16R
 - 44/17
 - 44/19
 - 44/1A
 - 44/1B
 - 44/1C
 - 44/1D
 - 44/1E
 - 44/1F
 - 44/1G
 - 44/1R
 - 44/1SR

The list of patent titles includes:

- Artificial logs and log-making method and apparatus
- Fire log process and apparatus
- Fuel compacting apparatus
- Method and apparatus for recovering by-product silt fines from a slurry thereof
- Method of charging solids into coal gasification reactor
- Process for making low-sulfur and low-ash fuels

The interface also features a "ViewBY" menu with options like Title, Patent Number, Inventor Name, etc., and a taskbar at the bottom showing the Start button, application icons, and the system clock at 10:52 AM.

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
Inventor(s): Joseph L. DeBellis
Contact Name: Aldo Noto (703) 288-5200
Attorney Docket No.: 5607

FIG. 48

MDIForm1

S.O.F.

(4008054) Process for making low-sulfur and low-ash fuels

Title: Process for making low-sulfur and low-ash fuels Patent Number: 4008054

Assignee: Consolidation Coal Company (Pittsburgh, PA)

Attorney: Mikesell, Jr., William A., Fowler, Jr., D. Leigh, Price, Jr., Stanke Application Number: 540310

Examiner: Dees, Carl F. Application Date: 1/10/1975

Assistant Examiner: Issue Date: 2/15/1977

8054'.WKU.%25260S=PN/4008054%2526RS=PN/4008054

Parent Case Description: 1. Field of the invention This invention relates to a process for converting coal to low-sulfur and low-ash gaseous, liquid and solid fuels, and more particularly, to a process for supplying the energy requirements of a steel plant from an ash- and sulfur-containing coal. 2. Description of the Prior Art The primary source of energy for the steel industry continues to be coke for the blast furnace. The conventional method for coke manufacture, that is, by slot ovens, requires a blend of high and low volatile coals of proper swelling properties to produce a strong coke without damaging the ovens. Beyond these physical properties, there is a need for desirable chemical properties (i.e. low ash and sulfur content) to permit low-cost production of high quality hot metal. With the continued expansion of the world's productive capacity for steel, a growing shortage of good metallurgical coals is developing, particularly those having the essential low volatile coal ingredients. Low-sulfur coals also are

Inventors: Clancey, James T., Gorin, Everett, Reichl, Eric H., Rice, Charles H.

Inventors Location: Pittsburgh, PA, Pittsburgh, PA, Pittsburgh, PA, Pittsburgh, PA

Web Ext

FIG. 49

Start | ptoX - ... | Harrop ... | MDIFo... | This is ... | 10:56 AM

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION
 Inventor(s): Joseph L. DeBellis
 Contact Name: Aldo Noto (703) 288-5200
 Attorney Docket No.: 5607

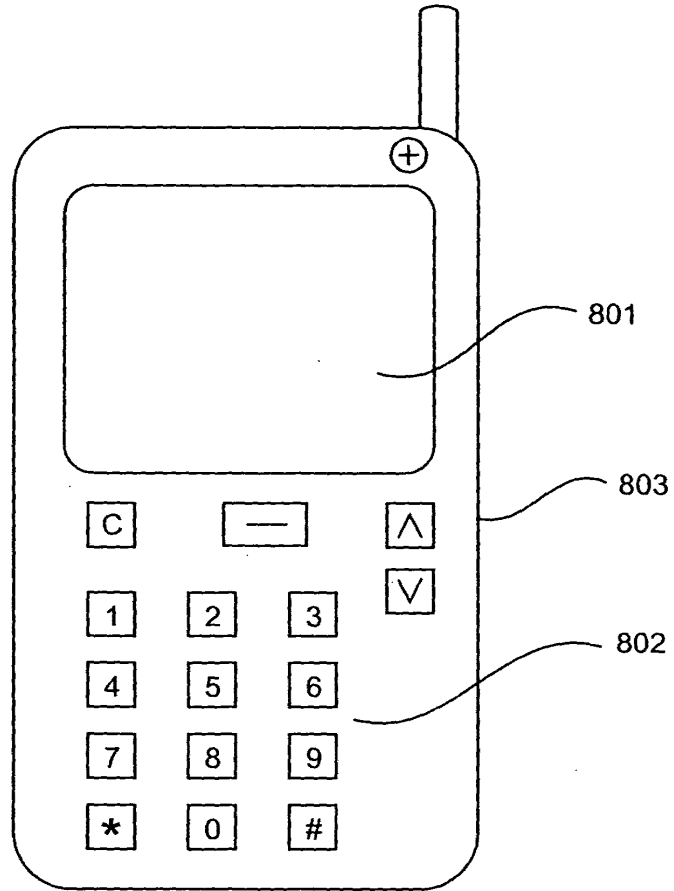
Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5250

Attorney Docket No.: 5607

5607-5250-0001



800

FIG. 50

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607

09555555

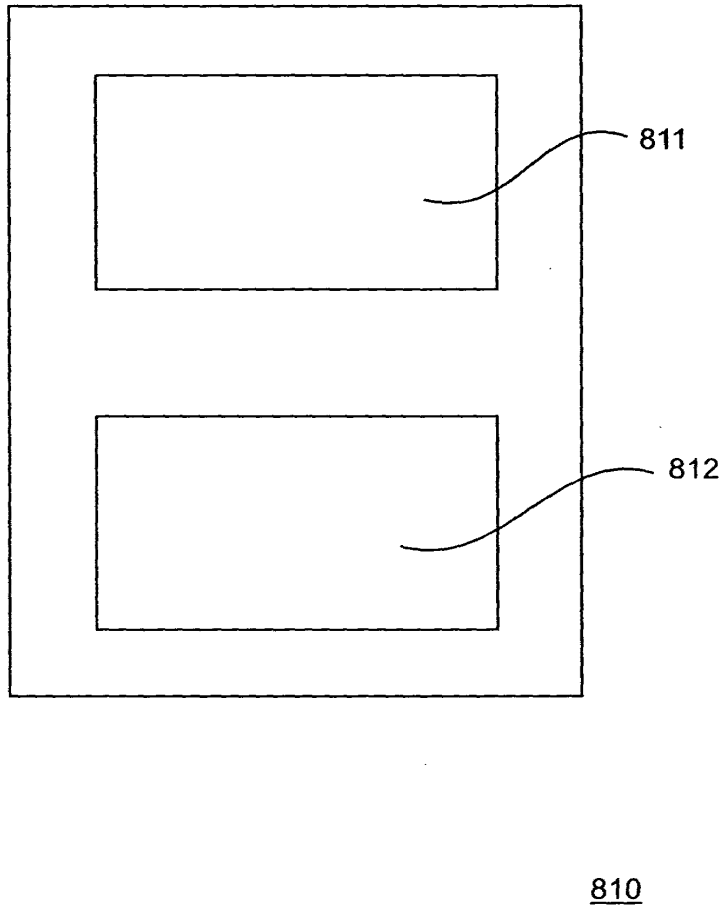


FIG. 51

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5220

Attorney Docket No.: 5607

FIG. 52

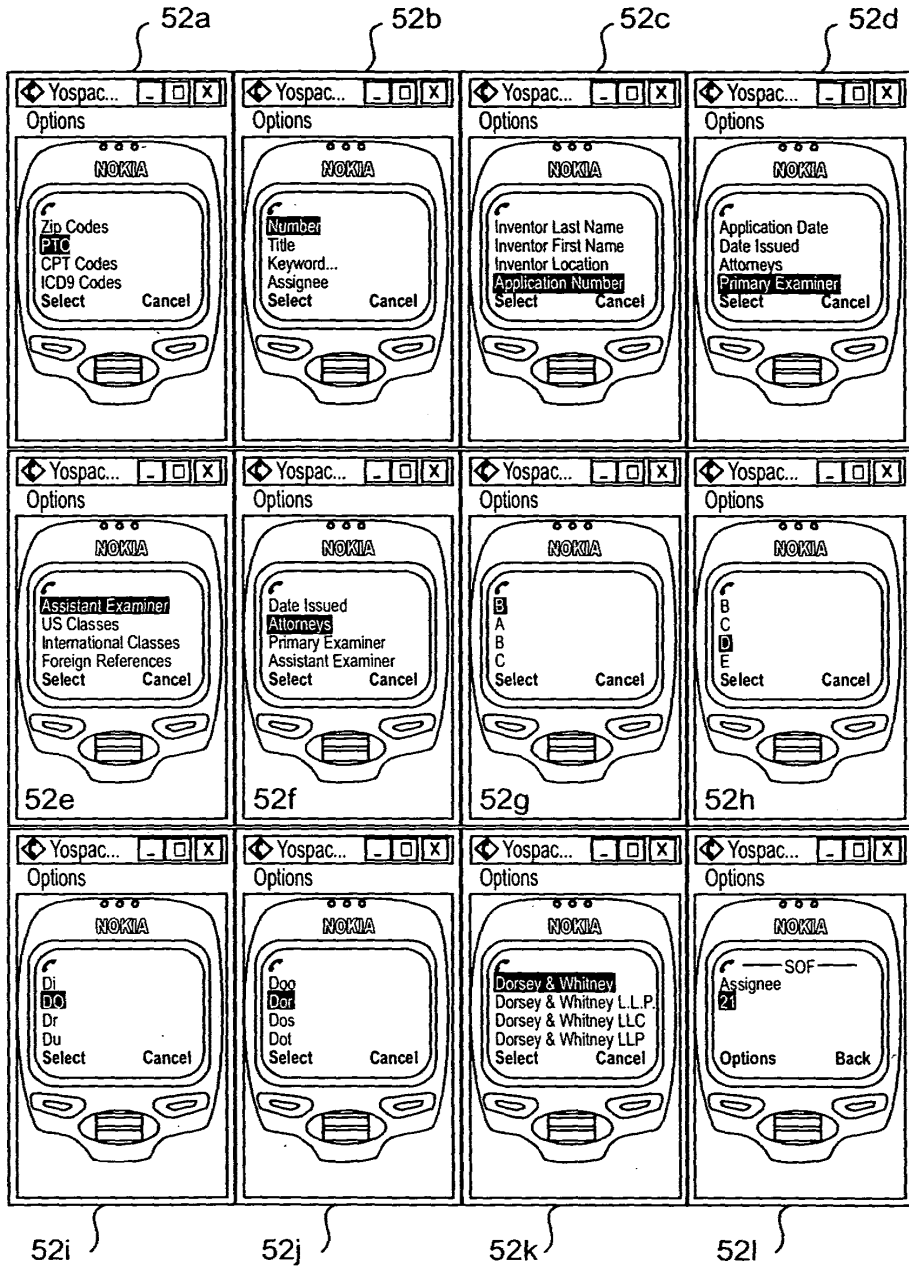


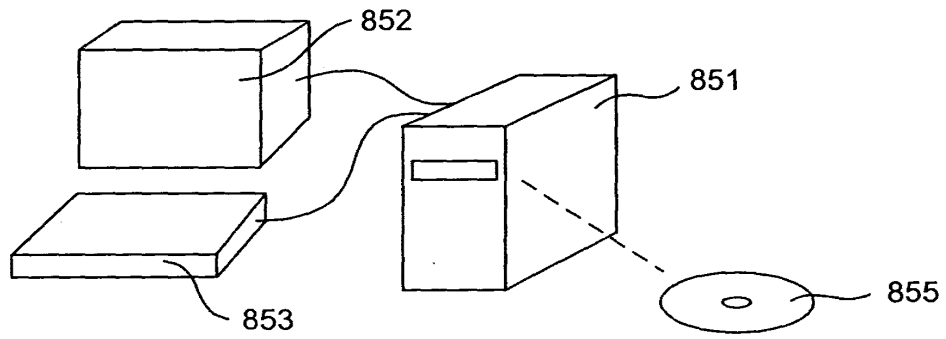
FIG. 52

Title: SEARCH-ON-THE-FLY WITH MERGE FUNCTION

Inventor(s): Joseph L. DeBellis

Contact Name: Aldo Noto (703) 288-5200

Attorney Docket No.: 5607



850

FIG. 53

1 schema is designed, a tool, known as a database management system (DBMS), is used to
 2 build the database and to operate on data within the database. The DBMS stores,
 3 retrieves and modifies data associated with the database. Lastly, to the extent possible,
 4 the DBMS protects data from corruption and unauthorized access.

5 A human user controls the DBMS by providing a sequence of commands selected
 6 from a data sublanguage. The syntax of data sublanguages varies widely. The American
 7 National Standards Institute (ANSI) and the International Organization for
 8 Standardization (ISO) have adopted Structured English Query Language (SQL) as a
 9 standard data sublanguage for relational databases. SQL comprises a data definition
 10 language (DDL), a data manipulation language (DML), and a data control language
 11 (DCL). The DDL allows users to define a database, to modify its structure and to destroy
 12 it. The DML provides the tools to enter, modify and extract data from the database. The
 13 DCL provides tools to protect data from corruption and unauthorized access. Although
 14 SQL is standardized, most implementations of the ANSI standard have subtle differences.
 15 Nonetheless, the standardization of SQL has greatly increased the utility of relational
 16 databases for many applications.

17 Although access to relational databases is facilitated by standard data
 18 sublanguages, users still must have detailed knowledge of the schema to obtain needed
 19 information from a database since one can design many different schemas to represent the
 20 storage of a given collection of information. For example, in an electronic commerce
 21 system, product information, such as product SKU, product name, product description,
 22 price, and tax code, may be stored in a single table within a relational database. In
 23 another electronic commerce system, product SKU, product name, description, and tax
 24 code may be stored in one table while product SKU and product price are stored in a
 25 separate table. In this situation, a SQL query designed to retrieve a product price from a
 26 database of the first electronic commerce system is not useful for retrieving the price for
 27 the same product in the other electronic system's database because the differences in
 28 schemas require the use of different SQL queries to retrieve product price. As a
 29 consequence, developers of retail applications accessing product information from
 30 relational databases may have to adapt their SQL queries to each individual schema.
 31 This, in turn, prevents their applications from being used in environments where there are
 32 a wide variety of databases having different schemas, such as the World Wide Web.

33 A further problem with conventional searches, search engines, data access and
 34 data retrieval is a tendency to return very large amounts of data, or to require the search

1 parameters to be narrowed. When large amounts of data are presented, the display may
2 take many "pages" before all data is seen by the user. The time and expense involved in
3 such a data review may be significant, inconvenient, not user friendly or efficient.

4 **Summary**

5 Sort-on-the-Fly/Search-on-the-Fly data retrieval methods and apparatus (hereafter,
6 search-on-the-fly) provide an intuitive means for accessing or searching databases,
7 allowing a user to access or obtain information about data in the database without having
8 to know anything about the database structure. Sort-on-the-Fly/Search-on-the-Fly is an
9 information gathering process or analysis process about data stored in one or more
10 databases. The on-the-fly methods and apparatus often use or include sorting and
11 searching. While Sort-on-the-Fly/Search-on-the-Fly may be a search engine or part of a
12 search engine, it may also stand alone or make calls to a search engine. For example,
13 database search engines may be used in conjunction with on-the-fly methods and
14 apparatus.

15 Using Sort-on-the-Fly/Search-on-the-Fly, a user selects a desired term, and the
16 user is delivered all instances of the desired term, even if a specific file or table does not
17 contain the instance. For example, if a user wants to enter a database using the name of a
18 specific individual as a database entry point, a database manager or other software will
19 access the database using the desired name, and will organize the results so that all entries
20 associated with that name are displayed. The database need not have a specific file (in a
21 flat database) or a table (in a relational database) of names. The user may perform further
22 on-the-fly searches or information retrieval to narrow or focus the results, or for other
23 reasons. For example, given results for all names that include the name "Smith," the user
24 may then decide to obtain information for all "Smiths" that include an association to an
25 address in New Jersey. Search-on-the-fly then conducts a further information gathering
26 using this criteria and produces a second result. Further narrowing or broadening of the
27 analysis is permitted, with search-on-the-fly returning results based on any new criteria.

28 In an embodiment, search-on-the-fly uses graphical user interfaces (GUIs) and
29 one or more icons to make the information gathering process as efficient as possible. The
30 GUIs may incorporate one or more pull down menus of available sorting terms. As a user
31 selects an item from a first pulldown menu, a subsequent pulldown menu displays choices
32 that are available for sorting or searching. The process may be continued or repeated
33 until Sort-on-the-Fly/Search-on-the-Fly has retrieved or displayed a discrete data entry
34 from the database. The pulldown menus are not pre-formatted. Instead, the pulldown

1 menus are created "on-the-fly" as the user steps through the sort and/or search process.
2 Thus, search-on-the-fly is inherently intuitive, and allows a user with little or no
3 knowledge of the database contents, its organization, or a search engine search routine to
4 execute comprehensive analysis, sorting and/or searches that return generally accurate
5 results.

6 Search-on-the-fly also searches on key words specified by the user. Search-on-
7 the-fly can be used to exclude certain items. Search-on-the-fly incorporates other
8 advanced features such as saving results by attaching a cookie to a user's computer, and
9 associating icons with the results.

10 Search-on-the-fly may be used with both internal and external databases. For
11 example, Search-on-the-fly may be used with a company internal database and one or
12 more databases accessible through the Internet.

13 Search-on-the-fly is user-friendly. With one interface, many different types of
14 databases or database schemas may be searched or sorted.

15 Finally, the search-on-the-fly technique, and other techniques discussed above
16 may be used in conjunction with a method of doing business, particularly a business
17 method that uses the Internet as a communications backbone.

18 **Description of the Drawings**

19 The detailed description will refer to the following figures, in which like numerals
20 refer to like objects, and in which:

21 Figure 1 is a block diagram of a system that uses a search-on-the-fly/sort-on-the-
22 fly process;

23 Figure 2 is another overall block diagram of the system of Figure 1;

24 Figure 3 is a detailed block diagram of the search engine used with the system of
25 Figure 2;

26 Figure 4 is an example of a search-on-the-fly using the search engine of Figure 3;

27 Figures 5 - 9 are detailed block diagrams of components of the search engine of
28 Figure 3;

29 Figure 10 is another example of a search-on-the-fly using the search engine of
30 Figure 3;

31 Figures 11 - 15b are additional examples of a search-on-the-fly using the search
32 engine of Figure 3;

33 Figures 16 - 20 are flow charts illustrating operations of the search engine of
34 Figure 3;

1 Figure 21 illustrates a further function of the search engine of Figure 3 in which
2 results of more than one search are combined;

3 Figures 22 - 26 illustrate graphical user interfaces that may be displayed in
4 conjunction with operation of the system of Figure 1;

5 Figure 27 is a flowchart illustrating an alternate operation of a query generator
6 used with the search engine of Figure 3;

7 Figure 28 is a flowchart illustrating an alternate operation of the truncator used
8 with the search engine of Figure 3;

9 Figures 29 - 36 illustrate user interfaces with search results from a search on the
10 fly and a merge function;

11 Figures 37 - 39 illustrate a keyword search result form a search on the fly with the
12 merge function;

13 Figures 40-49 illustrate additional search results;

14 Figure 50 illustrates a cellular phone incorporating the search-on-the fly with
15 merge function;

16 Figure 51 illustrates a personal data assistant incorporating the search-on-
17 the-fly with merge function;

18 Figures 52a - 52l illustrate search-on-the-fly as displayed on the cellular phone of
19 Figure 50; and

20 Figure 53 illustrates a computer-readable medium having the search-on-the-fly
21 with merge function loaded thereon.

22 Detailed Description

23 Ordinary search engines place constraints on any search. In particular, a partial
24 ordering of available search criteria limits application of the search engine only to certain
25 search sequences. The user is given a choice of search sequences, and the order in which
26 individual search steps in the search sequence become available limits the direction of the
27 search. A user who desires to take a vacation cruise may use an Internet search engine to
28 find a desired vacation package. The search begins with presentation of a list of general
29 categories, and the user clicks on "travel," which produces a list of subcategories. The
30 user then clicks on "cruises" from the resulting list of subcategories, and so on in a
31 cumulative narrowing of possibilities until the user finds the desired destination, date,
32 cruise line, and price. The order in which choices become available amounts to a
33 predefined "search tree," and the unspoken assumption of the search engine designer is

0993555-0840
"04230" 5952660

1 that the needs and thought processes of any user will naturally conform to this predefined
2 search tree.

3 To an extent, predefined constraints are helpful in that predefined constraints
4 allow a search engine to logically and impersonally order the user's thoughts in such a
5 way that if the user has a clear idea of what object the user wants, and if the object is
6 there to be found, then the user is assured of finding the object. Indeed, the user may
7 want to know that choosing any available category in a search sequence will produce an
8 exhaustive and disjunctive list of subcategories from which another choice can be made.
9 Unfortunately, an unnecessarily high cost is too often paid for this knowledge: The user
10 is unnecessarily locked into a limited set of choice sequences, and without sufficient prior
11 knowledge of the object being sought, this limitation can become a hindrance.
12 Specifically, where prescribed search constraints are incompatible with the associative
13 relationships in the user's mind, a conflict can arise between the thought processes of the
14 user and the function of the search engine.

15 At one time, such conflicts were written off to the unavoidable differences
16 between computers and the human mind. However, some "differences" are neither
17 unavoidable nor problematic. In the case of search engine design, the solution is elegant:
18 upon selecting a category or entering a keyword, the user can be given not only a list of
19 subcategories, but the option to apply previously available categories as well. In slightly
20 more technical terms, the open topology of the search tree can be arbitrarily closed by
21 permitting search sequences to loop and converge. Previous lists can be accessed and
22 used as points of divergence from which new sub-sequences branch off, and the attributes
23 corresponding to distinct sub-sequences can later be merged.

24 Sort-on-the-fly/search-on-the-fly data analysis, sorting access and retrieval
25 methods and apparatus (hereafter, search-on-the-fly search engine) provide an intuitive
26 means for analyzing various types of databases, allowing a user to obtain information
27 about and/or access data in the database without having to know anything about the
28 database structure. A user selects a desired term, and a database manager reviews the
29 database for all instances of the desired term, even if a specific file or table does not
30 contain the instance. For example, if a user wants to analyze the database using the name
31 of a specific individual as a database entry point, the database manager will search the
32 database or index using the desired name, and will organize the results so that all entries
33 associated with that name are displayed. The database need not have a specific file (in a
34 flat database) or a table (in a relational database) of names. The user may perform further

1 on-the-fly searches to narrow the search results, or for other reasons. The search engine
 2 then conducts a further search using this criteria and produces a second search result.
 3 Further narrowing or broadening of the search are permitted, with the search engine
 4 returning results based on any new criteria.

5 This on-the-fly method or process can be used to simply analyze data or gather
 6 information about data stored in a database. The actual data itself does not need to be
 7 fetched, displayed, printed or even sorted. The user may simply wish to use this tool to
 8 "clean-up" data or understand how data could be sorted or for other reasons.

9 Figure 1 is a block diagram of a system 10 that uses search-on-the-fly. In Figure
 10 1, a database 12 is accessed using a hardware/software interface device 100 to provide
 11 data to a user terminal 14. Additional databases 13 and 15 may also be accessed by the
 12 terminal 14 using the device 100. The databases 12, 13 and 15 may use different
 13 schemas, or may use a same schema. As will be described later, the device 100 may
 14 include the search-on-the-fly search apparatus. In an alternative embodiment, the search-
 15 on-the-fly search engine may be co-located with the terminal 14. In yet another
 16 embodiment, the search-on-the-fly search engine may be incorporated into the structure
 17 of one or more of the databases 12, 13 and 15. The device 100 may interface with any
 18 one or more of the databases 12, 13 and 15 using a network connection such as through
 19 the Internet, for example. Other communications mediums may also be used between the
 20 terminal 14, the device 100 and any one or more of the databases 12, 13 and 15. These
 21 mediums may include the public switched telephone network (PSTN), cable television
 22 delivery networks, Integrated Services Digital Networks (ISDN), digital subscriber lines
 23 (DSL), wireless means, including microwave and radio communications networks,
 24 satellite distribution networks, and any other medium capable of carrying digital data.

25 The system shown in Figure 1 is but one of many possible variations. The search-
 26 on-the-fly search engine could also be incorporated within a single computer, such as a
 27 personal computer, a computer network with a host server and one or more user stations,
 28 an intranet, and an Internet-based system, as shown in Figure 2. Referring again to Figure
 29 2, the terminal 14 may be any device capable of displaying digital data including
 30 handheld devices, cellular phones, geosynchronous positioning satellite (GPS) devices,
 31 wrist-worn devices, interactive phone devices, household appliances, televisions,
 32 television set top boxes, handheld computers, and other computers.

33 Figure 3 is a detailed block diagram of an exemplary search-on-the-fly search
 34 engine 125. The search engine 125 includes a request analyzer 130 that receives search

1 requests 114 from the terminal 14 (not shown in Figure 3) and sends out updated requests
2 115 to a query generator 150. A status control 140 receives a status update signal 116 and
3 a request status control signal 118 and sends out a request status response 119 to the
4 request analyzer 130. The status control 140 also keeps track of search cycles, that is, the
5 number of search iterations performed. The query generator 150 receives the updated
6 requests 115 from the request analyzer 130 and sends a database access signal 151 to a
7 database driver 170. The query generator 150 receives results 153 of a search of the
8 database 12 (not shown in Figure 3) from the database driver 170. The query generator
9 150 provides a display signal 175 to the terminal 14. The database driver 170 sends a
10 database access signal 171 to the database 12. Finally, a database qualifier 160 receives
11 information 161 from the database driver 170 and provides a list 163 of available data
12 fields from the database 12. As will be described later, the list of available data fields 163
13 may be displayed to a user at the terminal 14, and may be sorted and processed using the
14 request analyzer 130 in conjunction with the database qualifier 160. The database
15 qualifier 160 also receives search information and other commands 131 from the request
16 analyzer 130.

17 The search engine 125 may identify a database schema by simply using a trial and
18 error process. Alternatively, the search engine 125 may use other techniques know in the
19 art. Such techniques are described, for example, in U.S. Patent 5,522,066, "Interface for
20 Accessing Multiple Records Stored in Different File System Formats," and U.S. Patent
21 5,974,407, "Method and Apparatus for Implementing a Hierarchical Database
22 Management System (HDBMS) Using a Relational Database Management System
23 (RDBMS) ad the Implementing Apparatus," the disclosures of which is hereby
24 incorporated by reference.

25 The search engine 125 provides search-on-the-fly search capabilities and more
26 conventional search capabilities. In either case, the search engine 125 may perform a
27 preliminary database access function to determine if the user has access to the database
28 12. The search engine 125 also determines the database schema to decide if the schema is
29 compatible with the user's data processing system. If the database schema is not
30 compatible with the user's processing system, the search engine 125 may attempt to
31 perform necessary translations so that the user at the terminal 14 may access and view
32 data in the database 12. Alternatively, the search engine 125 may provide a prompt for
33 the user indicating incompatibility between the terminal 14 and a selected database.

1 The search engine 125 may conduct a search using one or more search cycles. A
 2 search cycle includes receipt of a request 114, any necessary formatting of the request
 3 114, and any necessary truncation steps. The search cycle ends when a result list 175 is
 4 provided to the terminal 14. The search engine 125 may retain a status of each past and
 5 current search cycle so that the user can modify the search at a later time. The user may
 6 also use this feature of retaining a status of past and current search cycles to combine
 7 results of multiple searches, using, for example, a Boolean AND function, a Boolean OR
 8 function, or other logic function. The above listed functions will be described in more
 9 detail later.

10 The search-on-the-fly function of the search engine 125 begins by determining
 11 available data fields of the database 12. The database 12 may have its data organized in
 12 one or more data fields, tables, or other structures, and each such data field may be
 13 identified by a data field descriptor. In many cases, the data field descriptor includes
 14 enough text for the user at the terminal 14 to determine the general contents of the data
 15 field. The list of data fields may then be presented at the terminal 14, for example, in a
 16 pull down list. An example of such a data field result list is shown in Figure 4, which is
 17 from a federal database showing data related to managed health care organizations. This
 18 database is available at <http://tobaccopapers.org/dnld.htm>. In Figure 4, the first data field
 19 listed is "PlanType," which is shown in result list 156. Other data field descriptors show
 20 the general categories of data in the database.

21 Using the terminal 14, the user may select one of the data field descriptors to be
 22 searched. For example, the user could select "city." If a number of entries, or records, in
 23 the city data field is short, a further result list of complete city names may be displayed.
 24 If the entries are too numerous to be displayed within a standard screen size, for example,
 25 the search engine 125 may, in an iterative fashion, attempt to reduce, or truncate, the
 26 result list until the result list may be displayed. In the example shown in Figure 4, entries
 27 in the city data field are so numerous (the database includes all U.S. cities that have a
 28 managed health care organization) that the search engine 125 has produced a result list
 29 157 that shows only a first letter of the city. Based on the available database data fields,
 30 the user may then perform a further search-on-the-fly. In this case, the user may choose
 31 cities whose first initial is "N." The search engine 125 then returns a result list 158 of
 32 cities whose names start with the letter "N." Because in this instance the result list 158 is
 33 short, no further truncation is necessary to produce a manageable list.

1 Figure 5 is a more detailed block diagram of the request analyzer 130. A protocol
2 analyzer 133 receives the request 114 and provides an output 135 to a constraint collator
3 136. The protocol analyzer 133 examines the received request 114, determines a format
4 of the request 114, and performs any necessary translations to make the request format
5 compatible with the database to be accessed. If the database to be accessed by the
6 terminal 14 is part of a same computer system as the terminal 14, then the protocol
7 analyzer 133 may not be required to perform any translations or to reformat the request
8 114. If the database to be accessed is not part of the same computer system as the
9 terminal 14, then the protocol analyzer 133 may be required to reformat the request 114.
10 The reformatting may be needed, for example, when a request 114 is transmitted over a
11 network, such as the Internet, to a database coupled to the network.

12 The constraint collator 136 provides the updated request 115 (which may be an
13 initial request, or a subsequent request) to the query generator 150. The constraint
14 collator 136 is responsible for interpreting the request 114. The constraint collator 136
15 performs this function by comparing the request 114 against information stored in the
16 status control 140. In particular, the constraint collator 136 sends the request status
17 control signal 118 to the status control 140 and receives the request status response 119.
18 The constraint collator 136 then compares the request status response 119 to constraint
19 information provided with the request 114 to determine if the constraint status should be
20 updated (e.g., because the request 114 includes a new constraint). In an embodiment, the
21 constraint collator 136 compares constraint information in a current request 114 to
22 constraint information residing in the status control 140, and if the current request 114
23 includes a new constraint, such as a new narrowing request (for example, when the user
24 clicks, touches or points over a field shown in a last search cycle), then the constraint
25 collator 136 adds the updated information and sends the updated request 115 to the query
26 generator 150. If the constraint status should be updated, the constraint collator 136 sends
27 the status update 118 to the status control 140. If the request 114 is a refresh request, the
28 constraint collator 136 sends a reset command 131 to the database qualifier 160. The
29 updated request 115 (possibly with a new constraint) is then sent to the query analyzer
30 150 for further processing.

31 Figure 6 is a block diagram of the query generator 150. The overall functions of
32 the query generator 150 are to scan a database, such as the database 12, using the database
33 driver 170, and to collect search results based on constraints supplied by the request

1 analyzer 130. The query generator 150 then returns the search results 175 to the terminal
2 14.

3 The query generator 150 includes a truncator 152 and a dispatcher 154. The
4 truncator 152 receives the updated request 115, including a new constraint, if applicable.
5 The truncator 152 creates new queries, based on new constraints, and applies the new
6 requests 151 to the database 12 using the database driver 170. Many different methods of
7 truncating for display or viewing may be used by truncator 152. The truncator 152 may
8 include a variable limit 155 that is set, for example, according to a capacity of the
9 terminal 14 to display the search results 175. If data retrieved from the database 12
10 exceed the limit value, the truncator 152 adjusts a size (e.g., a number of entries or
11 records) of the data until a displayable result list is achieved. One method of adjusting
12 the size is by cycling (looping). Other methods may also be used to adjust the size of the
13 result list. For example, the terminal 14 may be limited to displaying 20 lines of data
14 (entries, records) from the database 12. The truncator 152 will cycle until the displayed
15 result list is at most 20 lines. In an embodiment, the truncation process used by the
16 truncator 152 assumes that if the user requests all values in a particular data field from the
17 database 12, and there are no other constraints provided with the request 114, and if the
18 size of the resulting result list is larger than some numeric parameter related to a display
19 size of the terminal 14, then the constraints may be modified by the truncator 152 so that
20 the result list can accommodated (e.g., displayed on one page) by the terminal 14. For
21 example, instead of a full name of a city, some part of the name - the first n letters - is
22 checked against the database 12 again, and n is reduced until the result list is small
23 enough for the capacity of the terminal 14. If the maximum number of displayable results
24 is three (3), and the database 12 contains the names of six cities "Armandia, Armonk,
25 New Orleans, New York, Riverhead, Riverdale," then the first attempt to "resolve" the
26 result list will stop after a result list display is created with the full name of the cities:

27 Armandia, Armonk, New Orleans... (the limit was reached)

28 Try again with 7 characters:

29 Armandia, Armonk, New Orl, New Yor, (limit reached again)

30 Again with 5 characters:

31 Armandia, Armonk, New O, New Y, (limit reached again)

32 Again with 3 characters:

33 Arm (...), New (...), Riv (...). These results may now be displayed on the terminal 14.

34 The display of Arm, New, Riv can then be used to conduct a further search-on-the-fly.

1 For example, a user could then select Riv for a further search-on-the-fly. The result list
2 returned would then list two cities, namely Riverhead and Riverdale.

3 In another embodiment, a fixed format is imposed such that all queries generated
4 against a database will have preset limits corresponding to the capacity of the terminal 14.

5 In yet another embodiment, the truncator 152 may adjust the field size by division
6 or other means. For example, if the display limit has been reached, the truncator 125 may
7 reduce the field size, X by a specified amount. In an embodiment, X may be divided by
8 two. Alternatively, X may be multiplied by a number less than 1, such as 3/4, for
9 example. Adjusting the field size allows the search engine 125 to perform more focused
10 searches and provides more accurate search results.

11 In another embodiment, the truncator first attempts to display information without
12 truncation. If that is not appropriate, the truncator may attempt truncation by beginning
13 with one character (26 letters and perhaps 10 digits) and incrementing to two characters
14 and then three, four, until a failure to display is reached.

15 In still another embodiment, the user may select a limit that will cause the
16 truncator 152 to adjust the field size. For example, the user could specify that a
17 maximum of ten entries should be displayed.

18 For certain data fields, a terminal of a hand-held device, may have a very limited
19 display capacity. For example, a personal data assistant (POA – see Figure 52) or a
20 cellular phone (see Figure 50) may be used to search a database, with the results
21 displayed on a small screen. Alternatively a user may specify a limit on the number of
22 entries for display. In the illustrated cases, the search engine 125 may return a result list
23 175 of the request 114 on multiple display pages, and the user may toggle between these
24 multiple display pages. As an example, if the terminal 14 is limited to displaying a
25 maximum of ten entries, and if the request 114 results in a return of a data field
26 comprising the 400 largest cities in the United States, the truncator 152 will produce a list
27 of 23 entries comprising 23 alphabetical characters (no cities that begin with Q, Y or Z -
28 see Figure 4). The search engine 125 may then display the results on three pages.
29 Alternatively, the truncator 152 could produce a list of letter groups into which the cities
30 would fall, such as A-D, E-G, H-M, N-R, and R-X, for example. In another alternative,
31 the search engine 125 may send a notice to the terminal that the request 114 cannot be
32 accommodated on the terminal 14 and may prompt the user to add an additional
33 constraint to the request 114, so that a search result may be displayed at the terminal 14.

1 Adjusting the data field size also provides more convenient search results for the
2 user. For example, if a user were to access an Internet-based database for books for sale,
3 and were to request a list of all book titles beginning with the letter "F," a common search
4 engine might return several hundred titles or more, displaying perhaps twenty titles
5 (entries) at a time. The user would then have to look through each of many pages to find
6 a desired title. This process could be very time-consuming and expensive. Furthermore,
7 if the search results were too large, the common search engine might return a notice
8 saying the results were too large for display and might prompt the user to select an
9 alternative search request. However, performing the same search using the search engine
10 125 allows the truncator 152 to reduce the size of the information displayed to a
11 manageable level. In this example, if the request 114 includes the constraint "F," the
12 truncator 152 will loop through the data in a data field that includes book titles starting
13 with the letter "F" until a list is available that can fit within the display limits of the
14 terminal 14, or that fits within a limit set by the user, for example. The first list returned
15 to the terminal 14 as a result of this request 114 may be a two letter combination with "F"
16 as the first letter and a second letter of a book title as the second letter. For example, the
17 first list may include the entries "Fa," "Fe," "Fi," "Fo," and "Fu," all of which represent
18 titles of books. The user could then select one of the entries "Fa," "Fe," "Fi," "Fo," and
19 "Fu" to perform a further search, continuing the process until one or more desired titles
20 are displayed. An example of a similar truncation result is shown in Figure 14.

21 When a parameter related to the search results is adequately truncated, the
22 parameter is directed to the dispatcher 154, which retrieves the data from database 12
23 using the database driver 170. The dispatcher 154 then directs the final, truncated search
24 results 175 back to the terminal 14 as a response to the request 114.

25 Figure 7 is a block diagram showing the status control 140, which is responsible
26 for monitoring the status of a current search. Due to the nature of the search engine 125,
27 the user can choose any combination of constraints, fields or keywords, including those
28 from past and current search cycles. The status control 140 may keep track of all past
29 cycles of the search, as well as all information necessary to return to any of those past
30 search cycles. The status control 140 includes a status data module 142, and an index
31 module 144. The status data module 142 contains data related to each such search cycle,
32 including the constraint(s) entered during the search cycle, any truncation steps taken, and
33 the results of such truncation, for example. The index module 144 provides access to
34 these data. When the request 114 is being analyzed by the request analyzer 130, the

1 constraint collator 136 sends a request status query 116 to the index module 144. The
 2 status data module 142 contains information related to all past and current search cycles,
 3 which are referenced by the index module 144, and delivers a status response 119 for the
 4 most recent search cycle to the constraint collator 136. When a new constraint is sent to
 5 the query generator 150, the status data module 142 is updated 118 by the constraint
 6 collator 136. Specific structures of the request 114, the request status query 116, the
 7 status response 119 and the request status control 118 will be provided later.

8 The status data module 142 may be reset by the database qualifier 160 with all
 9 available fields when a refresh function is used. In an embodiment, the refresh function
 10 may be used to clear all past search cycles and the current search cycle from the status
 11 control 140. In such an event, the search results, such as the search results shown in
 12 Figure 4, will no longer be displayed at the terminal 14, and data related to the past and
 13 the current search cycles may not be used for future search cycles. In effect, the refresh
 14 function may cause the entire search to be discarded. The refresh function may be
 15 activated when a user selects a refresh button (see Figure 4) on a displayed result list, or
 16 on another portion of a GUI. Alternatively, the refresh function may discard selected
 17 search cycles. In this alternative embodiment, the user may, for example, move a cursor
 18 to a desired result list from a past search cycle and activate a refresh, reset, back, or drop
 19 button. All data associated with search cycles subsequent to the selected search cycle,
 20 including all displayed result lists may then be discarded.

21 Figure 8 is a block diagram showing the database qualifier 160. The database
 22 qualifier 160 provides data field information at the start of a search or when the search
 23 engine 125 is refreshed. A field assessor 162 access the database 12 using the database
 24 driver 170, and identifies and accesses discrete data fields and other information in the
 25 database 12. A field converter 164 structures the data field information into a usable
 26 (searchable/sortable) structure and sends 163 the formatted data field information to the
 27 status control 140. Techniques for identifying and accessing the data fields, and for
 28 formatting the data field information are well known in the art. Such techniques are
 29 described, for example, in U.S. Patent 5,222,066, Interface for Accessing Multiple
 30 Records Stored in Different File System Formats, the disclosure of which is hereby
 31 incorporated by reference.

32 Figure 9 is a block diagram of the database driver 170. The database driver 170
 33 is the universal interface with the database 12, which can be a local or a remote database.

1 selection is made, information from the database 200 related to the individual is displayed
 2 in window 230.

3 In the example shown in Figure 10, the user could have refreshed the search
 4 engine 125 at any time, and the search would have recommenced at the beginning.
 5 Alternatively, the user could, by simply selecting a prior menu, such as the menu 215,
 6 have changed the course of the search. In this alternative, if the user had gone back to the
 7 menu 215 and instead of selecting "Address" selected "Phone," then the menus 217 - 229
 8 would be removed from display at the terminal 14, and the search would begin over from
 9 the point of the menu 215.

10 Figures 11 – 15b illustrate exemplary searches of a remote database, such as the
 11 database 13 shown in Figure 1. The database in the illustrated example is for an Internet
 12 website 232 that sells books. The examples illustrated are based on a Barnes & Noble™
 13 website. In Figure 11, the user has applied the search engine 125 to the website 232
 14 database, and the query generator 150 has returned a list 233 of data fields from which the
 15 user may select to access data from the website 232 database. The list 233, and other lists
 16 described below, may be displayed as overlays on the website 232. In the example
 17 illustrated, the user selects "Title" for the first search cycle. Because the list of titles is
 18 too large to easily display at the terminal 14, the truncator 152 loops until an
 19 alphanumeric list 234 is created. The list 234 is then returned to the terminal 14. For the
 20 next search cycle, the user selects titles that begin with the letter "C." Again, the data
 21 field contains too many entries to conveniently display at the terminal 14, and the
 22 truncator 152 loops as appropriate until list 235 is created. The process continues with
 23 subsequent lists 236 and 237 being returned to the terminal 14.

24 Figures 12 - 15b illustrate alternate searches that may be completed using the
 25 website 232 database.

26 For the search results shown in Figures 11 – 15b, the status control 140 may
 27 iterate as follows:

28 Status Control Started...
 29 Key: Title1 Option: Title Level: 1 Filter: Field: Title
 30 Key: A2 Option: A Level: 2 Filter: SUBSTRING([Title],1,1) = 'A' Field:
 31 Title
 32 Key: AA3 Option: AA Level: 3 Filter: SUBSTRING([Title],1,2) = 'AA'
 33 AND SUBSTRING([Title],1,1) = 'A' Field: Title

5955E650

1 Key: F4 Option: F Level: 4 Filter: SUBSTRING([Title],1,1) = 'F' Field:
2 Title
3 Key: Fa5 Option: Fa Level: 5 Filter: SUBSTRING([Title],1,2) = 'Fa'
4 AND SUBSTRING([Title],1,1) = 'F' Field: Title
5 Key: Favo6 Option: Favo Level: 6 Filter: SUBSTRING([Title],1,4) =
6 'Favo' AND SUBSTRING([Title],1,2) = 'Fa' AND SUBSTRING([Title],1,1) = 'F'
7 Field: Title
8 Key: C7 Option: C Level: 7 Filter: SUBSTRING([Title],1,1) = 'C' Field:
9 Title
10 Key: Ce8 Option: Ce Level: 8 Filter: SUBSTRING([Title],1,2) = 'Ce'
11 AND SUBSTRING([Title],1,1) = 'C' Field: Title
12 Key: Cells9 Option: Cells Level: 9 Filter: SUBSTRING([Title],1,5) =
13 'Cells' AND SUBSTRING([Title],1,2) = 'Ce' AND SUBSTRING([Title],1,1) = 'C'
14 Field: Title
15 Key: Cellula10 Option: Cellula Level: 10 Filter: SUBSTRING([Title],1,7)
16 = 'Cellula' AND SUBSTRING([Title],1,2) = 'Ce' AND SUBSTRING([Title],1,1)
17 = 'C' Field: Title
18 Key: CC11 Option: CC Level: 11 Filter: SUBSTRING([Title],1,2) = 'CC'
19 AND SUBSTRING([Title],1,1) = 'C' Field: Title
20 Status Control Terminated.
21 Figure 15b shows the results for a search for a low-fat cookbook using the search
22 engine 125 as applied to a remote database. In this example, the remote database is
23 coupled to a Barnes & Noble web page. The first query, and resulting message strings,
24 are illustrated by the following:
25 Query Analyzer
26 Message Received: ACK
27 Status Control: Refresh
28 Dispatcher
29 Message Sent: Categories~~Title~~Author~~ISBN~SubTitle~Format~Date
30 Published~Stock Status~Recommended
31 Age~Pages~Ratings~Price~Retail~Savings~~Publisher
32 Query Analyzer
33 Message Received: CLK#0#1#Categories
34 Status Control received an update:

- 1 Key: Categories1 Option: Categories Level: 1 Filter: Field: Categories
- 2 Query Generator
- 3 Request is not cached, processing
- 4 Generated Query: SELECT DISTINCT [Categories] FROM Books ORDER BY
- 5 [Categories]
- 6 Number of Matching Records: 2032
- 7 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,82) FROM Books
- 8 ORDER BY SUBSTRING([Categories],1,82)
- 9 Number of Matching Records: 2022
- 10 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,61) FROM Books
- 11 ORDER BY SUBSTRING([Categories],1,61)
- 12 Number of Matching Records: 1995
- 13 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,45) FROM Books
- 14 ORDER BY SUBSTRING([Categories],1,45)
- 15 Number of Matching Records: 1751
- 16 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,33) FROM Books
- 17 ORDER BY SUBSTRING([Categories],1,33)
- 18 Number of Matching Records: 1251
- 19 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,24) FROM Books
- 20 ORDER BY SUBSTRING([Categories],1,24)
- 21 Number of Matching Records: 799
- 22 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,18) FROM Books
- 23 ORDER BY SUBSTRING([Categories],1,18)
- 24 Number of Matching Records: 425
- 25 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,13) FROM Books
- 26 ORDER BY SUBSTRING([Categories],1,13)
- 27 Number of Matching Records: 319
- 28 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,9) FROM Books
- 29 ORDER BY SUBSTRING([Categories],1,9)
- 30 Number of Matching Records: 147
- 31 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,8) FROM Books
- 32 ORDER BY SUBSTRING([Categories],1,8)
- 33 Number of Matching Records: 111

1 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,7) FROM Books
 2 ORDER BY SUBSTRING([Categories],1,7)
 3 Number of Matching Records: 78
 4 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,6) FROM Books
 5 ORDER BY SUBSTRING([Categories],1,6)
 6 Number of Matching Records: 44
 7 Generated Query: SELECT DISTINCT SUBSTRING([Categories],1,5) FROM Books
 8 ORDER BY SUBSTRING([Categories],1,5)
 9 Number of Matching Records: 26
 10 Truncator finished, took 15 seconds to make 13 iterations
 11 Caching this request...
 12 Dispatcher
 13 Message Sent: Afric~Art,
 14 ~Biogr~Busin~Compu~Cooki~Engin~Enter~Ficti~Histo~Home ~Horro~Kids!~Law:
 15 ~Medic~Mind,~Nonfi~Paren~Poetr~Refer~Relig~Scien~Small~Sport~Trave~Write~
 16 Query Analyzer
 17 Message Received: CLKCategories

18 In the example illustrated by Figure 15b and the above-listed message strings, an
 19 initial request would have returned 2032 book titles for cook books. This number of
 20 entries may be too large. Accordingly, the truncator 152, through 13 iterations, reduces
 21 the entries in a result list to 26. The entries in the truncated result list can then be easily
 22 reviewed by the user, and further searches may be performed to identify a desired book.
 23 As can be seen in Figure 15b, the user has selected "Categories" as a data field to search.
 24 As is also shown in Figure 15b, the search engine 125 may display other information
 25 windows, such as book availability, ordering and shipping information windows. With a
 26 simple drag-and-drop cursor operation, for example, the user may then order and pay for
 27 the desired book.

28 Figure 16 - 20 are flow charts illustrating operations of the search engine 125.
 29 Figure 16 is a flowchart of an overall search routine 250. The process starts in block 251.
 30 The request analyzer 130 receives the request 114, block 252. The request 114 may be
 31 made using a hierarchical menu-based display or a graphical user interface, with one or
 32 more layers. Using either the menu or the GUI, the user may enter specific details by
 33 typing, selection of iconic symbols or pre-formatted text, and by using well-known data
 34 entry techniques, for example. The request 114 may also comprise a simple text or voice

1 query. Use of voice recognition may be particularly useful in mobile environments, and
 2 to speed access to the database 12. Use of voice recognition may include simple
 3 commands, such as UP, DOWN, and SELECT, to select search terms from a pre-
 4 formatted list that is presented to the user at the terminal 14. More sophisticated use of
 5 voice recognition may include actually speaking letters or numbers, or full search terms,
 6 such as speaking a key word for a key word search, for example.

7 The protocol analyzer 133 provides an output 135 to the constraint collator 136,
 8 and the constraint collator 136 determines the nature of the request, block 254. If the
 9 request 114 is a refresh request (i.e., a command to initiate the refresh function), the
 10 constraint collator 136 sends a reset command 131 to the database qualifier 160. The
 11 updated request 115 (possibly with a new constraint) is then sent to the query analyzer
 12 150 for further processing, including analyzing the database 12, retrieving field
 13 descriptors, and formatting, block 256. The result of the data field descriptor retrieval
 14 and formatting are shown as an available data fields result list, block 258, and is returned
 15 to the terminal 14, block 260.

16 In block 254, if the request 114 is not a refresh request, the constraint collator 136
 17 provides the updated request 115 (which may be an initial request, or a subsequent
 18 request) to the query generator 150, block 264. The constraint collator 136 compares the
 19 request 114 against information stored in the status control 140. In particular, the
 20 constraint collator 136 sends the request status control signal 118 to the status control 140
 21 and receives the request status response 119. The constraint collator 136 then compares
 22 the request status response 119 to constraint information provided with the request 114 to
 23 determine if the constraint status should be updated (e.g., because the request 114
 24 includes a new constraint). If the constraint status should be updated, the constraint
 25 collator 136 calls create new constraint subroutine 270, and creates new constraints.

26 The create new constraints subroutine 270 is shown as a flowchart in Figure 17.
 27 The subroutine starts at 272. In block 274, the constraint collator 136 determines if the
 28 request is for a sort-on-the-fly operation. If sort-on-the-fly has been selected, field
 29 assessor 162 prepares a new set of data fields, block 280. The new set of data fields are
 30 then sent to the query generator 150, block 284, and the subroutine 270 ends, block 286.

31 In block 274, if sort-on-the-fly was not selected, the request analyzer 130 may
 32 receive a key word constraint, block 276. The query generator 150 will then generate an
 33 input window in which the user may enter a desired key word, block 282. Alternatively,
 34 the query generator 150 may prompt the user to enter a key word using voice recognition

093555-082401
104280"5955E660

1 techniques, or any other way of entering data. The process then moves to block 284. In
2 block 276, if a key word search option was not selected, the constraint collator 136 enters
3 the new constraint to the existing list of constraints, block 278. The process then moves
4 to block 284.

5 Returning to Figure 16, the constraint collator 136 next updates the status control
6 140, block 290. In block 292, using the updated constraints, the query generator 150
7 generates a next query of the database 12, block 292. The database driver 170 then
8 extracts the result list from the database 12, according to the latest query, block 294. In
9 block 296, the truncator 152 determines if the result list may be displayed at the terminal
10 14. If the result list cannot be displayed, the process moves to block 298, and a truncation
11 routine is executed. The process then returns to block 294. If the result list in block 296
12 is small enough, the result list is provided by the dispatcher 154 to the terminal 14, block
13 258.

14 As noted above, the request analyzer 130 determines the nature of the request,
15 including any special commands. A special command may include a command to
16 conduct a search-on-the-fly. Alternatively, the search engine 125 may adopt a search-on-
17 the-fly mechanism as a default value. The search engine 125 also may incorporate other
18 special search commands, such as a Boolean search, for example.

19 Figures 18 - 20 are flowcharts illustrating alternate truncation subroutines 298. In
20 Figure 18, the subroutine 298 adjusts a size of a data field by decrementing a parameter
21 TP related to entries in a selected data field. For example, if the data field comprises a list
22 of U.S. cities by name, the parameter TP may be the number of alphabetical characters in
23 a name. The results of such a truncation is shown in the example of Figure 4. The
24 subroutine 298 starts at block 301. In block 303, the parameter TP is set to equal a size of
25 the data field being searched. The truncator 152 then determines the list of records sized
26 by the parameter TP, block 305. In block 307, the truncator 152 determines if the result
27 list can be displayed at the terminal 14. If the result list cannot be displayed at the
28 terminal 14, the truncator 152 decrements the parameter TP, block 309. Processing then
29 returns to block 305, and the truncator 152 gets a reduced result list using the truncated
30 parameter TP. If the result list can be displayed at the terminal 14, the process moves to
31 block 311 and the subroutine 298 ends.

32 Figure 19 is a flowchart illustrating an alternate truncation routine 298. The
33 process starts in block 313. In block 315, the truncator 152 sets the parameter TP to a
34 size of the data field being searched. In block 317, the truncator 152 determines the list

1 of records sized by the parameter TP. In block 319, the truncator 152 determines if the
2 result list can be displayed at the terminal 14. If the result list cannot be displayed, the
3 truncator 152 adjusts the size of the data field by dividing the parameter TP by a set
4 amount, for example, by dividing the parameter TP by two, block 321. Processing then
5 returns to block 317, and repeats. If the result list can be displayed at the terminal 14, the
6 process moves to block 323 and the subroutine 298' ends.

7 Figure 20 shows yet another alternative truncation subroutine 298" The process
8 starts in block 325. In block 327, the truncator 152 sets the parameter TP to equal the size
9 of the data field being searched. In block 329, the truncator 152 determines the list of
10 records sized by the parameter TP. The truncator 152 then determines if the result list can
11 be displayed at the terminal 14, block 331. If the result list cannot be displayed at the
12 terminal 14, the truncator 152 determines if the parameter TP is less than ten, block 333.
13 If the parameter TP is not less than ten, the truncator 152 adjusts the parameter TP by
14 multiplying the parameter TP by a number less than one, block 337. In an embodiment,
15 the number may be 3/4. The process then returns to block 329 and repeats. In block 333,
16 if the value of the parameter TP is less than ten, the truncator 152 decrements the
17 parameter TP by one, block 335. Processing then returns to block 329 and repeats. In
18 block 331, if the list can be displayed at the terminal 14, the process moves to block 339
19 and the subroutine 298"ends.

20 The examples illustrated in Figures 18 - 20 are but a few examples of the
21 truncations subroutine. One of ordinary skill in the art could conceive of other methods
22 to adjust the field size. In addition to using a truncation subroutine, the user may specify
23 a limit for the field size.

24 As noted above, the search engine 125 may be used for multiple searches and may
25 be used to search multiple databases, including databases with different schemas. The
26 results of individual searches, including the control data provided in the status control
27 140, are saved. The search engine 125 may then be used to further sort (search), or
28 otherwise operate on, the results of these multiple searches. In an embodiment, the search
29 engine 125 may perform a Boolean AND operation on two search results. The result of
30 the Boolean AND operation would be a list of records, or entries, that are common to the
31 two search results. Figure 21 illustrates such a Boolean AND operation.

32 In Figure 21, a GUI 400 displays local database selections 410, including a
33 database of recordings (compact discs - CDs) 412 and a database of contacts 414. The
34 databases 412 and 414 may be shown by text descriptions and an appropriate icon, for

1 example. The database selections in this example are resident on a user's terminal, such
 2 as the terminal 14 shown in Figure 1. Also displayed on the GUI 400 is a remote
 3 database selection 420 that represents databases, such as the databases 13 and 15 shown
 4 in Figure 1, that are located remotely from the terminal 14. In the example shown in
 5 Figure 21, the remote database selection 420 includes a database 422 for online record
 6 sales, which is represented by an icon (a CD) and a text title of the online retailer. The
 7 remote databases shown in the remote database selection 420 may include those databases
 8 for which the user has already established a link. In the example shown, the user may
 9 already have entered an Internet address for the online retailer. In addition to any
 10 returned web pages from the online retailer, the terminal 14 may then display a
 11 representation of the database 422.

12 Continuing with the example, the user may use the search engine 125 to conduct a
 13 search-on-the-fly of the recordings database 412 and the Virgin Records™ database 422.
 14 The user may search both databases 412 and 422 for titles of recordings that are classified
 15 as "blues." The search engine 125 may return search results 416 and 424 for searches of
 16 both databases 412 and 422, respectively. The search results 416 and 424 may be
 17 displayed in a window section 430 of the GUI 400. The results 416 and 424 may also be
 18 represented by CD icons, such as the icons 432 and 434. The search results 416 and 424
 19 may be stored as lists in one or more temporary databases, as represented by the windows
 20 417 and 427. The search results 416 and 424 may also be stored in a scratch pad database
 21 418. At this point, the user may wish to determine which recordings from the list 424 are
 22 contained in the list 416. The search engine may support this function by performing a
 23 Boolean AND operation of the lists 416 and 424. The results of the Boolean AND
 24 operation are represented by the icon 436 displayed in the window 430. To execute the
 25 Boolean AND operation, the user may simply drag the icon 432 over the icon 434, and
 26 then select AND from a pop-up menu 438 that appears when the icons 432 and 434
 27 intersect. Other techniques to execute the Boolean AND (or another Boolean function)
 28 may include typing in a command in a window, using voice recognition techniques, and
 29 other methods. In addition, other Boolean functions may be used.

30 The result represented by the icon 436 of the Boolean AND operation may then be
 31 stored in a database at the terminal 14, such as in the scratch pad database 418 or may be
 32 stored at another location. The result may then be subjected to further search-on-the-fly
 33 operations.

1 Also shown in Figure 21 is an online-purchase module 435 that may be used to
2 consummate purchase of a product referenced in an online database such as the database
3 422. To initiate such a purchase, the user may drag an iconic or text representation of a
4 desired product listed in the search result 424 over an icon 436 in the online-purchase
5 module 435. This drag-and-drop overlaying these icon may initiate and complete the
6 online purchase for the desired product.

7 Use of the search engine 125 may be facilitated by one or more GUIs that are
8 displayed on the terminal 14. Figures 22 - 26 are examples of such GUIs. In Figure 22, a
9 GUI 450 includes a display section 452 and one or more database sections such as local
10 database section 470 and remote database section 460. The local database section 470
11 includes databases local to the terminal 14. In the example shown, the local databases
12 include a patients database 472, a general contacts database 474, a pharmacy database
13 476, a medicines database 478 and a scratch pad database 480. The remote databases
14 include an Amazon.com database 462, an online record retailer database 464, a
15 Physician's Desk Reference database 466 and an American Medical Association (AMA)
16 online database 468. The remote and local databases may be represented by a text title
17 and an icon, both contained in a small window as shown. A user may access one of the
18 remote or local databases by moving a cursor over the desired window and then selecting
19 the database. In the example shown, the local medicines database 478 has been selected,
20 and a list 490 of data fields in the medicines database 478 is displayed in the display
21 section 452. Also included on the display section 452 is a keyword button 492 that may
22 be used to initiate a key word search of the medicines database 478.

23 Figure 23 shows the GUI 450 with a user selection of a category data field from
24 the list 490. The category data field is indicated as selected by an arrow adjacent to the
25 data field name. When the category data field is selected, a category list 494 is displayed
26 on display section 452. The category list 494 includes four entries, as shown.

27 The user may continue to search the medicines database 478 using key word
28 techniques and search-on-the-fly techniques. Figure 24 shows the GUI 450 with results
29 of several search cycles displayed.

30 Figure 25 illustrates a search of the PDR database 466. Such a search may be
31 initiated by dragging a cursor to the window having the PDR 466 symbol (text or icon),
32 and then operating a "select" button. Figure 26 shows a search of the Amazon database
33 462. This search may also be initiated by a "drag-and-drop" operation.

093555-082401

1 The SOTF search engine 125 may accommodate merging of one or more sets of
2 search results. The multiple search results may be derived from a common database, or
3 from more than one database. A search using the search engine 125 may be controlled
4 through a user interface by one or more icons that can represent (1) filters or (2) the
5 images of filters. Thus, the icon may represent spatial or temporal attributes, or sets of
6 objects or procedures. Merging the icons thus has two interpretations corresponding to
7 (1) and (2): either filters are added (“apply every filter in every icon to every image to
8 which it can be applied”), or image sets are added. In an alternative embodiment, the
9 addition (union or join) operator may be any other relational operator, e.g. divide,
10 difference.

11 Use of the merge function may be explained by reference to Boolean lattices. A
12 collection of entities can have attributes A or B or both. If {A} is the set of all A entities
13 and {B} is the set of all B entities; the set whose elements all possess both attributes A
14 and B may now be written {A and B}, and the set whose elements all possess either
15 attribute A or attribute B or both may be written {A or B}. The elements of {A and B}
16 can be considered to possess a new, less inclusive or specific attribute C, and the elements
17 of {A or B} to possess a new, more inclusive or general attribute D. In a lattice, the
18 nodes are attributes; the most inclusive attribute (in this case D) is always at the top and is
19 called the join of those attributes (nodes) immediately below it, and the most exclusive
20 attribute (in this case C) is always at the bottom and is called the meet of those attributes
21 (nodes) immediately above it. In other words, the OR operation yields the join of two
22 attributes, while the AND operation yields their meet. Thus, the OR operator is upward or
23 inductive (yielding the more inclusive join of the operands), while the AND operation is
24 downward or deductive (yielding the more exclusive meet of the operands). The nodal
25 attributes of such a lattice are analogous to filters; but since a principle called CF duality
26 states that attributes and sets are to some extent interchangeable because every attribute
27 characterizes a set and every set is characterized by an attribute, these attributes are
28 logically equivalent to the sets they characterize.

29 In an example optical context, the downward AND operator corresponds to
30 stacking colored filters, while the upward OR operator corresponds to mixing colored
31 paints or filters. In color optics, stacking and unstacking colored lenses is called a
32 subtractive process, while mixing or unmixing paints is called an additive process.
33 Unfortunately, while combining or “adding” filters is subtractive with respect to the sets
34 they characterize, it is additive with respect to the filters themselves, and adding sets is

1 subtractive with respect to the filters. So it is better to refer to operations among
2 attributes (filters, lenses, etc.) as “filtrative” or “infonegative, and to those among sets
3 (paints, lights, etc.) as “constructive” or “infopositive”. CF duality can now be rephrased
4 as follows: every infonegative entity (attribute) descriptively characterizes an associated
5 infopositive entity (set/object), and every infopositive entity instantiates or is
6 descriptively characterized by an associated infonegative entity.

7 The search engine 125 may include iconization (iconic representation) of an
8 algebra or calculus of relations defined on Boolean lattices. This representation begins
9 with a set of primitive icons extracted from base tables and defines new icons (derived
10 tables, virtual databases) by means of simple user-executed operations. The icons can be
11 effortlessly translated into lists of data corresponding to the icons, and it is these lists that
12 comprise the real substance of any search procedure.

13 When search chains are branched into to chains A and B, the filters subsequently
14 applied to each chain can be the same or different, and merging can signify any of two or
15 more Boolean relationships (relational operations) defined on a relational database.
16 Specifically, when chains merge, sets of filters can be added or intersected. Since filters
17 are constraints, adding them amounts to intersecting their images, while adding their
18 images amounts to intersecting the filters (infopositive-infonegative distinction).
19 Equivalently, one may consider positive and negative filters effecting deduction and
20 induction respectively; the filters are descriptive, while the images are substantive. The
21 extent to which the images of filters can intersect depends on the commonality
22 (predicative non-exclusivity) of domains. Icon algebras (of iconic operators) are “object-
23 oriented” on the GUI level; they are UI extensions of the innate object-orientation of
24 relational databases themselves, wherein the objects are records, attributes, tables, virtual
25 databases and so on, and the operations are those of any relational algebra.

26 The looping and merging of search chains is to some extent algebraic. First, since
27 actual topology is being changed, such transformations do not directly form a topological
28 homeomorphisin group; the algebra remains Boolean, and the “homeomorphism” is
29 defined on the operator graph of the Boolean algebra (of which the initial search tree is
30 generally only a subspace). Icons representing sets of nested predicates are “Boolean
31 objects”; when decision chains converge or diverge, objects merge or split, and these
32 objects represent (combinatorially) unique search paths. Thus, operations among paths
33 can be reduced to operations among objects; e.g., regress-diverge is just an object-
34 splitting operation. Continuous looping applies “inverse deductive filters” to achieve

1 to be regarded as a virtual space realized only in the event that the search tree is
2 nondisjunctive in its nodes and therefore incomplete with respect to the semantic net
3 generated by the tree).

4 Figure 27 is a flow chart illustrating an alternative operation 600 of the query
5 generator 150 of Figure 6. In the illustrated operation, the query generator 150 is adapted
6 to receive multiple selections of items within a same menu function and within a same
7 merge function. To provide this functionality of the query generator 150, the request
8 analyzer 130 (see Figure 5) may be adapted to receive a collection of user choices.

9 The operation 600 begins in block 601. In block 603, the request analyzer 130
10 receives constraints collected from the constraint collator 136, and the updated request
11 115, which may be an initial request or a subsequent request, is provided to the query
12 generator 150. In block 605, the query generator 150 determines if the constraints (the
13 request 115) are in the same merge group. If the query generator 150 determines that the
14 request 115 is in the same merge group, the process moves to block 607 and the query
15 generator 150 generates the query with a Boolean AND. If the request is not in the same
16 merge group, the query generator 150 generates the query with a Boolean OR, block 609.

17 In block 611, the items selected within the same unit are Or'ed and the default
18 truncator may be used depending on the size of the returned items. In block 613, the
19 generated query is executed. In block 615, the number of records to be displayed is
20 checked. If the number is within a specified limit, the process moves to block 617 and
21 the search results are returned for display. The operation 600 then ends, block 625. In
22 block 625, if the number of records to be displayed is too large, the process moves to
23 block 621, and a truncation routine is executed.

24 The truncation routine may be any of the previously-described truncation routines
25 illustrated in Figures 18-20. Figure 28a illustrates an alternate truncation routine 630.
26 The routine 630 begins in block 631 with the truncator 152 receiving the request 115. In
27 block 633, the truncation is set to the size of the field being viewed on the GUI, and sets
28 the False Flag. The query is then run against the database using the selected truncator,
29 block 635. In block 635, the truncator 152 determines if the number of records that
30 would be retrieved from the database can be displayed on the existing GUI. If the records
31 can be displayed, the process moves to block 639, and the truncator 152 determines if the
32 Flag is set False. If the Flag is set False, the process moves to block 653 and the records
33 are returned (displayed on the GUI). The process then ends, block 655. In block 637, if
34 the number of records exceeds the display size of the GUI, the status of the Flag is

1 checked as False. If false, the truncator is set to 1, and the flag is set to true, block 647,
2 and the process returns to block 635. If in block 637. If the flag is not set false, the
3 process moves to block 651, and saved records are retrieved. The retrieved records are
4 then displayed, block 653.

5 In block 639, if the Flag is not set to false, the retrieved records are saved, and the
6 truncator 152 is incremented. The process then returns to block 635.

7 Figure 28b illustrates another alternative truncation routine 700. In block 701, the
8 truncator 152 receives the constraints, the view by field and the maximum of number of
9 display items (MNDI). In block 702, the truncation is set to zero (no truncation), and the
10 Flag is set to True. Next, the query is generated in block 702. In block 703a, query
11 generator receives the constraints, the view by field, and the truncator as parameters, and
12 the query generator returns the query. The query is then run against the database, and the
13 counter is set to zero, block 704. In block 705, the truncator 152 fetches the next record
14 and increments the counter. If the end of file is reached, block 706, and the truncation
15 equals zero, block 710, the truncator 152 sends the list of fields to the client, block 712.
16 However, if the truncation is not zero, block 710, the truncator 152 is incremented, block
17 709, and the process returns to block 703. On the other hand, if the end of file is not
18 reached, block 706, and the counter is smaller than MNDI, block 707, the process goes
19 back to block 705, in which the truncator 152 fetches the next record and increments the
20 counter. However, if the counter is larger than MNDI, block 707, and the saved list of
21 fields exist, block 708, the truncator sends the list to the client, block 712. Conversely, if
22 the saved list of fields do not exist, block 708, the truncator 152 is incremented, block
23 709, and the process goes back to block 703 again.

24 Table 1 illustrates an example of the alternate truncation routine 700. This routine
25 begins by attempting not to truncate the records.

T04280"5955E660

1 Table 1

Records		1 st Round		2 nd Round		3 rd Round	
1	Armandia	1	Armandia	1	A	1	AR
2	Armonk	2	Armonk	2	N	2	NE
3	Armonk	3	New Orleans	3	R	3	RI
4	New Orleans	4	New York			4	RO
5	New Orleans						
6	New York						
7	New York						
8	New York						
9	Riverdale						
10	Riverdale						
11	Riverdale						
12	Rockfort						

2 In this example, the maximum number (n) of displayable results is three, and the
 3 database contains twelve instances of six different cities. First, the database is queried for
 4 the full city field with no truncation, and records are fetched. Records are fetched until
 5 four (n+1) records are fetched from the database. Since the number of different cities (4)
 6 is greater than n, fetching is halted and the process moves to truncation. Then the
 7 database is queried for only the first letter of the cities (truncation is incremented so that it
 8 equals one). For this query the database manager may simply review its index. The
 9 compiled list from the query is saved as "A", "N", and "R". Next, the database is queried
 10 for the first two letters of the city field (truncation is incremented so that it equals two).
 11 Again, the database manager may simply review its index to locate this information about
 12 the data field. This query for two letters or characters is continued until the number of
 13 two letter combinations exceeds n. When the number of different combinations (4) is
 14 again greater than n, the routine halts and nothing is saved. The system now returns to
 15 the previous saved list. Therefore, the saved list ("A", "N", and "R") is returned to the
 16 client for display or process.

17 Figures 29 - 38 illustrate graphical user interfaces and search on the fly results
 18 using the search engine 125 with a merge function. In Figure 29, a search of a patent
 19 database has been executed to search for patents by primary examiner. The Primary
 20 Examiner results table lists the arabic numerals 0 - 7 and the letters A-Z, indicating that
 21 the database contains names of primary examiners beginning with these numerals/letters.
 22 To quickly narrow the search, the user selects the letter O, and results are returned listing
 23 last and first names all primary examiners whose last name begins with O. As can be
 24 seen by the returned results, the database lists several primary examiner instances of
 25 O'Dea. This could indicate an error in the database. The search engine 125 allows these

1 errors to be detected and corrected. The correction may be made by selecting the
 2 incorrect instances, right-clicking the correct instance, and then choosing a ‘correct all
 3 other’s based on this instance” function.

4 Figure 30 shows how multiple-select capabilities of the search engine 125 may be
 5 used to enhance a search. In the illustrated example, the user searches for 3M Company.
 6 Different versions of the company name are then displayed with the returned results. In
 7 this way, the user may select the different versions of the company that the user wants to
 8 use for the search. The pop-up pane shows a current status control for the GUI.

9 Figure 31 shows the results of subsequent menus showing the aggregation, or
 10 merge, of two previous constraints, “3m” and 3-M.” Figure 32 shows a merge execution.
 11 The user first selects the ‘3-M” and the “3M” company names using the check boxes in
 12 the previous menu. The user then selects the merge option, placing the menu on hold,
 13 and going to the “M”, “MI”, “MIN” and “MINNESOTA.M” menus. The merge option is
 14 then selected on the menu and the merged menu is displayed showing the merge of
 15 searches between “3M” and “Minnesota Mining and Manufacturing Co.” Figures 32 - 36
 16 show other search engine 125 features including data mining and database correction.

17 Figures 37 - 39 show the results of a full text search of a patent database using the
 18 keyword “encryption” and searching on all fields. The initial search results are truncated
 19 to display by first letter/numeral of the patent title. From this intermediate search result
 20 menu, the user selects all patents whose title begins with the letter “E”, and a subsequent
 21 search result menu is displayed listing partial titles of all such patents. From the next
 22 intermediate list, the user selects the patent whose title begins “Electronic copy protection
 23 mechanis.” (see Figure 38) The search engine 125 then returns this specific patent, the
 24 first page of which is shown in Figure 39. The displayed patent includes the keyword
 25 “encryption” highlighted wherever it occurs. The display also indicates the number of
 26 instances of the keyword in the patent.

27 Figures 40-49 illustrates additional search results.

28 In the examples shown in Figures 37-49, search results are displayed on a “large-
 29 format” screen, such as available with a desktop personal computer. When a user is in a
 30 mobile environment (e.g., on foot, in a car) the user may still be able to access the search-
 31 on-the-fly search engine and have search results returned to a mobile display device such
 32 as a cellular telephone or a personal data assistant.

33 Figure 50 illustrates a standard cellular telephone 800 that may use the search-on-
 34 the-fly search engine 125. The cellular telephone 800 includes a display 801, a keypad

1 802, and other controls 803 that may be used to navigate one or more data buses using the
 2 search-on-the-fly search engine 125.

3 Figure 51 illustrates a personal data assistant (PDA) 800 that may use the search-
 4 on-the-fly search engine 125. The PDA 800 includes a display area 811 and an input area
 5 812.

6 Figures 52a – 52l illustrate a search sequence using the cellular telephone 800
 7 configured to use the search-on-the-fly search engine 125. In the example illustrated, the
 8 U.S. Patent and Trademark Office patent database is selected. Using the cellular
 9 telephone 800, the user conducts a search of the U.S. Patent and Trademark Office
 10 database using a series of filters. Each time a filter is applied, a search result may be
 11 returned and displayed on the display 801. Using the controls 802, the user may add or
 12 subtract filters. The display 801 shows the accumulative result of the filtering process.
 13 When the data to be returned is too large to fit the display 801, the returned data may be
 14 truncated as illustrated in Figures 52f-52k.

15 Figure 53 illustrates a general purpose personal computer system 850 that may be
 16 used for search-on-the-fly of a plurality of databases. The system 850 includes a
 17 processor section 851, a display and a control section coupled to the processor section
 18 851, and a computer readable medium 855, which may be read by components of the
 19 processor section 851. The computer readable medium 855 may include the software
 20 routine required to implement the search-on-the-fly with merge function method.

21 In specific embodiments, the search engine 125 is implemented as a program
 22 executed on a general purpose computer, such as a personal computer. The search engine
 23 may also be implemented as a routine attached to a database structure. In addition, the
 24 search engine may be implemented on any processor capable of executing the routines of
 25 the program. In alternative embodiments, the search engine 125 may be implemented as
 26 a single special purpose integrated circuit (e.g., ASIC) having a main or central processor
 27 section for overall, system level control, and separate circuits dedicated to performing
 28 various different specific functions, computations and other processes under control of the
 29 central processor section. Those of ordinary skill in the art will appreciate that the search
 30 engine 125 may also be implemented using a plurality of separated dedicated or
 31 programmable integrated circuits, or other electronic circuits or devices (e.g., hardwired
 32 electronic or logic circuits such as discrete elements circuits, or programmable logic
 33 devices, such as PLDs, PLAs, or PALs). In general, any device or assembly of devices

09955660
"08401"
5955660

1 on which a finite state machine capable of implementing flowcharts similar to the
2 flowcharts of Figures 16 – 20, 27 and 28 can be used to implement the search engine 125.

3 While using search on the fly has been described in detail for an end result of
4 printing, viewing or displaying data, search on the fly can be useful for other purposes.
5 Search on the fly does not require obtaining the underlying data in the database or the
6 display of the underlying data to be useful. Search on the fly can be used for gathering
7 information or characteristics about data in a database with or without downloading the
8 data itself. This gathered information about the data can be used to analyze the data,
9 sorting, correct or clean data, verifications and confirmations. For example, search on the
10 fly can be used to determine whether there is existing data in a database within certain
11 ranges or parameters (date ranges, numerical, alphanumerical and other characteristics).
12 If there is data within certain parameters, the number of datapoints within those
13 parameters can also be determined. This information about the data can be gathered
14 using search on the fly with queries to the database manager (which may simply need to
15 query its index and not access the data itself). Another example is correcting data. Data
16 may need to be corrected or cleaned for various reasons including spelling errors. Search
17 on the fly can locate these errors without necessarily accessing and downloading the data
18 itself. Certain combinations of characters or truncations will be obvious spelling errors.
19 Also, data that is out of range can be located and corrected or eliminated from the
20 database using search on the fly. Another example is data from one database can be
21 confirmed or verified against data in a second database using search on the fly. Those
22 skilled in the art will find many uses and specific applications for search on the fly.

23 The terms and descriptions used herein are set forth by way of illustration only
24 and are not meant as limitations. Those skilled in the art will recognize that many
25 variations are possible within the spirit and scope of the invention as defined in the
26 following claims, and there equivalents, in which all terms are to be understood in their
27 broadest possible sense unless otherwise indicated.

- 1 In the claims:
- 2 1. A method for displaying data comprising:
- 3 determining a database schema for a database;
- 4 providing a list of database fields, wherein the list includes a descriptor indicating
- 5 a data category;
- 6 receiving a search selection for a database field on the provided list of database
- 7 fields;
- 8 determining a quantity of entries in the selected database field;
- 9 if the quantity exceed a specified amount,
- 10 truncating data, and
- 11 displaying the truncated data; and
- 12 if the quantity does not exceed the specified amount, displaying content from the
- 13 database field.
- 14 2. The method of claim 1, further comprising providing a key word search.
- 15 3. A method for formatting data for display, comprising:
- 16 generating a list of data fields;
- 17 receiving a first data field selection from the list of data fields;
- 18 determining a first quantity indicative of a number of entries of the selected data
- 19 field;
- 20 if the first quantity exceeds a specified limit, reducing a size of data to be
- 21 displayed from the selected data field; and
- 22 displaying data from the selected data field.
- 23 4. The method of claim 3, wherein the specified limit is fixed.
- 24 5. The method of claim 3, wherein the specified limit is variable.
- 25 6. The method of claim 3, wherein the data are displayed on a terminal, and wherein
- 26 the specified limit is determined dynamically, based on a characteristic of the terminal.
- 27 7. The method of claim 3, wherein the specified limit is a user-determined limit.
- 28 8. The method of claim 3, wherein the method for reducing the size of the data to be
- 29 displayed from the selected data field comprises:
- 30 performing a truncation that reduces the size of the data to be displayed from the
- 31 selected data field;
- 32 comparing the reduced size to the specified limit; and

FOIA b 7 - D

- 1 if the reduced size exceeds the specified limit, repeating the truncation and
2 comparing steps until the size of the data to be displayed from the selected data field is
3 less than or equal to the specified limit.
- 4 9. The method of claim 8, wherein a parameter is related to the size of the data to be
5 displayed from the selected data field, and wherein the truncation comprises
6 decrementing the parameter.
- 7 10. The method of claim 9, wherein the parameter is decremented or incremented by a
8 value of one.
- 9 11. The method of claim 8, wherein a parameter is related to the size of the data to be
10 displayed from the selected data field, and wherein the truncation comprises dividing the
11 parameter by a value.
- 12 12. The method of claim 11, wherein the value is two.
- 13 13. The method of claim 8, wherein a parameter is related to the size of the data to be
14 displayed from the selected data field, and wherein the truncation comprises multiplying
15 the parameter by a value.
- 16 14. The method of claim 3, further comprising:
17 receiving a first constraint, wherein the first constraint is related to a data element
18 in a data field; and
19 receiving one or more subsequent constraints, wherein search results are generated
20 based on a combination of the first and the one or more subsequent constraints.
- 21 15. A method for searching a database, comprising:
22 selecting a first search term;
23 sending the first search term to a search engine;
24 receiving a first search result;
25 selecting and sending a second search term to the search engine; and
26 receiving a second search result, wherein the second search results represents a
27 combination of the first and the second search terms.
- 28 16. The method of claim 15, further comprising:
29 selecting and sending a third search term to the search engine;
30 dropping a prior search term, wherein the dropped prior search term in one of the
31 first and the second search terms; and
32 receiving a third search result comprising a combination of the third search term
33 and one of the first and the second search terms.

- 1 27. The method of claim 26, wherein a parameter is related to the size of the data to
2 be displayed from the selected data field, and wherein the truncation comprises
3 decrementing or incrementing the parameter.
- 4 28. The method of claim 27, wherein the parameter is decremented or incremented by
5 a value of one.
- 6 29. The method of claim 26, wherein a parameter is related to the size of the data to
7 be displayed from the selected data field, and wherein the truncation comprises dividing
8 the parameter by a value.
- 9 30. The method of claim 29, wherein the value is two.
- 10 31. The method of claim 26, wherein a parameter is related to the size of the data to
11 be displayed from the selected data field, and wherein the truncation comprises
12 multiplying the parameter by a value.
- 13 32. A method for providing search functions in one or more databases, comprising:
14 receiving a first search term;
15 searching at least a first database using the first search term;
16 returning a first search result, wherein the first search result comprises a first list
17 of elements in the first database;
18 receiving a second search term;
19 conducting a second search by applying the second search term to one of the first
20 list of elements and a second database; and
21 returning a second search result, wherein the second search results represents a
22 combination of the first and the second search terms.
- 23 33. The method of claim 32, further comprising:
24 receiving a third search term;
25 receiving a signal to drop one of the first and the second search terms;
26 dropping the selected one of the first and the second search terms, wherein
27 dropping the selected one of the first and the second search terms provides a revised list
28 of elements;
29 searching one of the revised list of elements and one of the second or subsequent
30 databases using the third search term; and
31 returning a third list of elements comprising a combination of the third search
32 term and the non-selected one of the first and the second search terms.
- 33 34. The method of claim 32, wherein the first search result is returned as a truncated
34 list of elements.

- 1 35. A method for navigating one or more databases, comprising:
2 receiving a first attribute associated with elements in one or more of the databases,
3 wherein the first attribute comprises a first search term;
4 retuning a first search result based on the first attribute;
5 receiving a second attribute associated with elements in one or more of the
6 databases, wherein the second attributes comprises a second search term;
7 generating a second search result based on the second attribute;
8 merging the first and the second search results to provide a merged search result;
9 and
10 returning the merged search result.
- 11 36. The method of claim 35, further comprising:
12 truncating the merged search result based on a display size of a device receiving
13 the merged search result.
- 14 37. A method for retrieving data from one or more databases; comprising:
15 receiving a first constraint, wherein the first constraint relates to a first data
16 attribute;
17 receiving a second constraint, wherein the second constraint relates to a second
18 data attribute;
19 determining if the first and the second constraint are in a same merge group;
20 generating a database query based on the determining step; and
21 returning a first merged search result.
- 22 38. The method of claim 37, wherein the first and the second constraints are in the
23 same merge group, further comprising:
24 generating a Boolean AND as the database query.
- 25 39. The method of claim 37, wherein the first and the second constraint are in
26 different merge groups, further comprising:
27 generating a Boolean OR as the database query.
- 28 40. The method of claim 37, wherein the first and the second constraints are recovered
29 using a wireless connector, and wherein the first merged search result is returned using
30 the wireless connection.
- 31 41. A method for searching one or more databases, wherein each of the one or more
32 databases comprises a plurality of fields, comprising:
33 getting a first list of fields of a first database;

FOIA b 7 - D

- 1 applying a first filter to the final list of fields, wherein the final filter comprises a
- 2 first search constraint;
- 3 applying a second filter to the first list of fields, wherein the second filter
- 4 comprises a second search constraint;
- 5 applying a third filter to the first list of filters, wherein the third filter comprises a
- 6 third search constraint;
- 7 removing at least one of the first, second and third filters, whereby a search result
- 8 is generated; and
- 9 displaying the search result.

ABSTRACT

1
2
3
4
5
6
7
8
9
10
11
12
13

Sort-on-the-Fly/Search-on-the-Fly data retrieval or analysis provides an intuitive means for accessing databases, allowing a user to access or obtain information about data in the database without having to know anything about the database structure. A user selects a desired term, and the method or apparatus delivers all instances of the desired term, even if a specific file or table does not contain the instance. The database need not have a specific file (in a flat database) or a table (in a relational database) of names. The user may specify other criteria, or constraints to narrow the search results, or for other reasons. The method or apparatus then conducts further analysis or searching using this criteria and produces a second result. Further narrowing or broadening of the process is permitted, with search-on-the-fly returning results based on any new constraints. If the returned information would be too large to be conveniently displayed at a terminal, the process executes a truncation routine so that the returned data is easily displayed.

095555660

Docket No.
5607

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled
SEARCH-ON-THE-FLY WITH MERGE FUNCTION

the specification of which

(check one)

- is attached hereto.
- was filed on August 24, 2001 as United States Application No. or PCT International Application Number 09/935,565 and was amended on _____ (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d) or Section 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)			Priority Not Claimed
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>

FILED IN 59560



I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

60/227,305	August 24, 2000
(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

FOR THE OFFICE

(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)
(Application Serial No.)	(Filing Date)	(Status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

All Attorneys listed under Customer Number 27082

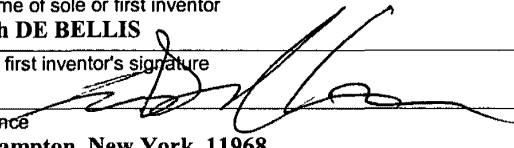
Send Correspondence to:

Dorsey & Whitney LLP
1001 Pennsylvania Avenue, N.W., Suite 300 South
Washington, D.C. 20004

Direct Telephone Calls to: *(name and telephone number)*

John K. Harrop (202) 824-8800/(703) 288-5247

THE UNITED STATES PATENT AND TRADEMARK OFFICE

Full name of sole or first inventor Joseph DE BELLIS	
Sole or first inventor's signature 	Date 11/8/07
Residence Southampton, New York 11968	
Citizenship U.S.A.	
Post Office Address N/A	

Full name of second inventor, if any	
Second inventor's signature	Date
Residence	
Citizenship	
Post Office Address	



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
 UNITED STATES PATENT AND TRADEMARK OFFICE
 WASHINGTON, D.C. 20231
 www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 9677

SERIAL NUMBER 09/935,565	FILING DATE 08/24/2001 RULE	CLASS 707	GROUP ART UNIT 2177	ATTORNEY DOCKET NO. 5607
------------------------------------	---	---------------------	-------------------------------	------------------------------------

APPLICANTS
 Joseph De Bellis, Southampton, NY;

**** CONTINUING DATA *******
 THIS APPLICATION IS A CIP OF 09/513,340 02/25/2000 *yes (LW)*
 WHICH CLAIMS BENEFIT OF 60/227,305 08/24/2000

**** FOREIGN APPLICATIONS ******* *None (LW)*

IF REQUIRED, FOREIGN FILING LICENSE GRANTED SMALL ENTITY ****
 ** 09/10/2001

Foreign Priority claimed 35 USC 119 (a-d) conditions met Verified and Acknowledged	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> Met after Allowance <i>[Signature]</i> Examiner's Signature	STATE OR COUNTRY NY	SHEETS DRAWING 55	TOTAL CLAIMS 41	INDEPENDENT CLAIMS 8
--	---	------------------------	----------------------	--------------------	-------------------------

ADDRESS
 DORSEY & WHITNEY LLP
 Suite 300
 1660 International Drive
 McLean ,VA 22102

TITLE
 Search-on-the-fly with merge function

FILING FEE RECEIVED 809	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees
		<input type="checkbox"/> 1.16 Fees (Filing)
		<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)
		<input type="checkbox"/> 1.18 Fees (Issue)
		<input type="checkbox"/> Other _____
		<input type="checkbox"/> Credit

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

08/27/2001.SDIRETA1.00000019 09935565

01 FC:201	355.00 CH
02 FC:203	189.00 CH
03 FC:202	200.00 CH

PTO-1556
(5/87)

*U.S. GPO: 1999-459-082/19144

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2000

Application or Docket Number

5607

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	41	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	41 minus 20 =	21
INDEPENDENT CLAIMS	8 minus 3 =	5
MULTIPLE DEPENDENT CLAIM PRESENT	<input type="checkbox"/>	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	Minus **	=
	Independent	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	Minus **	=
	Independent	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

	(Column 1)	(Column 2)	(Column 3)
AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total	Minus **	=
	Independent	Minus ***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>			

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3."

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SMALL ENTITY TYPE

OR OTHER THAN SMALL ENTITY

RATE	FEE
BASIC FEE	355.00
X\$ 9=	189
X40=	200
+135=	
TOTAL	744.00

RATE	FEE
BASIC FEE	710.00
X\$18=	
X80=	
+270=	
TOTAL	

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
X\$ 9=	
X40=	
+135=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X80=	
+270=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$ 9=	
X40=	
+135=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X80=	
+270=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$ 9=	
X40=	
+135=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
X\$18=	
X80=	
+270=	
TOTAL ADDIT. FEE	

BEST AVAILABLE COPY

CLAIMS ONLY

SERIAL NO. 09935565 FILING DATE 08-24-0
 APPLICANT(S)

CLAIMS

	AS FILED		AFTER 1st AMENDMENT		AFTER 2nd AMENDMENT			*		*		*	
	IND.	DEP.	IND.	DEP.	IND.	DEP.		IND.	DEP.	IND.	DEP.	IND.	DEP.
1	/						51						
2		/					52						
3	/						53						
4		/					54						
5		/					55						
6		/					56						
7		/					57						
8		/					58						
9		/					59						
10		/					60						
11		/					61						
12		/					62						
13		/					63						
14		/					64						
15	/						65						
16		/					66						
17		/					67						
18		/					68						
19		/					69						
20	/						70						
21		/					71						
22		/					72						
23		/					73						
24		/					74						
25		/					75						
26		/					76						
27		/					77						
28		/					78						
29		/					79						
30		/					80						
31		/					81						
32	/						82						
33		/					83						
34		/					84						
35	/						85						
36		/					86						
37	/						87						
38		/					88						
39		/					89						
40		/					90						
41	/						91						
42		/					92						
43							93						
44							94						
45							95						
46							96						
47							97						
48							98						
49							99						
50							100						
TOTAL IND.	8						TOTAL IND.						
TOTAL DEP.	33						TOTAL DEP.						
TOTAL CLAIMS	41						TOTAL CLAIMS						

* MAY BE USED FOR ADDITIONAL CLAIMS OR ADMENDMENTS

BEST AVAILABLE COPY