In the United States Court of Federal Claims

No. 19-859

(Filed: 22 March 2023)

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E-NUMERATE SOLUTIONS, INC., and      *
E-NUMERATE SOLUTIONS, LLC,           *
                                     *
          Plaintiffs,                *
                                     *     Claim Construction; Markman Hearing;
v.                                   *     Plain and Ordinary Meaning; Intrinsic
                                     *     Record; Person Having Ordinary Skill in the
THE UNITED STATES,                   *     Art.
                                     *
          Defendant.                 *
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Shahar Harel, Trial Attorney, Intellectual Property Section, with whom were *Carrie Rosato*, Trial Attorney, *Scott Bolden*, Of Counsel, *Nelson Kuan*, Of Counsel, *Gary L. Hausken*, Director, Commercial Litigation Branch, and *Brian M. Boynton*, Principal Deputy Assistant Attorney General, Civil Division, U.S. Department of Justice, all of Washington, DC, for defendant.

CLAIM CONSTRUCTION OPINION AND ORDER

HOLTE, **Judge.**

Plaintiffs e-Numerate Solutions, Inc. and e-Numerate, LLC[1] accuse the government of patent infringement. The parties filed claim construction briefs seeking to construe the meaning of various disputed claim terms and resolved construction of three terms amongst themselves. The government argues fifteen claim terms are indefinite under 35 U.S.C. § 112 or must be construed under § 112 ¶ 6. While the parties raised numerous terms for construction, the Court's procedures for claim construction, modeled after the rules of Judge Alan Albright of the United States District Court for the Western District of Texas, aided the Court in efficiently handling this claim construction.[2] The Court first held a *Markman* hearing to construe the disputed terms not implicated by the government's indefiniteness arguments, following agreement by the parties

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[1] This court's CM/ECF system, which names plaintiff as "e-Numerate Solutions, LLC," contradicts the parties' briefing, which name plaintiff as "e-Numerate, LLC."

[2] *See also Haddad v. United States*, 164 Fed. Cl. 28 (2023); *Giesecke & Devrient GmbH v. United States*, 163 Fed. Cl. 430 (2023); *Wanker v. United States*, 152 Fed. Cl. 219 (2021); *Thales Visionix, Inc. v. United States*, 150 Fed. Cl. 486 (2020); *CellCast Techs., LLC v. United States*, 150 Fed. Cl. 353 (2020).

at a status conference to split the *Markman* hearing into two days.[3] This Claim Construction Opinion and Order construes the parties' disputed terms not implicating indefiniteness.

I.   Background

A.   Factual History

Plaintiff e-Numerate Solutions, Inc., the owner and assignee of the eight patents-in-suit and plaintiff e-Numerate, LLC (collectively, "plaintiffs" or "e-Numerate"), the exclusive licensee of the seven asserted patents, allege the government infringes the asserted patents. Second Am. Compl. ¶¶ 3–4, ECF No. 53. The asserted patents generally relate to markup languages. U.S. Patent No. 7,650,355 ("the '355 Patent") describes "provid[ing] macros and a markup language . . . which allows numerical analysis routines to be written quickly, cheaply, and in a form that is usable by a broad range of data documents[.]" '355 Patent at [57]. The '355 Patent "facilitates the browsing and manipulation of numbers, as opposed to text as in [Hypertext Markup Language ('HTML')], and does so by requiring attributes describing the meaning of the numbers to be attached to the numbers." *Id.* U.S. Patent Nos. 8,185,816 ("the '816 Patent"), 9,262,383 ("the '383 Patent"), 9,262,384 ("the '384 Patent"), 9,268,748 ("the '748 Patent"), and 10,223,337 ("the '337 Patent") all relate to the same provisional applications as the '355 Patent—"[p]rovisional application No. 60/135,525, filed on May 21, 1999, [and] provisional application No. 60/183,152, filed on Feb. 17, 2000"—and address similar technology. *Id.* at [60]; *see* '816 Patent at [60]; '383 Patent at [60]; '384 Patent at [60]; '748 Patent at [60]; '337 Patent at [60]. U.S. Patent No. 9,600,842 ("the '842 Patent") describes "allow[ing] users to efficiently manipulate, analyze, and transmit eXtensible Business Reporting Language ('XBRL') reports" and "to automatically build financial reports that are acceptable to governing agencies such as the [Internal Revenue Service]." '842 Patent at [57].

Plaintiffs contend the government has assumed liability for various companies which have infringed and continue to infringe the asserted patents through preparing and filing documents with the Securities and Exchange Commission ("SEC"). Second Am. Compl. ¶¶ 51–52, 65–66, 82–83, 99–100, 113–114, 138–139, 152–153. Plaintiffs also argue the SEC directly infringes the '816 and '383 Patents through analysis of infringing submissions. *Id.* ¶¶ 73–74, 90–91. Plaintiffs further assert the SEC, the Federal Deposit Insurance Corporation ("FDIC"), the Federal Financial Institutions Examining Council ("FFIEC"), the United States Department of the Treasury ("Treasury"), the Office of Management and Budget ("OMB"), the Federal Energy Regulatory Commission ("FERC"), and the United States Department of Energy ("DOE") directly infringe the '748 and '842 Patents by validating and processing infringing filings. *Id.* ¶¶ 122–125, 132, 134–136.

B.   Procedural History

Plaintiffs filed their complaint on 11 June 2019. *See* Compl., ECF No. 1. On 11 October

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[3] 7 Oct. 2022 Status Conference Tr. ("SC Tr.") at 101:14–19 ("THE COURT: So the Court hopes to divide the *Markman* hearing into two days with . . . the terms in day one, as much as we can get through them, and then in day two, indefiniteness. Does that make the most sense? [THE GOVERNMENT]: Yes. [PLAINTIFFS]: Yeah."), ECF No. 100.

2019, the government filed a motion to dismiss. *See* Def.'s Mot. to Dismiss under Rule 12(b)(6), ECF No. 8. This case was reassigned to the undersigned Judge on 9 December 2019. *See* Order, ECF No. 11. The Court denied the government's motion to dismiss on 7 August 2020. *See* Op. & Order, ECF No. 27.

Plaintiffs filed their opening claim construction brief, opening claim construction brief on indefiniteness, and an appendix on 14 March 2022. *See* Pls.' Opening Cl. Constr. Br. ("Pls.' Cl. Constr. Br."), ECF No. 78; Pls.' Opening Cl. Constr. Br. on Indefiniteness, ECF No. 79; App. in Supp. of Pls.' Opening Cl. Constr. Brs. ("App."), ECF Nos. 80–81. The government filed its responsive claim construction brief and responsive claim construction brief on indefiniteness on 29 April 2022. *See* Def.'s Resp. Cl. Constr. Br., ECF No. 82; *See* Def.'s Resp. Cl. Constr. Br. on Indefiniteness, ECF No. 83. On 1 June 2022, plaintiffs filed their reply claim construction brief and reply claim construction brief on indefiniteness. *See* Pls.' Reply Cl. Constr. Br., ECF No. 88; Pls.' Reply Cl. Constr. Br. on Indefiniteness, ECF No. 89. The government filed a surreply claim construction brief and a surreply claim construction brief on indefiniteness on 1 July 2022. *See* Def.'s Surreply Cl. Constr. Br., ECF No. 90; Def.'s Surreply Cl. Constr. Br. on Indefiniteness, ECF No. 91. On 15 July 2022, plaintiffs filed a surreply claim construction brief on indefiniteness. *See* Pls.' Surreply Cl. Constr. Br. on Indefiniteness, ECF No. 92. The parties filed their joint claim construction statement on 18 August 2022. See J. Cl. Constr. Statement, ECF No. 95.

The Court held a status conference on 7 October 2022 to discuss the parties' joint claim construction statement, plaintiffs' plans to drop U.S. Patent No. 10,423,708 ("the '708 Patent") from this case following reexamination, technology tutorials the parties submitted to the Court via email, similarities in the specifications of the asserted patents, and logistics for a *Markman* hearing. *See* Order, ECF No. 96; SC Tr. at 6:5–7:5. Following the status conference, the Court issued an order directing the parties to file: (1) the reexamination certificate for the '708 Patent; (2) "[a] stipulation of dismissal with prejudice of Count 8 of the Second Amended Complaint . . . to remove the '708 Patent;" and (3) a revised joint claim construction statement. Order at 1, ECF No. 97. The parties filed their joint stipulation of dismissal and the reexamination certificate on 18 October 2022, *see* J. Stipulation of Dismissal, ECF No. 101, and their revised joint claim construction statement on 20 October 2022, *see* Rev. J. Cl. Constr. Statement Ex. A ("RJCCS"), ECF No. 103-1. The Court held a *Markman* hearing on the disputed terms not implicating indefiniteness on 16 November 2022. *See* Order, ECF No. 98; 16 Nov. 2022 *Markman* Hearing Tr. ("Tr."), ECF No. 106. Following the hearing, the Court allowed the parties to submit supplemental briefing clarifying their arguments. *See* Order, ECF No. 104; Def.'s Suppl. Cl. Constr. Br., ECF No. 107; Pls.' Suppl. Cl. Constr. Br., ECF No. 108.

C.   The Technology of the '355 Patent Family

On 18 May 2000, e-Numerate Solutions, Inc. filed U.S. Patent Application No. 09/573,780, later issued on 19 January 2010 as the '355 Patent. *See* '355 Patent at [10], [21]–[22], [45]. The '355 Patent, titled "Reusable Micro Markup Language," *id.* at [54], relates to "data processing systems and, more particularly, to a computer markup language for use in a data browser and manipulator." *Id.* col. 1 ll. 24–26. "A markup language is a way of embedding markup 'tags,' special sequences of characters, that describe the structure as well as the behavior

of a document and instruct a web browser or other program on how to display the document." *Id.* col. 1 ll. 32–36.

Two examples of markup languages are HTML and Extensible Markup Language ("XML"). *See id.* col. 1 ll. 32, 61–62. HTML contains "a fixed set of tags with specific purposes" mixed with the ordinary text in text files, and "XML is a free-form markup language with unspecified tags, which allows developers to develop their own tags and . . . markup languages." *Id.* col. 1 ll. 39–40, 63–66. The background of the '355 Patent explains limitations of HTML and XML. *See generally* '355 Patent col. 1 ll. 39–59, col. 2 ll. 1–11. HTML's fixed set of tags limits the language to only working with text and images, and HTML only instructs browsers on reading and displaying a document's characters—not understanding the data the browser is displaying. *See id.* col. 1 ll. 39–44. HTML is incapable of interpreting numbers as numbers—it only reads them as text—preventing users from being able to search through numerical data or run it through "an analytical program without human intervention to copy-and-paste." *Id.* col. 1 ll. 44–59. XML falls short in two main areas. First, "XML describes structure and meaning, but not formatting." *Id.* col. 2 ll. 1–2. Second, individualized markup languages the XML users develop from non-standardized tags are incompatible with each other because "different users use the tags for different purposes." *Id.* col. 2 ll. 7–11.

"Methods and systems in accordance with the ['355 Patent] provide a markup language, referred to as Reusable Data Markup Language ("RDML"), that permits the browsing and manipulation of numbers[,] and [these methods and systems] provide a related data viewer that acts as a combination Web browser and spreadsheet/analytic application that may automatically read numbers from multiple online sources and manipulate them without human intervention" to provide a "chart view" display. *Id.* col. 3 ll. 51–58; *see also* '355 Patent col. 3 ll. 58–61, col. 4 ll. 26–28. RDML is capable of making tags reflecting numerical values and their characteristics—such as unit and magnitude—and understanding these numerical characteristics rather than just reading text. *See id.* col. 3 ll. 65–67, col. 4 ll. 4–10.

D.   The Technology of the '816, '383, '384, '748, and '337 Patents

The '355 Patent's technology is representative of the technology claimed in the '816, '383, '384, '748, and '337 Patents because they all relate to the '525 and '152 applications filed on 21 May 1999 and 17 February 2000, respectively. *See* '355 Patent at [60]; '816 Patent at [60]; '383 Patent at [60]; '384 Patent at [60]; '748 Patent at [60]; '337 Patent at [60]; *cf.* SC Tr. at 53:12–17 ("[PLAINTIFFS: [The '525 and '152 applications] were the provisionals that underlie [the '780] application, which issues as the '355 [Patent].""). The '355 Patent was published first. *Compare* '355 Patent at [45], *with* '816 Patent at [45], '383 Patent at [45], '384 Patent at [45], '748 Patent at [45], *and* '337 Patent at [45]. Plaintiffs state "the '355 covers the '816, the '383, the '384, the '748, and the '337," and the '842 is separate from the others as it contains additional disclosure. SC Tr. at 61:1–5; *see also* SC Tr. at 56:6–12 ("THE COURT: . . . [T]he government's responsive claim construction brief stated that all of the asserted patents comprise disclosure substantially similar to the '355 patent, but then goes on to say . . . the '842 . . . patent[] comprise[s] additional disclosure. Do you agree with that? [PLAINTIFFS]: Yes, the '842 patent has additional disclosure than what is in the first series of patents.").

E.   The Technology of the '842 Patent

Unlike the '355 Patent and the related patents, the '842 Patent is representative of a separate patent family. *See* SC Tr. at 61:1–5. On 23 January 2002, plaintiffs filed U.S. Patent Application No. 10/052,250, later issued on 21 March 2017 as the '842 Patent. '842 Patent at [10], [21]–[22], [45]. The '842 Patent is titled "RDX Enhancement of System and Method for Implementing Reusable Data Markup Language (RDL)." *Id.* at [54]. The '842 Patent relates to "data processing systems and, more particularly, to a computer markup language for financial accounting and a related data browser and manipulator." *Id.* col. 1 ll. 39–43. The parties agree there is a substantive difference between the '355 and '842 Patents. SC Tr. at 67:5–11, 67:23–25 ("THE COURT: [T]he '842 Patent, which has an almost identical spec[ification], has priority of January 2001. [THE GOVERNMENT]: Right. THE COURT: Does that result in a substantive difference? [THE GOVERNMENT]: Yes . . . . THE COURT: [Plaintiffs], any disagreement . . . ? [PLAINTIFFS]: . . . The '355 patent and specification and the '842 specification are different.); *see also* SC Tr. at 67:11–20 (the government's explanation of the differences); SC Tr. at 68:5–13 (plaintiffs' explanation of the differences).

Considering markup languages beyond HTML and XML, the '842 Patent incorporates XBRL, "which has an underlying syntax defined in XML." '842 Patent col. 2 ll. 16–18; *see also* SC Tr. at 67:11–20 ("[THE GOVERNMENT]: [T]he '842 includes all the '355, but it includes significantly more . . . it may also incorporate by reference other references beyond the XML Bible, certainly references as to the XBRL standard."). "XBRL is an XML-based language used for reporting financials such as balance sheets, cash flow reports, and the basic information that is reported to the Securities and Exchange Commission ('SEC')." '842 Patent col. 5 ll. 16–19. "XBRL includes two major elements: (1) a 'taxonomy,' which defines the financial terms which can be reported and the interrelationships between these terms, and (2) an 'instance document,' which includes reported values for the terms of the taxonomy and references to the terms." *Id.* col. 2 ll. 24–28. An XBRL "instance document is a report from a financial institution" describing "quantitative values such as the currency (monetary types), precision (e.g., values reported + or –10%), and magnitude (e.g., numbers in thousands, millions, etc.)"; the "XBRL taxonomies form the context" for these reports by defining "the names, data types (e.g., textual, monetary, numeric), and relationships (account/sub-account)" the reports can reference. *Id.* col. 2 ll. 34–50. XBRL lacks, however, the tools for users to build XBRL reports, automatically schedule and transmit reports in XBRL format, automatically link a current accounting system to an XBRL document, or automatically analyze and manipulate data in an XBRL document. *Id.* col. 5 ll. 27–36.

"Methods and systems consistent with the ['842 Patent] provide a data processing system for developing reports," allowing "users to efficiently build, manipulate, analyze and transmit XBRL documents and reports" and "open[ing] analysis possibilities that would normally remain closed to XBRL users." *Id.* col. 5 ll. 42–43, col. 7 ll. 4–6, col. 8 ll. 35–36. In relation with the '355 Patent's RDML, '842 Patent systems and methods allow for "transl[ation] of an XBRL instance document into RDML format for the RDML system to analyze it"; such systems also allow for manipulation of RDML text documents to create instance documents in alternative, non-XBRL formats. *Id.* col. 7 ll. 16–19, col. 8 ll. 12–41.

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