

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: John Albert Kembel, et al.
U.S. Patent No.: 8,020,083 Attorney Docket No.: 39843-0148IP1
Issue Date: September 13, 2011
Appl. Serial No.: 11/932,585
Filing Date: October 31, 2007
Title: SYSTEM AND METHODS FOR CREATING AND AUTHORIZING
INTERNET CONTENT USING APPLICATION MEDIA
PACKAGES

DECLARATION OF DR. PHILIP GREENSPUN

Declaration

I declare that all statements made herein on 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 under Section 1001 of Title 18 of the United States Code.

By: *Philip Greenspun*
Philip Greenspun, Ph.D.

I. QUALIFICATIONS AND BACKGROUND INFORMATION

1. I have been retained on behalf of Samsung Electronics Co., Ltd. (“Petitioner”) and asked to review and provide my opinion on the patentability of claims 1-16 of U.S. Patent No. 8,020,083 (“the ’083 patent”).

2. A detailed description of my professional qualifications, including a listing of my specialties/expertise and professional activities, is contained in my curriculum vitae, a copy of which is provided along with this declaration. In what follows, I provide a short summary of my professional qualifications.

3. In terms of my background and experiences that qualify me as an expert in this case, I earned a Ph.D. in Electrical Engineering and Computer Science from Massachusetts Institute of Technology in 1999. I also obtained a Bachelor of Science Degree in Mathematics from Massachusetts Institute of Technology in 1982 and a Master of Science Degree in Electrical Engineering and Computer Science from Massachusetts Institute of Technology in 1993.

4. My Ph.D. thesis concerned the engineering of large online Internet communities with a Web browser front-end and a relational database management system (RDBMS) containing site content and user data.

5. I have authored five computer science textbooks in total, including Database Backed Web Sites (Macmillan), Software Engineering for Internet Applications (MIT Press), and a SQL language tutorial.

6. I have served as an independent member of various advisory and corporate boards, mostly for technology companies. For example, I joined the corporate board of an MIT materials science spin-off in late 2005 during a \$550,000 seed capital phase. I stepped down when the company secured \$10 million in venture capital in mid-2007.

7. I have previously served as an expert witness for Amazon.com, IBM, Microsoft, Xerox, and Google, among others, in patent cases.

8. I began working full-time as a computer programmer in 1978, developing a database management system for the Pioneer Venus Orbiter at the National Aeronautics and Space Administration's Goddard Space Flight Center.

9. Some of my pre-Web work as a software developer included building computer programs that ran on desktop computers with window systems and that downloaded information from servers. For example, I built a system for Fidelity Investments that downloaded financial market information and produced graphs and charts on a Macintosh computer in the 1980s.

10. I developed my first program using a relational database management system in 1994. It was a Web interface to the Children's Hospital Oracle RDBMS version 6. This enabled doctors at the hospital to view patient clinical data using any computer equipped with a Web browser.

11. In 1995, I led an effort by Hearst Corporation to set up an infrastructure for Internet applications across all their newspaper, magazine, radio, and television properties. This infrastructure included software for managing users, shopping carts, electronic commerce, advertising, and user tracking.

12. Between 1995 and 1997, I significantly expanded the photo.net online community that I had started, in 1993, in order to help people teach each other to become better photographers. I began distributing the source code behind photo.net to other programmers as a free open-source toolkit, called “ArsDigita Community System.”

13. The photo.net site enabled users to upload photos as attachments to discussion forum postings and also, beginning in 1999, included a complete photo-sharing system along the lines of Flickr.

14. In May 1997, Macmillan published my first textbook on Internet Application development, “Database Backed Web Sites.” This book advises readers that server-based programs should, to the extent possible, summarize information from the database and make previews of content available so that users don’t have to navigate as much. See Chapter 13, for example: “One-line summaries of the newest [classified] ads should be displayed on the very first page of the system. Users shouldn't have to click to see ads.”

15. In 1997, I started a company, ArsDigita, to provide support and service for the free open-source toolkit. Between 1997 and the middle of 2000, I managed the growth of ArsDigita to 80 people, almost all programmers, and \$20 million per year in annual revenue. This involved supervising dozens of software development projects, nearly all of which were Internet Applications with a Web front-end and an Oracle RDBMS back-end. As the founder, CEO, and chief technical employee of the company, I personally developed functional specifications, SQL data models (Structured Query Language, or “SQL,” is the standard programming language for relational database management systems), and Web page flows that determined the user experience. Our work at ArsDigita included “push technology” and representing data in XML and HTML.

16. Between 2000 and the present, I have done software development projects for philip.greenspun.com and photo.net, two online services that are implemented as relational database management applications. In addition, I developed postclipper.com, a database-backed Web application that works in conjunction with Facebook to allow parents to produce electronic baby books based on photographs previously included in Facebook posts.

17. Separately from this commercial and public work, I have been involved, as a part-time teacher within the Department of Electrical Engineering and Computer Science, educating students at MIT in how to develop Internet

Applications with an RDBMS back-end. In the Spring of 1999, I taught 6.916, Software Engineering of Innovative Web Services, with Professors Hal Abelson and Michael Dertouzos. Some of the teams in this class got early access to the then-new Microsoft .NET system, which emphasizes the exchange of data among computers in XML format as part of a “Web services” standard. In the Spring of 2002, this course was adopted into the standard MIT curriculum as 6.171. I wrote 15 chapters of a new textbook for this class, “Software Engineering for Internet Applications.” This book was published on the Web at <http://philip.greenspun.com/seia/> starting in 2002 and 2003 and also in hardcopy from MIT Press in 2006. I am the sole author of a supplementary textbook for the class, “SQL for Web Nerds,” a succinct SQL programming language tutorial available only on the Web at <http://philip.greenspun.com/sql/>. I am also one of the creators and teachers of a three-day intensive course in developing database applications. We teach this class periodically at MIT.

18. I periodically teach a database programming class at Harvard Medical School. Students have access to a relational database of more than 5 billion insurance claims and write SQL programs to try to identify correlations and trends. I taught this course most recently in March 2021. Also in 2021, I taught an Information Security class at Florida Atlantic University. Most recently, I taught an aeronautical engineering class at MIT in January 2024.

II. OVERVIEW OF CONCLUSIONS FORMED

19. In writing this Declaration, I have considered the following: my own knowledge and experience, including my work experience in the fields of computer science and electrical engineering; my experience in teaching those subjects; and my experience in working with others involved in those fields. In addition, I have analyzed the following publications and materials, in addition to other materials I cite in my declaration:

- Petition for *Inter Partes* Review of United States Patent No. 8,020,083
- Patent Owner's Response to Petition for *Inter Partes* Review of United States Patent No. 8,020,083
- U.S. Patent No. 8,020,083 (SAMSUNG-1001), and its accompanying prosecution history (SAMSUNG-1002)
- Declaration of Dr. Douglas C. Schmidt (SAMSUNG-1003)
- Curriculum Vitae of Dr. Douglas C. Schmidt (SAMSUNG-1004)
- U.S. Patent No. 6,278,448 B1 ("Brown") (SAMSUNG-1005)
- U.S. Patent No. 6,449,638 B1 ("Wecker") (SAMSUNG-1006)
- U.S. Patent No. 5,793,368 ("Beer") (SAMSUNG-1007)
- U.S. Patent No. 6,789,263 B1 ("Shimada") (SAMSUNG-1008)
- U.S. Patent No. 6,088,340 ("Buchholz") (SAMSUNG-1009)
- U.S. Patent No. 6,819,345 B1 ("Jones") (SAMSUNG-1010)

- *HTML 4 Unleashed* (“Darnell”) (SAMSUNG-1011)
- IPR2019-01278 Final Written Decision (SAMSUNG-1012)
- U.S. Patent No. 6,342,907 B1 (“Petty”) (SAMSUNG-1013)
- *Lenovo Holding Company, Inc. v. DoDots Licensing Solutions LLC*, No. 2021-1247, 2021 WL 5822248 (Dec. 8, 2021) (SAMSUNG-1014)
- U.S. Patent No. 6,311,058 B1 (“Wecker 2”) (SAMSUNG-1015)
- U.S. Patent No. 5,737,560 (“Yohanan”) (SAMSUNG-1016)
- CNET News, “PointCast unveils free news service,”
https://web.archive.org/web/20110616130215/http://news.cnet.com/PointCast-unveils-free-news-service/2100-1023_3-204658.html, last
accessed Feb. 16, 2023 (SAMSUNG-1017)
- Declaration of June Ann Munford (SAMSUNG-1018)
- *DoDots Licensing Solutions LLC v. Samsung Electronics Co., Ltd. et al.*, 6:22-cv-00535, W.D. Tex., filed May 24, 2022 (SAMSUNG-1019)
- U.S. Patent No. 6,216,141 (“Straub”) (SAMSUNG-1025)
- Transcript of the deposition of Dr. Ted Selker (SAMSUNG-1027)
- Transcript of the deposition of John Kembel (SAMSUNG-1028)
- Transcript of the deposition of George Kembel (SAMSUNG-1029)
- Microsoft’s Computer Dictionary, 4th Edition (SAMSUNG-1031)
- Inside Dynamic HTML (SAMSUNG-1032)

- U.S. Patent No. 6,539,387 (“Oren”) (SAMSUNG-1033)
- U.S. Patent No. 6,243,700 (“Zellweger”) (SAMSUNG-1034)
- U.S. Patent No. 6,144,962 (“Weinberg”) (SAMSUNG-1035)
- XHTML™ 1.0: The Extensible HyperText Markup Language,
<https://www.w3.org/TR/1999/PR-xhtml1-19991210/> (SAMSUNG-1036)
- U.S. Patent No. 9,438,467 (“The ’467 Patent”) (SAMSUNG-1037)
- U.S. Patent No. 8,510,406 (“The ’406 Patent”) (SAMSUNG-1038)
- U.S. Patent No. 9,369,545 to Kembel, et al. (“the ’545 Patent”) (SAMSUNG-1039)
- Hypertext Markup Language - 2.0,
<https://datatracker.ietf.org/doc/html/rfc1866> (SAMSUNG-1040)
- Declaration of Ted Selker, Ph.D. (DODOTS-2010)
- Curriculum Vitae of Ted Selker, Ph.D. (DODOTS-2011)
- Introduction to Active Channel Technology, dated 08/15/2017 (DODOTS-2014)
- U.S. Patent No. 7,660,868 (“The ’868 Patent”) (DODOTS-2015)
- What is Data Structure? (available at
<https://www.geeksforgeeks.org/data-structure-meaning/>) (DODOTS-2016)

- HTML Data Guide, W3C Interest Group Note 08 March 2012 (DODOTS-2017)
- Specifications of Personal Computers Over Time (available at <https://www.hp.com/us-en/shop/tech-takes/specifications-personal-computers-over-time>) (DODOTS-2018)
- Barnett, S., Palm VII: Like its predecessors, the Palm VII doesn't do all that a desktop does, but it just might do enough (DODOTS-2019)
- CNET: Windows CE to become "Windows powered" (available at <https://www.itprotoday.com/windows-78/cnet-windows-ce-become-windows-powered#close-modal>) (DODOTS-2020)
- Declaration of John Kembel (DODOTS-2021)
- Imagining a Web Beyond the Browser; Fortune Magazine, February 21, 2000 (DODOTS-2022)
- Lyons, D., Browser Bashers; Forbes, May 15, 2000 (DODOTS-2023)
- Baig, E., Bits of organization clear clutter; USA Today (DODOTS-2024)
- Heim, K., Tools turn browser into galaxy, July 7, 2000 (DODOTS-2025)
- Mossberg, W., New Metabrowsers Allow You To Create a Quilt of Web Pages, May 18, 2000 (DODOTS-2026)
- A New World Needs a New Internet (DODOTS-2027)

- DoDots Technical Overview (DODOTS-2028)
- How to Build Dots (DODOTS-2029)
- Declaration of George Kembel (DODOTS-2030)
- June 15, 1999 Email from Tom Kosnik to investors re: Periphio (next steps) (DODOTS-2031)
- SOFTBANK Venture Capital's Technology Fund Invests in DoDots, Inc., October 13, 1999 (DODOTS-2032)
- DoDots Website (DODOTS-2033)
- DoDots Technology Embraced by ABC Television Network and ABC.com to Deliver Innovative ABC Dots on the Internet, October 2, 2000 (DODOTS-2034)
- Leading Online Companies Do Dots With DoDots ; DoDots ' Technology Delivers Internet Packaging and Distribution for Internet Content, Applications and Services, March, 13, 2000 (DODOTS-2035)
- Excite@Home Partners With DoDots to Enhance Service for Business Professionals On Work.com, March 13, 2000 (DODOTS-2036)
- DoDots Announces Partnership With Wireless Solution Provider 2Roam at DEMOmobiLe 2000 Wireless Conference in Pasadena, California, September 7, 2000 (DODOTS-2037)

- Dots Go Live; Web Sites Now Offer Internet Applications, Content, and Services in Dots, April 3, 2000 (DODOTS-2038)
- Conference Guide to Demo 2000 (DODOTS-2039)
- DemoMobile Conference Program, September 6-8, 2000 (DODOTS-2040)
- Demo 2000: The innovation Continues, March 6, 2000 (DODOTS-2041)
- DoDots Named “Investors’ Choice” Winner at Telenelogic Partners’ Internet Outlook Conference in Burlingame, California, September 20, 2000 (DODOTS-2042)
- Stanford Business School Case Study of DoDots, June 2000 (DODOTS-2043)
- Stanford Business School Case Study of DoDots, September 2001 (DODOTS-2044)
- Dots Messaging and XML specification (DODOTS-2045)
- Yurko, C., DoDots: The Web without a browser, April 7, 2000 (DODOTS-2046)
- Back to the launch pad: after a few dormant years, tech entrepreneurs are returning to the game (DODOTS-2047)

20. This expert Declaration explains the conclusions that I have formed based on my analysis. These conclusions are based upon my knowledge and experience and my review of the prior art publications listed above. The following points are a summary:

- Based upon my knowledge and experience and my review of the prior art publications listed above, I believe that claims 1-5 and 9-13 of the '083 patent are obvious over Brown.
- Based upon my knowledge and experience and my review of the prior art publications listed above, I believe that claims 1-16 of the '083 patent are obvious over Brown in view of Wecker.
- Based upon my knowledge and experience and my review of the prior art publications listed above, I believe that claims 1-16 of the '083 patent are obvious over Shimada in view of Buchholz.

21. In forming these conclusions, I have also reviewed the prior declaration of Dr. Douglas Schmidt. SAMSUNG-1003. Except where otherwise noted or qualified, I adopt Dr. Schmidt's conclusions. *Id.*

III. LEVEL OF ORDINARY SKILL IN THE ART

22. I have reviewed and concur with the established definition of a person of ordinary skill in the art (“POSITA”) relating to the subject matter of the ’083 Patent, as defined in the Petition and Dr. Schmidt’s declaration. Petition, p. 5; SAMSUNG-1003, ¶¶20-21.

23. Based on my experiences, I have a good understanding of the capabilities of a POSITA. Indeed, I have taught, participated in organizations, and worked closely with many such persons over the course of my career. From teaching and supervising both undergraduate and post-graduate students, I also have an understanding of the knowledge that a person with this academic experience possesses. As founder and CEO of ArsDigita, I hired and supervised dozens of computer science graduates, many with at least three years of experience, in the second half of the 1990s. Furthermore, I possess the capabilities of a POSITA myself.

IV. LEGAL STANDARDS

A. Terminology

24. I have been informed by Counsel and understand that the best indicator of claim meaning is its usage in the context of the patent specification as understood by one of ordinary skill. I further understand that the words of the claims should be given their plain meaning unless that meaning is inconsistent with the patent specification or the patent’s history of examination before the Patent

Office. Counsel has also informed me, and I understand that, the words of the claims should be interpreted as they would have been interpreted by one of ordinary skill at the time of the invention was made (not today). Because I do not know at what date the invention as claimed was made, I have used the earliest priority date of U.S. Patent No. 8,020,083 as the point in time for claim interpretation purposes. That date was April 26, 1999.

B. Legal Standards for Anticipation

25. I have been informed by Counsel and understand that documents and materials that qualify as prior art can render a patent claim unpatentable as anticipated. I am informed by Counsel and understand that all prior art references are to be looked at from the viewpoint of a person of ordinary skill in the art.

26. I am informed by Counsel and understand that a challenged claim is unpatentable as “anticipated” under 35 U.S.C. § 102 if it is determined that all the limitations of the claim are described in a single prior art reference. I am informed by Counsel and understand that, to anticipate a claim, a prior art reference must disclose, either expressly or inherently, each and every limitation of that claim and enable one of ordinary skill in the art to make and use the invention.

27. I have been informed by Counsel and understand that in an *inter partes* review, “the petitioner shall have the burden of proving a proposition of

unpatentability,” including a proposition of anticipation, “by a preponderance of the evidence.” 35 U.S.C. §316(e).

C. Legal Standards for Obviousness

28. I have been informed by Counsel and understand that documents and materials that qualify as prior art can render a patent claim unpatentable as obvious. I am informed by Counsel and understand that all prior art references are to be looked at from the viewpoint of a person of ordinary skill in the art at the time of the invention, and that this viewpoint prevents one from using his or her own insight or hindsight in deciding whether a claim is obvious.

29. I have been informed by Counsel and understand that a claim is unpatentable for obviousness under 35 U.S.C. § 103 “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.” I am informed by Counsel and understand that obviousness may be based upon a combination of references. I am informed by Counsel and understand that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. However, I am informed by Counsel and understand that a patent claim composed of several

elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.

30. I am informed by Counsel and understand that when a patented invention is a combination of known elements, a court must determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue by considering the teachings of prior art references, the effects of demands known to people working in the field or present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art.

31. I am informed by Counsel and understand that a patent claim composed of several limitations is not proved obvious merely by demonstrating that each of its limitations was independently known in the prior art. I am informed by counsel for the Patent Owner and understand that identifying a reason those elements would be combined can be important because inventions in many instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known. I am informed by Counsel and understand that it is improper to use hindsight in an obviousness analysis, and that a patent's claims should not be used as a "roadmap."

32. I am informed by Counsel and understand that an obviousness inquiry requires consideration of the following factors: (1) the scope and content of the

prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the pertinent art; and (4) any objective indicia of non-obviousness, such as commercial success, long-felt but unresolved need, failure of others, industry recognition, copying, and unexpected results. I understand that the foregoing factors are sometimes referred to as the “Graham factors.”

33. I have been informed by Counsel and understand that an obviousness evaluation can be based on a combination of multiple prior art references. I understand that the prior art references themselves may provide a suggestion, motivation, or reason to combine, but that the nexus linking two or more prior art references is sometimes simple common sense. I have been informed by Counsel and understand that obviousness analysis recognizes that market demand, rather than scientific literature, often drives innovation, and that a motivation to combine references may be supplied by the direction of the marketplace.

34. I have been informed by Counsel and understand that if a technique has been used to improve one device, and a person of ordinary skill at the time of invention would have recognized that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

35. I have been informed by Counsel and understand that practical and common sense considerations should guide a proper obviousness analysis, because

familiar items may have obvious uses beyond their primary purposes. I have been informed by Counsel and understand that a person of ordinary skill looking to overcome a problem will often be able to fit together the teachings of multiple prior art references. I have been informed by Counsel and understand that obviousness analysis therefore takes into account the inferences and creative steps that a person of ordinary skill would have employed at the time of invention.

36. I have been informed by Counsel and understand that a proper obviousness analysis focuses on what was known or obvious to a person of ordinary skill at the time of invention, not just the patentee. Accordingly, I understand that any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed.

37. I have been informed by Counsel and understand that a claim can be obvious in light of a single reference, without the need to combine references, if the elements of the claim that are not found explicitly or inherently in the reference can be supplied by the common sense of one of skill in the art.

38. I have been informed by Counsel and understand that secondary indicia of non-obviousness may include (1) a long felt but unmet need in the prior art that was satisfied by the invention of the patent; (2) commercial success of processes covered by the patent; (3) unexpected results achieved by the invention;

(4) praise of the invention by others skilled in the art; (5) taking of licenses under the patent by others; (6) deliberate copying of the invention; (7) failure of others to find a solution to the long felt need; and (8) skepticism by experts. I understand that evidence of secondary indicia of non-obviousness, if available, should be considered as part of the obviousness analysis.

39. I have been informed by Counsel and understand that there must be a relationship between any such secondary considerations and the invention, and that contemporaneous and independent invention by others is a secondary consideration supporting an obviousness determination.

40. In sum, my understanding is that prior art teachings are properly combined where one of ordinary skill having the understanding and knowledge reflected in the prior art and motivated by the general problem facing the inventor, would have been led to make the combination of elements recited in the claims. Under this analysis, the prior art references themselves, or any need or problem known in the field of endeavor at the time of the invention, can provide a reason for combining the elements of multiple prior art references in the claimed manner.

41. I have been informed by Counsel and understand that in an *inter partes* review, “the petitioner shall have the burden of proving a proposition of unpatentability,” including a proposition of obviousness, “by a preponderance of the evidence.” 35 U.S.C. §316(e).

IV. INTERPRETATIONS OF THE '083 PATENT CLAIMS AT ISSUE

42. I understand that, for purposes of my analysis in this *inter partes* review proceeding, the terms appearing in the patent claims should be interpreted “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 283(b)....” 37 C.F.R. § 42.100(b). In that regard, I understand that the best indicator of claim meaning is its usage in the context of the patent specification as understood by a POSITA. I further understand that the words of the claims should be given their plain meaning unless that meaning is inconsistent with the patent specification or the patent’s history of examination before the Patent Office. I also understand that the words of the claims should be interpreted as they would have been interpreted by a POSITA at the time of the invention was made (not today). Because I do not know at what date the invention as claimed was made, I have used the earliest possible priority date of U.S. Patent No. 8,020,083 as the point in time for claim interpretation purposes. That date was April 26, 1999.

43. I understand that the following terms should be interpreted as follows:

A. “networked information monitor” (“NIM”)

44. I understand that for the purposes of the present proceeding, this term, which appears in claims 1-6 and 9-14, should be construed to mean “a fully configurable frame, with one or more controls, through which content is presented

to the user.” This definition is consistent with the use of the term in the specification of the ’083 patent. *See, e.g.*, SAMSUNG-1001, 5:41-44 (“the term Application Media Package refers to a component which includes a **fully configurable frame with one or more controls**; the frame through which **content is optionally presented.**”)¹; *see also id.*, 8:32-33; 12:12-13. Moreover, in IPR2019-01278, Patent Owner explained that “application media package” means “networked information monitor.” SAMSUNG-1012, Page 9. Thus, for purposes of this IPR, I have adopted Patent Owner’s construction of networked information monitor, which was adopted in IPR2019-01278 and Dr. Schmidt’s declaration. SAMSUNG-1012, Page 10; SAMSUNG-1014, *3-4; SAMSUNG-1003, ¶28.

B. “networked information monitor template”

45. I understand that for the purposes of the present proceeding, this term, which appears in claims 1-2, 4-10, and 12-16, should be construed to mean “a data structure that defines the characteristics of a NIM, including the NIM frame, view, and control characteristics, and that excludes executable applications/compiled code.” This definition is consistent with the use of the term in the specification of the ’083 Patent. *See, e.g.*, SAMSUNG-1001, 7:19-23 (“[e]ach Application Media Package template defines the characteristics of a specific Application Media Package, including fully configurable frame characteristics, viewer and control

characteristics, and Application Media Package content references.”); *see also id.*, 24:12-14. Moreover, the ’083 Patent states, “[u]nlike a downloadable, custom, client-application (e.g., for delivering custom web applications to users’ desktops), an Application Media Package is entirely content. That is, the entirety of a Dot package, referred to as its definition, is in a browser-readable language.” *Id.*, 8:53-57. The ’083 Patent further states that a Dot definition “is content, rather than compiled code.” *Id.*, 14:34-35. According to Patent Owner in IPR2019-01278, a networked information monitor template “is not compiled code, and cannot be an executable application or applet.” SAMSUNG-1012, Page 9. Thus, for purposes of this IPR, I have adopted Patent Owner’s construction of networked information monitor template, which was adopted in IPR2019-01278 and Dr. Schmidt’s declaration. SAMSUNG-1012, Page 13; SAMSUNG-1014, *3-4; SAMSUNG-1003, ¶29.

V. A POSITA WOULD HAVE COMBINED BROWN AND WECKER

46. The combination of Brown and Wecker is a simple, straightforward combination of two Microsoft patents that are both directed to improving delivery of Internet content to user devices. As Dr Schmidt and I explain, the references have several similarities that would have led a POSITA to consider their disclosures together and turn to Wecker for implementation techniques that would have been beneficial to Brown’s system. SAMSUNG-1003, ¶¶35-42. In fact,

because Brown's disclosure is so similar to the '083 patent, the combination relies on just two basic techniques that were well-known and part of a POSITA's general knowledge: (1) storing a template in memory and (2) requesting a template from a remote computer. Wecker clearly discloses these concepts and, when Brown's disclosure is viewed in the context of Wecker, it would have been obvious to implement Brown's templates using these two basic techniques. SAMSUNG-1003, ¶¶35-42. As discussed in the Petition, Brown uses templates to build "a composite desktop ... from Web content retrieved from one or more Web sites," and Wecker uses templates to produce "a mobile channel" that is "a self describing web site that contains all the information necessary for efficient download of web content." Petition, 9-13. Brown's templates are similar to Wecker's templates because they each define the visual appearance of data on a screen. Petition, 10-12; SAMSUNG-1006, 2:8-36, 3:17-20. Understanding these similarities, a POSITA would have been motivated to apply Wecker's known techniques of downloading template files stored on remote devices (e.g., as part of a channel) to Brown's templates and would have used the downloaded templates as part of Brown's composite desktop, a collection of HTML templates. Petition, 13-16. In this way, a user of Brown's composite desktop, in addition to modifying the desktop in accordance with Brown's teachings, would achieve the benefits of using remotely stored HTML templates via a model similar to Wecker's mobile channel

subscription model. Petition, 13-16; SAMSUNG-1003, ¶¶35-42; SAMSUNG-1026, ¶46. Benefits of remotely managing templates and making them available for download were well-known and would have led a POSITA to implement these techniques in Brown, particularly because Brown already suggests local storage and remote download of its templates. Petition, 14; SAMSUNG-1005, 4:16-21, 4:49-52, 5:45-47. Indeed, the benefits described by Wecker for managing its templates remotely and separately from Internet content would have motivated a POSITA to apply these techniques to Brown's templates. Petition, 16; SAMSUNG-1006, 4:53-62, 10:41-56. And a POSITA would have understood and found it obvious that these techniques could be applied to various types of templates, including Brown's, and would not have needed to change Brown's templates simply to have them accessible remotely and available for download. SAMSUNG-1003, ¶¶35-42; SAMSUNG-1026, ¶47.

47. As detailed in the Petition and further explained below, a POSITA would have been motivated to make the Brown-Wecker combination. SAMSUNG-1003, ¶¶35-42.

A. Patent Owner distorts the combination of Brown and Wecker

48. The Patent Owner overexaggerates the complexity of the combination of Brown and Wecker by erroneously alleging that the combination requires additional modifications, namely "us[ing] Wecker's more complex method [of

script templates] with Brown’s personal computers.” POR, 17. But the Petition never alleged that Brown’s HTML desktop components must be transformed into script templates, only that “a user could download desktop components, and their associated HTML instructions, to their composite desktop,” similar to Wecker’s teachings of its script templates. Petition, 13-19. Accordingly, the only required modification to Brown’s HTML desktop components in view of Wecker is that these components would have been downloaded and stored (the storing of HTML being something that Dr. Selker admits is “absolutely” possible). Petition, 13-19; SAMSUNG-1027, 91:4-6. Additionally, the typical Web browser of the 1990s had a “Save As” command, enabling the user to save HTML to the local hard drive and, if desired, reopen at a later date even without a network connection).

49. Additionally, the Patent Owner alleges that the term “style template” is unique to the Beer and Petty references, and that this term is exclusive to the HTML techniques described in Brown—such that the teachings of Petty and Beer cannot be used to corroborate a POSITA’s understanding of Brown. POR, 18-19. That is, the Patent Owner appears to be alleging that the phrase “style template” (also known as “style sheets”) was not a term of art commonly used to describe

both HTML and XML templates before the critical date². *Id.* This is simply not true, as evidenced by the fact that (1) multiple corroborating references in the Petition used this phrase in the same way and (2) Dr. Selker, when questioned about the phrase “style template,” readily confirmed its relationship to HTML. Petition, 20; SAMSUNG-1027, 57:22-58:35. Various HTML publications around the time of the critical date also confirm the phrase “style sheet” was associated with HTML and XML. SAMSUNG-1011, 202-220, 412 (“XML’s visualization power is thus completely determined by the style sheet language you use ...”); SAMSUNG-1032, 16-20. Accordingly, any attempt by the Patent Owner to draw a meaningful distinction between HTML templates and style templates is misguided. POR, 18-19.

50. Finally, the Patent Owner alleges that the differing operating systems (OS) disclosed in Brown and Wecker mean that they are “incompatible technology,” and that Dr. Schmidt’s testimony to the contrary is a “superficial conclusion.” POR, 18. This argument is deficient for multiple reasons. *Id.* First, a POSITA would naturally implement the combination in the most recent version of any operating system available as of the critical date (e.g., Windows 98 for

² Of note, the format of HTML and XML is so similar that the W3C proposed merging the formats in December 1999 with “XHTML 1.0.” SAMSUNG-1036.

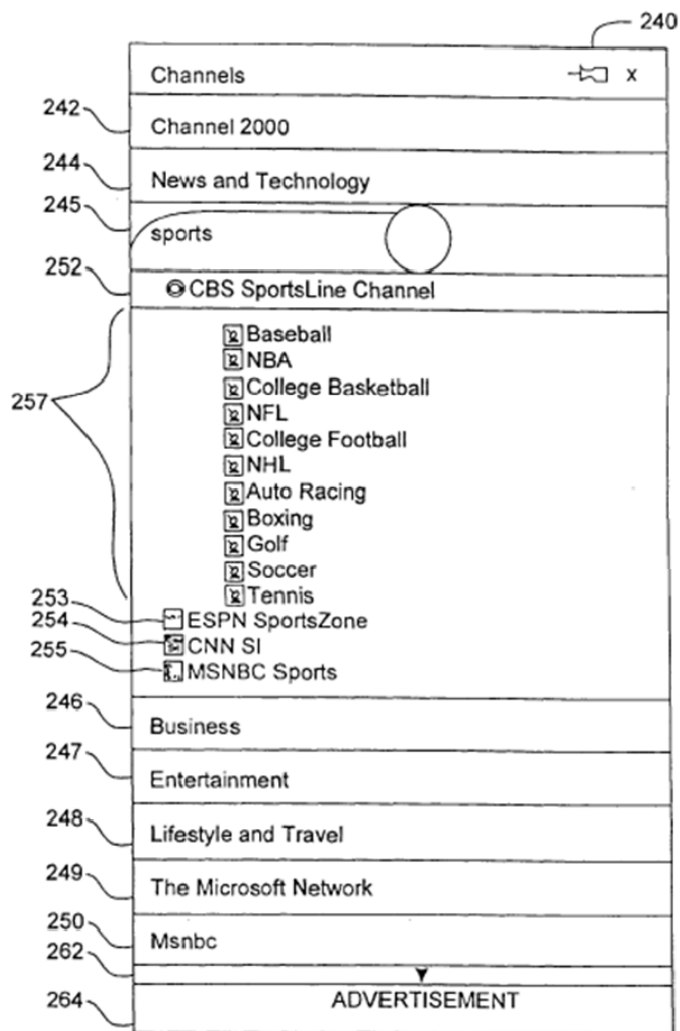
Microsoft’s consumer edition of Windows), making DoDots’ arguments against a particular OS moot. Indeed, the petition never alleges that a particular OS is required to implement the combination. Petition, 13-19. Second, as described in the Petition and Dr. Schmidt’s testimony, “both Brown and Wecker describe the Windows 95 operating system as a suitable operating system that can implement their techniques,” and Wecker further discloses that a “user typically runs the same types of applications on both the desktop computer and on the mobile device.” Petition, 15; SAMSUNG-1005, 6:26-32; SAMSUNG-1006, 1:39-44, 8:15-21. Because Wecker uses its techniques for a desktop computer, DoDots arguments that a POSITA would not have considered Wecker for non-mobile implementations falls flat. Petition, 13-14; SAMSUNG-1006, 3:58-4:13, 6:45-7:26. Finally, Microsoft—before the critical date—had already implemented “channels,” as described by Wecker, on a desktop computer running the Windows 95 operating system. *See below*, §V.B. Accordingly, Dr. Schmidt’s testimony was based on tangible facts within the references and is not conclusory. Petition, 13-19; SAMSUNG-1003, ¶¶38-39.

B. Wecker’s techniques had already been implemented on desktop computers prior to the critical date

51. The Patent Owner alleges that that the differing preferred OS of Brown and Wecker mean that they are “incompatible technology.” POR, 18; SAMSUNG-1027, 123:5-125:6. However, before the critical date, the common

assignee of both Brown and Wecker—Microsoft—had already disclosed similar arrangements in other patent filings.

52. For instance, US 6,216,141 to Microsoft (“Straub”) describes implementing an HTML “channel guide” and “control” that would “access ... a user preference storage” to retrieve and display content located at a URL (to include “Visual Basic Scripts” – as described by Wecker). SAMSUNG-1025, 11:60-12:6, FIG. 9; SAMSUNG-1006, 9:38-48. Like Wecker, Straub refers to these content sources as “channels,” which are displayed on an “active desktop” of a “Windows® 95 operating system”; example interfaces that depict channels from both Wecker and Straub are reproduced below. SAMSUNG-1025, 8:3-9:6, 7:21-37, FIG. 5; SAMSUNG-1006, 10:56-67; 19:60-20:51. Accordingly, Patent Owner’s argument that a POSITA would not have been motivated to implement Wecker’s teachings on a desktop computer are incorrect as such an arrangement already existed prior to the critical date. POR, 18; SAMSUNG-1025, 8:3-9:6, 7:21-37, FIG. 5.

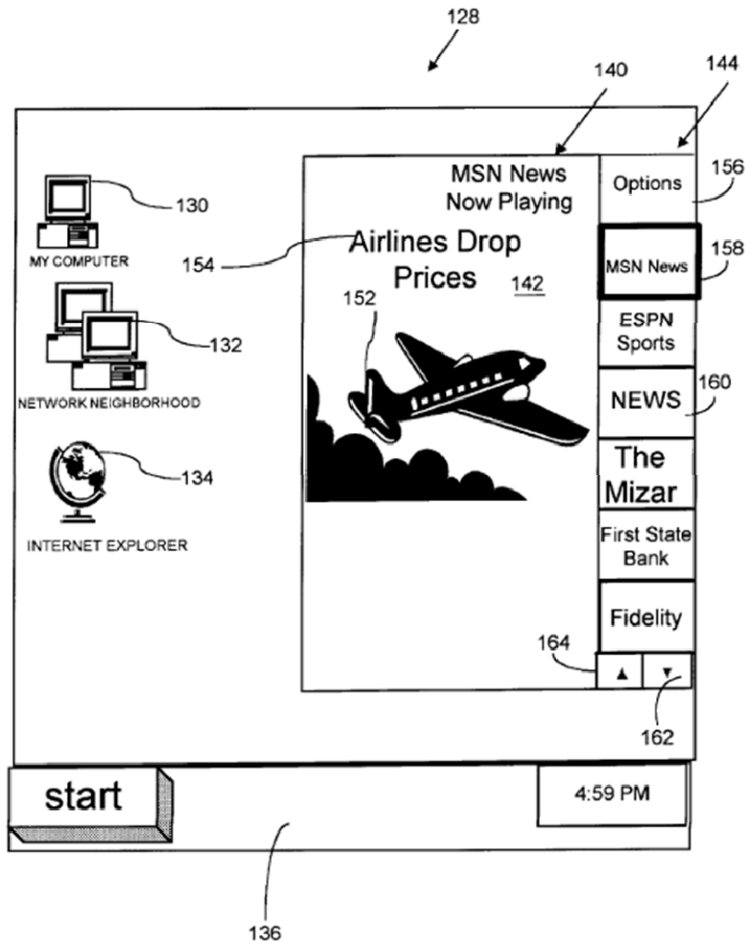


Examples of
"channels" in
Wecker

FIG. 8

SAMSUNG-1006, FIG. 8 (annotated).

FIG. 5



Examples of
"channels" in
Straub

SAMSUNG-1025, FIG. 5.

VI. BROWN AND BROWN-WECKER RENDER THE CLAIMS OBVIOUS

A. Brown and Brown-Wecker render obvious a NIM template

Brown's HTML instructions include control characteristics

53. The Patent Owner alleges that "a control characteristic is a characteristic of a control itself," "located 'in a [] control space' within a frame," and that these characteristics must be completely defined within the NIM template.

POR, 24-29. However, there is no clear disavowal or redefinition of the plain and ordinary meaning of the term “characteristic” in the ’083 patent that would support such a narrow interpretation. POR, 24-26.

54. The construction of “NIM template” does not limit the feature of a “control” with its use of the word “characteristic” – it broadens it by simply requiring definition of “control characteristics” of the NIM.³ Petition, 4-5. Additionally, the ’083 patent makes clear that NIM templates can include “control calls” (the invoking of control functionality defined outside of the template). SAMSUNG-1001, 8:46-53, 9:15-19, 13:49-53, 13:57-59, 20:38-40. Darnell describes the process of calling a control with respect to Active-X, an example used in the ’083 Patent. SAMSUNG-1011, 151 (describing that Active-X controls can be called using the HTML “<OBJECT>” tag), 324. From this disclosure, a POSITA would understand that a control need not be fully defined within the NIM template as the Patent Owner suggests. HTML affords a broad number of control options to a POSITA, to include JavaScript, menus, title bars, to name just a few. SAMSUNG-1011, 292-334.

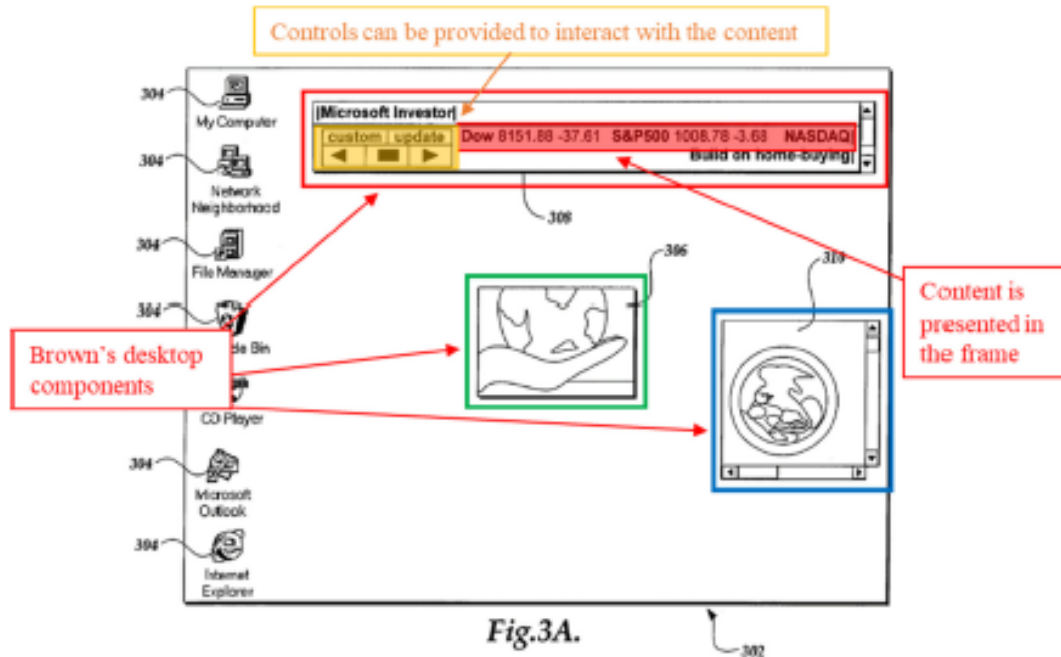
³ The ’083 patent even describes that “[t]erms not specifically defined ... shall be understood to have their broadest, generally accepted meaning.” SAMSUNG-1001, 8:16-22.

55. Using its narrow interpretation, the Patent Owner alleges that Brown’s “resizable” characteristic is a “frame characteristic,” not a “control characteristic.” POR, 24-26. DoDots attempts to support its flawed argument by referring to a different DoDots patent (DODOTS-2015, 36:12-15, FIG. 28B)⁴ while ignoring conflicting disclosure within the ’083 patent, which clearly describes “resize” as a control. SAMSUNG-1001, 8:49-53 (“controls such as ... resize”); 9:61-10:4 (“base control (close, resize)”). Indeed, the ’083 patent describes the decision to render resize controls as a control characteristic of its NIM template. *Id.*, 10:1-4 (“The Dot Definition may contain base control (close, resize) overrides such that the controls are not rendered.”). Because Brown’s “resizable” characteristic defines whether or not a resize control is rendered for a desktop component, it aligns precisely with the ’083 patent’s description of control characteristics. In contrast, the ’083 patent itself does not describe “resizable” as being “a frame characteristic.” SAMSUNG-1001, 7:19-23; 10:46-57. Thus, a POSITA would

⁴ Although this patent supports the idea that “resizable” is an example “frame characteristic,” it does not state that “resizable” cannot also be a “control characteristic” of a NIM, for example, changing the size of the control area by resizing the NIM. DODOTS-2015, 36:12-15, FIG. 28B.

have understood Brown's "resizable" characteristic to be a "control characteristic" of its desktop components.

56. Various other examples of controls defined within Brown's HTML instructions are also control characteristics consistent with the '083 patent. Petition, 25-29, 42-46; SAMSUNG-1005, 2:41-43, 4:20-24, 10:34-39, 13:22-29, 13:33-34, FIG. 3A. For example, the '083 patent describes that the "Dot framework supports any Active-X based control" and that "a Dot developer may embed an active-X control in an HTML page rendered in the Web Conduit control." SAMSUNG-1001, 16:47-52, 16:61-65, 17:3-5. Brown describes the use of Active-X controls in the same manner as the '083 Patent. In fact, the description of Active-X in the '083 patent describes a nearly identical example to what is depicted in Brown. SAMSUNG-1001, 16:61-67 (describing an "Active-X based control" of a "stock ticker display"); SAMSUNG-1005, 2:41-43, 4:20-24, 10:34-39, 13:22-29, 13:33-34, FIG. 3A (depicting a "Microsoft Investor" desktop component for viewing stocks); Petition, 23-29, 42-46. Indeed, the '083 patent describes its "minimum control" as being a "Web Conduit which is the Internet data rendering portion of the frame." SAMSUNG-1001, 9:61-65; 11:5-10. Brown's HTML instructions clearly define the "Internet data rendering portion of the frame" and Brown's rendering of Active-X controls aligns directly with the '083 patent's use of its Web Conduit to render the same.



SAMSUNG-1005, FIG. 3A (color added).

57. Finally, characteristics of the scroll bar controls in Brown's desktop components are defined by Brown's HTML instructions. Petition, 42-43; SAMSUNG-1005, 7:49-65, 9:13-27, 11:43-12:43, 13:22-44. Whether these controls are present and the size of the scroll element are defined by the frame size specified in Brown's HTML instructions. Although the characteristics of these controls are indirectly defined by the frame size, the '083 patent does not exclude that type of indirect definition. SAMSUNG-1001, 15:36-62. In fact, the '083 patent explicitly includes it, explaining that the title bar control "has a fixed height and width *that is a function of the frame's width.*" SAMSUNG-1001, 15:36-62. Because characteristics of Brown's scroll bars are functions of a frame's width and height, Brown's definition of the frame size in its HTML instructions defines

control characteristics in a manner similar to how the '083 patent defines characteristics of its title bar control.

Brown's HTML instructions are data structures

58. The Patent Owner alleges that a data structure is “way of organizing and storing data in a computer so that it can be accessed and used efficiently,” and further that HTML is not a data structure. POR, 33-36. This position is impossible to reconcile with the '083 patent, which recites “dHTML” (“dynamic” HTML) as an example language that can define a NIM template. SAMSUNG-1001, 8:36-45. This position is also impossible to reconcile with the practicalities of a client-server system, such as a Web-based system. Structured data must be transmitted from one computer to another, e.g., from the server to a client. For this to happen over an Internet connection, the data structure must be serialized into a computer-readable format. HTML and XML are popular examples of such formats. Computers cannot read each other's minds and telepathically zap an in-memory data structure from one machine to another over a distance of 1,000 miles. If nothing else, the two computers might have incompatible ways of storing binary data in memory. Moreover, the Patent Owner's own exhibits corroborate that HTML is an acceptable language in which a NIM template can be defined. DODOTS-2025, 2; DODOTS-2033, 42.

George and John Kembel, twin brothers and graduates of the same Stanford University product design program, founded Sunnyvale start-up DoDots Inc. to give Web sites better packaging.

In their analogy, surfing the Web is like trolling the supermarket aisles for lettuce, croutons and dressing. They aim to combine everything into a single bag of mixed salad.



The dot icons they offer are like those bags, serving up bite-size applications written with the widely used HTML code. Companies use the dots to package their content and services, and then send them out to users as miniature versions of their Web pages.

DODOTS-2025, 2 (annotated).

59. As discussed in the Petition, Brown's HTML instructions are "data structures," at least because (1) the Patent Owner has availed themselves of HTML as a suitable NIM template format, and (2) this is consistent with the understanding of a POSITA. Petition, 26; SAMSUNG-1001, 8:36-45; SAMSUNG-1027, 83:19-84:18; DODOTS-2025, 2; DODOTS-2033, 42.

60. In particular, a POSITA would understand that "data structure" is a genus term that encompasses many different types of data formats, to include the HTML Document Object Model (DOM) – a hierarchical structure. Indeed, Microsoft's Computer Dictionary defines a "data structure" broadly, and says that a data structure is "[a]n organizational scheme, such as a record or array, that can be applied to data to facilitate interpreting the data or performing operations on it." SAMSUNG-1031. As described in the petition, Brown's HTML instructions (an

organizational scheme that describes a desktop component) are interpreted by a processor which perform certain operations as a result (e.g., parsing a URL within the instructions and retrieving content located at the URL). Petition, 37-38, 39-41. Microsoft also describes the DOM as a structure in other publications, for example, *Inside Dynamic HTML* (referenced in Brown) which dedicates five chapters to HTML document “structure” SAMSUNG-1032, 3, 82-92. Other inventors, besides Microsoft, also describe the hierarchical structure of HTML. SAMSUNG-1033, Cover, 1:15-40, 3:54-4:6; SAMSUNG-1034, Cover, 2:47-56, 3:14-28, 4:32-41; SAMSUNG-1035, Cover, 2:27-48, 6:52-65, 12:17-39; SAMSUNG-1040, 20 (under a heading of “document structure”, the 1995 HTML standard document explains that “An HTML document is a tree of elements”; a POSITA would recognize that a tree is a fundamental data structure in computer science).

B. Brown’s desktop components render obvious a NIM, and have fully configurable frames

61. The Patent Owner alleges that none of the desktop components of Brown include “a fully configurable frame” because the “frame shape and content [cannot] be wholly defined by the Dot developer” (“[t]his is what it means to be a fully configurable frame.”). POR, 36-37. But the ’083 patent does not support such a narrow interpretation.

62. In support of this argument, Patent Owner cites to several areas of the ’083 patent, none of which specify that a NIM frame must include a

configurable control defined by a “developer.” SAMSUNG-1001, 10:55-57, 11:11-15, 65-67; 12:20-45; 16:61-65. At best, these passages suggest that, in some embodiments, NIMs include controls that are designed by a developer, but that such a feature is not a requirement. SAMSUNG-1001, 10:56 (“may be”), 11:11-15 (“a manner that enables developer control of the user interface”), 12:24-25 (“Developers may repurpose the Internet content that they have developed and used in web pages to form Dots”), 16:61-62 (“The Web Conduit control is just one of many controls that may be included and positioned in a Dot’s control space 126”). Additionally, none of these passages are directly tied to what it means to be a “fully configurable frame,” much less offer a definition of “fully configurable frame” or disavow coverage of NIMs where the frame shape and content is not wholly defined by the Dot developer. *Id.* In fact, the Patent Owner’s exhibits provide numerous examples of NIMs that do not include a configurable control added by a developer. SAMSUNG-1001, Appendix A, 3 (depicting “zero or more <CONTROL> tags” in an “exemplary definition of an XML structure used for Dots”); DODOTS-2021, 15, citing DODOTS-2028, Technical Overview at 1.

<MENU>

Contains zero or more <ITEM> tags.

<ITEM>

TITLE="string"

TOOLTIP="string"

ICON="URL"

ID="string"

Must be unique.

<ACTION>

RECIPIENT="address"

MESSAGE="string"

<CONTROL_LAYOUT>

Contains zero or more <CONTROL> tags.

WIDTH="integer"

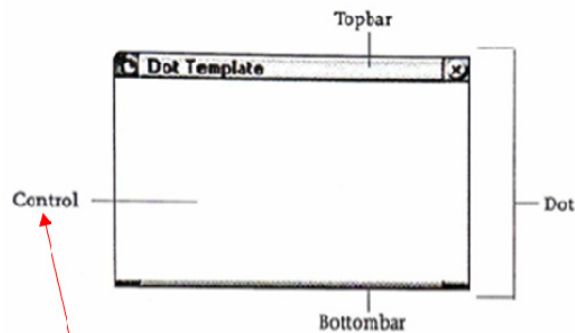
Divides control space into this many evenly spaced columns. Default is 1.

SAMSUNG-1001, Appendix A, 3.

DoDots Technical Overview

THE DOT™ DEFINES THE PACKAGE FOR CONTENT AND APPLICATIONS

Dots™ are packaged pieces of branded Internet content and applications. The Dot descriptions are constructed of three primary elements: the Topbar, the Bottombar, and the Web Control. Groups of Dots, called DotPacks™, can work together, using Dot messaging, to give users a full application experience. Through the DevDot™ and Dot messaging, developers have access to all the elements of Dots and DotPacks, and can create branded, smart packages targeted to specific customers.



The "web control" is the only control present

DODOTS-2021, 15, citing DODOTS-2028, Technical Overview at 1.

63. The Patent Owner’s construction of NIM merely requires “a fully configurable frame, with one or more controls.” Petition, 3-4. As explained in the Petition, Brown places no restriction on the frames of its desktop components and, thus, Brown discloses fully configurable frames. Petition, 23-25. And, as discussed above, Brown’s frames have one or more controls. Petition, 25-29, 42-46; *see above*, §VI.A. Moreover, Brown does not place any restrictions on the HTML included in its desktop components and, without restrictions, a POSITA would have understood or found obvious that standard controls defined by HTML are available for addition in Brown’s desktop components. SAMSUNG-1005, 7:9-47; 8:10-16; 10:9-15; 12:44-13:21.

C. Each of Brown’s desktop components includes “a content reference”

64. The Patent Owner alleges that Brown’s “CDF subscription” is not “internet content,” and therefore, not a “content reference.” POR, 41-42. This argument is deficient for multiple reasons. *Id.*

The ’083 patent admits XML is internet content, and CDF files are coded in XML

65. The ’083 patent admits that XML is “standard internet content,” and Dr. Selker’s testimony confirms the same. SAMSUNG-1001, 11:1-4, 14:29-37 (“The definition is content”), 21:18-20; SAMSUNG-1027, 107:19-25. Moreover, the Patent Owner’s own exhibits corroborate that XML was understood to be internet “content” around the time of the critical date. DODOTS-2033, 12.



DODOTS-2033, 12.

66. Microsoft's CDF is based on XML, as corroborated by Wecker (another Microsoft reference describing the use of CDF). SAMSUNG-1006, 10:57-60 ("The CDF standard is based on the Extensible Markup Language (XML)"). Accordingly, the URL depicted in the cited portion of the Petition would lead to an XML file. Petition, 33. The POR does not explain why an XML file, in the context of Brown's CDF, is *not* internet content, when considering the description of XML as being internet content in the '083 patent. POR, 41-42. The

claim simply requires “a content reference that comprises a network location at which content for the first networked information monitor is accessible.” Brown’s CDF file is certainly for Brown’s desktop component and, as discussed above, is content. The Patent Owner’s assertion that CDF files themselves cannot be internet content is at odds with the ’083 patent itself. POR, 41-42; SAMSUNG-1001, 11:1-4, 21:18-20; SAMSUNG-1027, 107:19-25; SAMSUNG-1006, 10:57-60; Petition, 33.

```
14. <IFRAME id=8 MARGINWIDTH=0
    MARGINHEIGHT=0 name="DeskMovrW" src=
    "http://www.microsoft.com/ie/ie40/gallery/ticker.htm"
15. resizable="XY"
16. subscribed_url="http://www.microsoft.com/ie/ie40/
    gallery/cdf/g_stock.cdf"
17. frameborder=0 style="BACKGROUND: transparent;
    position:absolute; LEFT:178; TOP:26; WIDTH:516;
    HEIGHT:57; Z-INDEX:1016"></IFRAME
```

A URL corresponding to a CDF file.

Petition, 33 (annotated).

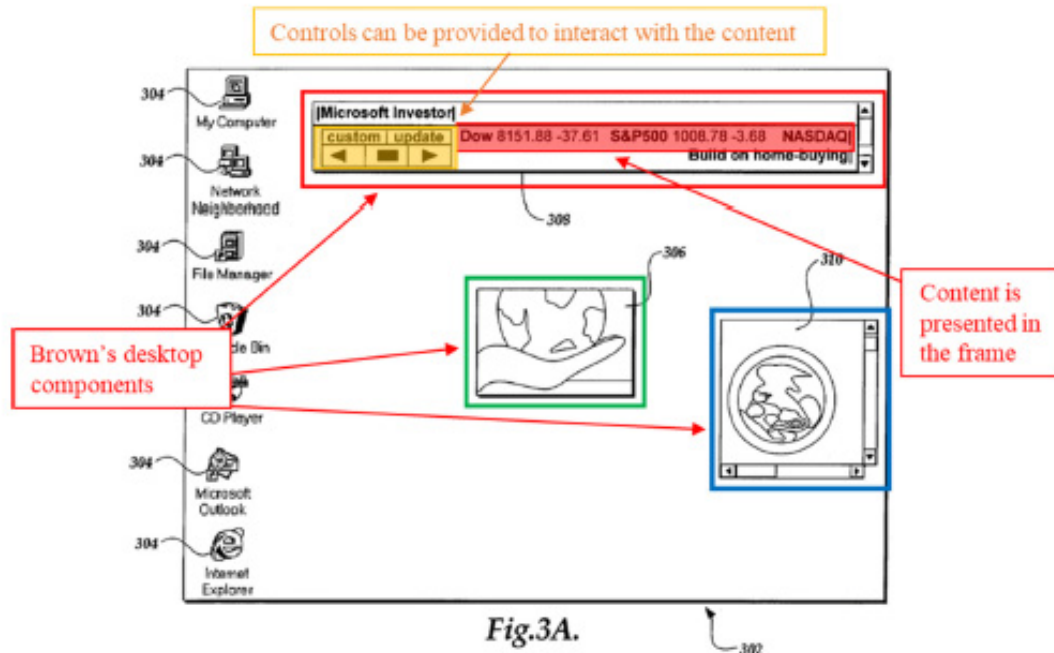
This allegation is undermined by Dr. Selker’s lack of experience with CDF

67. The Patent Owner’s analysis that CDF files are allegedly not internet content relies on the testimony of Dr. Selker. POR, 41-42; DODOTS-2010, ¶¶119-120. However, as Dr. Selker admits, he has no previous experience with CDF, and was not aware that CDF files were written in XML (believing them to be a “scripting language”). SAMSUNG-1027, 110:21-111:23. Accordingly, Dr.

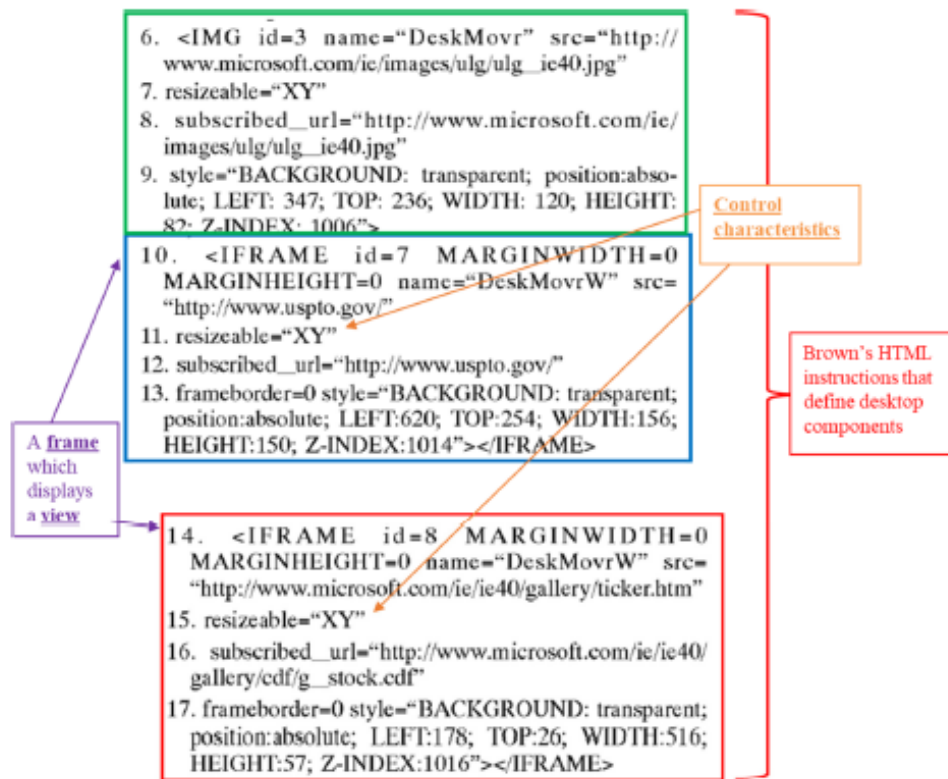
Selker's testimony with respect to CDF should be given little weight. POR, 41-42; DODOTS-2010, ¶¶119-120.

Patent Owner ignores other examples of content references in Brown

68. The Patent Owner implicitly alleges that Brown's CDF file is the only source of internet content in the Petition, as it only addresses this one example in the POR, 41-42. Although Brown's CDF subscription was relied upon in the Petition as an illustrative example, the Petition clearly articulates that (1) according to Dr. Schmidt, "a POSITA would have understood or found obvious that a Uniform Resource Locator ('URL') [is a] 'network location,'" and that content is available at these network locations, and (2) Brown depicts multiple desktop components, each with its own content reference. Petition, 23-25, 32-33; SAMSUNG-1003, ¶¶23, 52-53, 64-67. DoDots offers no explanation of why the other desktop components of Brown, as presented in the Petition, do not also include content references (e.g., <http://www.uspto.gov/>). POR, 41-42. Indeed, even Dr. Selker recognizes that Brown's FIG. 3A displays "three kinds of active desktop items" where "content is retrieved from a URL." SAMSUNG-1027, 126:5-127:19, 130:17-21.



Petition, 25.



Petition, 29.

D. Each of Brown’s HTML instructions have “instructions configured to cause the first/second NIM to request content”

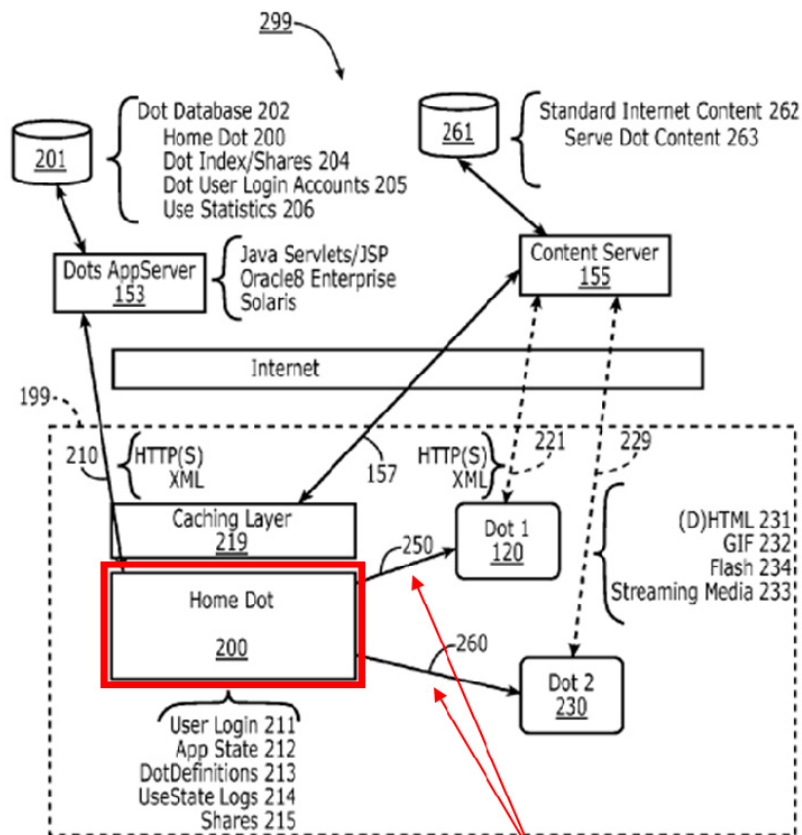
69. The Patent Owner alleges that “each NIM must be able to request content without requiring any other NIM to also do so,” and that Brown’s HTML instructions fail because “[a]ll the alleged NIMs are part of the same web page.”⁵ POR, 43-45.

70. As an initial matter, the Patent Owner’s allegations that “each NIM can run independently of any other NIM” and that “each NIM must be able to request content without requiring any other NIM to also do so” are incorrect. POR, 43. Although the Patent Owner cites to various areas of the ’083 patent, they neglect to mention the “Application Media Viewer” (or “Home Dot”) which is “an installed client application which renders the [NIMs] as well as provides additional functionality to the user experience” – an example Home Dot is illustrated below. SAMSUNG-1001, 5:58-6:5 (describing “[t]he present invention ...”), 8:52-53, 9:9-46, 20:25-21:42 (describing that “The Home Dot 119 is effectively a client application that contains the procedures or calls to procedures for rendering and managing Dots on the client computer,” and “the connection is indirect” between “Dots 120, 230” and “content server 155,” and “content passes first through the

⁵ The Patent Owner erroneously argues that claim 2 recites these features.

SAMSUNG-1001, Claim 2.

Home Dot application 200”). Indeed, the ’083 patent states that “[t]he Home Dot is capable of executing and displaying multiple Dots simultaneously,” confirming that simultaneous display of multiple NIMs is encompassed in the claims. *Id.* 20:49-50.



Instantiation of NIMs
and retrieval of content
is performed by the
“Home Dot”

SAMSUNG-1001, FIG. 6 (annotated).

71. Next, the Patent Owner argues that “when Brown’s HTML document is evaluated ... the rendering software displays the entire HTML layer of the

composite desktop with all alleged NIMs” and that, because “the alleged NIMs of Brown are not separate NIMs that operate independently,” they do not disclose this claim feature. POR, 44-45 (emphasis omitted). This argument simply repackages the Patent Owner’s assertion that NIMs must be completely separate and applies it to the prior art without explaining how HTML instructions including a URL, what is identified in the Petition, are not “instructions configured to cause the first/second NIM to request content” as that would have been interpreted by a POSITA. Petition, 37-38.

72. Moreover, as established in the Petition, Brown’s composite desktop is composed of a plurality of “HTML instructions,” each set of instructions defining its own separate and unique “desktop component,” and each component is visually distinct from all other components. Petition 23-29. Users can add or subtract individual desktop components (and their associated HTML instructions) at will from the composite desktop (and desktop.htm file). *Id.*; SAMSUNG-1005, 13:45-14:6. This level of separation satisfies the limitation, which simply requires “instructions” for a “first networked information monitor.” Petition, 37-38. There is no clear disavowal or redefinition of the plain and ordinary meaning of this limitation in the ’083 Patent, and the Patent Owner’s attempt to insert “independently” or “separately” into the claim language is unsupported. POR, 43-44; see generally SAMSUNG-1001.

E. Brown and Brown-Wecker discloses and renders obvious “one or more processors configured to access or execute the ... NIM template.”

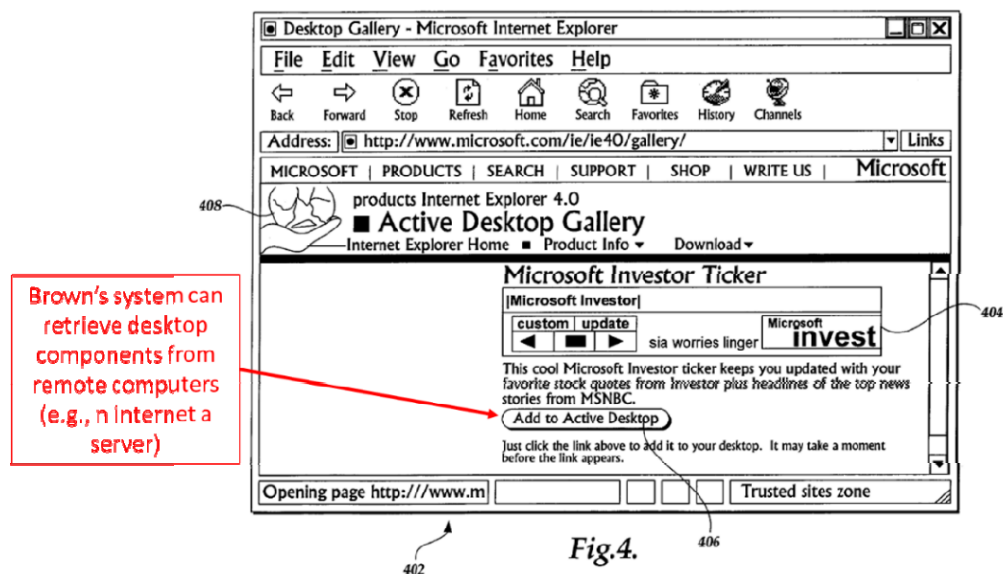
73. The Patent Owner’s argument for this limitation depends upon the assumption that NIMs are “accessed and/or executed independently,” which as explained above, is incorrect. POR, 45-46; *see above* §VI.D. On the contrary, each NIM is executed by the Home Dot, an application presumably executed by a processor (much in the same way Brown’s “shell,” executed by a processor, renders each and every desktop component from that’s components HTML instructions). Petition, 39-41; *see above* §VI.D. The Patent Owner’s argument depends entirely on this assumption and does not substantively address the analysis in the Petition. POR, 45-46.

F. Brown/Brown-Wecker render claims 4, 5, 6, 7, 14, and 15 obvious

74. With respect to claims 4 and 5, the Patent Owner argues that Brown “does not disclose separate graphic user interfaces for the first and second alleged NIMs,” but rather “one graphical user interface.” POR, 48-49. However, the POR admits that “desktop components 306, 308, 310 appear visually separate,” and the same can be seen from Brown’s FIG. 3A. POR, 48-49; Petition, 24-25; SAMSUNG-1027, 126:9-23 (Dr. Selker recognizing the composite desktop in Brown’s FIG. 3A includes “three kinds of active desktop items”). Accordingly, the Patent Owner’s argument that “[a] POSITA does not understand [desktop components] to be separate/discrete graphic user interfaces” is conclusory, and

even contradicted by its own expert. POR, 48-49. Dr. Selker's declaration simply repeats the analysis of the POR. DODOTS-2010, ¶179.

75. With respect to claims 6-7 and 14-15, which are directed to transmitting a request for a NIM and storing the NIM, respectively, the Patent Owner first argues that Brown fails to disclose these claims because "Brown fails to provide any details of what is transmitted to a client computer running Brown's composite desktop when the shell user interface control is selected." POR, 49-50. Brown makes clear in its disclosure, as cited in the Petition, that its desktop components can be retrieved from "remote computers," which, as noted in the petition, supports its combination with Wecker. Petition, 15-16. An example of Brown retrieving a component from a remote computer (e.g., a server on the internet) based on a user request is provided below. SAMSUNG-1005, FIG. 4.



SAMSUNG-1005, FIG. 4.

76. Second, the Patent Owner argues that “Wecker does not resolve” the alleged deficiencies of Brown because (1) “the Petition points to no evidence that Wecker’s scripts/templates, are transmitted in response to a user request,” (2) “Wecker’s scripts/templates are not NIM templates as construed nor has the Petitioner alleged that they are,” and (3) “Wecker provides no details regarding what would be contained in any scripts/templates that are transmitted from a server and whether what is transmitted and stored is a NIM template as construed.” POR, 50-51.

77. With respect to (2) and (3), the Petition never alleges that Wecker’s “scripts” are NIM templates and makes clear that HTML instructions for Brown’s desktop components are the claimed NIM template. POR, 50-51; Petition, 19-32.

78. With respect to (1), Wecker makes clear that “the users of desktop 16 can preferably subscribe to channels in a standard fashion which provide the user with certain channel content which can be browsed off-line or on-line” – sending a “user request” for a template that defines the channel’s content (via a “subscription”). Petition, 51-52 (emphasis added). As explained in the Petition (and above), a POSITA would have viewed the disclosure of Wecker in the context of Brown and found it obvious to maintain HTML instructions for Brown’s desktop components on a server and download them upon user request based on Wecker’s description of server-based templates and channel subscriptions, as well

as the well-known benefits of using server-based templates that would have been part of a POSITA's general knowledge. Petition, 13-19, 51-54.

79. Finally, the Patent Owner alleges that “[o]ther than through hindsight ... a POSITA would not understand that the alleged NIM template is being transmitted from a server in response to a user requesting the alleged NIM.” POR, 50. This argument attacks the motivation for the combination of Brown and Wecker and is deficient for the same reasons discussed above. *See above*, §V.

VII. A POSITA WOULD HAVE COMBINED SHIMADA AND BUCHHOLZ

80. The Petition alleged that the combination of Shimada and Buchholz would involve “implementing the ‘screen configuration data’ of Shimada into the ‘subscriber units’ of Buchholz.” Petition, 62. As detailed in the Petition and further explained below, a POSITA would have been motivated to make such a combination. *Id.*; SAMSUNG-1003, ¶¶76-77.

A. Patent Owner’s arguments concerning Shimada’s “expanding device” are irrelevant as the combination of Shimada-Buchholz does not rely on this feature, and does not need it to function

81. The Patent Owner presents multiple arguments in the POR regarding Shimada’s “expanding device,”⁶ namely that “Buchholz ... does not have [an

⁶ Note that the conventional terms in the 1990s for what Shimada discloses were “clipping proxy server” and “transcoding proxy server”. Prior to the 2007

expanding] device positioned between the server and client,” that Shimada’s templates are disparate from Buchholz’s because Shimada’s are “filled in by the screen configuration expanding device to create screen configuration data,” and that Shimada’s system is disparate because it uses the expanding device as part of “numerous back-and-forth communications that must occur during an eleven-step process.” POR, 99-102.

82. The Patent Owner appears to reverse the roles of the two references. POR, 99-102. It appears the Patent Owner is arguing that the Petition primarily relies on the structure of Shimada to implement the techniques of Buchholz, when in fact, it is the opposite. Petition, 62. Shimada’s techniques (“screen configuration data” – a collection of HTML templates) are implemented in the structure of Buchholz’s system (“subscriber units” configured to display HTML-like data). *Id.* Shimada’s “expanding device” is not part of the combination, nor is any hardware component of Shimada necessarily. *Id.* Indeed, as described in the Petition, Buchholz’s subscriber units are already configured to store, parse, and display collections of HTML-like templates (using “pack cache 226,”

introduction of the iPhone, the typical mobile device was ill-suited to rendering a conventional web page and, therefore, schemes were developed to interpose a translator that would adapt web content before sending it to the mobile device.

“conventional display 216,” and “processing system 206,” respectively). Petition, 63-65, 82-84. Although Shimada’s system is more technically involved, a POSITA looking to implement the templates of Shimada in a more capable Buchholz device would have recognized these complex features could be discarded.

B. Patent Owner’s alleged disparity between “HTML” templates and templates “similar” to HTML is unsupported on the record

83. The Patent Owner alleges that Buchholz, when discussing something “similar” to HTML, proposes “some custom variant of HTML for a mobile device” that would be incompatible with HTML techniques. POR, 61-62. The POR does not elaborate on what this “custom variant” could be, and neither does Dr. Selker’s testimony. POR, 61-62; DODOTS-2010, ¶¶231-232. They also do not explain why, if this “custom variant” is so dissimilar to HTML, Buchholz would specifically say it templates are similar to HTML. *Id.* As Patent Owner admits, “Buchholz is completely silent regarding any details of its templates.”⁷ POR, 64. So how then did the Patent Owner, or Dr. Selker, conclude that Buchholz is using “some custom variant of HTML” that is so dissimilar that Buchholz would be completely incompatible with the HTML of Shimada? POR, 61-62; DODOTS-

⁷ Ironically, this further supports the motivation for a POSITA to seek out references that describe HTML-like templates (i.e., Shimada), as a POSITA would necessarily need to turn to other references to glean these implementation details.

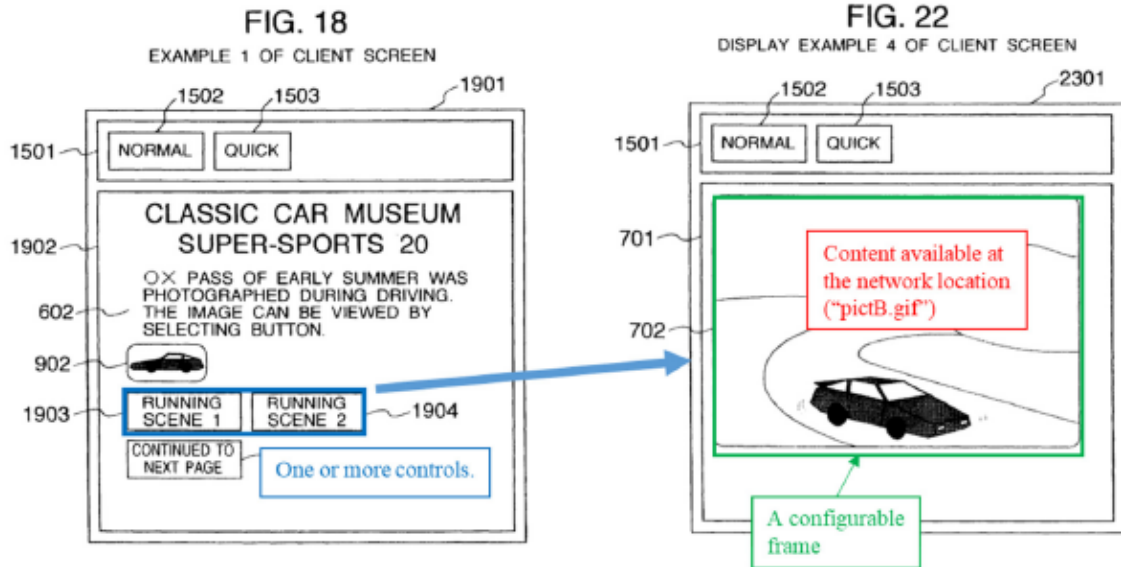
2010, ¶¶231-232. There is no support on the record for such a conclusion, and this argument should be rejected. *Id.*

VIII. SHIMADA-BUCHHOLZ RENDERS THE CLAIMS OBVIOUS

A. Shimada-Buchholz renders obvious a NIM template

Shimada's screen configuration data includes view characteristics

84. The Patent Owner argues that “[t]he Petition provides no discussion of what a view characteristic means to a POSITA in the context of the ’083 patent, or Shimada-Buchholz.” POR, 66. However, as cited by the POR, the Petition describes that “screen configuration data also specifies the content frame (‘NIM frame [and] view’). Petition, 71-72; POR, 66. As can be seen from Shimada’s figures on the previous page of the Petition, reproduced below, the frame of screen configuration data bounds a “view.” Petition, 77. The Patent Owner appears to be arguing that the feature “view characteristics” takes on special meaning in the context of the ’083 patent. POR, 66-68. In actuality, details of “view characteristics” do not appear in the ’083 patent, which simply describes throughout that the content of a NIM may be “viewed.” SAMSUNG-1001, 7:63-66, 8:32, 11:22-23, 18:51-55. Accordingly, Shimada-Buchholz satisfies this feature simply because its content can be observed by a user through screen configuration data (“viewed”) based on the characteristics defined in its templates. *Id.*; Petition, 71-72.

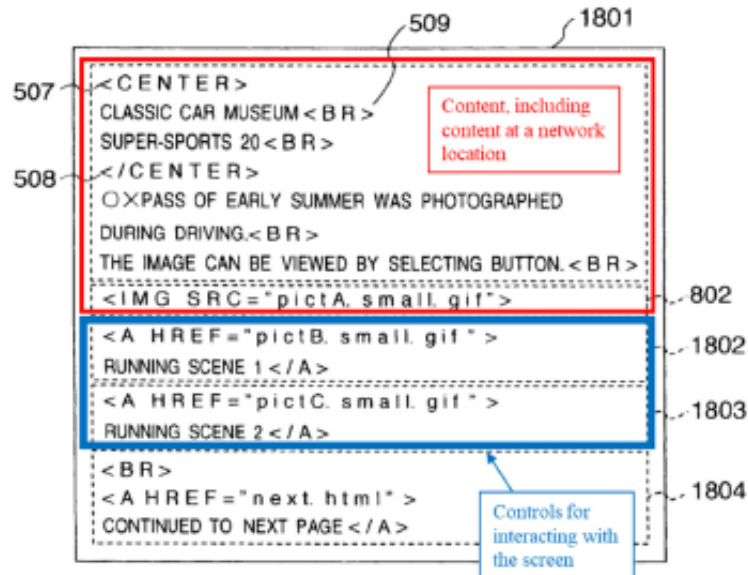


SAMSUNG-1008, FIGS. 18 and 22 (annotated).

Shimada's screen configuration data includes control characteristics

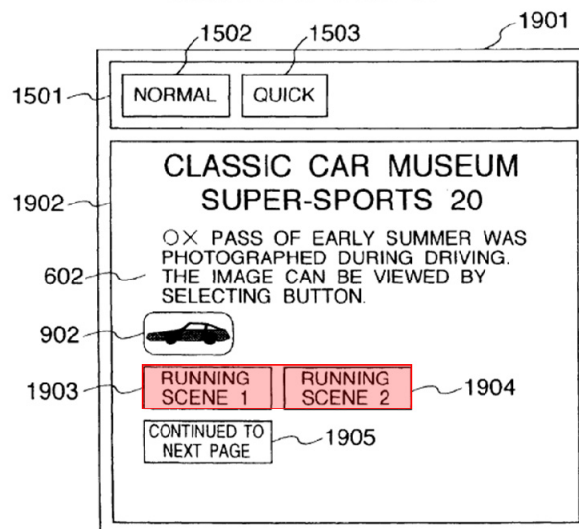
85. The Patent Owner alleges that "[t]he Petition does not identify anything in the Shimada/Buchholz specifications/figures as being a 'control' characteristic," yet the POR cites the controls the Petition identified in FIG. 17 of Shimada – reproduced below (numerals 1802 and 1803, which define buttons 1903 and 1904 in FIG. 18). POR, 68-69. The issue the Patent Owner appears to take is that the Petition allegedly does not identify the "characteristic" of these controls. POR, 69. The distinction the Patent Owner makes is insignificant, and does not change the fact that Shimada's screen configuration data includes controls that are presented to a user (manifesting "characteristics"). POR, 68-69; Petition, 71-73.

FIG. 17
EXAMPLE OF CONVERTED SCREEN CONFIGURATION DATA
(QUICK MODE)



SAMSUNG-1008, FIG. 17 (annotated).

FIG. 18
EXAMPLE 1 OF CLIENT SCREEN



Buttons 1903 and 1904 are defined by numerals 1802 and 1803 in FIG. 17.

SAMSUNG-1008, FIG. 18 (annotated and color added).

Shimada's HTML is a "data structure"

86. The Patent Owner alleges that "HTML (and certainly HTML fragments) are not data structures for the same reasons set forth in Section V.D.1.d regarding Brown." POR, 70-71. This argument is deficient for the same reasons discussed above. *See above*, §VI.A.2.

B. Shimada-Buchholz renders obvious a NIM

87. The Patent Owner argues that Shimada's screen configuration data is not "fully configurable" because "Shimada's screens all have a similar and specific layout" and that this "indicat[es] that they are not fully configurable frames." POR, 74. This is a circular argument with no supporting analysis, and Dr. Selker's testimony simply repeats the POR. POR, 74; DODOTS-2010, ¶277. For this reason, the Patent Owner's argument should be given little weight. *Id.* Also, as discussed above, the Patent Owner's implicit construction of this feature requiring that a developer "wholly define" the frame should be rejected. *See above*, §VI.B.

C. Shimada-Buchholz discloses "storing a plurality of NIM templates on a client device"

88. The Patent Owner argues that "Buchholz [disclosing] storing a pack of templates⁸ at the client device does not teach a POSITA to store multiple alleged

⁸ Notably, John Kembel – one of the named inventors of the '083 patent – agrees that a "bundle of templates" (what Buchholz describes) accurately describes a

templates of Shimada,” simply because “[a] POSITA would not combine Buchholz/Shimada.”⁹ POR, 76-77; Petition, 63-65. A POSITA would have combined Shimada and Buchholz for the reasons discussed above, and in the Petition. Petition, 62; *see above*, §VII. DoDots’ argument here turns entirely on their combination arguments and fails with them. POR, 76-77.

D. Shimada-Buchholz renders obvious dependent claims 4 and 12

89. The Patent Owner argues that Shimada-Buchholz fails to render obvious a second NIM template because Buchholz discloses “[t]he templates of the pack can be related or unrelated in form and functionality, depending upon the use for which the deck and template data are intended.” POR, 78-79 (emphasis in original). The Patent Owner has simply emphasized the portion of the reference that suits their argument and ignored portions that don’t (passing over “related”), without providing any compelling analysis of why the combination would be so limited. *Id.* Dr. Selker’s analysis simply repeats that of the POR. DODOTS-2010, ¶¶287-290.

“collection of Dots” (NIMs). SAMSUNG-1028, 50:19-51:10.

⁹ The Patent Owner admits that “Buchholz discloses a different type of system where storing multiple templates makes sense.” POR, 77.

90. The Patent Owner argues that the Shimada-Buchholz combination does not render obvious “a second content reference” and “a second network location” because the “[t]he Petition does not identify what the second content reference is or what the second network location is.” POR, 79. As described in the Petition, and cited by the POR, to “provide content distinct from the first template, the second template would need to reference a ‘second network location, which is different from the [first] network location.’” POR, 79; Petition, 88. Indeed, Shimada describes “world wide networks and access to world-wide information,” which clearly indicates that its envisioned content is not from a single source. Petition, 74-75. There are also multiple examples of content in Buchholz, which describes “up-to-date information on stocks, sports, [and] news,” all conceivably retrieved from different network locations. SAMSUNG-1009, 1:13-19. Accordingly, the Patent Owner’s requirement that the Petition identify a specific “second content reference” and “network” location overlooks the petition’s arguments for the references’ total disclosed “content reference[s]” and “network location[s].”

IX. PATENT OWNER’S PROPOSED CONSTRUCTION FOR “EXECUTE THE TEMPLATE” IS INCORRECT

91. The Patent Owner alleges that the phrase “execute the template” should be construed to mean “use/using the information from the NIM template to instantiate a NIM with a markup language in connection with specified

operations.” POR, 9; DODOTS-2010, ¶¶42-43. However, Dr. Selker’s declaration provides no indication of supporting disclosure, and his testimony simply described retrieving a template from a database DODOTS-2010, ¶¶42-43; SAMSUNG-1027, 74:5-77:5; SAMSUNG-1001, 33:6-11. To that end, “execute the template” should be given its plain and ordinary meaning, with the understanding that a NIM template cannot be executable code. *Id.*

APPENDIX A

Resume

of [Philip Greenspun](#); updated October 2021

Summary:

- Business experience: started six companies and buried three. As CEO, grew an open-source enterprise software company to \$20 million annual revenue in two years with \$10,000 in capital. Served as corporate board member for venture capital-backed MIT spinoff companies.
- Software product development experience: 20 years. Same email address since 1976: philg@mit.edu. Developing open source software since 1982. List of engineering projects completed is available from <http://philip.greenspun.com/personal/resume-list>
- Pedagogy experience: Co-developed "[Software Engineering for Internet Applications](#)" with Hal Abelson at MIT; it has been a successful course at MIT and is being used by computer science departments at 10 other universities around the world. Re-developed 16.687 for the MIT Department of Aeronautics and Astronautics. Co-developed the RDBMS materials for a Harvard Medical School course on computational medicine.
- Non-profit experience: Started a 501c3 foundation in December 1998. The Foundation operated a prize program for high-school age Web developers and a one-year post-baccalaureate program in computer science; the annual budget was approximately \$1.5 million.
- Political experience: Testified before the U.S. Senate Commerce Committee and the Subcommittee on Patents, Copyrights and Trademarks of the Senate Judiciary Committee
- Writing experience: four computer science textbooks, one book about North America and its people, numerous journal and magazine articles.
- Photography experience: started [photo.net](#) in 1993, an online community for photographers. Work published in dozens of print magazines and books and used for advertising (see [separate photo resume](#)).
- Aviation experience: holder of Airline Transport Pilot certificate with multi-engine, single-engine seaplane, and helicopter ratings; holder of flight instructor certificate with instrument and helicopter ratings; have flown single-engine aircraft to Alaska (twice) and just about everywhere else in North America and the Caribbean; have flown three coast-to-coast trips in Robinson helicopters; flew the Canadair Regional Jet out of JFK for Delta Airlines
- Education: three MIT degrees (including a Ph.D., but you can't call me "Dr. Greenspun" because my brother is a real doctor).

Employment Experience

2021-present: Florida Atlantic University

Teach Information Security at this 31,000-student branch of the State University System of Florida.

2018-present: Harvard University

Develop curricular materials for medical students and post-doc researchers learning how to query a 12 TB insurance claims database. Assist student groups with their analytics projects in SQL and R.

1991-present: Massachusetts Institute of Technology

Teach and expand the MIT computer science curriculum, conduct research, and supervise student research. Teach the most popular course in the MIT Department of Aeronautics and Astronautics,

16.687 (via Zoom for 2021, with over 500 students)

2013-present: Fifth Chance Media LLC

I develop software, write, photograph, and create videos for this publishing company whose current products are listed at fifthchance.com. Through Fifth Chance Media LLC I also work as a [software expert witness](#), especially in cases regarding [Internet software patents](#) (e.g., for Amazon, Ford, IBM, Microsoft, and the U.S. Department of Justice). I have also served as an [aviation expert witness](#), testifying in front of a Federal Court jury, and as a [relational database expert witness](#).

1993-2000; 2006-2007: photo.net

Started, programmed, financed, and managed this online learning community as a personal hobby. Spun it off in 2000 to a team of entrepreneurs who attempted to make it a profitable business. Took it back over in mid-2006 to clean up the content, software, and balance sheet (crippled with debt). With 600,000 registered users and 60 million page views per month, sold the company in April 2007 to NameMedia.

1997 through March 2000: ArsDigita Corporation

Started, financed, and managed this company, which developed an open-source toolkit for building collaborative Internet applications. Grew the company profitably from 5 part-time people to 80 full-timers and revenue of \$20 million per year. Between January and March 2000, negotiated and closed a \$38 million venture capital investment from Greylock and General Atlantic Partners. Handed over the reins to a team of professional managers brought in by the venture capitalists.

February 1988 through August 1990: Isosonics Corporation

Founded company to develop a product that stored digital data with consumer video recorders. Co-designed custom digital signal processor. Developed simulation environment, complete simulator for digital audio recorder (1.4 Mbits/second), microcode compiler on the Symbolics Lisp Machine. Used Lisp tools to develop error correction microcode and refine DSP architecture. Co-designed three phase locked loops. With partners, developed system for auditing television broadcasts nationwide by monitoring commercials and compiling reports for advertisers. We designed a single board that tunes a chosen channel, recognizes tagged advertisements and makes a record for each ad of time of broadcast, number of fields, video quality and color burst presence. Served as president of Isosonics from its inception until its dissolution.

April 1986 through November 1989: ConSolve Incorporated

Co-founded this construction automation company. With partner, developed initial product, obtained financing (from PaineWebber Ventures), hired software development, marketing and support staff, established R&D partnership with Tektronix, obtained government contracts and sold software. Was active participant in all important planning, legal, and management activities. Wrote every line of code in the first system shipped to a customer (Caterpillar).

November 1984 through August 1985: ICAD, Inc.

Co-founded company with three partners. With Patrick O'Keefe, developed Lisp software to automate mechanical engineering. The ICAD System was initially primarily intended for large steel structures, e.g., air-cooled heat exchangers, offshore oil rigs, coal-fired power plants, but has been extended to many general ME problems.

Company went public in January 1995 as Concentra with a market valuation of \$50 million and was subsequently acquired by Oracle Corporation.

June 1983 through November 1984: Symbolics, Inc.

Developed VLSI tools, including automatic layout functions and worked on the system architecture for the Ivory microprocessor (the base of all Symbolics products sold in the late 1980s). Wrote parts of the Symbolics operating system.

June 1982 through June 1983: Hewlett-Packard Labs

Wrote packet-switched network simulation software on Symbolics Lisp Machine. Helped architect, simulate and design prototype of HP's Precision Architecture RISC computer. The prototype took two man-years to complete and ran at VAX 11/780 speed in June 1983. This architecture became the basis of HP's computer product line for 15 years and then became the basis for the 64-bit generation of Intel processors.

1978 to 1982

Paid tuition and living expenses through MIT with employment and contract work for Wang Laboratories, Verbex Corporation, National Aeronautics and Space Administration, and other organizations.

Education (Massachusetts Institute of Technology)

Ph.D. 1999 in electrical engineering and computer science. Thesis title: *Architecture and Implementation of Online Communities*.

S.M. 1993 in electrical engineering and computer science. Thesis title: *Site Controller: A system for computer-aided civil engineering and construction*.

S.B. 1982 in mathematics. Completed coursework for electrical engineering S.B. with emphasis on digital systems and signal processing. Took undergraduate and graduate computer science courses, with an emphasis on algorithms. Took graduate courses in microeconomics and neurophysiology.

Selected Technical Publications

[*Software Engineering for Internet Applications*](#) (online and MIT Press 2006), [*Philip and Alex's Guide to Web Publishing*](#) (Morgan Kaufmann; 1999), [*Database Backed Web Sites*](#) (Ziff Davis Press; 1997), [*Travels with Samantha*](#), a book about North America; [*SITE CONTROLLER: A system for computer-aided civil engineering and construction*](#); various journal articles; dozens of magazine articles. United States patents [5,172,363](#) (digital audio recorder circuit), [5,150,310](#) (location system), and [5,964,298](#) (computer-aided earthmoving system).

Most of my relevant publications are linked from philip.greenspun.com or fifthchance.com.

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