

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of: John Albert Kembel, et al.
U.S. Patent No.: 9,369,545 Attorney Docket No.: 39843-0150IP1
Issue Date: June 14, 2016
Appl. Serial No.: 13/975,227
Filing Date: August 23, 2013
Title: ACCESSING AND DISPLAYING NETWORK CONTENT

DECLARATION OF DR. DOUGLAS C. SCHMIDT

I, Dr. Douglas C. Schmidt, of Nashville, Tennessee, declare that:

QUALIFICATIONS AND BACKGROUND INFORMATION

1. My qualifications can be found in my Curriculum Vitae, which is submitted with this Declaration as Exhibit 1004 and includes a complete list of my education, patents and publications, employment and research history, and professional activities and awards.

2. I am currently tenured as the Cornelius Vanderbilt Professor of Engineering with the Department of Electrical Engineering and Computer Science at Vanderbilt University in Nashville, TN, where I also serve as the Associate Chair of the Computer Science Department. I have been a full-time university professor since 1994, and I was previously a tenured professor at the University of California, Irvine with the Electrical and Computer Engineering department from 2000 to 2003 and Washington University in St. Louis, MO with the Computer Science and Engineering department from 1994 to 2000. In addition, I served as

the Chief Technology Officer for the Software Engineering Institute at Carnegie Mellon University from 2010 to 2012.

3. I hold a Doctor of Philosophy (PhD) degree in Computer Science from the University of California (UC) Irvine in Irvine, CA, which I received in 1994. I also earned a Master's Degree in Computer Science from UC Irvine in 1990, as well as a Bachelor's Degree in Sociology in 1986 and Master's Degree in Sociology in 1984 from the College of William and Mary in Williamsburg, VA. Prior to completing my graduate studies at UC Irvine, I worked with the Urban Information Systems ("URBIS") project at UC Irvine's Public Policy Research organization, where I studied end-user computing interactivity with municipal institutions in 40 cities across the United States. I also worked at the International Center for Information Technology ("ICIT") in Washington, D.C. on projects assessing techniques for improving software productivity for enterprise IT systems.

4. I first started programming in 1983 when I was an undergraduate student taking statistics courses at the College of William and Mary in Williamsburg, VA. While I was an undergraduate and graduate student at William and Mary I programmed with the SPSS and SAS statistical packages and worked as a programmer at the National Center for State Courts during the summer of 1986 as I was completing my Master's degree. From 1985 through 1988 I learned how to program in Pascal, C, C++, Ada, Prolog, and Lisp, both at the College of

William and Mary (where I was a graduate student in the Sociology department) and at UC Irvine (where I was a graduate student in the Information and Computer Science department). During this time period I also learned how to program networked software services and applications using platforms, libraries, and protocols available at the time, such as UNIX Sockets and TCP/IP. During the time I was also an avid user of popular networked applications, such as remote login (rlogin and TELNET), email, and file transfer (FTP), which provided distributed services for accessing remote computer resources and collaborating over local area and wide area networks.

5. During the past 30 years, I have conducted and supervised a significant number of research projects involving a wide range of software-related topics including patterns, optimization techniques, and empirical analyses of object-oriented middleware frameworks for distributed real-time embedded systems and mobile cloud computing applications, including applications backed by relational database management systems. I have published over 640 scholarly articles and technical papers, and I am the co-author or editor of 12 books or book-length manuscripts on various topics, including software architecture, network programming, object-oriented frameworks, distributed and real-time systems, open-source middleware platforms, and mobile cloud computing applications. My work has been cited more than 38,000 times across a comprehensive spectrum of

high-impact publications, and my current h-index score is 90, which indicates the significant impact of my publications on scholarly literature in the field of Computer Science.¹ I have also supervised the research of more than 40 PhD and Master's graduate students to date. In addition to conducting and publishing my own research, I have served on the editorial board of numerous journals, including publications by IEEE and the ACM, and I have been a guest editor of numerous special issue journals based on my research expertise.

6. My research has been funded by a variety of organizations, including both federal agencies, such as DARPA, NSF, NASA, NIH, the U.S. Air Force, and the U.S. Navy, as well as leading companies, such as Northrup Grumman, Raytheon, Lockheed- Martin, Boeing, McDonnell-Douglas, General Electric, and Siemens. I have also received other honors and awards, including election to professional organizations, engagements for invited talks and the 2015 Award for Excellence in Teaching from the Vanderbilt University Department of Electrical Engineering.

¹ The h-index is a popular measure of scholarly productivity. The definition of the index is that a scholar with an index of h has published h papers each of which has been cited in other papers at least h times. Thus, the h-index reflects both the number of publications and the number of citations

7. In addition to my research experience, I have decades of hands-on programming experience with a variety of different programming languages. I have programmed with object-oriented languages since the mid-1980s, when I began to program with C++. I have programmed with Java and other related object-oriented and functional languages (such as C# and Python) since the mid-1990s and early 2000s. While at the University of California Irvine starting in 1991 I led the development of one of the first C++ object-oriented frameworks for concurrent and networked middleware and applications (ACE) and later starting in 1996 developed one of the first Java object-oriented frameworks for concurrent and networked middleware and applications (Java ACE). Since 1990, I have taught more than 1,000 students in dozens of face-to-face courses on network programming to both undergraduate and graduate students at UC Irvine, Washington University St. Louis, and Vanderbilt University. Since 2013, I have taught mobile cloud computing to more than 200,000 students in Massive Open Online Courses (MOOCs) on the Coursera platform, which have focused on technologies such as mobile app programming with Android and JavaScript and cloud service programming with various web services frameworks, such as Spring and Node.js. Mobile cloud computing applications commonly connect to relational database management systems to provide access to large data repositories.

8. In addition to my regular course offerings, over the past 35 years I have also taught over 600 short-courses and tutorials on numerous subjects, including: object-oriented and functional design patterns and programming techniques; systems programming and network programming for UNIX and Windows; object-oriented and functional programming languages; and, various courses on distributed operating systems, web apps and services, mobile cloud computing, compiler construction, algorithms, and data structures.

9. For the past three decades, I have led the development of ACE, Java ACE, TAO, and CIAO.² The millions of lines of object-oriented code in these frameworks provide layers of system infrastructure middleware that simplify the development of concurrent and networked software apps and services and often integrate with relational database systems.

² See *Obtaining ACE, TAO, CIAO, and DAnCE*, Vanderbilt, <http://download.dre.vanderbilt.edu/> (for access to ACE, TAO and CIAO downloads) (attached herein as Exhibit E); *Java ACE*, Vanderbilt, <http://www.dre.vanderbilt.edu/JACE/> (for access to Java ACE downloads) (attached herei

10. In addition to my various academic and research engagements, from 2010 to 2014 I served as a member of the United States Air Force Scientific Advisory Board, where I was the Vice Chair of Cyber Situational Awareness, a study for the U.S. Air Force on the network security of mission operations. I also recently served on the Advisory Board for the U.S. Naval Air Systems Command (NavAir) Future Airborne Capability Environment (FACE) and was recently a co-lead of a task force on “Published Open Interfaces and Standards” for the U.S. Navy's Open Systems Architecture initiative.

11. From 2000 to 2003 I served as a Deputy Office Director and Program Manager at the Defense Advanced Research Projects Agency (DARPA), where I led the national research and development effort on portable open system architecture middleware for distributed real-time and embedded (DRE) systems, which focused on the systematic use of adaptation, supported by redundancy, heterogeneity, and use of computer network security mechanisms, such as access-control, intrusion detection and packet filtering.

12. My work on middleware for DRE systems has transitioned to the Joint Tactical Terminal (JTT) and Joint Tactical Radio System (JTRS) software defined radio programs, manned/unmanned combat air vehicles, the Orbital Express low earth orbit (LEO) satellite telemetry and control framework, the Ground Support System (GSS) for the X33 Single Stage To Orbit (SSTO) Reusable Launch

Vehicle, and the USS Ronald Reagan and USS Zumwalt, the USAF upgraded early warning radar system, as well as the Facebook iPhone app and electronic medical imaging systems from Siemens and GE, among many other governmental and commercial applications. During 2001 to 2003, I also co-chaired the Software Design and Productivity (SDP) Coordinating Group of the U.S. government's multi-agency Networking and Information Technology Research and Development (NITRD) Program, which helped to formulate a national interagency software research agenda.

13. Additionally, over the last two decades I have been retained as an expert consultant more than two dozen times in a variety of computer software-related matters, focusing primarily on topics related to the software and network infrastructure of mobile and cloud computing platforms.

14. 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:

- U.S. Patent No. 9,369,545 (Exhibit 1001), and its accompanying prosecution history (Exhibit 1002)

- U.S. Patent No. 6,278,448 B1 (“Brown”) (Exhibit 1005)
- U.S. Patent No. 6,449,638 B1 (“Wecker”) (Exhibit 1006)
- U.S. Patent No. 5,793,368 (“Beer”) (Exhibit 1007)
- U.S. Patent No. 6,789,263 B1 (“Shimada”) (Exhibit 1008)
- U.S. Patent No. 6,088,340 (“Buchholz”) (Exhibit 1009)
- U.S. Patent No. 6,819,345 B1 (“Jones”) (Exhibit 1010)
- *HTML 4 Unleashed* (“Darnell”) (Exhibit 1011)
- IPR2019-00988 Final Written Decision (Exhibit 1012)
- U.S. Patent No. 6,342,907 B1 (“Petty”) (Exhibit 1013)
- *Lenovo Holding Company, Inc. v. DoDots Licensing Solutions LLC*, No. 2021-1247, 2021 WL 5822248 (Dec. 8, 2021) (Exhibit 1014)
- U.S. Patent No. 6,311,058 B1 (“Wecker 2”) (Exhibit 1015)
- U.S. Patent No. 5,737,560 (“Yohanan”) (Exhibit 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 (Exhibit 1017)
- Declaration of June Ann Munford (Exhibit 1018)

- *Complaint DoDots Licensing Solutions LLC v. Samsung Electronics Co., Ltd. et al.*, 6:22-cv-00535, W.D. Tex., filed May 24, 2022 (Exhibit 1019)
- U.S. Patent No. 6,094,681 (“Shaffer”) (Exhibit 1020)
- U.S. Patent No. 6,055,522 (“Krishna”) (Exhibit 1021)
- U.S. Patent No. 6,185,614 B1 (“Cuomo”) (Exhibit 1022)

LEGAL PRINCIPLES

Anticipation

15. I have been informed that a patent claim is invalid as anticipated under 35 U.S.C. § 102 if each and every element of a claim, as properly construed, is found either explicitly or inherently in a single prior art reference. Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes the claimed limitations, it anticipates.

16. I have been informed that a claim is invalid under 35 U.S.C. § 102(a) if the claimed invention was known or used by others in the U.S., or was patented or published anywhere, before the applicant’s invention. I further have been informed that a claim is invalid under 35 U.S.C. § 102(b) if the invention was patented or published anywhere, or was in public use, on sale, or offered for sale in this country, more than one year prior to the filing date of the patent application (critical date). I have been informed that a claim is invalid under 35 U.S.C. § 102(e)

if an invention described by that claim was described in a U.S. patent granted on an application for a patent by another that was filed in the U.S. before the date of invention for such a claim.

Obviousness

17. I have been informed that a patent claim is invalid as “obvious” under 35 U.S.C. § 103 in light of one or more prior art references if it would have been obvious to a POSITA, taking into account (1) the scope and content of the prior art, (2) the differences between the prior art and the claims, (3) the level of ordinary skill in the art, and (4) any so called “secondary considerations” of non-obviousness, which include: (i) “long felt need” for the claimed invention, (ii) commercial success attributable to the claimed invention, (iii) unexpected results of the claimed invention, and (iv) “copying” of the claimed invention by others. For purposes of my analysis above and because I know of no indication from the patent owner or others to the contrary, I have applied a date of April 26, 2000, as the date of invention in my obviousness analyses, although in many cases the same analysis would hold true even at an earlier time than April 26, 2000.

18. I have been informed that a claim can be obvious in light of a single prior art reference or multiple prior art references. To be obvious in light of a single prior art reference or multiple prior art references, there must be a reason to modify the single prior art reference, or combine two or more references, in order

to achieve the claimed invention. This reason may come from a teaching, suggestion, or motivation to combine, or may come from the reference or references themselves, the knowledge or “common sense” of one skilled in the art, or from the nature of the problem to be solved, and may be explicit or implicit from the prior art as a whole. I have been informed that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. I also understand it is improper to rely on hindsight in making the obviousness determination.

OVERVIEW OF CONCLUSIONS FORMED

19. This expert Declaration explains the conclusions that I have formed based on my analysis. To summarize those conclusions:

- Based upon my knowledge and experience and my review of the prior art publications listed above, I believe that claims 1-4, 6-10, and 13-15 of the '545 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 5, 11-12, and 16-21 of the '545 patent are obvious over Brown, Wecker, and Beer.
- Based upon my knowledge and experience and my review of the prior art publications listed above, I believe that claims 1-4, 6-7, 9-10, and

13-15 of the '545 patent are obvious over Shimada in view of Buchholz.

- Based upon my knowledge and experience and my review of the prior art publications listed above, I believe that claims 5, 8, and 12 of the '545 patent are obvious over Shimada, Buchholz, and Darnell.
- Based upon my knowledge and experience and my review of the prior art publications listed above, I believe that claims 11 and 16-21 of the '545 patent are obvious over Shimada, Buchholz, and Krishna.

BACKGROUND KNOWLEDGE ONE OF SKILL IN THE ART WOULD HAVE HAD PRIOR TO THE PRIORITY DATE OF THE '545 PATENT

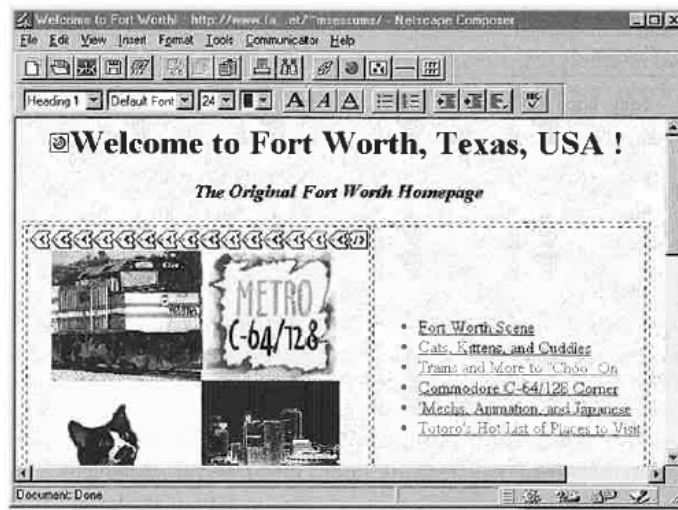
20. A person of ordinary skill in the art ("POSITA") relating to the subject matter of the '545 Patent would have had (1) a bachelor's degree in computer science, computer engineering, electrical engineering, or a related field, and (2) at least three years of corresponding industry work experience. Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education. This definition is consistent with the previous definition of a POSITA adopted in IPR2019-00988. SAMSUNG-1012, Page 9.

21. 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.

TECHNOLOGY OVERVIEW

A. World Wide Web

22. The World Wide Web, commonly referred to as the “Internet,” serves as a repository for various forms of digital content. SAMSUNG-1005, see generally 1:10-18. This content can be present within “Web Pages” hosted by remote computers, known as “servers” or “web servers.” *Id.*, see also 2:4-12. Web pages can include various forms of content, including text, image, audio, and video content. *Id.*, 2:20-23. An example, period-correct, web page is provided below. Personal computers, or “clients” can request to view web pages and receive data hosted on server computers via the “Transfer Control Protocol/Internet Protocol” or “TCP/IP.” SAMSUNG-1005, 2:13-18; SAMSUNG-1011, 88-92. One example protocol that operates using TCP/IP is the “Hypertext Transfer Protocol” or “HTTP.” SAMSUNG-1011, 88-92.



SAMSUNG-1011, 123

B. Uniform Resource Identifiers (URI)

23. To identify the location of a webpage or resource on the internet a unique identifier known as a “Uniform Resource Identifier” or “URI” is used. SAMSUNG-1011, 102-108. One of the most common forms of URI is the “Uniform Resource Locator,” or “URL.” *Id.*, 103. URLs are used, among other things, to locate webpages or content on the Internet using HTTP and TCP/IP. *Id.* An example URL syntax is provided below.

`http://www.foo.com/~bar/file.html`

SAMSUNG-1011, 103

C. Hyper Text Markup Language (HTML)

24. One format for writing Web pages and documents is the “Hyper Text Markup Language,” or “HTML.” SAMSUNG-1005, 18-28; SAMSUNG-1011,

70-86. HTML is a “platform independent” markup language, since it is “recognized on all available computing platforms using available software.” SAMSUNG-1011, 70. Said another way, HTML does not require anything beyond commonly available browsers and viewers for interpretation (“without having to pay for specific hardware and software with proprietary schemes”). *Id.* HTML “elements” and “tags” describe how internet content is presented, and can include controls for interacting with content (e.g., an “anchor tag” with a URL). SAMSUNG-1011, 72-86, see also 223-232. An example set of HTML instructions is provided below.

```
6. <IMG id=3 name="DeskMvr" src="http://
www.microsoft.com/ie/images/ulg/ulg_ie40.jpg"
7. resizable="XY"
8. subscribed_url="http://www.microsoft.com/ie/
images/ulg/ulg_ie40.jpg"
9. style="BACKGROUND: transparent; position:abso-
lute; LEFT: 347; TOP: 236; WIDTH: 120; HEIGHT:
82; Z-INDEX: 1006">
10. <IFRAME id=7 MARGINWIDTH=0
MARGINHEIGHT=0 name="DeskMvrW" src=
"http://www.uspto.gov/"
11. resizable="XY"
12. subscribed_url="http://www.uspto.gov/"
13. frameborder=0 style="BACKGROUND: transparent;
position:absolute; LEFT:620; TOP:254; WIDTH:156;
HEIGHT:150; Z-INDEX:1014"></IFRAME>
```

SAMSUNG-1005, 11:51-67

D. Subscriptions

25. The Internet is known to host various forms of in-demand digital content, so systems have been created that are directed to providing “up-to-date” information on a recurring basis (a “subscription”). SAMSUNG-1005, 13:1-13;

SAMSUNG-1006, 3:58-67, 2:1-13; SAMSUNG-1009, 1:13-26. One early example of Internet subscriptions was the “PointCast” system first released to the public in February, 1996. SAMSUNG-1017. PointCast was designed to “display regularly updated news in place of a user’s more conventional screensaver” and included categories for “News, Companies, Industries, Weather, Sports, and Lifestyle.” *Id.* As one example of data retrieved through a subscription, a user can be subscribed to receive regular updates of information related to stocks. SAMSUNG-1005, FIG. 3A, SAMSUNG-1006, 10:48-55; SAMSUNG-1009, 1:13-20. One additional example of a subscription service is Microsoft’s Channel Definition Format (CDF), which is discussed by both Brown and Wecker. SAMSUNG-1005, 13:1-13; SAMSUNG-1006, 3:3-16.

INTERPRETATIONS OF THE ’545 PATENT CLAIMS AT ISSUE

26. I understand that, for purposes of my analysis in this *inter partes* review proceeding, the terms appearing in the patent claims should be interpreted according to their “broadest reasonable construction in light of the specification of the patent in which it appears.” 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 priority date of U.S. Patent No. 9,369,545 as the point in time for claim interpretation purposes. That date was April 26, 1999.

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

“networked information monitor” (“NIM”)

28. I understand that for the purposes of the present proceeding, this term, which appears in claims 1, 12-13, 16, 18, and 20 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 ’545 patent, as well as the definition adopted by Patent Owner in prior proceedings. *See, e.g.*, SAMSUNG-1001, 4:56-63 (“As used herein, the term networked information monitor or NIM refers to a **fully configurable frame** with one or more **controls**; the **frame** through which **content is optionally presented**”); SAMSUNG-1012, Page 10; SAMSUNG-1014, *3-4. Thus, for purposes of this IPR, I have adopted Patent Owner’s construction of networked information monitor, which was adopted in IPR2019-00988. SAMSUNG-1012, Page 10; SAMSUNG-1014, *3-4.

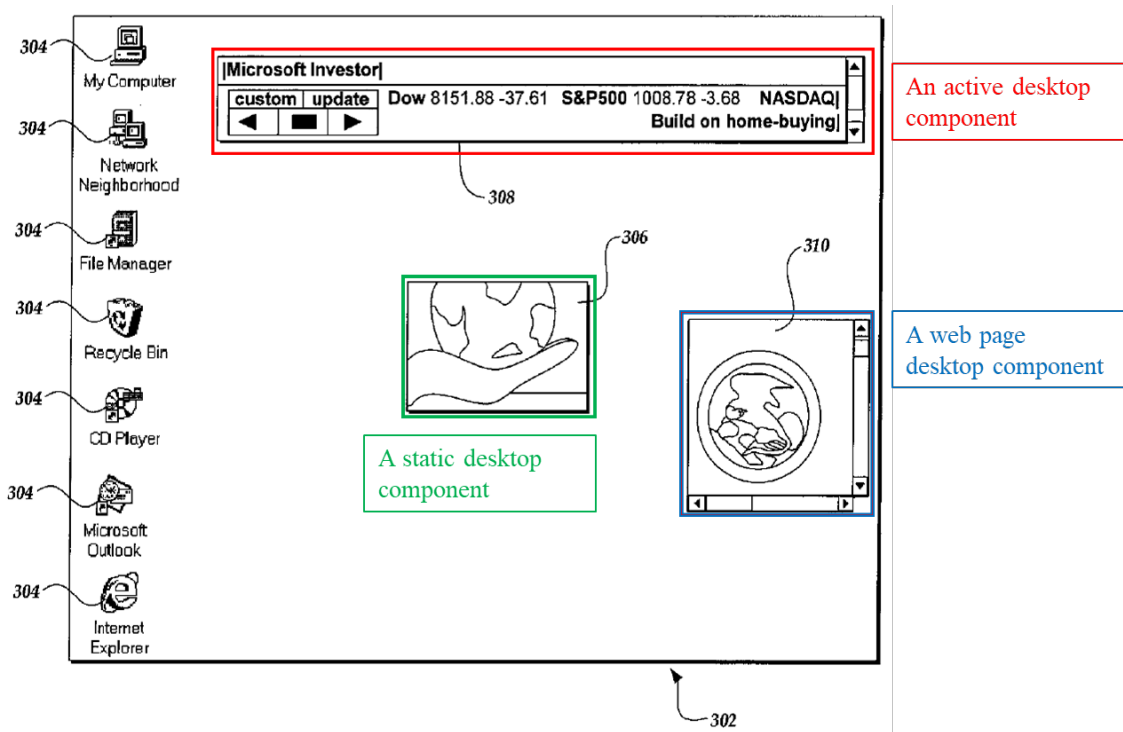
“networked information monitor template”

29. I understand that for the purposes of the present proceeding, this term, which appears in claims 1, 5-9, 11, 13, 15-18, and 20 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 ’545 Patent. *See, e.g.*, SAMSUNG-1001, 6:34-37 (“Each NIM template defines the characteristics of a specific NIM, including fully configurable frame characteristics, viewer and control characteristics, and NIM content references.”). Moreover, the ’545 Patent states, “NIMs allow a developer to provide an application feel without developing custom client applications.” *Id.*, 26:33-35. The ’545 Patent further states that a NIM definition “is content, rather than compiled code.” *Id.*, 21:59-60. According to Patent Owner in IPR2019-00988, a networked information monitor template “is a data structure that defines the NIM; it is not the NIM and it is not an executable program (i.e., compiled code).” SAMSUNG-1012, Page 11. Thus, for purposes of this IPR, I have adopted Patent Owner’s construction of networked information monitor template, which was adopted in IPR2019-00988. SAMSUNG-1012, Pages 12-19; SAMSUNG-1014, *3-4.

ANALYSIS OF BROWN AND WECKER

Brown

30. Brown describes “a method of creating a composite desktop built from Web content retrieved from one or more Web sites.” SAMSUNG-1005, Abstract. Brown’s composite desktop includes components, which can be “a static image or an active desktop component providing dynamic content.” *Id.*



SAMSUNG-1005, FIG. 3A (annotated)

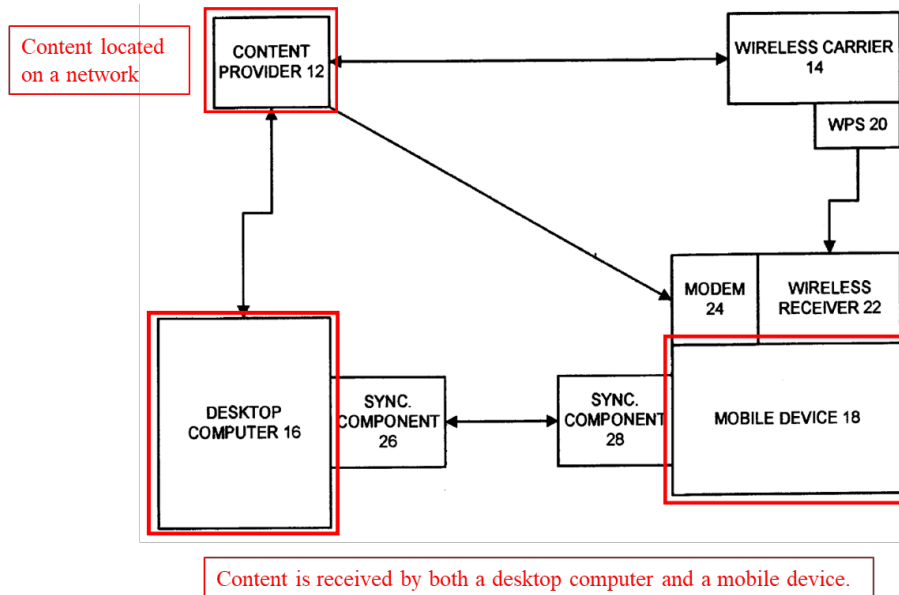
31. As shown in FIG. 3A (above), Brown’s “composite desktop 302 includes one or more desktop components,” where each “desktop component is a distinct geometric region that displays a single piece of Web-based content.” SAMSUNG-1005, 7:21-23. Brown describes that “the component may be selected

from a Web page, within which the component is embedded.” SAMSUNG-1005, 7:40-41.

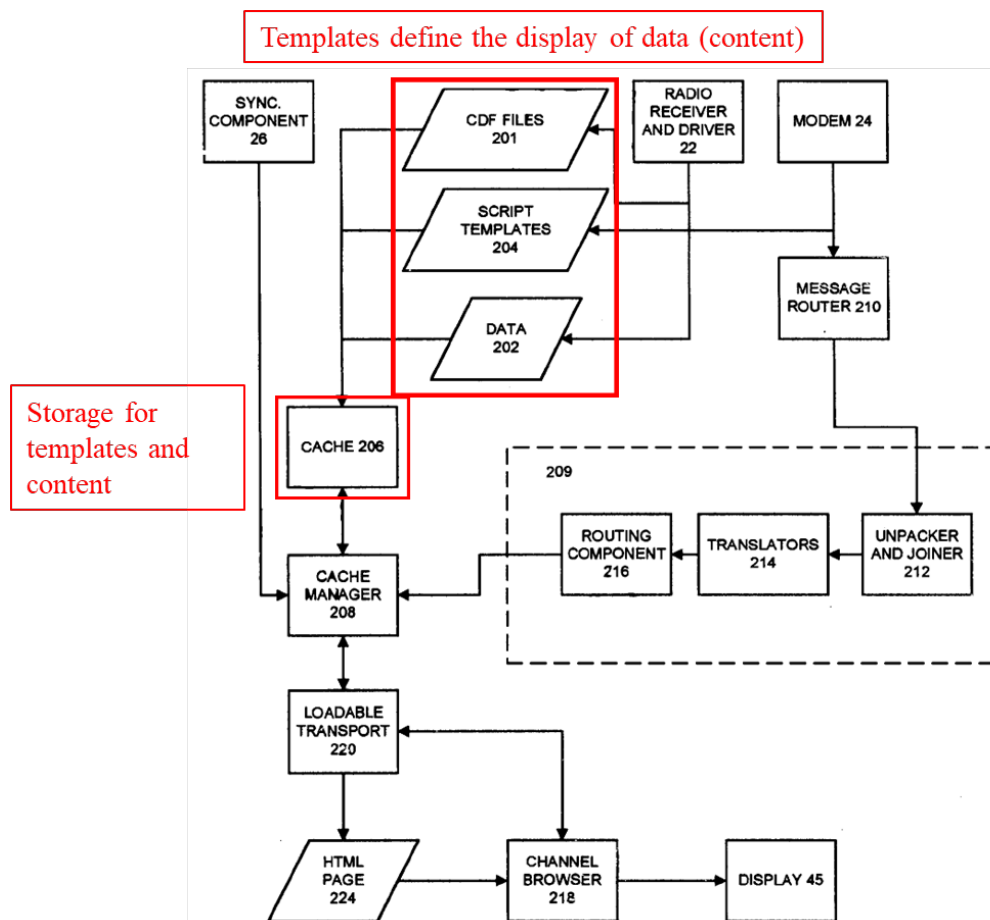
32. Brown also describes desktop component instructions, which “include a URL specifying an Internet location where additional HTML code corresponding to the active desktop component 308 resides.” SAMSUNG-1005, 13:1-4. In some cases, these HTML instructions include “a URL corresponding to a CDF file.” *Id.*, 13:4-5. Brown explains that Channel Definition Format (CDF) “files are used to implement ‘subscriptions’ in which information is regularly retrieved and updated within the active desktop component 308,” noting that “[t]he use of CDF files is known to those skilled in the art of Web page construction.” *Id.*, 13:5-9.

Wecker

33. Wecker describes “a method for rendering information,” the information including “a content structure file, a data file and a script file.” SAMSUNG-1006, Abstract. Wecker describes that “the content structure file is read to ascertain which script in the script file is associated with data to be rendered.” *Id.* Thereafter, “[t]he data from the data file is retrieved and the associated script file is executed to render the data.” *Id.*



SAMSUNG-1006, FIG. 1 (annotated)



34. Wecker describes that “the content is provided in a standard format, such as HTML, JPEG, GIF, WAV, etc.” and that “[t]he web content is also preferably described in a content structure file also known commonly as a channel definition format (CDF) file.” SAMSUNG-1006, 3:2-6. Wecker further describes that:

“a single portion of content (such as a web page or a web site) is referred to herein as a mobile channel. A mobile channel is a self describing web site that contains all the information necessary for efficient download of web content to mobile device 18. Three components are provided in a preferable mobile channel. The components include a channel definition format (CDF) file, a set of script files to render the channel, and a set of data files to be rendered.” SAMSUNG-1006, 3:6-14.

Motivation to combine Brown and Wecker

35. I believe that a POSITA would have found it obvious to combine Brown and Wecker (collectively the “Brown-Wecker combination”). Among other things, both Brown and Wecker are generally directed to “accessing and viewing internet content” and further describe the use of Microsoft’s channel definition format (CDF) to implement subscriptions to internet content, with Brown explicitly directing the reader toward additional references that discuss CDF. SAMSUNG-1005, Abstract, 13:4-13, 13:39-44; SAMSUNG-1006, Abstract, 3:1-16. Given the similarity of the disclosures, and spurred by Brown’s directive, a POSITA would have found it obvious to consider Wecker’s disclosure in the

context of Brown's system for multiple reasons. For example, a POSITA would have found it obvious to leverage Wecker's disclosure of a cache to store HTML style templates. A POSITA also would have found it obvious that Brown's desktop components could be implemented as mobile channels, such that a user could download desktop components, and their associated HTML instructions, to their composite desktop. SAMSUNG-1005, 7:21-23; SAMSUNG-1006, 3:6-14.

36. I believe a POSITA would have been motivated to combine Brown and Wecker for various reasons, outlined below.

37. First, a POSITA would have recognized that Wecker's mobile channel "script files," also referred to as "templates," are data structures that are similar in objective to the "HTML instructions" that define Brown's "desktop components." SAMSUNG-1005, 12:61-62; SAMSUNG-1006, 3:17-20. Indeed, Wecker describes that "the users of **desktop 16** can preferably subscribe to channels in a standard fashion which provide the user with certain channel content" and that the desktop can "periodically retrieve or receive new and updated script, data and CDF files." SAMSUNG-1005, 3:63-66, 4:3-6. I believe that a POSITA would have recognized or found obvious that the "desktop," as contemplated by Wecker, would have possessed similar features to the "composite desktop" of Brown and that these features of Wecker's desktop could be incorporated into Brown with a reasonably high expectation of success.

38. A POSITA would have been prompted to pursue this combination because doing so is merely the application of known techniques (*e.g.*, rendering content using templates/script files) to a known structure (*e.g.*, Brown’s composite desktop) to yield predictable results. Moreover, both Brown and Wecker describe the Windows 95 operating system as a suitable operating system that can implement their techniques. SAMSUNG-1005, 6:26-32; SAMSUNG-1006, 8:15-21. Finally, both Brown and Wecker are assigned to the “Microsoft Corporation” and, therefore, a POSITA would have reasonably expected their techniques to be compatible as the assignee would have been motivated by business reasons to provide commonality between their products. SAMSUNG-1005, Cover; SAMSUNG-1006, Cover. In view of the above, I believe that a POSITA would have had a reasonable expectation of success in implementing Wecker’s techniques into the disclosure of Brown.

39. Second, a POSITA would have recognized or found obvious that, because Brown’s desktop components are retrieved from “remote computers,” such components could also be accessed via Wecker’s “wireless push server” or “remote computer.” SAMSUNG-1005, 4:16-21; SAMSUNG-1006, 3:34-38, 7:55-63. In fact, Wecker describes that a “user typically runs the same types of applications on both the desktop computer and on the mobile device.” SAMSUNG-1006, 1:39-44. A POSITA would have recognized or found obvious

from this disclosure that the “composite desktop” taught by Brown would have been compatible with certain features of the interfaces running on mobile devices, as contemplated by Wecker. SAMSUNG-1005, 4:13-19. Indeed, Brown describes that its techniques may be practiced in “other computer system configurations, including **hand-held devices**.” SAMSUNG-1005, 4:44-49.

40. A POSITA would have been prompted to pursue this combination because doing so is merely the application of known techniques (*e.g.*, rendering content using templates/script files) to a known structure (*e.g.*, Brown’s composite desktop) to yield predictable results. Additionally, Wecker describes that “Windows CE” is a suitable operating system upon which to implement its techniques, and that this operating system is made available by the “Microsoft Corporation” – the assignee of Brown. SAMSUNG-1005, Cover; SAMSUNG-1006, 5:30-32. Finally, both Brown and Wecker are assigned to the “Microsoft Corporation” and, therefore, a POSITA would have reasonably expected their techniques to be compatible as the assignee would be motivated by business reasons to provide commonality between their products. SAMSUNG-1005, Cover; SAMSUNG-1006, Cover. In view of the above, I believe that a POSITA would have had a reasonable expectation of success in implementing features of Wecker into Brown’s composite desktop.

41. Moreover, a POSITA would have been motivated to combine Wecker with Brown to improve data transfer times, increase usability, standardize interfaces across different devices, reduce client-side storage requirements, and/or to capitalize on the growing need to display internet content in a customizable way. Wecker explains that “[b]y separating the script from the data in the web content, web content can be transmitted to mobile device 18 over very low bit rate channels” and that “since an individual file is typically much smaller than the script files, the data can be updated quite frequently, giving the user of mobile device 18 updated web content information, without transmitting new script.” SAMSUNG-1006, 4:53-62. Indeed, Wecker describes a co-pending application (now US Patent – hereafter referred to as “Wecker 2”) directed to “delivering data content over a low bit rate transmission channel.” SAMSUNG-1006, 3:26-31; SAMSUNG-1015, Cover. Wecker 2 describes that:

“[t]he bit rate of conventional wireless channels is very low. Thus, the delivery of very large content ... is highly impractical. One conventional type of approach to delivering such information is to rewrite the content into a device friendly format, such as HTML.” SAMSUNG-1015, 2:3-9.

Wecker 2 also describes, like Brown and Wecker, that “[i]n some prior applications, [a] mobile device is used in conjunction with a desktop computer.” SAMSUNG-1005, 4:44-49; SAMSUNG-1006, 1:39-44; SAMSUNG-1015, 1:46-47. Moreover, Brown cites a U.S. Patent (hereafter referred to as “Yohanan”)

directed to “accessing information on a communications network” that provides motivation to improve the usability of graphical displays that present internet content. SAMSUNG-1005, Cover; SAMSUNG-1016, Cover. Yohanan describes that “[i]ncreased accesses by individual users on a day-to-day basis demands a more efficient method for accessing network locations. What is needed is a convenient method to access network locations without having to open a browser and key-in the desired site's URL.” SAMSUNG-1016, 2:18-23.

42. For at least these above reasons, I believe that a POSITA would have been motivated to combine Brown and Wecker and consider their disclosures together.

Brown and Wecker Renders Obvious Claims 1-10, 13-15, and 21

[1.pre]: A computer-implemented method of obtaining content over a network and displaying the content to a user, the method being implemented in a client computing device in operative communication with a server over a network, the client computing device including electronic storage, a display, and one or more processors configured to execute one or more computer program modules, the method comprising:

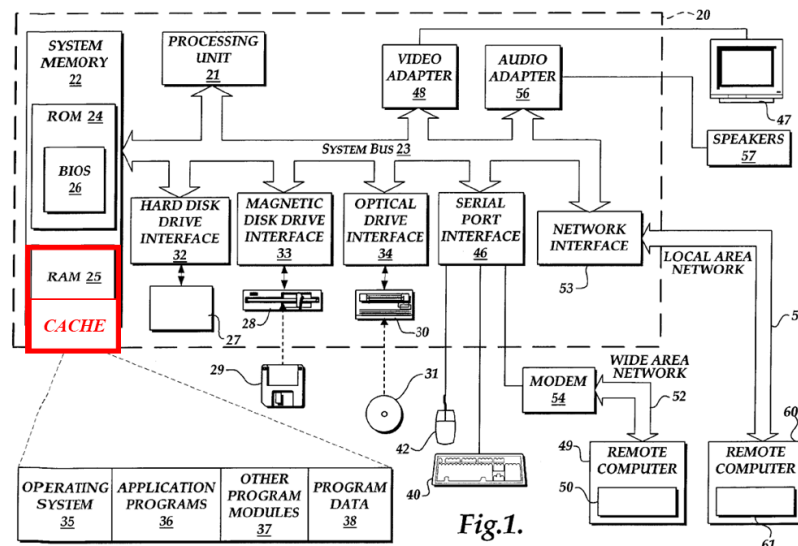
43. To the extent the preamble is limiting, the Brown-Wecker combination renders [1.pre] obvious. For example, Brown describes “a computer-based system for controlling the display of elements on a desktop,” and a “**computer-based method (“computer-implemented method”)** of creating a composite desktop built from Web content,” and also that “an operating system user interface shell program executes on a computer, preferably a general purpose

personal computer.” SAMSUNG-1005, 2:54-57, 4:32-40, Claim 15. A POSITA would have understood or found obvious that “a computer-based system” and “personal computer” includes a “**client computing device**,” as a computer is frequently referred to as a “client.” *Id.* Indeed, the ’545 Patent frequently refers to a “client computer.” SAMSUNG-1001, *see at least* 1:24, 1:46, 1:51, 2:6, 2:8. A POSITA also would have understood that Brown’s “Web content” is “**content over a network**.” SAMSUNG-1005, 2:54-57. Indeed, the ’545 Patent frequently refers to its content as “Web content.” SAMSUNG-1001, *see at least* 1:26-29, 1:38, 4:32, 5:31.

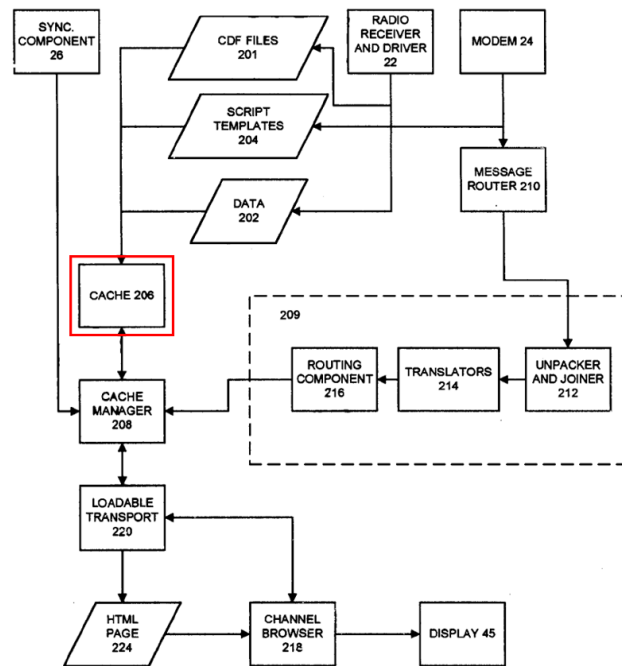
44. Both Brown and Wecker describe that their client devices can download content from the Internet. SAMSUNG-1005, 2:4-12; SAMSUNG-1006, 3:8-16, 4:3-13. Indeed, Brown describes that “[a] ‘client’ computer connected to the Internet can **download** (“**in operative communication with**”) digital information from ‘**server**’ **computers connected to the Internet** (“**a server over a network**”).” SAMSUNG-1005, 2:4-8. Wecker also describes that desktop computers can “**periodically retrieve or receive** new and updated script, data and CDF files.” SAMSUNG-1006, 4:3-13.

45. Brown discloses “a general purpose computing device” that includes a “system memory.” SAMSUNG-1005, 4:54-58. A POSITA would have understood or found obvious that a system memory is a form of “**electronic**

storage” because a POSITA would have understood that memory is an example of electronic storage. Indeed, the ’545 Patent frequently refers to “memory 30” within “computer 20.” SAMSUNG 1001, *see at least* 5:13-15, 5:23-25. A POSITA also would have understood or found obvious that this storage would be capable of storing files, like “templates” because it was well known as of the critical date that HTML files were stored in a form of “electronic storage.” Indeed, Wecker discloses a “cache memory” used for holding “script templates.” SAMSUNG-1006, 8:34-39. As one example, the Brown-Wecker combination would incorporate similar features, such that the “cache memory” of Wecker would be incorporated into the “system memory” of Brown as illustrated below.

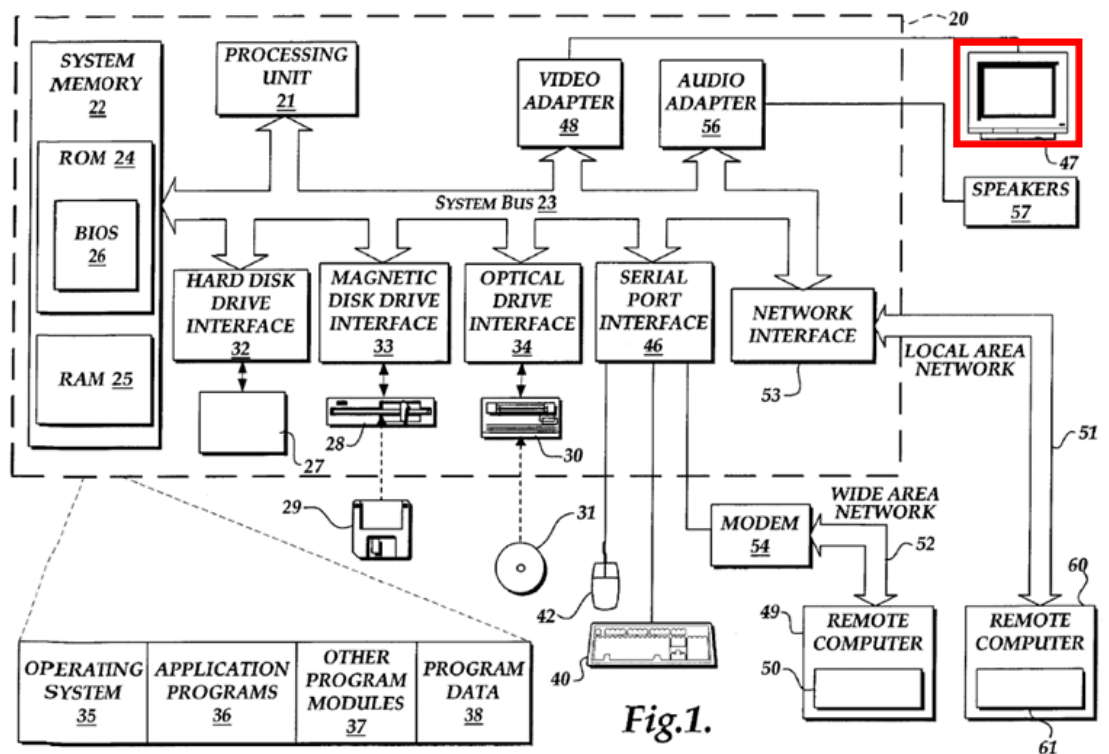


SAMSUNG-1005, FIG. 1 (annotated)



SAMSUNG-1006, FIG. 6 (annotated)

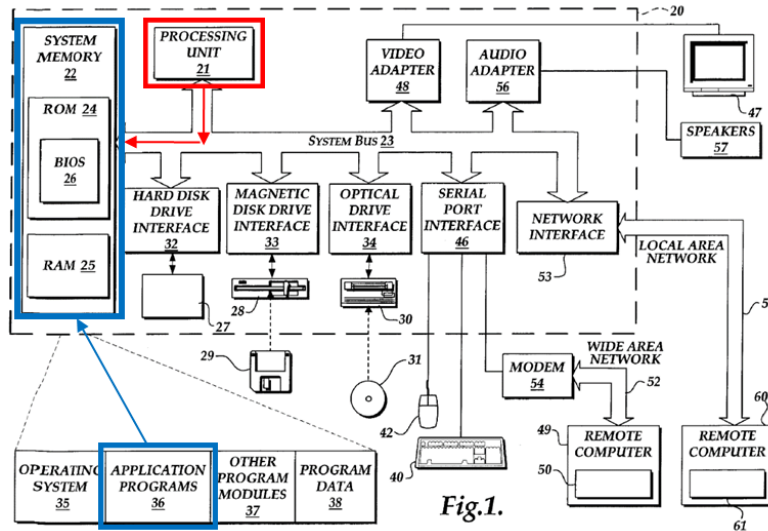
46. As annotated below in Figure 1, Brown’s “computer-based system” includes an electronic **display**, which Brown refers to as a “monitor.” SAMSUNG-1005, 5:38-39. A POSITA would have recognized or found obvious from this disclosure that a display would be used to present content to a viewer.



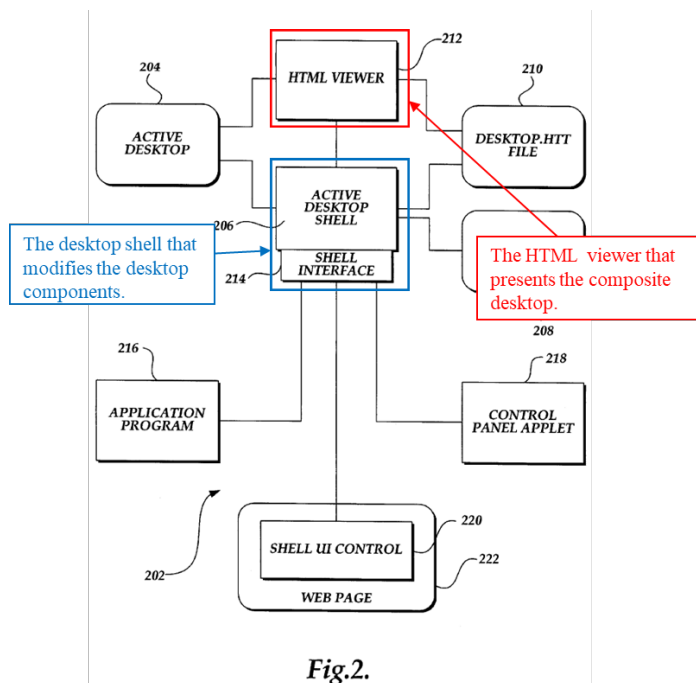
SAMSUNG-1005, FIG. 1 (annotated)

47. Brown also discloses an “HTML viewer” and “composite desktop shell” (“**one or more program modules**”) that access and execute the HTML instructions that define the desktop components. SAMSUNG-1005, 6:26-40. Presented below are annotated copies of Brown’s Figure 1 and 2 showing these program modules, where the terms “active desktop” and “composite desktop” are used interchangeably.

The processing unit executes the HTML viewer and desktop shell (application programs 36) through system bus 23



SAMSUNG-1005, FIG. 1 (annotated)



SAMSUNG-1005, FIG. 2 (annotated)

48. A POSITA would have understood or found obvious that both the “HTML viewer” and “composite desktop shell” are “executed” by “one or more

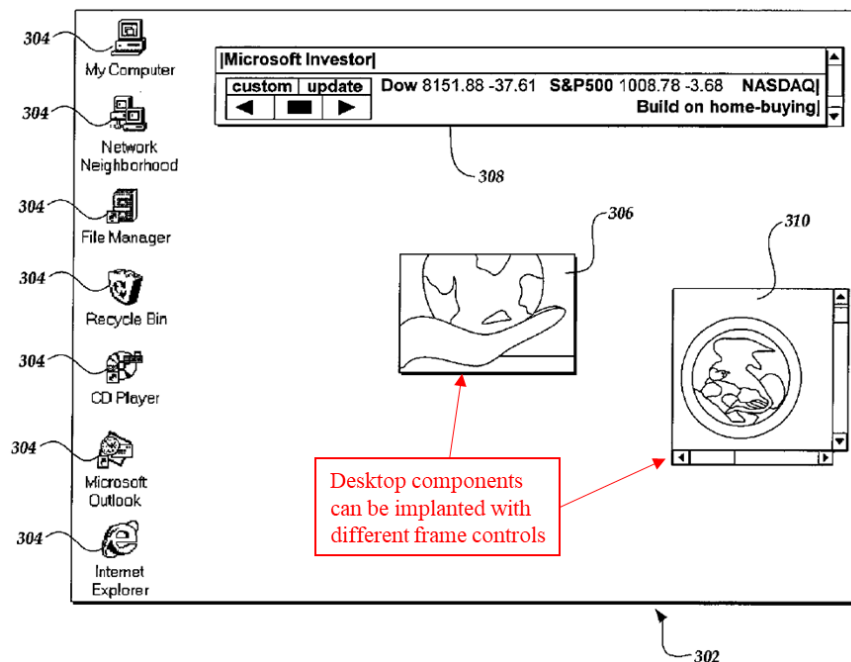
processors” because processors were known in the art to execute such programs. Indeed, Petty is one such reference that describes a system for “defin[ing] platform independent user interface panels” with a “computer system 100 [that] comprises a processor 110 connected to a main memory 120” and that “[p]rocessor 110 **executes program instructions stored in main memory 120.**” SAMSUNG-1013, Abstract, 5:58-59, 7:58-59.

[1.1]: transmitting a request to the server over the network, the request requesting networked information monitor template;

49. Brown describes sets of “HTML instructions” that define a “composite desktop” containing a plurality of “desktop components.” SAMSUNG-1005, 6:34-36, 7:21-22, 11:1-67, 12:1-67, 13:1-54. Brown explains that a desktop component, examples of which are presented in the annotated version of Fig. 3A (below), is “a distinct geometric region that displays a single piece of Web-based content.” *Id.*, 7:22-23.

50. A POSITA would have understood **or found obvious** the “desktop components” of Brown to be “networked information monitors” because desktop components have similar features. Indeed, networked information monitors are “a fully configurable **frame**, with one or more **controls**, through which **content** is presented to the user,” and a POSITA would have recognized that a desktop component possesses all of these features. SAMSUNG-1001, 5:41-44; *see* paragraph 28, *above*.

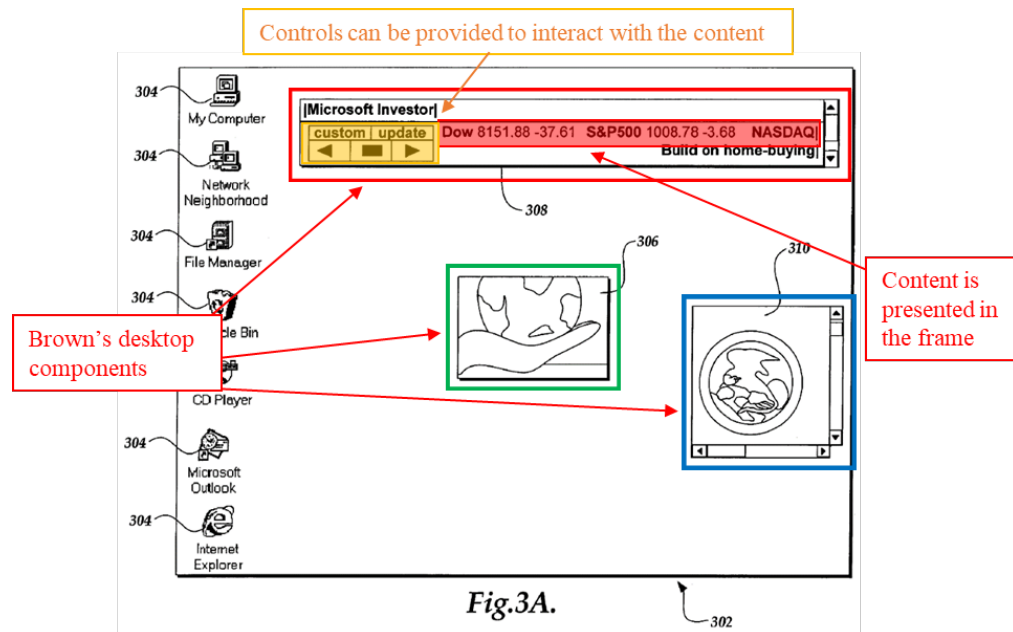
51. For instance, Brown describes that desktop components are “implemented as floating **frames**.” SAMSUNG-1005, 12:61-64; [1.3], *below*. Brown further explains that floating frames “can be positioned anywhere on a screen” and that desktop components, and their frames, can be “positioned at any location on a composite desktop, and can be resized if desired.” SAMSUNG-1005, 7:24-26, 12:64-65. Brown presents examples of desktop components with different frame “**controls**”, as annotated in Figure 3A below. SAMSUNG-1005, FIG. 3A. The above disclosures render Brown’s desktop component frames “**fully configurable**” as this term is used by the ’545 Patent (e.g., “details defining the NIM, such as the look-and-feel”). SAMSUNG-1001, 30:34-36.



SAMSUNG-1005, FIG. 3A (annotated)

52. Finally, Brown describes that desktop components “[display] a single piece of Web-based **content**.” SAMSUNG-1005, 7:22-23. As described above, Brown’s desktop components are “fully configurable frames,” and as a result, the “**content**” is displayed “**through**” the “**fully configurable frame**.” SAMSUNG-1001, 2:45-59; SAMSUNG-1005, 7:24-26, 12:64-65, FIG. 3A.

53. Therefore, Brown’s desktop components are “networked information monitors,” as properly construed.



SAMSUNG-1005, FIG. 3A (annotated)

54. Additionally, a POSITA would have recognized or found obvious that the “HTML instructions” that define Brown’s “desktop components” are a “networked information monitor template” because these HTML instructions have similar features. SAMSUNG-1005, 11:39-67, 12:1-43. Indeed, a networked

information monitor template is “a **data structure** that defines the **characteristics of a NIM**, including the NIM **frame**, **view**, and **control characteristics**, [which] excludes executable **applications/compiled code**,” and a POSITA would have recognized or found obvious that a set of Brown’s HTML instructions includes all of these features. SAMSUNG-1001, 7:19-23, 8:53-57, 14:34-35; *see* paragraph 29, *above*. Brown provides a set of HTML instructions as an example, which is reproduced and annotated below. Brown describes that these instructions are “generated from the **data** stored in the registry 208” (“a **data structure**”). SAMSUNG-1005, 14:7-8.

55. Brown describes that “lines 14-17 [in the example code] comprise HTML instructions that **describe the active desktop component 308**,” (“**defines the characteristics of [the] NIM**”). SAMSUNG-1005, 12:61-62. Brown includes similar language for the other desktop components of this example set of HTML instructions. *Id.*, 12:44-46, 13:14-15.

56. For example, Brown describes that “[f]loating **frames** are designated by the ‘IFRAME’ tag.” SAMSUNG-1005, 12:65-66. Brown’s HTML instructions utilize the “IFRAME” HTML tag to **define the frame of the desktop component**, as shown in the annotated figure below. SAMSUNG-1005, 11:56-67, 12:1-10.

57. It can also be seen from the annotated figure that visual features of the desktop component (“**the view**”) are defined by the HTML instructions.

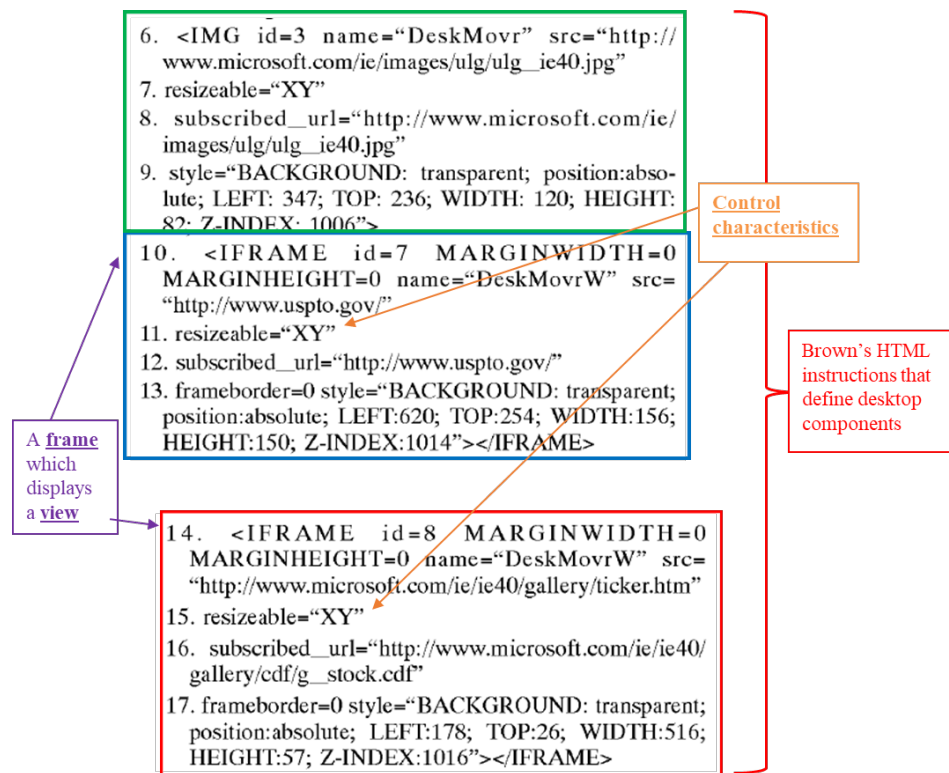
SAMSUNG-1005, 11:56-67, 12:1-10. For example, the HTML instructions include a “frameborder” tag, as well as a “BACKGROUND” tag, that both define visual features of the desktop component. *Id.*

58. Moreover, Brown’s HTML instructions provide the ability to designate a desktop component as “resizable” as presented in the annotated figure below (“**a control characteristic**”). SAMSUNG-1005, 11:56-67, 12:1-10. The resizing of desktop components is enabled by “a windowed component manipulation **control** 326 and a windowless component manipulation **control** 328.” SAMSUNG-1005, 7:57-59.

59. Moreover, as it can be seen in the annotated instructions below, Brown’s HTML instructions do not contain “**applications**” or “**compiled code.**” SAMSUNG-1005, 11:56-67, 12:1-10. Indeed, Brown describes its HTML instructions are stored in “an HTML file, referred to as the desktop.htt file 210,” which a POSITA would have understood or found obvious to not include compiled code since HTML is known to be a markup language. *Id.*, 6:36-37. This understanding is established in other references known in the art. *Id.* For example, Darnell, an academic reference directed to HTML, describes that HTML is “platform independent” (i.e., not requiring specific hardware or software for interpretation). SAMSUNG-1011, Page 70. Darnell states that one of the advantages of a “platform independent” language is that “persons in different

locations can exchange information, collaborate on authoring articles, publish data, and carry on a robust discourse without ... having to pay for specific hardware and software with proprietary schemes.” *Id.* A POSITA would have understood the advantages of a platform independent language, like HTML, and would have been motivated to avoid including additional compiled code that would render these advantages moot.

60. Therefore, with the above disclosures, Brown’s HTML instructions correspond to a “networked information monitor template.”



SAMSUNG-1005, 11:56-67, 12:1-10 (annotated)

61. Brown describes that its client device can download content from the Internet. SAMSUNG-1005, 2:4-12; SAMSUNG-1006, 3:8-16, 4:3-13. Indeed, Brown describes that “[a] ‘client’ computer connected to the Internet can **download** (“transmitting ... a request”) digital information from ‘server’ **computers** connected to the Internet (“over the network”).” SAMSUNG-1005, 2:4-8.

62. A POSITA would have understood or found obvious that this transmission would occur “**to a server over [a] network**” because Brown describes the use of “uniform resource locators” or “URLs” which are known to correspond to such network locations hosted on such servers. SAMSUNG-1005, 3:24-33, 11:43-67, 12:1-43. For example, one of Brown’s example desktop components includes “a URL corresponding to a CDF file.” SAMSUNG-1005, 12:1-8, FIG. 3A.

```
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.

SAMSUNG-1005, 12:1-8 (annotated)

63. Moreover, Wecker describes a channel as “a self describing web site that contains **all the information necessary for efficient download** of web content to mobile device” and that this information includes “a set of **script files** to render the channel.” SAMSUNG-1006, 3:8-16. As discussed above, a POSITA would have recognized that script files are style-focused data structures that are similar in objective to Brown’s HTML instructions, and that HTML files could be downloaded in a similar manner.

64. Indeed, both Wecker and Brown describe that HTML files could be downloaded to a client. SAMSUNG-1005, *see at least* 2:13-29; SAMSUNG-1006, *see at least* 10:25-56. In view of the above, a POSITA would have recognized or found obvious that HTML instructions (“**[a] networked information monitor template**”) could be requested from a “**server**” as both Brown and Wecker have been demonstrated to be capable of communicating “**over a network**” to a “**server.**”

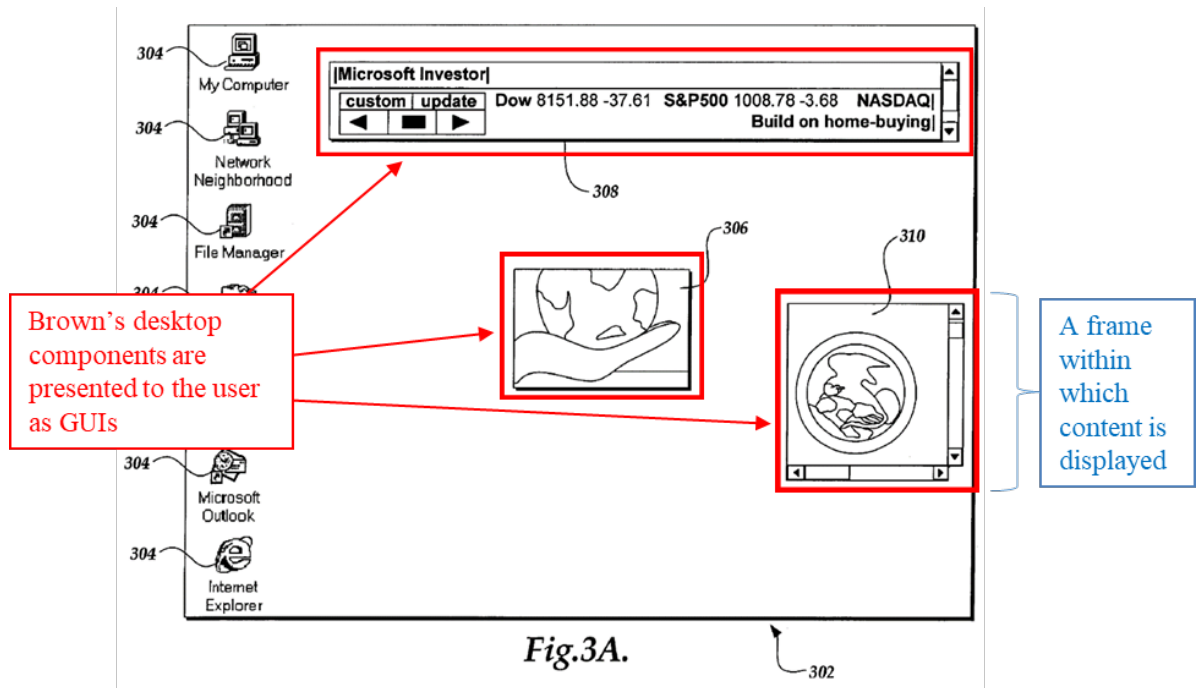
[1.2]: receiving the requested networked information monitor template from the server over the internet, the requested networked information monitor template having been transmitted from the server over the network responsive to the transmitted request, the networked information monitor template comprising:

65. *See* [1.1] (incorporated here). A POSITA would have understood or found obvious that, once requested from the web server, the client would receive the content included in the request (“**receiving the requested networked**

information monitor template from the server over the internet ... responsive to the transmitted request”). Indeed, Wecker describes a “loadable transport” that can “periodically retrieve or receive new and updated script.” SAMSUNG-1006, 3:63-67, 4:1-6.

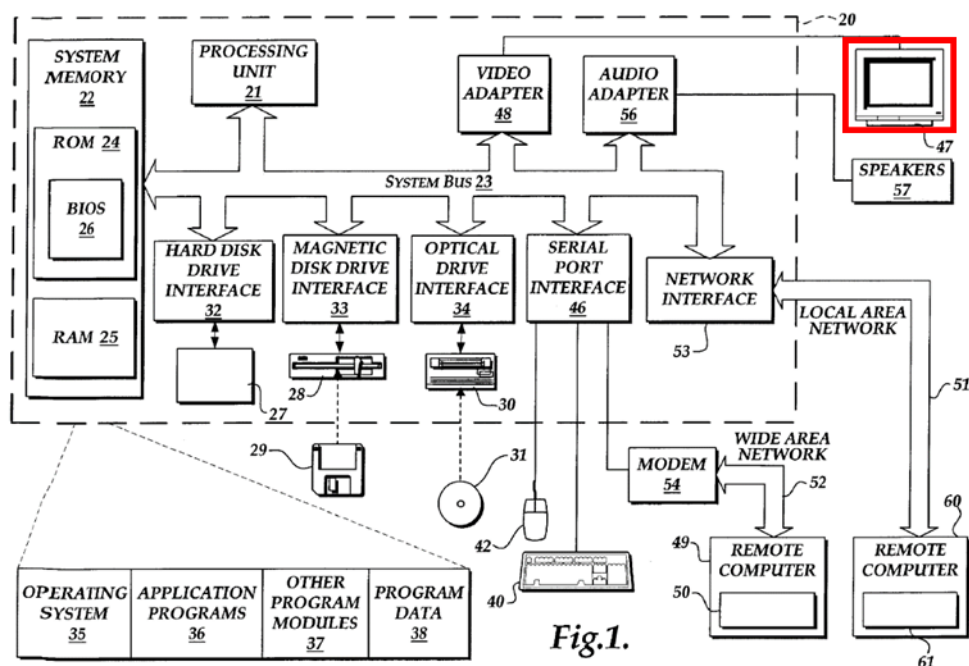
[1.3]: a definition of a viewer graphical user interface within which content in a web browser-readable language may be presented on the display of the client computing device; and

66. A POSITA would have recognized that Brown’s desktop components are presented to the user as “graphical user interfaces” or “GUIs” as these terms are commonly used in the art to describe such visual components. SAMSUNG-1005, FIG. 3A. Example desktop components are presented in the annotated Figure 3A below. Indeed, Brown refers to its composite desktop (and all Windows-based desktops) as a “GUI desktop.” SAMSUNG-1005, 1:35-38, FIG. 3A. Because Brown’s HTML instructions define the desktop component, a POSITA would have recognized that, therefore, they contain **“a definition of a graphical user interface.”**



SAMSUNG-1005, FIG. 3A (annotated)

67. Brown further describes that desktop components are “implemented as floating frames” that bound the content of the component (**“within which content ... is presented”**). SAMSUNG-1005, 12:61-64. As annotated below in Figure 1, Brown’s “computer-based system” also includes an electronic display, which Brown refers to as a “monitor.” SAMSUNG-1005, 5:38-39. A POSITA would have recognized or found obvious from this disclosure that a display would be used to **“[present] content on the display of the client computing device.”**



SAMSUNG-1005, FIG. 1 (annotated)

68. Brown also describes that Web pages or documents presented in desktop components “[function] similarly to the corresponding Web page **viewed in a browser window.**” SAMSUNG-1005, 11:20-28. A POSITA also would have recognized that HTML is an example of a “**web-browser readable language,**” as HTML is one of the most common examples of such a language. Indeed, Darnell describes an HTML “standard” for web-browsers. SAMSUNG-1011, Page 112 (“the W3 Consortium (W3C) sets the **HTML standards for the World Wide Web (W3).** Any browser that wants to survive **must conform to the standards set by the W3C**”).

69. In view of the above disclosures, a POSITA would have understood or found obvious that Brown’s content is “**content in a web browser-readable**

language.” Indeed, the ’545 Patent frequently refers to HTML as “standard web content” or “a NIM’s content.” SAMSUNG-1001, 4:29-34, 21:55-64, 37:5-7.

[1.4]: a definition of a first content element for the networked information monitor template, the definition of the first content element referencing a first network location from which the first content element for the networked information monitor template is served over the network;

70. A POSITA would have recognized the CDF subscription to be “**a first content element ... referencing a first network location**” because CDF subscriptions reference a URL, at which, content is available. For example, one of Brown’s example desktop components includes “a URL corresponding to a CDF file.” SAMSUNG-1005, 13:4-5. Wecker also describes that “**web content** is also preferably described in a content structure file also known commonly as a channel definition format (CDF) file.” SAMSUNG-1006, 3:3-5.

71. Brown explains that “CDF files are used to implement ‘subscriptions’ in which **information is regularly retrieved and updated (“served over the network”)** within the active desktop component.” SAMSUNG-1005, 13:4-7. An annotated example of Brown’s “HTML instructions” and “CDF subscription” is provided below.

```
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.

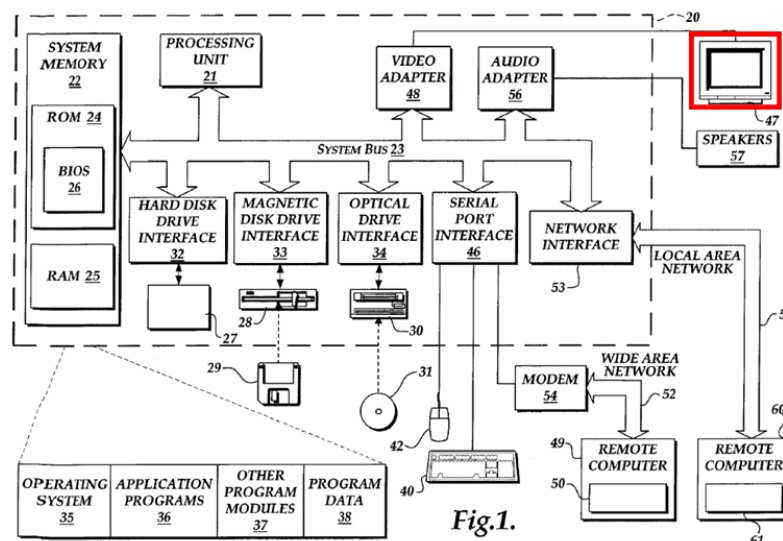
SAMSUNG-1005, 12:1-8 (annotated)

72. A POSITA would have understood or found obvious that a Uniform Resource Locator (“URL”) to be a “network location” as this is the most common use of a URL. Indeed, Darnell provides support and explains that “uniform (or sometimes *universal*) resource identifiers are strings of characters that **identify the location** of a resource available on the World Wide Web” and that “the most common use of a uniform resource identifier these days is to locate a Web page using a **URL**. URLs are commonly thought of as pointers to a filename in a directory **on a Web server.**” SAMSUNG-1011, 103.

[1.5]: responsive to instructions included in the requested networked information monitor template, presenting the viewer graphical user interface defined by the networked information monitor on the display of the client computing device separate from and outside of any other graphical user interface that includes user controls for specifying the first network location from which the first content element for the networked information monitor is served over the network;

73. See [1.3] (incorporated here) regarding a “**viewer graphical user interface defined by the networked information monitor.**”

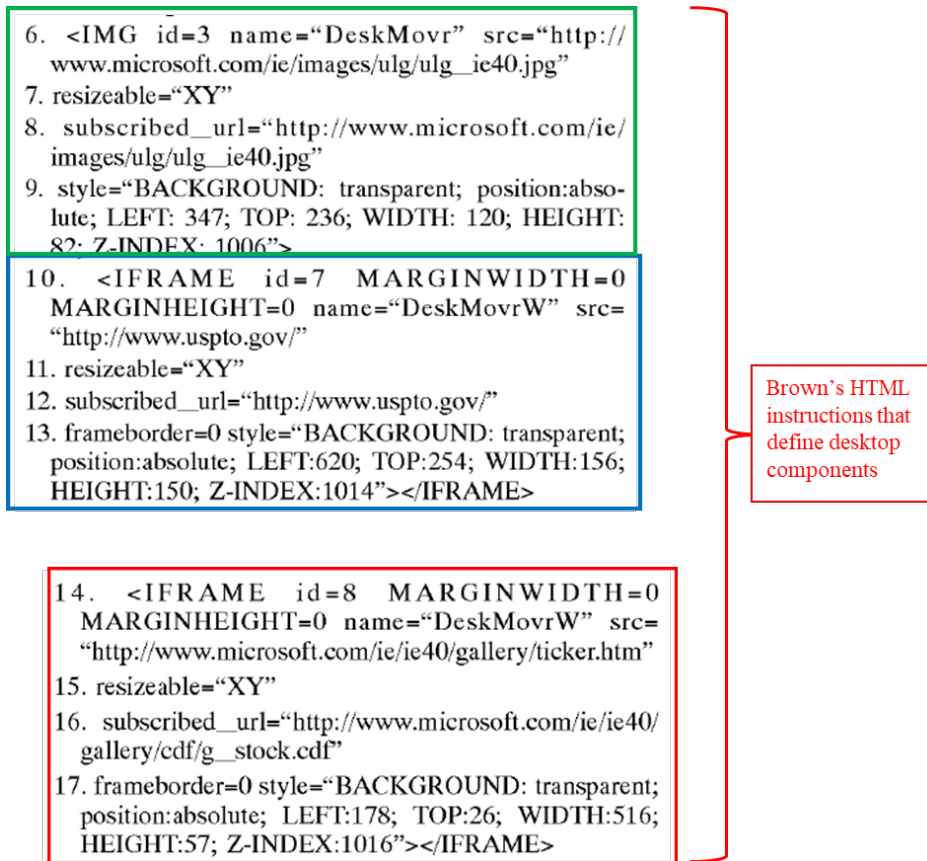
74. As annotated below in Figure 1, Brown’s “computer-based system” includes an electronic “**display**”, which Brown refers to as a “monitor.” SAMSUNG-1005, 5:38-39. A POSITA would have recognized or found obvious from this disclosure that a display would be used to present content to a viewer (“**presenting ... on the display of the client computing device**”).



SAMSUNG-1005, FIG. 1 (annotated)

75. A POSITA would have recognized or found obvious that the “presenting” of the “**viewer graphical user interface**” is performed “**responsive to instructions included in the requested networked information monitor template**” as Brown’s HTML instructions are used to render the desktop component. SAMSUNG-1005, 11:56-67, 12:1-10. Indeed, as evident from the

figure below, the HTML instructions include “instructions” for “presenting” the desktop component. SAMSUNG-1005, 11:56-67, 12:1-10.

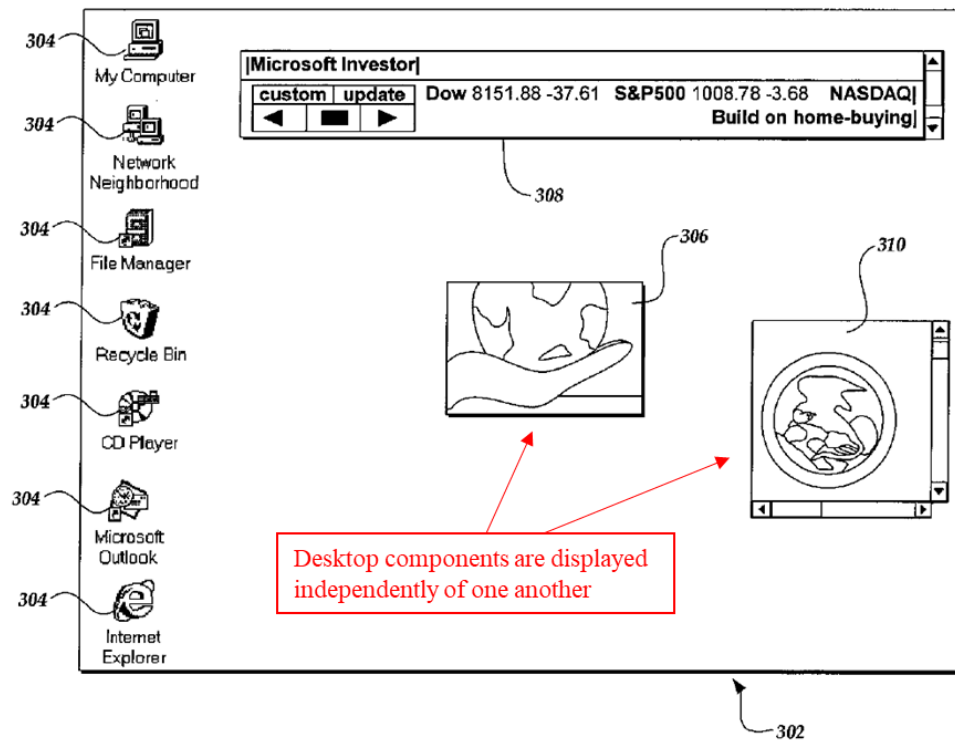


SAMSUNG-1005, 11:56-67, 12:1-10 (annotated)

76. A POSITA would have recognized or found obvious in reviewing Brown's figures that the components are displayed “**separate from and outside of any other graphical user interface.**” Indeed, as further illustrated below, Brown describes its “desktop components” as “**distinct** geometric region[s]” (“**separate from and outside**”). SAMSUNG-1005, 7:21-23, FIG. 3A.

77. Referencing Brown's FIG. 3A above, it can be seen that Brown's desktop components lack “**user controls for specifying the first network**

location from which the first content element for the networked information monitor is served over the network.” SAMSUNG-1005, FIG. 3A. To the extent that Patent Owner argues that a desktop component can be created with such controls, the decision to include navigation controls in a desktop component would ultimately be a design decision for a POSITA, and, in networks where data transfer rates are limited or controls are not desired, a POSITA would be motivated to construct desktop components without extraneous features, such as navigation controls, to improve data transfer times or streamline use. Indeed, Shimada provides support and describes that “[w]hen the amount of data transmitted from the server to the client is reduced, the data access time can be reduced particularly when the transmission rate of the network is low.” SAMSUNG-1008, 1:45-48. Additionally, Yohanan describes such an implementation lacking controls to specify a network location (“a more efficient method for accessing network locations” using “a convenient method to access network locations without having to open a browser and key-in the desired site's URL).” SAMSUNG-1016, 2:18-23.



SAMSUNG-1005, FIG. 3A (annotated)

[1.6]: responsive to instructions included in the requested networked information monitor template, transmitting over the network a first content request to the first network location referenced by the definition of the first content element for the networked information monitor template;

78. Brown describes that its client device can download content from the Internet. SAMSUNG-1005, 2:4-12; SAMSUNG-1006, 3:8-16, 4:3-13. Indeed, Brown describes that “[a] ‘client’ computer connected to the Internet can **download (“transmitting ... a first content request”)** digital information from ‘server’ computers connected to the Internet.” SAMSUNG-1005, 2:4-8.

79. A POSITA would have understood or found obvious that this transmission would include a reference to **“a first network location referenced by the definition of the first content element”** because Brown describes the use

of “uniform resource locators” or “URLs” which are known to correspond to such network locations. SAMSUNG-1005, 3:24-33, 11:43-67, 12:1-43. For example, one of Brown’s example desktop components includes “a URL corresponding to a CDF file.” SAMSUNG-1005, 12:1-8, FIG. 3A. An annotated example of this desktop component is provided below.

```
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.

SAMSUNG-1005, 12:1-8 (annotated)

80. A POSITA would have understood or found obvious that a Uniform Resource Locator (“URL”) to be a “**network location**” as this is the most common use of a URL. Indeed, Darnell provides support and explains that “uniform (or sometimes *universal*) resource identifiers are strings of characters that **identify the location** of a resource available on the World Wide Web” and that “the most common use of a uniform resource identifier these days is to locate a Web page using a **URL**. URLs are commonly thought of as pointers to a **filename in a directory on a Web server.**” SAMSUNG-1011, 103.

81. Wecker also describes that desktop computers can “**periodically retrieve or receive** new and updated script, data and CDF files” (“**transmitting over the network a first content request to the first network location referenced by the definition of the first content element**”). SAMSUNG-1006, 4:3-13.

[1.7]: receiving, over the network, the first content element transmitted responsive to the first content request;

82. *See* [1.3] (incorporated here). A POSITA would have understood or found obvious that, once requested from the web server (“**over the network**”), the client would receive the content included in the request (“**in response to the first content request**”). Indeed, Brown describes that CDF subscriptions “are used to implement “subscriptions” in which information is regularly retrieved (“**receiving ... the first content element**”) and updated.” SAMSUNG-1005, 12:1-8, 13:4-13.

83. The requesting and reception of content would have been obvious to a POSITA as this function was well known in the art. Indeed, Brown describes that “[client] application software executing on client computers typically accept commands from a user and **obtain[s] data and services by sending requests** to server applications running on server computers connected to the Internet.” SAMSUNG-1005, 2:8-12. Brown further explains that “HTML documents can contain embedded software components containing program code that perform a

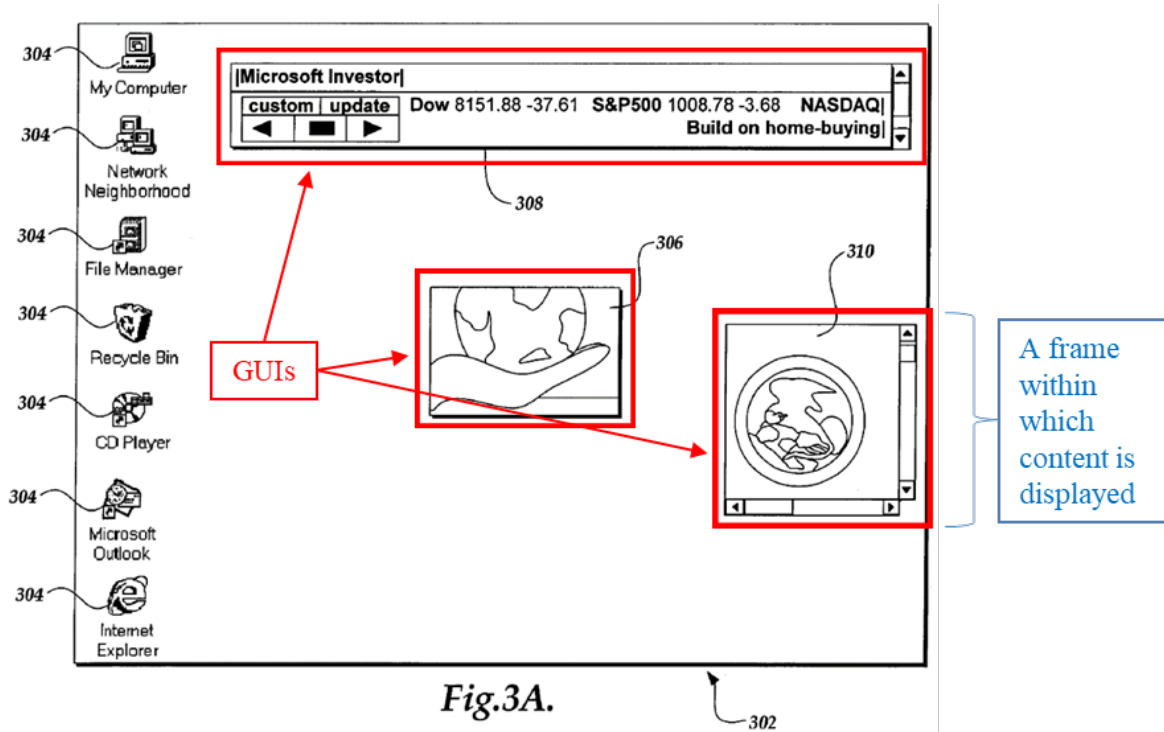
wide variety of operations, such as ... updating (“sending requests” and “obtain[ing]”) the displayed data.” *Id.*, 2:36-41.

84. Additionally, Beer describes a well-known method for “retrieve[ing] a user interface and a visual style from a local or remote storage unit, [and] rapidly display[ing] the visual stylized user interface.” SAMSUNG-1007, Abstract. Beer describes the use of a “Programmable Graphical User Interface” or “PGUI” that “renders the appearance of each part of the user interface in accordance with any newly selected visual style, and redisplay[s] the changed user interface for **response to events** and for **display of content**.” *Id.*, Abstract, 14:1-22.

[1.8]: presenting the received the first content element in the viewer graphical user interface defined by the networked information monitor template, wherein the definition of the viewer graphical user interface and/or the first content element define all controls for enabling a user to interact with the first content element through the viewer graphical user interface.

85. See [1.4] and [1.5] (incorporated here). A POSITA would have recognized or found obvious from reviewing Brown’s figures, for example, the annotated Figure 3A reproduced below, that Brown’s “**content element[s]**” are “[presented] ... in the viewer graphical user interface defined by the networked information monitor template.” SAMSUNG-1005, FIG. 3A. A POSITA would have recognized or found obvious that a “**viewer graphical user interface and/or ... content element**” would define “**all controls for enabling a user to interact with [the] content element**.” As shown below, Brown’s desktop

components define “**all controls for enabling a user to interact with the first content element,**” as all controls presented in the GUI are within the frame. SAMSUNG-1005, FIG. 3A. Additionally, Brown does not disclose any controls used for content interaction not bounded by the frame of the desktop component. SAMSUNG-1005, 11:43-67, 12:1-43, FIG. 3A. This implementation is consistent with the ’545 Patent, which describes that “[t]he space **within the frame** is the **control space** or viewer; visible controls are **distributed within the control space** or viewer.” SAMSUNG-1001, 22:34-38.



SAMSUNG-1005, FIG. 3A (annotated)

[2]: The method of claim 1, wherein the definition of the viewer graphical user interface includes a definition of at least one control effective for controlling an aspect of the viewer graphical user interface, and wherein presenting the viewer graphical user interface comprises presenting the at least one control.

86. A POSITA would have recognized or found obvious that desktop components contain multiple features that “[include] a definition of at least one control effective for controlling an aspect of the viewer graphical user interface.” Further, a POSITA would have understood or found obvious that “presenting the viewer graphical user interface” would include “presenting the at least one control” because these controls are defined by the same set of HTML instructions. SAMSUNG-1005, 11:56-67, 12:1-10.

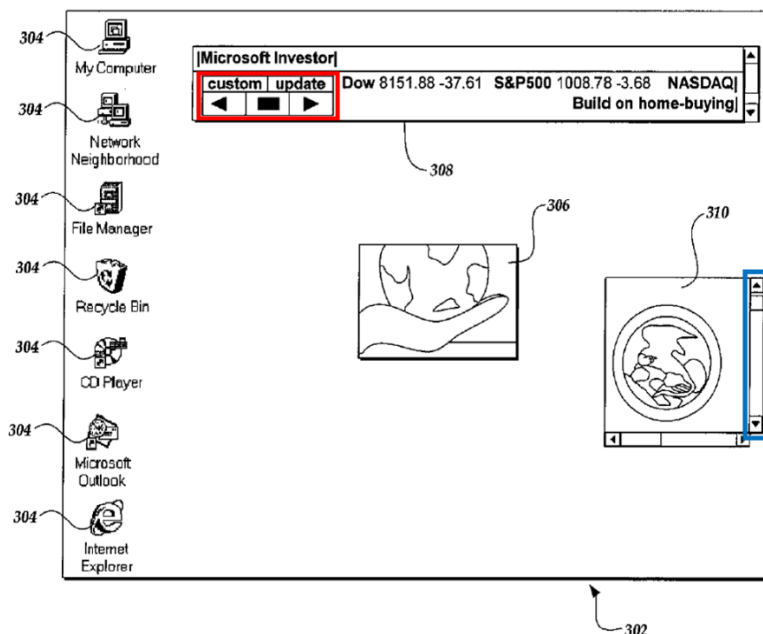
87. First, Brown discloses that its HTML instructions can also include a “windowed component manipulation control 326 and a windowless component manipulation control 328,” which allow the user to “move and resize desktop components. SAMSUNG-1005, 7:59-61. An example of a resizable desktop component is presented below in the annotated set of HTML instructions.

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>

Control characteristics within
the HTML instructions

SAMSUNG-1005, 12:1-8 (annotated)

88. Second, Brown's Figure 3A (annotated below) depicts multiple forms of controls within desktop components. SAMSUNG-1005, FIG. 3A. As noted in the annotated figure, Brown's desktop components can be outfitted with scroll bars. SAMSUNG-1005, *see also* 9:13-27.



SAMSUNG-1005, FIG. 3A (annotated)

```

typedef struct__tagCOMPONENT
{
    DWORD dwSize;    //Size of this structure
    DWORD dwID;    //Reserved: Set it always to zero.
    int iComponentType; //One of COMP_TYPB_*
    BOOL fChecked;    // Is this component enabled?
    BOOL fDirty;    // Had the component been modified and
not yet saved to disk?
    BOOL fNoScroll;    // Is the component scrollable?
    COMPPPOS cpPos;    // Width, height etc.,
    WCHAR wszFriendlyName[MAX_PATH];    // Friendly
name of component.
    WCHAR wszSource[INTERNET_MAX_URL_
LENGTH]; //URL of the component.
    WCHAR wszSubscribedURL[INTERNET_MAX_URL_
LENGTH]; //Subscribed URL
}

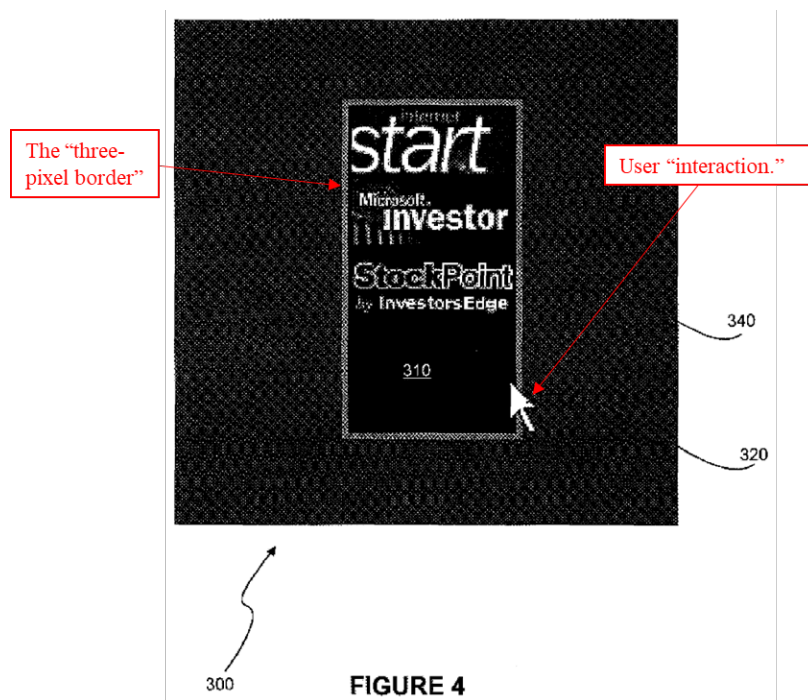
```

Scroll bars can
be implemented
for desktop
components.

SAMSUNG-1005, 9:13-27 (annotated)

89. Third, Brown additionally directs the reader to “Jones,” a co-pending application directed to “managing position and size for a desktop component.” SAMSUNG-1005, 13:39-44; SAMSUNG-1010, Cover. Jones discloses multiple methods of interacting with a desktop component, and states that “FIG. 4 depicts the desktop component 310 in a third state in which pointer 320 is in close proximity to, or actually intersecting, an edge of the desktop component. In this situation, a thick border 340 is displayed. In a present embodiment, a three-pixel border is used so that the user may more easily interact with the border, such as for **resizing the desktop element (“controlling an aspect”).**” SAMSUNG-1010, 5:1-7, FIG. 4. A POSITA would have recognized or found obvious that Jones’ techniques of resizing and repositioning desktop components would have been part

of a POSITA's general knowledge and applicable to Brown, which refers the reader to Jones.



SAMSUNG-1010, FIG. 4 (annotated)

[3]: The method of claim 2, wherein the aspect is the location at which the user interface is rendered on a display device.

90. See [2] (incorporated here). A POSITA would have recognized or found obvious from reviewing the controls discussed in [2] that the “**aspect**” could be “**the location at which the user interface is rendered on a display device.**” For example, Brown discusses allowing the user to “move and resize desktop components. SAMSUNG-1005, 7:59-61. This disclosure within Brown is consistent with Jones (“such as for moving the desktop component on the desktop”). SAMSUNG-1010, 5:8-14.

[4]: The method of claim 2, wherein the aspect is the size of the user interface when presented on the display of the client computing device.

91. See [2] (incorporated here). A POSITA would have recognized or found obvious from reviewing the controls discussed in [2] that the “**aspect**” could be “**the size of the user interface when presented on the display of the client computing device.**” For example, Brown discusses allowing the user to “move and resize desktop components. SAMSUNG-1005, 7:59-61. This disclosure within Brown is consistent with Jones (“such as for resizing the desktop element”). SAMSUNG-1010, 5:1-7.

[6]: The method of claim 1, wherein the definition of the viewer graphical user interface defined by the networked information monitor template comprises an image, and wherein presenting the viewer graphical user interface defined by the networked information monitor template on the display of the client computing device comprises presenting the image included in the definition as part of the viewer graphical user interface.

92. Brown describes that HTML documents can contain “graphics ... and video clips” (both examples of an “**image**”). SAMSUNG-1005, 2:20-21. A POSITA would have understood or found obvious that these images are part of the “**definition of the viewer graphical user interface defined by the networked information monitor template**” and that “**presenting the viewer graphical user interface**” would include “**presenting the image included in the definition as part of the viewer graphical user interface**” as these images are within Brown’s HTML instructions used for generating desktop components. SAMSUNG-1005,

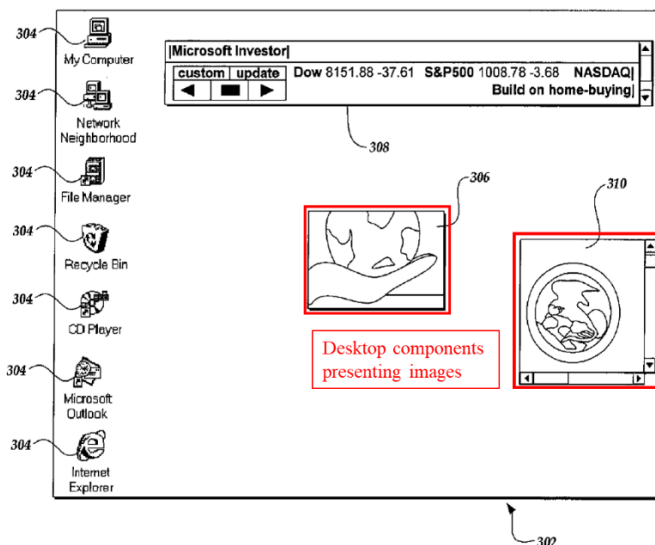
11:51-59, 12:44-50, FIG. 3A. Presented below are figures that demonstrate images in Brown's HTML instructions and desktop components.

```
6. <IMG id=3 name="DeskMovr" src="http://  
www.microsoft.com/ie/images/ulg/ulg_ie40.jpg"  
7. resizable="XY"  
8. subscribed_url="http://www.microsoft.com/ie/  
images/ulg/ulg_ie40.jpg"  
9. style="BACKGROUND: transparent; posi  
lute; LEFT: 347; TOP: 236; WIDTH: 120; HEIGHT:  
82; Z-INDEX: 1006">
```

A URL corresponding to an image file.

SAMSUNG-1005, 11:51-59 (annotated)

Additionally, Brown describes the use of “webpage desktop components” which “[function] similarly to the corresponding Web page viewed in a browser window.” SAMSUNG-1005, 11:21-28, 11:59-67, 13:14-21, FIG. 3A. An example webpage desktop component (310) is illustrated below, which includes an image within the GUI.



SAMSUNG-1005, FIG. 3A (annotated)

93. Wecker also describes that **images** can be contained within a CDF subscription. SAMSUNG-1006, 16:25-67. Wecker describes that “IMG indicates the field that represents an **image**, such as JPG or GIF.” SAMSUNG-1006, 16:64-65. An annotated example of a “stocks” script file according to Wecker is provided below.

```
<ITEM HREF="http://www.market.com/Stocks.mcs"
  ID="Stock_S"
  <USAGE VALUE="None"
</ITEM>
...
<CHANNEL ID = "Stock_C" >
  <TITLE VALUE="Market"/>
  <ITEM HREF="http://www.market.com/stocks.mcd"
  ID="Stock_D">
    <USAGE VALTE="MobileChannel"/>
    <ITEMSCRIPT VALUE="Stock_S"/>
    <ITEMFORMAT VALUE="Title,Date, Picture=
      IMG;
      Name, Low, High, Close"/>
  </ITEM>
</CHANNEL>
```

The IMG tag is used to indicate data that represents an image

SAMSUNG-1006, 16:44-60 (annotated)

[7]: The method claim 6, wherein presenting the received the first content element in the viewer graphical user interface defined by the networked information monitor template comprises presenting the received the first content element in association with the image.

94. See [6] (incorporated here). More specifically, a POSITA would have recognized or found obvious that a “Web page,” presented in a webpage desktop component, would include a combination of “**content element[s]**” and “**images,**” such that at least “**the first content element [is presented] in association with the image.**” SAMSUNG-1005, FIG. 3A; [6], *above*. Indeed, the URL referenced by

Brown's webpage desktop component includes an image, and a POSITA would have recognized or found obvious that this URL ("http://www.uspto.gov") would include additional non-image content as it was a well-known government website known to host such content. *Id.*

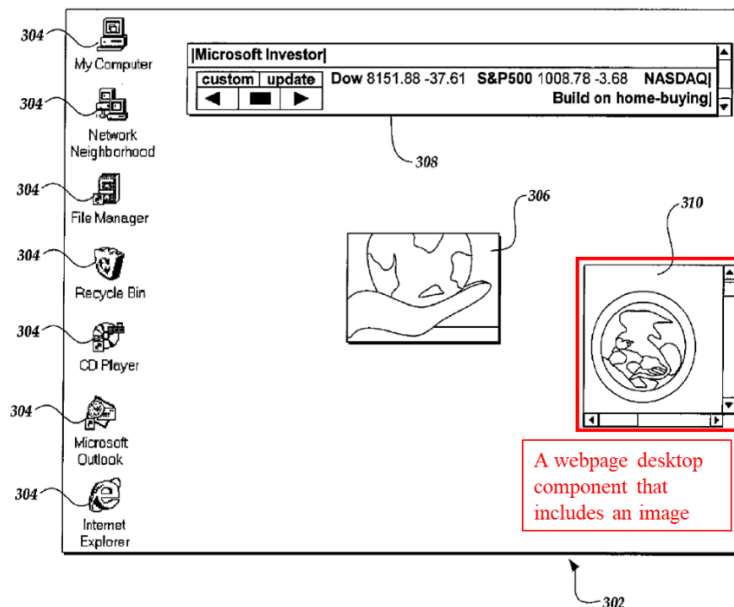
```

10. <IFRAME id=7 MARGINWIDTH=0
    MARGINHEIGHT=0 name="DeskMovrW" src=
    "http://www.uspto.gov/"
11. resizable="XY"
12. subscribed_url="http://www.uspto.gov/"
13. frameborder=0 style="BACKGROUND: transparent;
    position:absolute; LEFT:620; TOP:254; WIDTH:156;
    HEIGHT:150; Z-INDEX:1014"></IFRAME>

```

A URL corresponding to a web page

SAMSUNG-1005, 11:59-67 (annotated)



SAMSUNG-1005, FIG. 3A (annotated)

95. Moreover, a POSITA would have recognized or found obvious that Brown obviates this limitation in multiple ways. For example, a POSITA would have recognized or found obvious that HTML could be used to create a

“background” using an “**image**” which could be presented behind at least “**the first content element**,” such that they are both presented “**in association with**” each other.

96. Indeed, Darnell discusses the use of the HTML “BODY” tag and describes that “[the] **image** is placed in the **background of the Web page**, similar to hanging wallpaper in a bedroom. If the image is smaller than the space occupied by the browser window, it's tiled to fill the entire background.” SAMSUNG-1011, 242-243. Brown describes the use of “Web pages,” as this term is used by Darnell, in “webpage desktop components.” SAMSUNG-1005, 11:21-28, 11:59-67, 13:14-21, FIG. 3A.

[8]: The method of claim 6, wherein presenting the received the first content element in the viewer graphical user interface defined by the networked information monitor template comprises presenting the received the first content element at least in part within the image.

97. *See* [7] (incorporated here). A POSITA would have recognized or found obvious that the use of a “background” would result in “**presenting the received the first content element at least in part within the image**” as the image of a background is displayed behind any content.

[9]: The method of claim 1, wherein the definition of the viewer graphical user interface defines at least one control permitting the modification of the appearance of the viewer graphical user interface defined by the networked information monitor template, and wherein presenting the viewer graphical user interface defined by the networked information monitor template on the display of the client computing device comprises presenting the at least one control.

98. See [1.1], [2], [3], and [4] (incorporated here). A POSITA would have understood or found obvious that all of these previously discussed controls are **“at least one control permitting the modification of the appearance of the viewer graphical user interface”** as “aspect,” as used in the above claims, is a synonym of “appearance.”

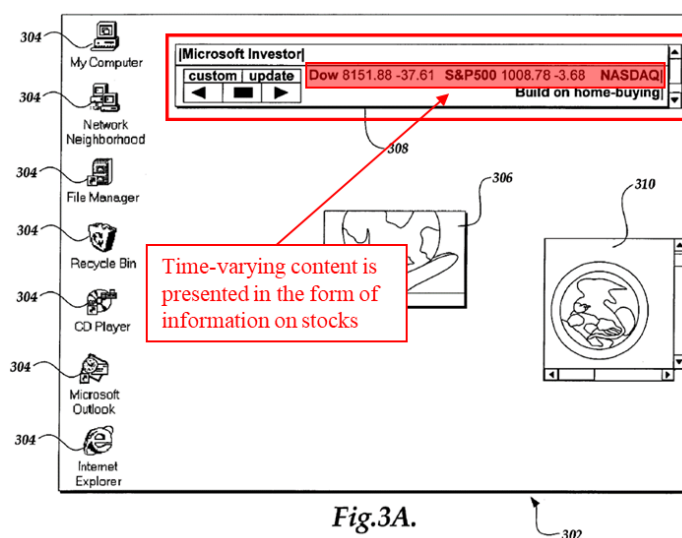
[10]: The method of claim 1, wherein the first content element includes audio content, video content, graphics content, still image content, textual content and/or interactive content.

99. Brown describes that “[an] HTML document can contain text (“**textual content**”), graphics (“**graphics content**” and “**still image content**”), audio clips (“**audio content**”), and video clips (“**video content**”), as well as metadata or commands providing formatting information.” SAMSUNG-1005, 2:20-23. A POSITA would have recognized or found obvious that any of the above listed forms of content could be “**interactive content**,” as they are displayed in a GUI with controls. See [2], *above*.

[13]: The method of claim 1, wherein the networked information monitor is configured to cause the client computing device to periodically request the first content element from the first network location referenced by the definition the first content element for the networked information monitor template and to present the received first content element within the viewer graphical user interface in an ongoing manner.

100. Brown describes that the GUI desktop can “provide entry points to Internet resources” that can **“change over time** to reflect the **changing nature of the resource.**” SAMSUNG-1005, 1:24-34. As an example of content that can

change over time, Brown presents a desktop component directed to stock information, presented in the annotated figure below.



SAMSUNG-1005, FIG. 3A (annotated)

101. In view of the above disclosures, a POSITA would have understood or found obvious that Brown's content is "**periodically [requested] ... from the first network location referenced by the definition the first content element for the networked information monitor template**" and "**[presented] ... within the viewer graphical user interface in an ongoing manner**"). [1.6]-[1.8], *above*. Further, because this content is referenced by a URL in the HTML instructions that define the desktop component, the desktop component is "**configured**" to perform these operations. *Id.*

102. A POSITA would have understood or found obvious that "web pages," as described by Brown, would include "time-varying content" as the

Internet was known to host such content. *See* [7], *above*. Indeed, Shaffer describes “messages received by [a] computer [that] include **web page updates** received by a router associated with a web server on the **World Wide Web of the Internet.**” SAMSUNG-1020, 36-59. A “web page update,” according to Shaffer, can include “scheduled updates (“**periodically request**”) of stock prices.” *Id.*

[14]: The method of claim 1, wherein the network is the internet.

103. Both Brown and Wecker describe operating over the “internet.” SAMSUNG-1005, 13:1-4; SAMSUNG-1006, 3:1-7.

104. Further, Brown describes “HyperText Transfer Protocol (HTTP),” which a POSITA would have recognized or found obvious to be a form of TCP/IP that operates over the internet. SAMSUNG-1005, 2:29-33. Indeed, Darnell discloses that “HTTP [hypertext transfer protocol] operates **over the Internet**, where communication occurs between computers via TCP/IP.” SAMSUNG-1011, Page 88.

[15.1]: The method of claim 1, wherein the networked information template further comprising a definition of a second content element for the networked information monitor template, the definition of the second content element referencing a second network location from which the second content element for the networked information monitor template is served over the network, and wherein the method further comprises:

105. *See* [1.4] (incorporated here). A POSITA would have recognized from reviewing Brown’s HTML instructions and figures that multiple (e.g., at least a “**second**”) “**content elements**” each referencing different “**network locations**”

could be presented with desktop components (“**a definition of the second content element for the networked information template ... referencing a second network location**”). SAMSUNG-1005, 12:1-8, FIG. 3A.

```
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>
```

The diagram shows a red rectangular box highlighting two lines of HTML code: line 14, which contains the `src="http://www.microsoft.com/ie/ie40/gallery/ticker.htm"` attribute, and line 16, which contains the `subscribed_url="http://www.microsoft.com/ie/ie40/gallery/cdf/g__stock.cdf"` attribute. To the right of the code, a red box contains the text "URLs corresponding to different content locations." with two red arrows pointing from the text to the two highlighted lines of code.

SAMSUNG-1005, 12:1-8 (annotated)

[15.2]: responsive to instructions included in the requested networked information monitor template, transmitting over the network a second content request to the second network location referenced by the definition of the second content element for the networked information monitor template;

106. *See* [1.6] (incorporated here). More specifically, Brown-Wecker renders obvious multiple (e.g., first and second) content requests and network locations because Brown discloses multiple URLs, each referencing a network location. SAMSUNG-1008, FIG. 18. A POSITA also would have understood or found obvious that, in order to retrieve content distinct from the first content, a second content request must be transmitted.

[15.3]: receiving, over the network, the second content element transmitted responsive to the second content request; and

107. *See* [1.7] (incorporated here). A POSITA also would have understood or found obvious that, once the request was transmitted, the client would “**receive**” the requested “**content element**” as this was well known in the art.

[15.4]: presenting the received second content element in the viewer graphical user interface defined by the networked information monitor template, wherein the definition of the viewer graphical user interface and/or the second content element define all controls for enabling a user to interact with the second content element through the viewer graphical user interface.

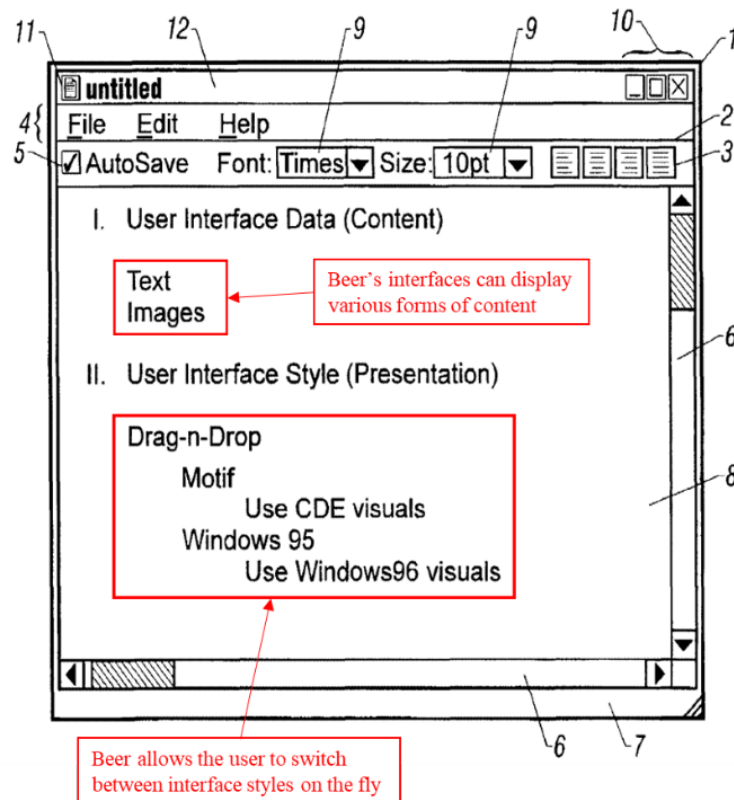
108. *See* [1.5] (incorporated here) regarding “**presenting the received the second content element in the viewer graphical user interface defined by the networked information monitor template.**” *See* [1.8] (incorporated here) regarding “**the definition of the viewer graphical user interface ... [defining] all controls for enabling a user to interact with the second content element through the viewer graphical user interface.**” I believe that [15.4] is obvious for the reasons discussed above in [1.5] and [1.8].

ANALYSIS OF BROWN, WECKER, AND BEER

Beer

109. Beer describes “[a] method and system for allowing a user to retrieve a user interface and a visual style from a local or remote storage unit, rapidly display the visual stylized user interface, and dynamically switch between visual styles.” SAMSUNG-1007, Abstract. Beer describes the use of a “Programmable Graphical User Interface” or “PGUI” that “renders the appearance of each part of the user interface in accordance with any newly selected visual style, and redisplay the changed user interface for response to events and for display of

content.” *Id.*, Abstract, 14:1-22. An annotated interface according to Beer is provided below.



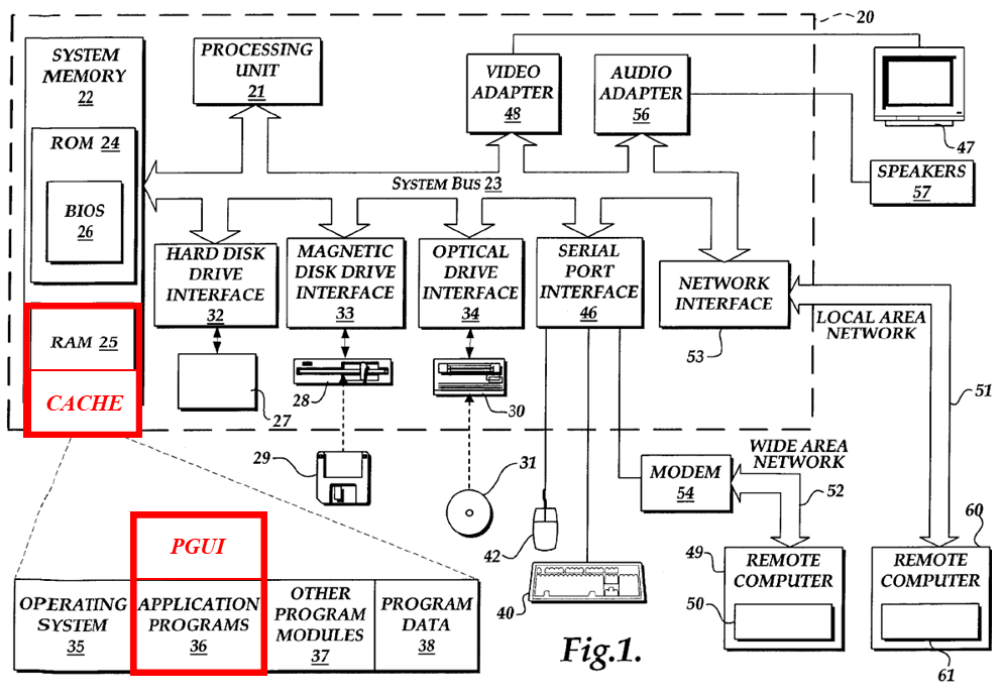
SAMSUNG-1007, FIG. 1 (annotated)

110. Beer refers to its templates as “text-based User Interface Language (UIL).” SAMSUNG-1007, *see at least* 2:29-30. Beer describes that these UILs are “preferably a text file, in a format similar to various text-markup languages, such as HTML (Hyper Text Markup Language). *Id.*, 3:41-45. Beer describes that “[t]he PGUI parses the user interface definition and creates each part of the application user interface in accordance with the defined attributes” and further

that “[t]he PGUI displays the user interface rendered in the specified style for response to events and for display of content.” *Id.*, 14:3-22.

Motivation to combine Brown, Wecker, and Beer

111. A POSITA would have found it obvious to combine Brown, Wecker, and Beer (collectively the “Brown-Wecker-Beer combination”). Among other things, Brown, Wecker, and Beer are generally directed to “accessing and viewing internet content.” SAMSUNG-1005, Abstract; SAMSUNG-1006, Abstract; SAMSUNG-1007, Abstract, 3:50-55, 13:65-67, 14:1-22. Brown and Beer also describe that content can be displayed in a GUI defined by a style template (Brown, HTML instructions; Beer, User Interface Language). SAMSUNG-1005, 6:34-36, 7:21-22, 11:1-67, 12:1-67, 13:1-54; SAMSUNG-1007, 3:41-45. Annotated figures of the Brown-Wecker-Beer combination are presented below.



SAMSUNG-1005, FIG. 1 (annotated)

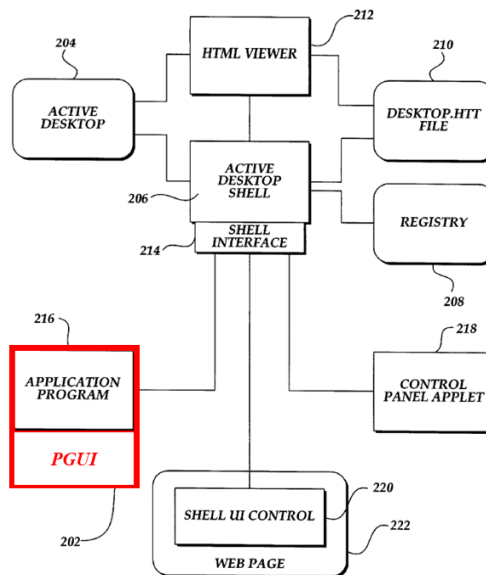


Fig.2.

SAMSUNG-1005, FIG. 2 (annotated)

112. A POSITA would have been motivated to combine Brown, Wecker, and Beer for various reasons.

113. First, a POSITA would have recognized that Beer's "User Interface Language," also referred to as "UILs," are data structures corresponding to the "HTML templates" that define Brown's "desktop components," and as a result, the additional capability of Beer could be incorporated without substantially modifying Brown's system. SAMSUNG-1005, 12:61-62; SAMSUNG-1007, 3:41-45. Indeed, Beer describes that "UIL user interface description is preferably a text file, in a format similar to various text-markup languages, such as HTML (Hyper Text Markup Language)." SAMSUNG-1007, 3:42-45.

114. Second, a POSITA would have understood or found obvious that the same content may be displayed in multiple styles across operating systems. Indeed, Brown describes that "those skilled in the art will appreciate that the invention may be practiced with **other computer system configurations**." SAMSUNG-1005, 4:44-49. Beer provides such an example of "other computer system configurations" and describes that operating systems can include "UNIX" and "Macintosh System 7," in addition to the "Windows 95" operating system already described by Brown and Wecker. SAMSUNG-1005, 6:26-32; SAMSUNG-1006, 8:15-21; SAMSUNG-1007, 3:28-33. Beer further states that its method "allows a user to select from a variety of different visual styles for a user interface" and that,

as an example, a “user can have a Windows95 style for applications running under the UNIX operating system.” SAMSUNG-1007, 3:16-33. More specifically, a POSITA would have recognized or found obvious that there would be business advantages in allowing a user to specify a style in such a way, given that there were many competing products on the market at the time of the Critical Date.

115. A POSITA would have been prompted to pursue this implementation because doing so is merely the application of known techniques (e.g., Beer’s PGUI parser) to a known structure (e.g., Brown’s client computer, and/or Wecker’s portable subscriber unit) to yield predictable results. Additionally, Brown, Wecker, and Beer all describe the Windows 95 operating system as a suitable operating system that can implement their techniques. SAMSUNG-1005, 6:26-32; SAMSUNG-1006, 8:15-21; SAMSUNG-1007, 3:28-29. Thus, a POSITA would have had a reasonable expectation of success in implementing Beer’s PGUI into the disclosure of Brown and Wecker.

Brown, Wecker, and Beer Renders Obvious Claims 5, 11-12, and 16-21

[5]: The method of claim 1, wherein the networked information monitor template includes instructions in extensible markup language (XML) format, and further wherein the method further comprises parsing the definition of the viewer graphical user interface.

116. Wecker describes that CDF, as used in both Brown and Wecker, is “based on the **Extensible Markup Language (XML)**.” SAMSUNG-1006, 10:57-62. More specifically, a POSITA would have recognized that, since the CDF

subscription is contained within Brown’s HTML instructions, these instructions “[include] instructions in extensible markup language (XML) format.” A figure presenting Brown’s HTML instructions and an XML CDF file according to Wecker is provided below.

```
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.

SAMSUNG-1005, 12:1-8 (annotated)

TABLE 1	
—	<!-- Declare item scripts --> <ITEM HREF="http://www.microsoft.com/test/script1.mcs", ID="IS1"> <USAGE VALUE="None"/> K </ITEM> <ITEM HREF="http://www.microsoft.com/test/script2.mcs", ID="IS2"> <USAGE VALUE="None"/> </ITEM> — <!-- Declare channel scripts --> <ITEM HREF="http://www.microsoft.com/test/script3.mcs" ID="CS1"> <USAGE VALUE="None"/> J </ITEM> <ITEM HREF="http://www.microsoft.com/test/script4.mcs" ID="CS2"> <USAGE VALUE="None"/> — </ITEM> A <CHANNEL HREF = "mctp://www.microsoft.com/test/test.cdf", ID="test" C BASE = "http://www.microsoft.com/test/ B SELF = "http://www.microsoft.com/test.cdf/> <TITLE VALUE = "Test Channel" /> <!-- IS1 is the general item script to use within the channel --> <ITEMSCRIPT VALUE="IS1"/> <!-- CS1 is the general channel script to use within the channel --> <CHANSRIPT VALUE = "CS1"/> E <ITEM HREF = "http://www.microsoft.com/test/AD1.mad" ID="AD1"> <USAGE VALUE = "MobileAd"/> <ITEM> <ITEM HREF = "http://www.microsoft.com/test/AD2.mad" ID="AD2"> <USAGE VALUE = "MobileAd"/> </ITEM> G <CHANNEL ID = "C1" DEFAULTPREF = "ON"> <TITLE VALUE = "Test Subchannel 1" /> <!-- This subchannel is also rendered by the general channel script CS1 --> <ITEM HREF="http://www.microsoft.com/test/item-a.mcd" ID="ITA"> <!-- This item is rendered by the item-specific IS2 script --> <ITEMSCRIPT VALUE="IS2"/> <USAGE VALUE="MOBILECHANNEL"/> </ITEM> <!-- <!-- H <CHANNEL ID = "C2" DEFAULTPREF = "OFF"> <TITLE VALUE = "Test Subchannel 2" /> <!-- This subchannel is rendered by the channel-specific script CS2 --> <CHANSRIPT VALUE = "CS2" /> <ITEM HREF="http://www.microsoft.com/test/item-b.mcd" ID="ITB"> <!-- This item is also rendered by the general IS1 item script --> <USAGE VALUE="MOBILECHANNEL"/> </ITEM> </CHANNEL> </CHANNEL>

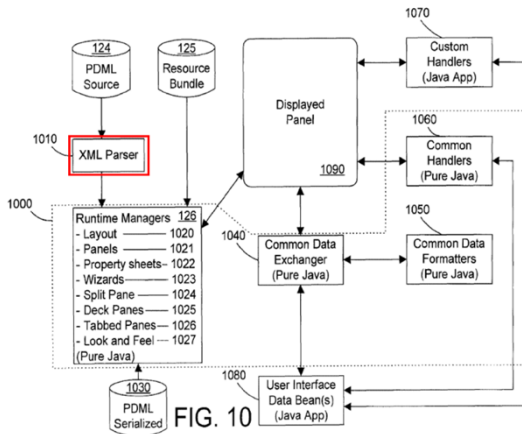
An example set of XML instructions in a CDF file.

SAMSUNG-1006, Col 11 (annotated)

117. Moreover, a POSITA would have understood or found obvious that the use of XML would require “**parsing the definition of the viewer graphical user interface**” as the use of XML requires the use of a compatible parser. Beer provides an example of one such parser, the PGUI. SAMSUNG-1007, Abstract, 14:1-22; [11], *below*. Indeed, Darnell describes the use of such parsers when processing XML documents:

“By attaching the [document data type] with the document sent over the network, you can ensure that the **XML software reading the document can parse it correctly** and thereby guarantee its correct formatting conversion, adding to a database, or whatever the receiver will choose to do with the document.” SAMSUNG-1011, 783.

118. Petty provides an additional example of style templates (“PDML”) built from XML and describes an “XML definition 123 of a panel definition markup language (PDML).” SAMSUNG-1013, 6:3-4. Petty, like Darnell, also describes parsing XML documents with an “XML parser,” as annotated in the figure below. *Id.*, see at least FIG. 10.



SAMSUNG-1013, FIG. 10 (annotated)

[11]: The method of claim 1, further comprising: executing a client parser application that is separate from the networked information monitor template, the client parser application being configured to present the viewer graphical user interface defined by the networked information monitor template on the client computing device, to generate the request for the content that is transmitted to the first network location referenced by the definition of the first content element for the networked information monitor template, and to present the first content element received from the first network location within the viewer graphical user interface defined by the networked information monitor template.

119. As an initial matter, a POSITA would have recognized or found obvious that a “parser,” or equivalent program module, could be used to perform various functions with a template. For instance, Brown’s “HTML viewer” and

“desktop shell” perform operations for **“present[ing] the viewer graphical user interface,”** **“generat[ing] the request for the content that is transmitted to the first network location referenced by the definition of the first content element,”** and **“present[ing] the first content element within the viewer graphical user interface.”** SAMSUNG-1005, 6:9-48, 14:8-12. Likewise, a POSITA would have recognized or found obvious that Wecker’s “loadable transport” and “script interpreter” also perform similar functions. SAMSUNG-1006, 3:58-67, 4:1-13, 4:43-52.

120. Moreover, a POSITA would have recognized that each of these program modules could be implemented as an **“application,”** as this is a common type of program module. Indeed, Brown describes that “[t]he Windows 95 operating system provides a system registry that is employed by multiple **application programs** to store configuration information for subsequent retrieval,” and that the “desktop shell” is one such application program that can access this registry. SAMSUNG-1005, 6:26-32. Additionally, a POSITA would have recognized or found obvious that Beer’s “PGUI resident” is an example of such an **“application.”** SAMSUNG-1007, 14:3-5.

121. To the extent that Patent Owner argues that the “parser application” must be a single program module, a POSITA would have also recognized or found obvious that a single program module could effectuate these functions. For

example, Beer discusses the use of a “PGUI” that “retrieves [a] corresponding **user interface definition** from a storage device ... **parses the user interface definition** and creates each part of the application **user interface** ... retrieves a defined visual style object ... renders the appearance of **each part of the user interface** in accordance with the defined visual style ... [and] displays the user interface rendered in the specified style for **response to events and for display of content**” (all collectively “**present[ing] the viewer graphical user interface [and at least a] first content element**” and “**generat[ing] the request for the content**”). SAMSUNG-1007, 14:3-23. A POSITA also would have recognized or found obvious, based on the same disclosure in Beer, that the PGUI is “**separate from the networked information monitor template.**”

[12]: The method of claim 1, further comprising causing the networked information monitor to communicate with another networked information monitor.

122. Beer describes that, in displaying a User Interface Language, “a UIL user interface description file can use the request feature to load user interface components which are described with a different UIL.” SAMSUNG-1007, 14:25-36. In order for this “request” process to occur, one UIL would need to “communicate” with the other, and that a POSITA would have recognized or found obvious that communications between user interfaces would be possible (“networked information monitor[s],” and the associated GUIs). *Id.*

[16pre]: A computer-implemented method of obtaining and displaying content obtained over a network to a user on a client computing device, the method being implemented in the client computing device, the client computing device including electronic storage, a display, and one or more processors configured to execute one or more computer program modules, the method comprising:

123. To the extent the preamble is limiting, Brown-Wecker-Beer renders [16pre] obvious. A POSITA would have recognized that the Brown-Wecker-Beer combination (and the Brown-Wecker combination) is also a **“computer-implemented method of obtaining and displaying content obtained over a network to a user on a client computing device”** because Brown describes “a computer-based method of displaying information on a graphical user interface composite desktop displayed on a computer monitor,” the information being “Web content retrieved from one or more Web sites.” SAMSUNG-1005, Abstract, Claim 19. A POSITA would have recognized that a “computer” and “desktop” are examples of a **“client computing device”** as these terms are used interchangeably in the art.

124. As discussed above, Brown’s “computer” includes **“electronic storage, a display, and one or more processors configured to execute one or more computer program modules”**). *See* [1.pre], *above*.

[16.1]: executing on the client computing device client parser, wherein the execution of the client parser results in the client computing device:

125. *See* [11] (incorporated here). A POSITA would have understood that the terms “client parser” and “client parser application” could be used interchangeably. I believe that [16.1] is obvious for the reasons discussed above in [11].

[16.2]: transmitting over the network a first content request to a first network location referenced by a definition of a first content element in a networked information monitor template that is readable by the client parser;

126. *See* [1.6] and [11] (incorporated here). I believe that [16.2] is obvious for the reasons discussed above in [1.6] and [11].

[16.3]: receiving, over the network, the first content element transmitted responsive to the first content request;

127. *See* [1.7] and [11] (incorporated here). I believe that [16.3] is obvious for the reasons discussed above in [1.7] and [11].

[16.4]: presenting a viewer graphical user interface defined by the networked information monitor template on the display of the client computing device and wherein the viewer graphical user interface defined by the networked information monitor template is presented separate from and outside of any other graphical user interface that includes user controls for specifying the first network location from which the first content element for the networked information monitor is served over the network; and

128. *See* [1.5] and [11] (incorporated here). I believe that [16.4] is obvious for the reasons discussed above in [1.5] and [11].

[16.5]: presenting the received content element within the viewer graphical user interface defined by the networked information monitor template, wherein the definition of the viewer graphical user interface and/or

the first content element define all controls for enabling a user to interact with the first content element through the viewer graphical user interface.

129. *See* [1.8] and [11] (incorporated here). I believe that [16.5] is obvious for the reasons discussed above in [1.8] and [11].

[17]: The method of claim 16, wherein execution of the client parser further results in the client computing device determining that the first element content modifies the networked information monitor template and responsive to such determination, modifying the networked information monitor template prior to the step of presenting the graphical user interface.

130. *See* [11] (incorporated here). Beer describes that “[t]he PGUI displays the user interface rendered in the specified style for response to events (**“determining that the first element content modifies the networked information monitor template”**) and for display of content.” SAMSUNG-1007, 14:3-22. Beer also describes that an example “response” to an “event” can be **“redraw[ing] the user interface (“modifying the networked information monitor template prior to the step of presenting the graphical user interface”)**.” SAMSUNG-1007, 13:22-24.

131. Moreover, a POSITA would have understood or found obvious that time-varying content would drive regular (e.g., continual) modification to the GUI. For example, Brown describes that the GUI desktop can “provide entry points to Internet resources” that can **“change over time to reflect the changing nature of the resource.”** SAMSUNG-1005, 1:24-34. Wecker also describes **“updat[ing]**

time-critical information, such as stock market values during peak network hours.” SAMSUNG-1006, 10:48-51.

[18]: The method of claim 16, further comprising presenting an icon representing networked information monitor associated with the networked information monitor template on the display of the client computing device, and wherein execution of the client parser to perform one or more of the transmitting operation, the presenting the viewer graphical user interface operation, or presenting the first content element operation is responsive to reception of selection by a user of the icon.

132. The use of icons was well known in the art as of the Critical Date, and a POSITA would have recognized or found obvious that selection of an icon would effectuate certain functions of a parser or similar computer program module. Indeed, Brown describes that an “icon corresponds to a program file, a program, or a resource **that is invoked** when a user selects and activates the icon (“**transmitting operation**” and/or “**presenting ... operation**”).” SAMSUNG-1005, 7:18-20. A POSITA would have recognized or found obvious that these “program files” could be HTML instructions associated with desktop components (“**an icon representing networked information monitor associated with the networked information monitor template**”), or other similar templates, as Brown describes these templates as “**a file** corresponding to the composite desktop.” SAMSUNG-1005, 3:4. Additionally, a POSITA would have recognized that any of the previously discussed computer program modules could perform the actions recited by the claim. *See [11], above.*

[19]: The method of claim 16, further comprising invoking the client parser an initiating one or more of the transmitting operation, the presenting the viewer graphical user interface operation, or presenting the first content element operation automatically during a start-up process of the client computing device.

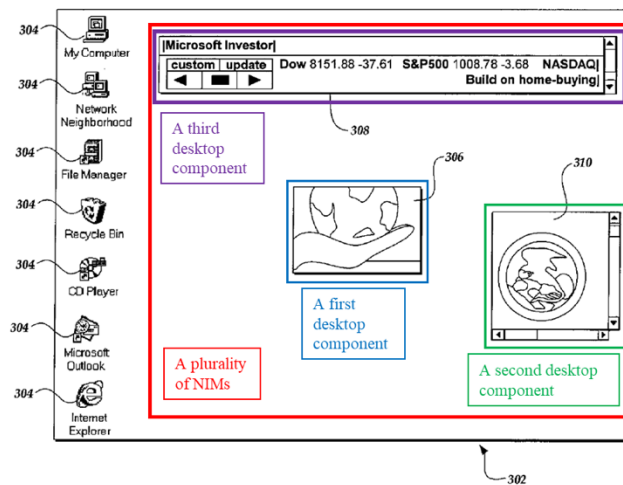
133. *See* [11] (incorporated here) with respect to “**the transmitting operation**” and “**the presenting the viewer graphical user interface operation.**”

I believe that [19] is obvious for the reasons discussed above in [11].

[20.1]: The method of claim 19, wherein execution on the client computing device of the client parser further results in the client computing device: transmitting over the network a second content request to a second network location referenced by a definition of a second content element in a second networked information monitor template that is readable by the client parser;

134. *See* [1.1], [1.6], and [11] (incorporated here). A POSITA would have recognized from reviewing the figures of Brown that the “composite desktop” is comprised of “one **or more** components,” which includes additional sets of “HTML instructions” that define the desktop “components.” SAMSUNG-1005, 4:13-19, FIG. 3A.

135. Brown renders obvious multiple (*e.g.*, first and second) content requests because Brown discloses multiple desktop components and content elements, each with an associated network location. FIG. 3A. As discussed above, a POSITA would have recognized or found obvious that the parser application could “**transmit**” a “**content request.**” *See* [11], *above*.



SAMSUNG-1005, FIG. 3A (annotated)

[20.2]: receiving the second content element transmitted responsive to the second content request;

136. *See* [1.7] and [11] (incorporated here). I believe that [20.2] is obvious for the reasons discussed above in [1.7] and [11].

[20.3]: presenting a second viewer graphical user interface defined by the second networked information monitor template on the display of the client computing device, wherein the second viewer graphical user interface lacks user controls, wherein the definition of the second viewer graphical user interface and/or the second content element define all controls for enabling a user to interact with the second content element through the second viewer graphical user interface; and

137. *See* [1.5] and [11] (incorporated here). I believe that [20.3] is obvious for the reasons discussed above in [1.5] and [11].

[20.4]: presenting the second content element within the viewer second graphical user interface,

138. *See* [1.8] and [11] (incorporated here). I believe that [20.4] is obvious for the reasons discussed above in [1.8] and [11].

[20.5]: wherein execution of the client parser to perform the transmitting the second content request, the presenting the second viewer graphical user interface operation, and the presenting the second content element is responsive to reception of a selection to initiate a second networked information monitor associated with the second networked information monitor template.

139. *See* [11] and [18] (incorporated here). I believe that [20.5] is obvious for the reasons discussed above in [11] and [18].

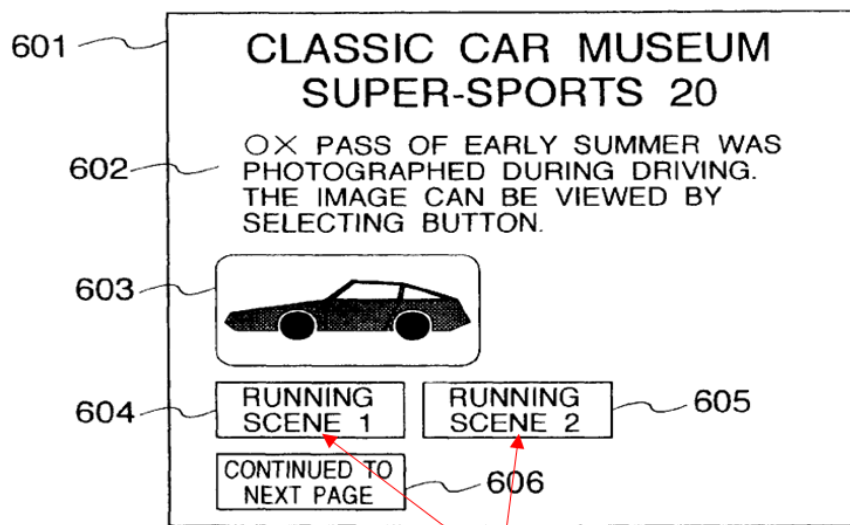
[21]: The method of claim 16, wherein the network is the internet.

140. *See* [14] (incorporated here). I believe that [21] is obvious for the reasons discussed above in [14].

ANALYSIS OF SHIMADA AND BUCHHOLZ

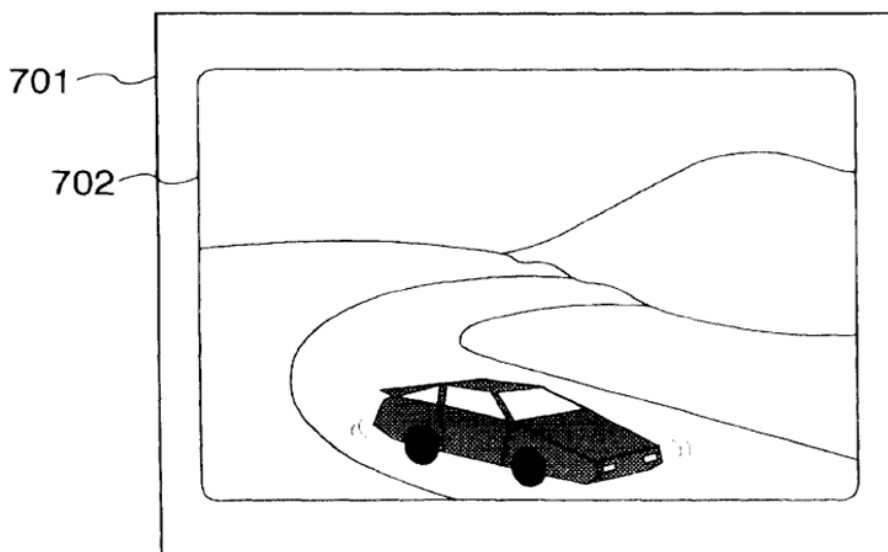
Shimada

141. Shimada describes “a data conversion apparatus included an information input device” and “a convertor for executing the data in accordance with a predetermined rule.” SAMSUNG-1008, Abstract. Shimada further describes that “when the kind of the data is screen configuration data describing configuration of the screen output of an information processing unit, the predetermined rule adds a display area of the screen configuration and converts it to a screen configuration data capable of displaying a plurality of screen configurations on the same screen.” *Id.* Annotated figures 6 and 7 below provide examples of anchor tags that generate the display areas according to Shimada.



Anchor tags that correspond to a
piece of internet content.

SAMSUNG-1008, FIG. 6 (annotated)

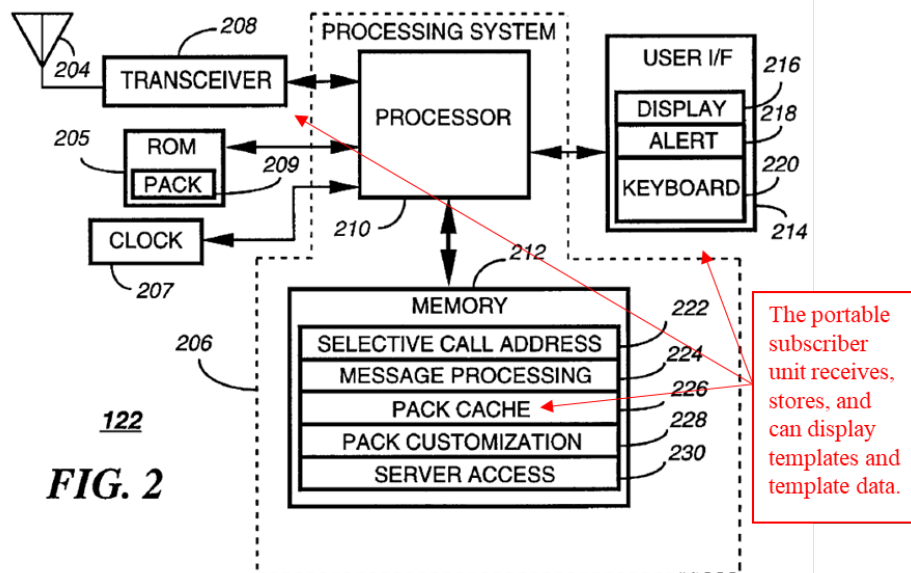


A frame that displays content
referenced by the anchor tag.

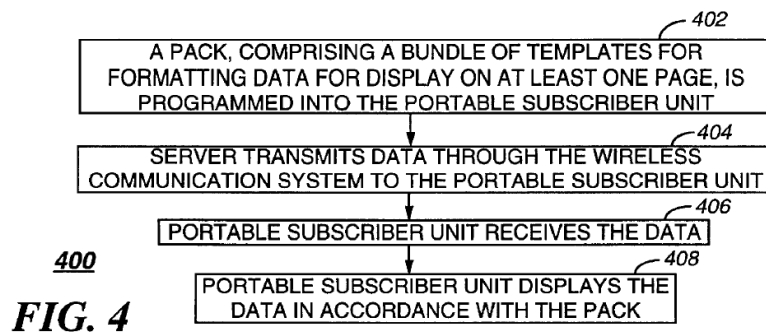
SAMSUNG-1008, FIG. 7 (annotated)

Buchholz

142. Buchholz describes “a method in a wireless communication system for controlling a display of template data by a portable subscriber unit.” SAMSUNG-1009, 1:57-59. Buchholz further explains that this method “comprises the steps of programming a pack into the portable subscriber unit, the pack comprising a bundle of templates for formatting the template data for display on at least one page, and transmitting the template data from a server in the wireless communication system. The method further comprises the steps of receiving the template data by the portable subscriber unit, and displaying the template data in accordance with the pack.” SAMSUNG-1009, 1:60-67. Annotated figure 2 provides an example of a portable subscriber unit according to Buchholz. Figure 4 outlines a process for transmitting data to a portable subscriber unit and displaying the data in accordance with a pack. Figure 8 outlines transmitting a pack to a portable subscriber unit.



SAMSUNG-1009, FIG. 2 (annotated)



SAMSUNG-1009, FIG. 4

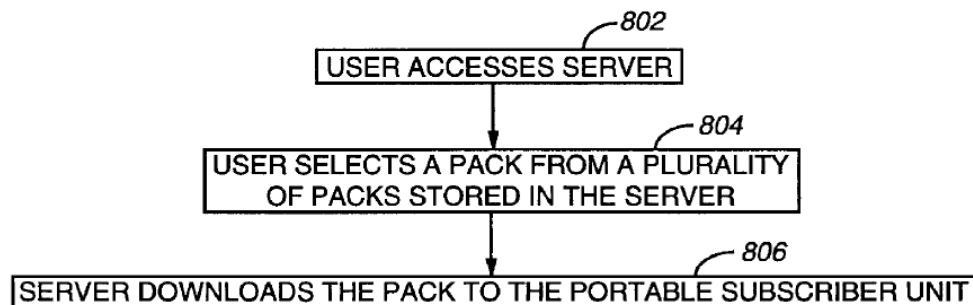


FIG. 8

SAMSUNG-1009, FIG. 8

Motivation to combine Shimada and Buchholz

143. A POSITA would have found it obvious to combine Shimada and Buchholz (collectively the “Shimada-Buchholz combination”). Among other things, both references are directed to “accessing and viewing internet content” and are further specifically directed to the desire to “reducing data transfer times.” SAMSUNG-1008, Abstract, 1:34-55; SAMSUNG-1009, Abstract, 1:49-54.

144. A POSITA would have combined Shimada and Buchholz for various reasons.

145. First, a POSITA would have recognized that both Shimada and Buchholz complement each other's ability to mitigate long download times in networks with "small network transmission capacity," as described by Shimada. SAMSUNG-1008, 1:40-44. Indeed, Buchholz also contemplates such networks, for example, "wireless communication systems" that can experience "excessive latency" when requesting and displaying web pages. SAMSUNG-1009, 1:26-37. Thus, a POSITA would have recognized that the techniques of these references were complementary, and each would enhance the abilities of the other.

146. Second, a POSITA would have recognized that the "screen configuration data" of Shimada and the "templates" of Buchholz are both implemented in HTML. SAMSUNG-1008, 6:59-62; SAMSUNG-1009, 5:9-13. Thus, a POSITA would have had a reasonable chance of success in implementing the "screen configuration data" of Shimada into the "subscriber units" of Buchholz since this would require little to no modification of both systems and would merely involve the application of a known technique to yield predictable results.

147. Moreover, a POSITA would have been motivated to combine Shimada and Buchholz to improve data transfer times, increase usability, reduce client-side storage requirements, and/or other relevant business or technical

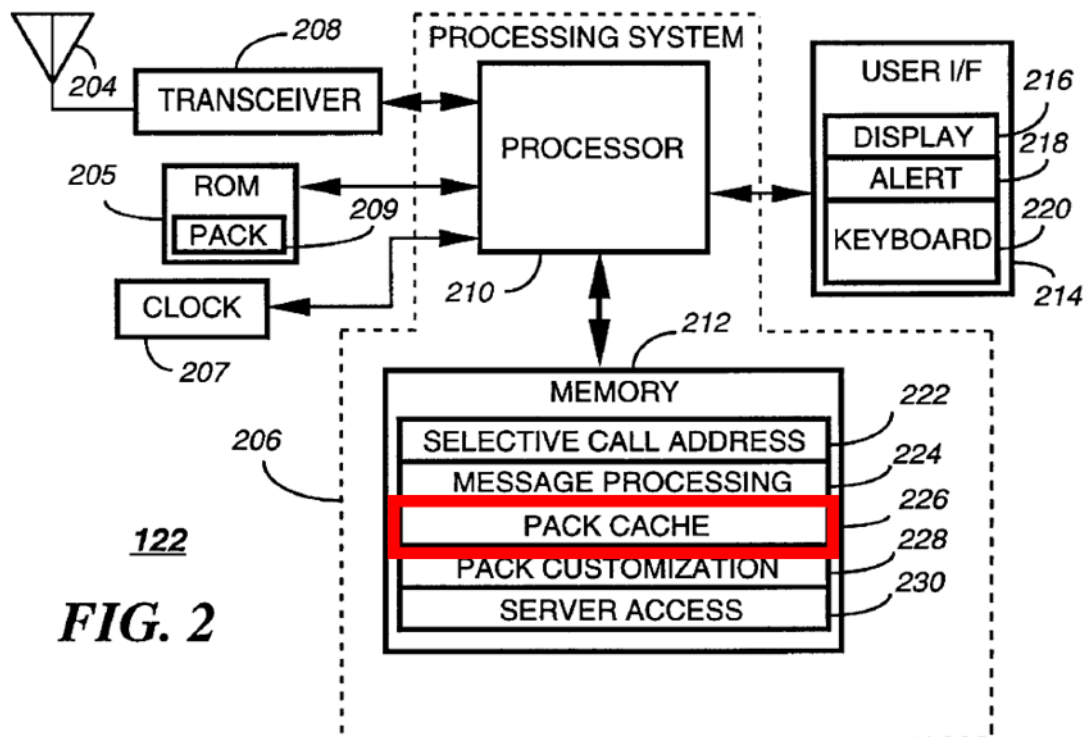
reasons. With these motivations, a POSITA would have found it obvious to consider the disclosures of Shimada and Buchholz together.

Shimada and Buchholz Renders Obvious Claims 1-4, 6-7, 9-10, and 13-15

[1.pre]: A computer-implemented method of obtaining content over a network and displaying the content to a user, the method being implemented in a client computing device in operative communication with a server over a network, the client computing device including electronic storage, a display, and one or more processors configured to execute one or more computer program modules, the method comprising:

148. To the extent the preamble is limiting, the Shimada-Buchholz combination renders [1pre] obvious. For example, Shimada describes “a system ... [comprising] a server 101, networks 102 and 104, a screen configuration expanding device 103 and a client 105.” SAMSUNG-1008, 5:48-51. A POSITA would have understood or found obvious that “a client” is a form of “**client computing device**” as the addition of “computing device” does not create any limitation. A POSITA also would have understood or found obvious that because Shimada describes “**world wide networks** and access to **world-wide information**” that the techniques of Shimada could be used to “**[obtain] content over a network and [display] the content to a user.**” SAMSUNG-1008, 1:34-36. A POSITA also would have understood based on the same disclosure that Shimada’s client is “**in operative communication with a server over a network.**” *Id.*, see also 5:48-51.

149. Buchholz discloses a “memory 212” that comprises “a pack cache 226 for storing a pack utilized by the portable subscriber unit 122.” SAMSUNG-1009, 4:23-25. Buchholz describes that a pack “comprises a **bundle of templates** for formatting template data for display on at least one page” and that a template is “a pattern utilized by the processing system 206 and the user interface 214 to lay out the presentation of information to the user.” SAMSUNG-1009, 5:4-9. An example portable subscriber unit is provided below.

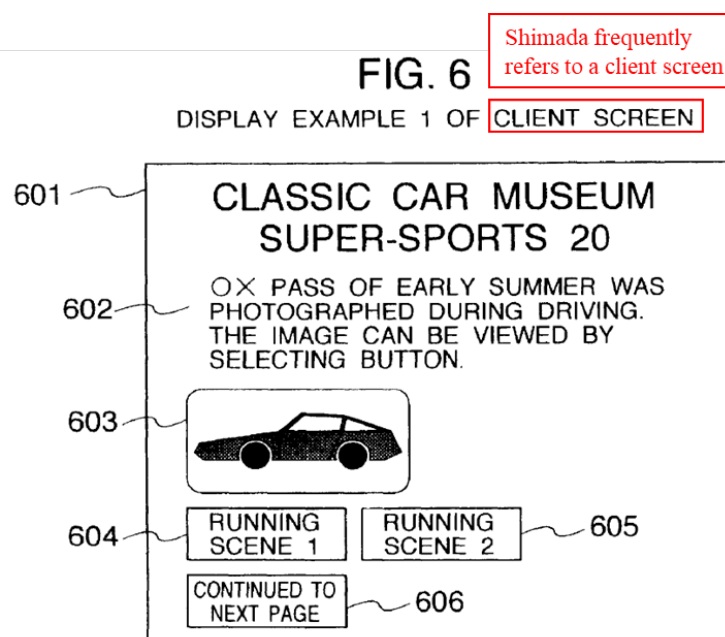


SAMSUNG-1009, FIG. 2 (annotated)

150. A POSITA would have recognized or found obvious that the “pack cache” and “memory” of Buchholz’s portable subscriber units to be a form of “**electronic storage**” because a POSITA would have understood that memory is an

example of electronic storage. Indeed, the '545 Patent frequently refers to “memory 30” within “computer 20.” SAMSUNG 1001, *see at least* 5:13-27.

151. Shimada frequently refers to a “client screen display,” which a POSITA would have understood or found obvious to be “**a display.**” SAMSUNG-1008, *see at least* 6:4-9, FIG. 6, FIG. 7, FIG. 17, FIG. 18. An example of Shimada’s client display is provided below.



SAMSUNG-1008, FIG. 6 (annotated)

152. Buchholz also describes such features, and discloses that portable subscriber devices include a “conventional display 216.” SAMSUNG-1009, 4:1-2. An example portable subscriber device is provided below.

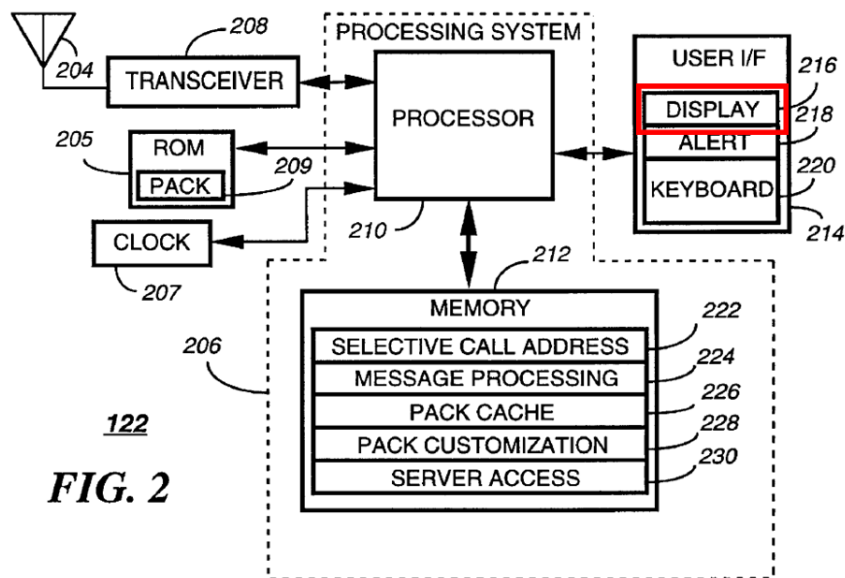
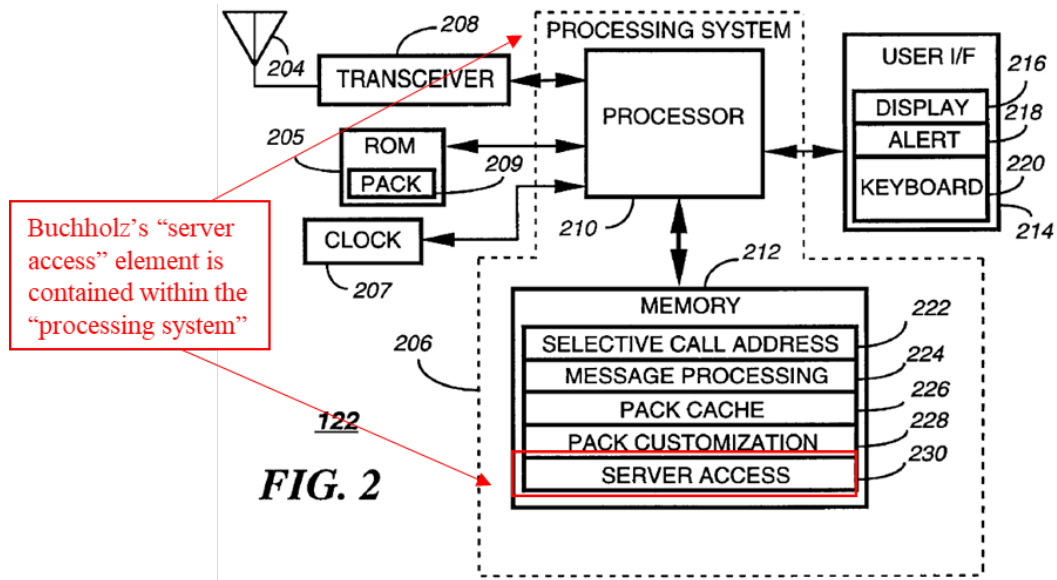


FIG. 2

SAMSUNG-1009, FIG. 2 (annotated)

153. Shimada also discloses that “processing” occurs on the client side of its system and states that the “information **processing** unit on the service requesting side is referred to as a ‘client.’” SAMSUNG-1008, 1:26-28, FIG. 1, FIG. 4, FIG. 6, FIG. 7. A POSITA would have understood or found obvious from this disclosure that a “processor” would execute the basic functions of the screen configuration data.

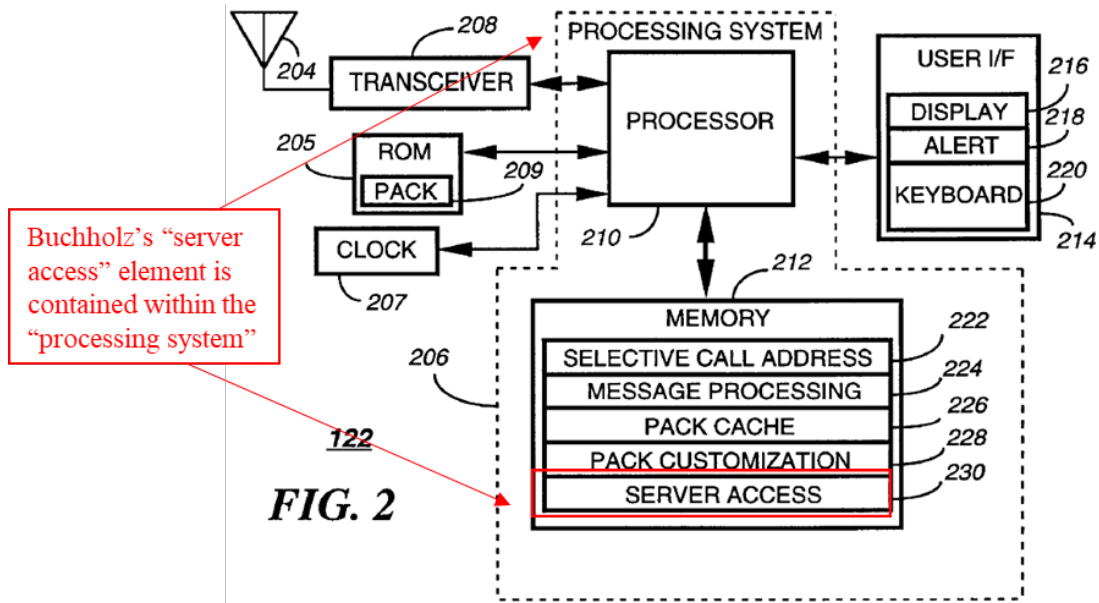
154. Consistent with this disclosure, Buchholz describes that its portable subscriber units contain a “processing system 206” (“**one or more processors**”) which comprises a “conventional processor 210 and a conventional memory 212,” where the memory 212 further comprises “a **server access element 230** (“**configured to execute one or more computer program modules**”).” SAMSUNG-1009, 4:14-31, FIG. 2.



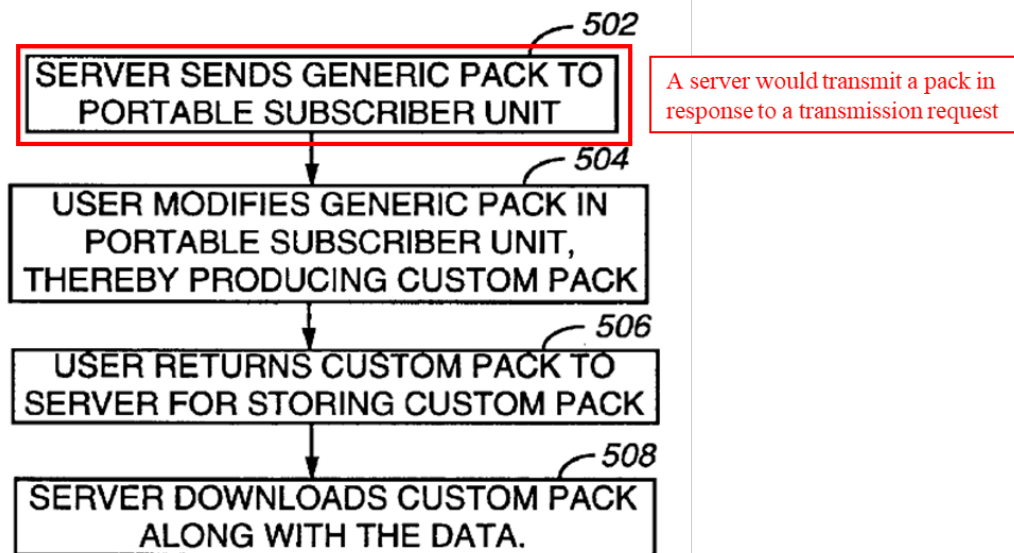
SAMSUNG-1009, FIG. 2 (annotated)

[1.1]: transmitting a request to the server over the network, the request requesting networked information monitor template;

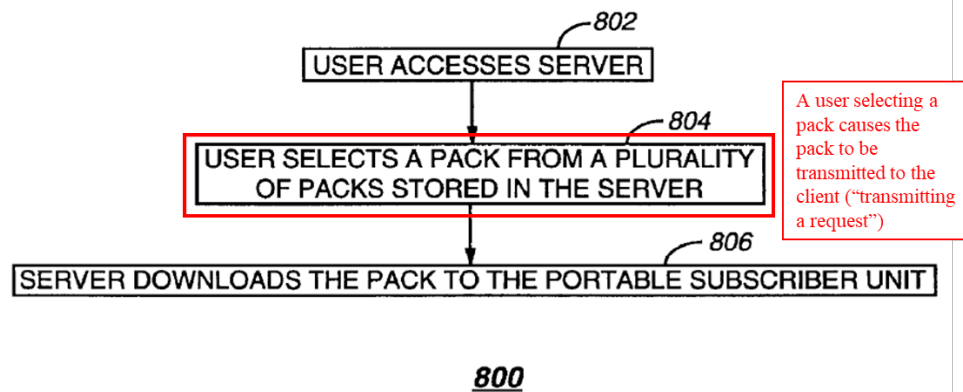
155. See [1.pre] (incorporated here). Buchholz describes “a **server access element 230** for programming the processing system 206 to allow a user to **access the server 124** (“transmitting a request to the server over the network”) for creating, modifying, and **downloading a pack** (“the request requesting networked information monitor template”).” SAMSUNG-1009, 4:14-31, FIG. 2, *see also* FIG. 5, FIG. 8. An annotated figure of Buchholz’s portable subscriber unit and various processes for downloading a pack are presented below.



SAMSUNG-1009, FIG. 2 (annotated)

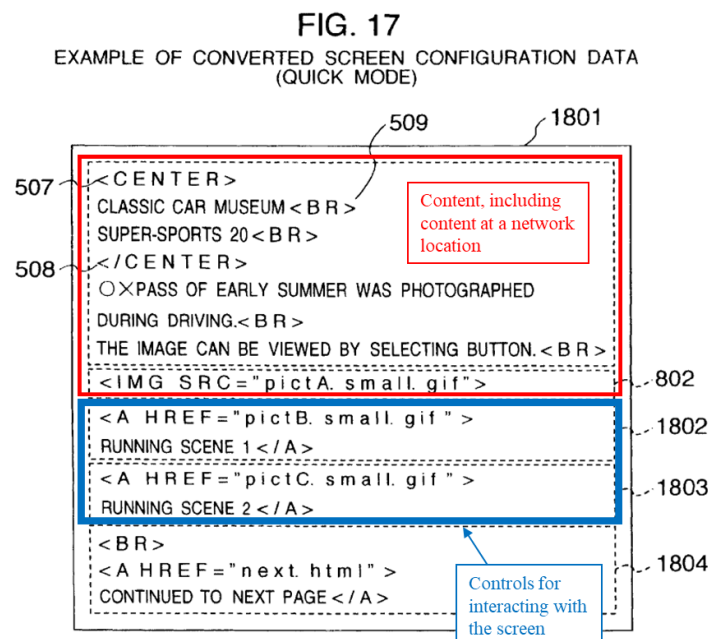


SAMSUNG-1009, FIG. 5 (annotated)

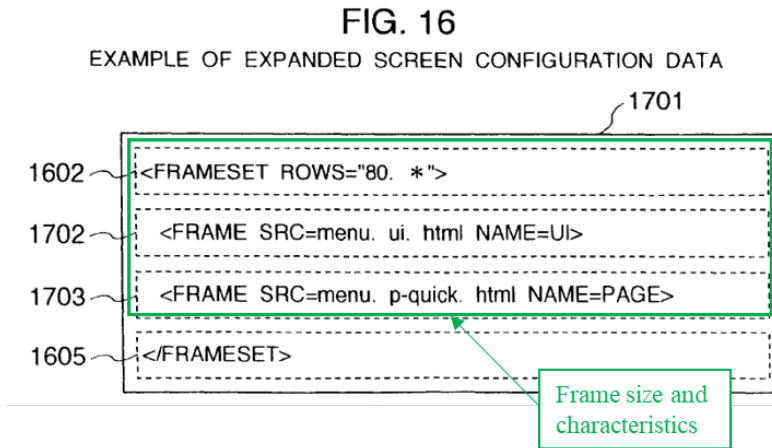


SAMSUNG-1009, FIG. 8 (annotated)

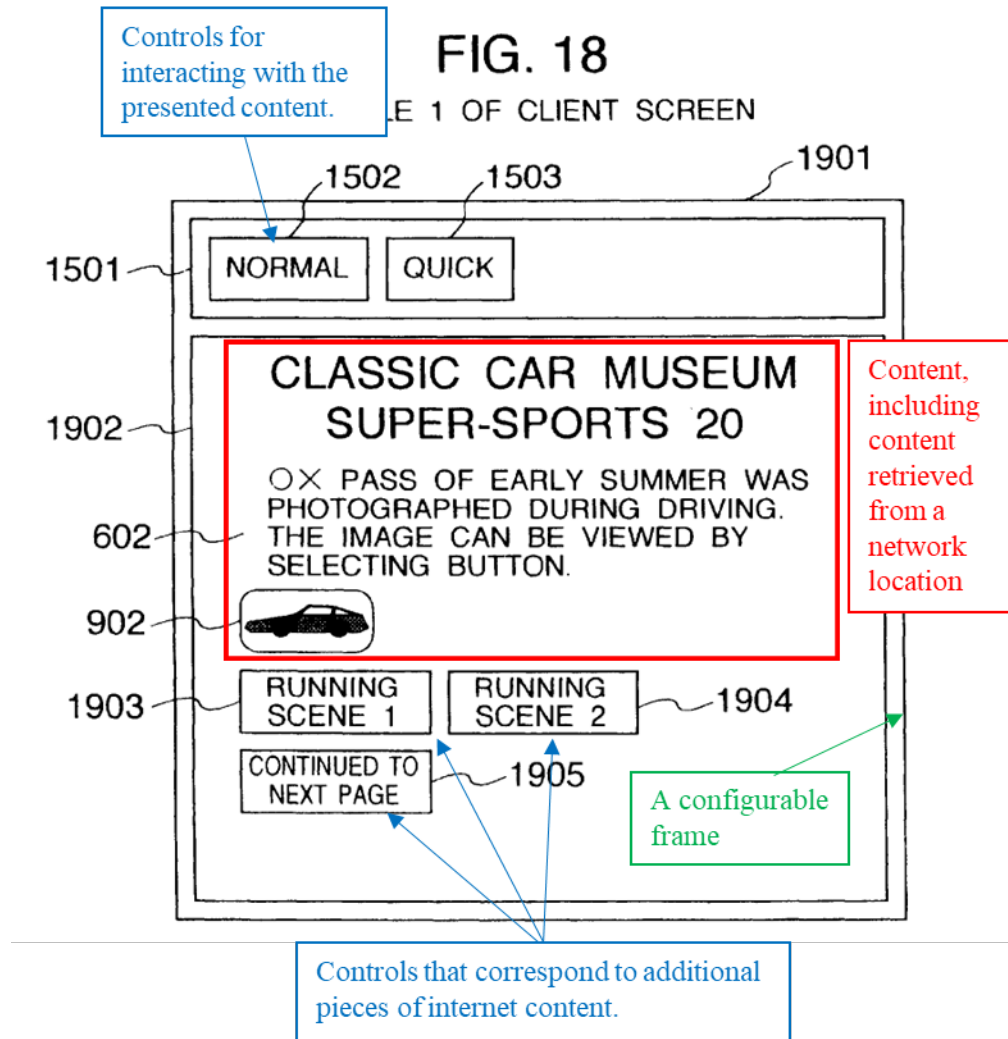
156. A POSITA would have recognized or found obvious that the screen configuration data of Shimada is a "template," as this term is used by Buchholz, as screen configuration data is also an HTML data structure that defines the presentation of content. Annotated figures depicting screen configuration data and the associated screen are provided below.



SAMSUNG-1008, FIG. 17 (annotated)



SAMSUNG-1008, FIG. 16 (annotated)



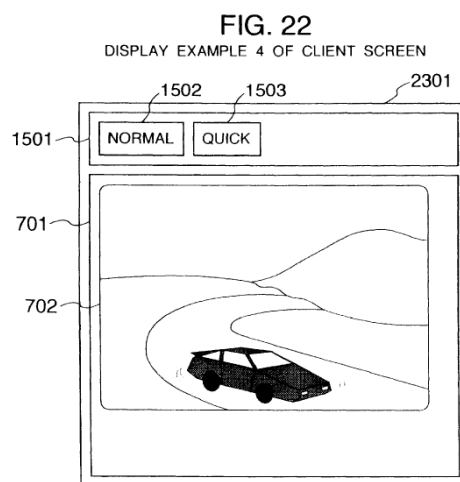
SAMSUNG-1008, FIG. 18 (annotated)

157. A POSITA would have understood or found obvious that the “screens” of Shimada correspond to the claimed “networked information monitors” in view of their similar features. Indeed, networked information monitors are “a **fully configurable frame**, with one or more **controls**, through which **content** is presented to the user,” and a POSITA would have recognized or found obvious that Shimada’s screens possess all of these features. SAMSUNG-1001, 5:41-44; *see* paragraph 28, *above*.

158. For example, Shimada’s screens present multiple anchor tags that allow the user to download additional content, as well as controls that allow the user to interact with displayed content (“**one or more controls**”). SAMSUNG-1008, 6:39-51, FIG. 18. Shimada describes “[]0 and [] in the description 504 are referred to as ‘anchor tags,’ and the portion encompassed by these tags becomes **a button on the screen** of the client 105. When the user clicks this button, the client 105 transmits the transfer request of the data designated by [HREF=“ ”] in the anchor tag to the server.” *Id.* Shimada also describes that “**control can be made** so that when the client 105 first gains access to the data or when the **user selects the QUICK button**, all the static images transferred to the client 105 are reduced, and when the **user selects the NORMAL button**, the static image data are not reduced in the same way.” *Id.*, 13:12-18. A

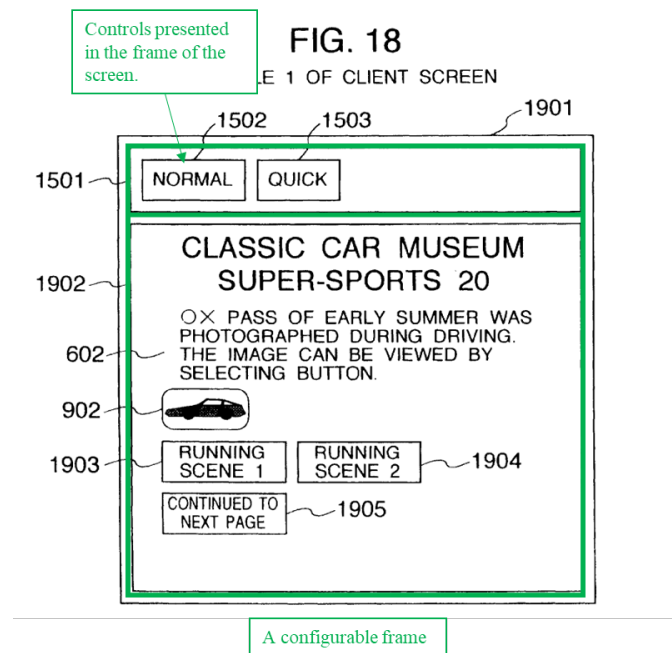
POSITA would have recognized or found obvious that these buttons are “**one or more controls**” as describing a feature as a button implies user control.

159. A POSITA also would have recognized or found obvious that the text and images (.gifs) presented to the user within the frame of the screen are “**content ... presented to the user,**” as .gifs are a common form of image file. SAMSUNG-1008, FIG. 18. Additionally, a POSITA would have recognized or found obvious that the content locations referenced by the anchor tags correspond to additional content locations, as the addresses of these network locations also correspond to .gif files. *Id.* Indeed, Shimada describes “[w]hen the user clicks this button, the client 105 transmits the transfer request of the data designated by [HREF= “ ”] in the anchor tag to the server. [pictB.gif] is the address representing the **static image 702.**” *Id.*, 6:42-45, FIG. 7, FIG. 10, FIG. 19, FIG. 22. An example of this additional content is provided below as component 702.



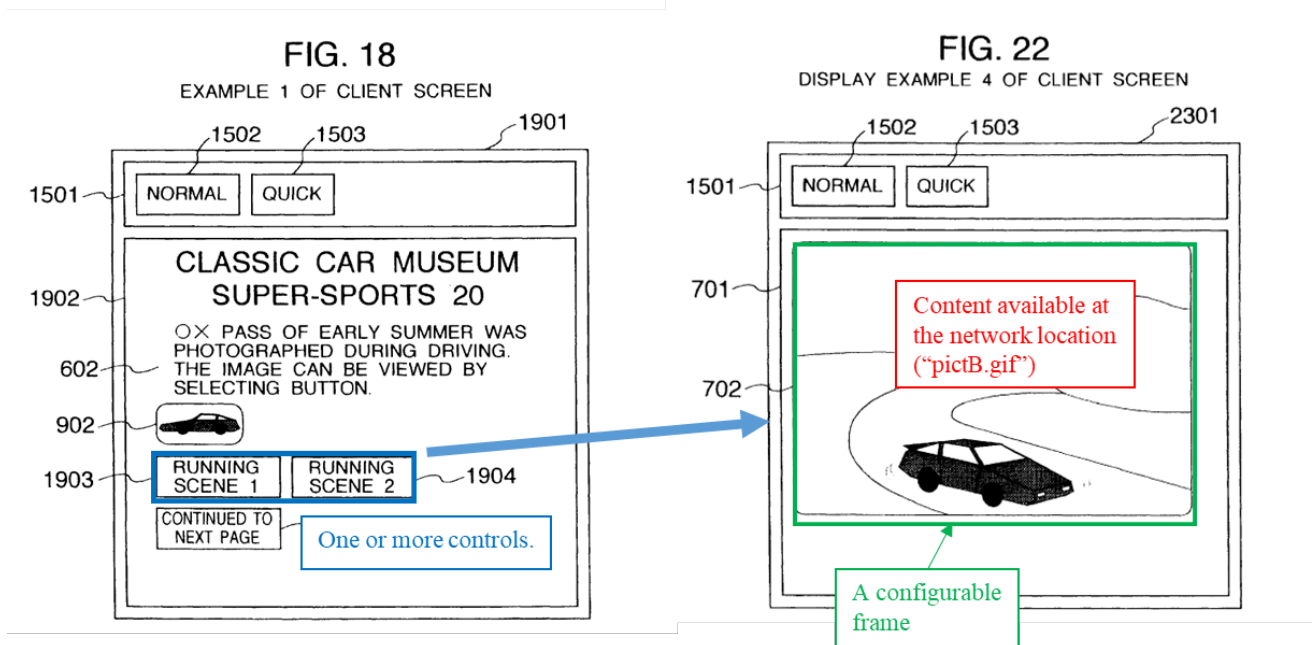
SAMSUNG-1008, FIG. 22

160. Finally, a POSITA would have recognized or found obvious that this content is presented to a user as a “**fully configurable frame**” from reviewing, at least, Figure 18 of Shimada which presents the content referenced by screen configuration data in a “**frame.**” SAMSUNG-1008, FIG. 18. Additionally, the size of this frame can be defined (“dividing the screen display”) and controls can be specified to control the frame. SAMSUNG-1008, 7:21-22, 8:65-67, FIG. 15, FIG. 16, FIG. 18. The above disclosures render Shimada’s screens “**fully configurable**” as this term is used by the ’545 Patent (i.e. the user can specify frame characteristics and controls). SAMSUNG-1001, 1:60-67. An annotated figure is presented below which shows the frame of Shimada’s screen, along with the associated controls.



SAMSUNG-1008, FIG. 18 (annotated)

161. Alternatively, a POSITA would have further recognized or found obvious that multiple features within Shimada's screen configuration data can also correspond to the NIMs as claimed. For example, Shimada's anchor tags, like Shimada's screens, also possess all of the features of a NIM (“a **fully configurable frame**, with one or more **controls**, through which **content** is presented to the user” *Id.* Shimada describes that an anchor tag “becomes a **button** on the screen of the client.” SAMSUNG-1008, 6:41-42, FIG. 18. A POSITA would have understood or found obvious that this button is “**one or more controls**” as a “button” implies user such control. A POSITA also would have recognized or found obvious that the .gif image referenced by the anchor tag, visible in the annotated Figure 22 below, is “**content ... presented to the user**” as .gifs are a common form of image file. SAMSUNG-1008, FIG. 22. A POSITA also would have recognized or found obvious that this content is presented in “a **fully configurable frame**” as Shimada presents many options for the display of the content referenced by the anchor tag. SAMSUNG-1008, *see at least* FIG. 7, FIG. 10, FIG. 19, FIG. 22, FIG. 25.



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

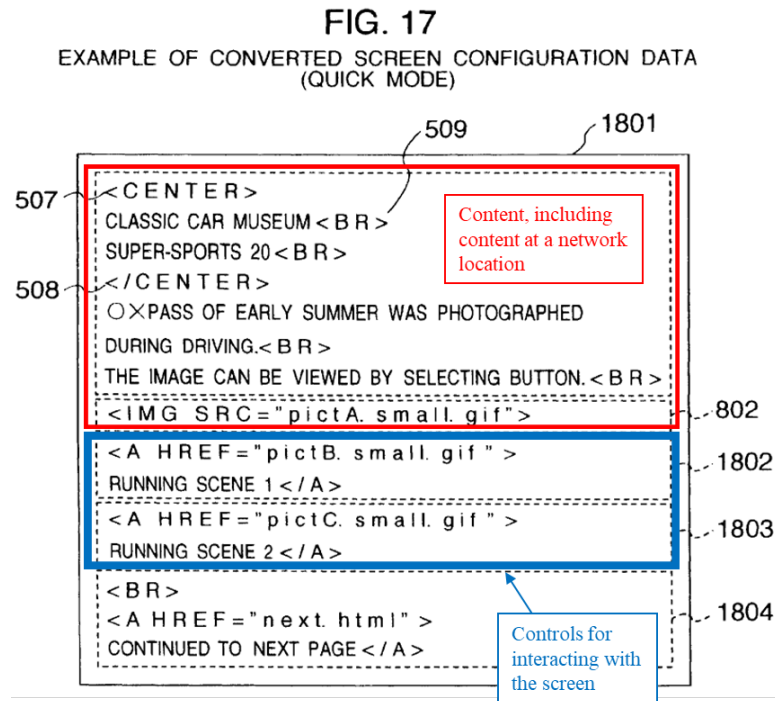
162. Therefore, both Shimada's screens and anchor tags correspond to "networked information monitors."

163. A POSITA would have recognized or found obvious that the "screen configuration data" that defines Shimada's screens and anchor tags is a "networked information monitor template" because screen configuration data has similar features. SAMSUNG-1008, 6:7-51. An annotated example of screen configuration data is provided below. Indeed, because networked information monitor templates are "a data structure that defines the **characteristics of a NIM**, including the NIM **frame**, **view**, and **control characteristics**, [which] excludes executable **applications/compiled code**," a POSITA would have recognized or found obvious that a set of Shimada's screen configuration data possesses all of

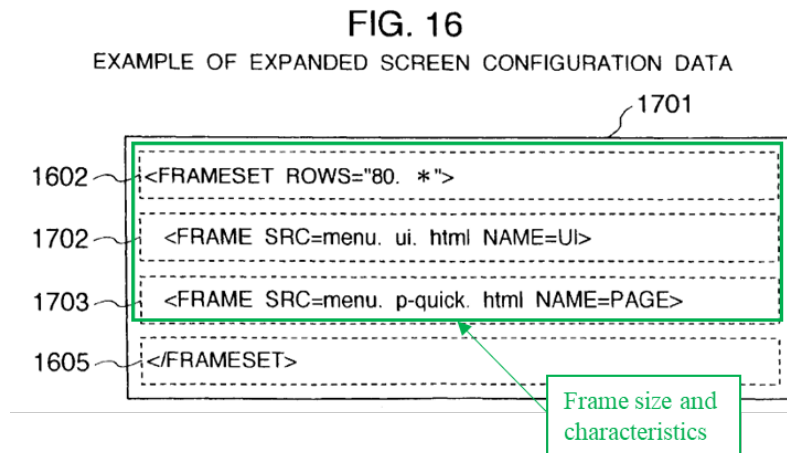
these features. SAMSUNG-1001, 7:19-23, 8:53-57, 14:34-35; *see* paragraph 29, *above*. As seen in the annotated Figure 17 below, Shimada's screen configuration data contains multiple pieces of content and buttons ("**defines the characteristics of a NIM, including the NIM frame, view, and control characteristics**"). SAMSUNG-1008, FIG. 17. Additionally, as can be seen from the annotated Figures 16 and 17 below, screen configuration data also specifies the content frame ("**NIM frame [and] view**"). SAMSUNG-1008, FIG. 16, FIG. 17. Therefore, Shimada's screen configuration data corresponds to a "networked information monitor template."

164. Additionally, as it can be seen in the annotated instructions below, Shimada's HTML screen configuration data does not contain "**applications**" or "**compiled code**." SAMSUNG-1008, 6:59-62, FIG. 16, FIG. 17. A POSITA would have understood or found obvious to not include compiled code in the screen configuration data since HTML is known to be a markup language. *Id.*, 6:36-37. Indeed, Darnell describes that HTML is "platform independent" (i.e. not requiring specific hardware or software for interpretation). SAMSUNG-1011, Page 70. Darnell states that one of the advantages of a "platform independent" language is that "persons in different locations can exchange information, collaborate on authoring articles, publish data, and carry on a robust discourse without ... having to pay for specific hardware and software with proprietary

schemes.” *Id.* A POSITA would have understood the advantages of a platform independent language, like HTML, and would have been motivated to avoid including additional compiled code that would render these advantages moot.



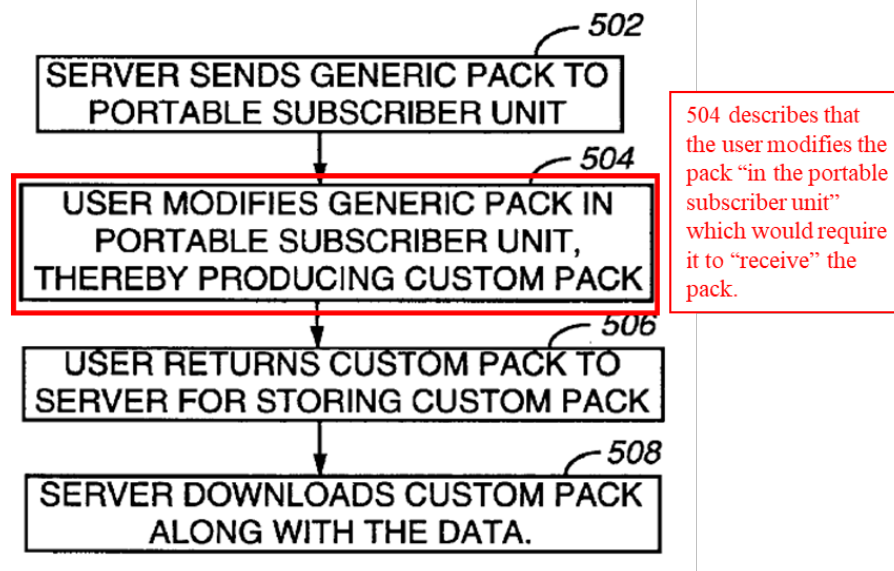
SAMSUNG-1008, FIG. 17 (annotated)



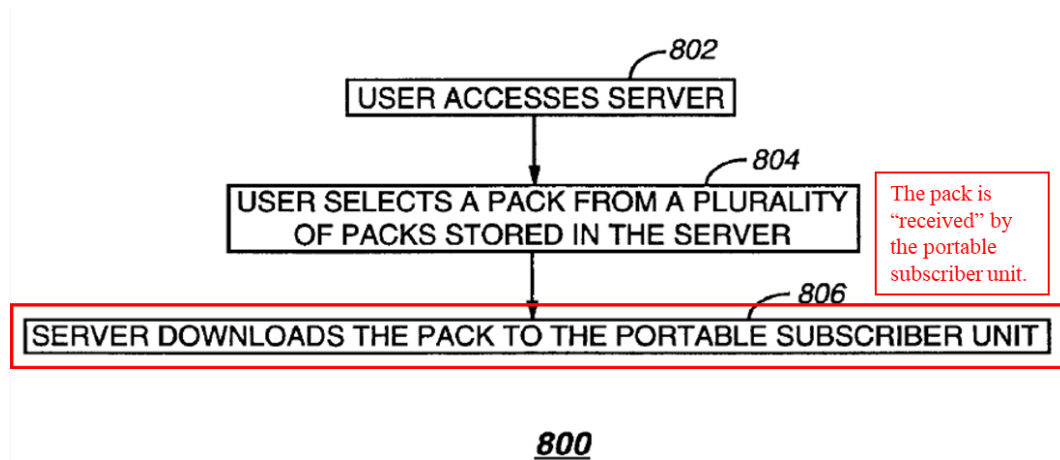
SAMSUNG-1008, FIG. 16 (annotated)

[1.2]: receiving the requested networked information monitor template from the server over the internet, the requested networked information monitor template having been transmitted from the server over the network responsive to the transmitted request, the networked information monitor template comprising:

165. *See* [1.1] (incorporated here). A POSITA would have understood or found obvious that, once requested from the web server, the client would receive the content included in the request (“**receiving the requested networked information monitor template from the server over the internet ... responsive to the transmitted request**”). Indeed, Buchholz describes that, once requested, “[the] server 124 then downloads 806 the pack **to the portable subscriber unit 122.**” SAMSUNG-1009, 6:50-52, FIG. 8. The annotated figures of Buchholz below describes a process in which templates are received by the client. SAMSUNG-1009, FIG. 5, FIG. 8.



SAMSUNG-1009, FIG. 5 (annotated)



SAMSUNG-1009, FIG. 8 (annotated)

[1.3]: a definition of a viewer graphical user interface within which content in a web browser-readable language may be presented on the display of the client computing device; and

166. *See* [1.1] (incorporated here). A POSITA would have recognized that Shimada’s screens are “**a definition of a viewer graphical user interface**” or, “GUI,” as the screens both present content (“**content in a web browser-readable language ... presented on the display of the client computing device**”) and allow user interaction. SAMSUNG-1008, *see at least* FIG. 18.

167. Indeed, Shimada describes that the “expansion of the screen configuration in this embodiment means the addition of an interface, which accomplishes interactive communication between a user at the client 105 and the client screen, to the screen configuration information of the server 101.” SAMSUNG-1008, 5:66-67, 6:1-3, FIG. 6, FIG. 7. In further support, the examples

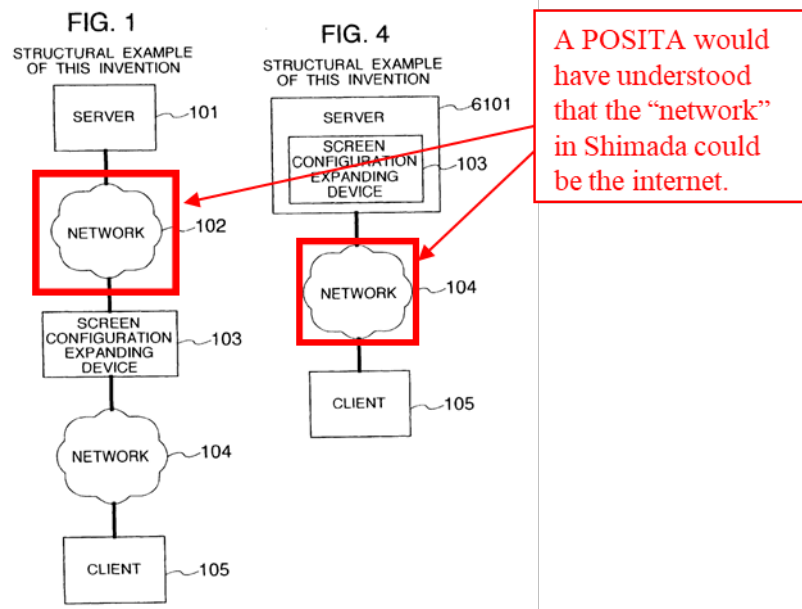
of screen configuration data presented in Shimada provide controls to the user. *See* [1.1], *above*.

168. A POSITA would have understood or found obvious that the Shimada-Buchholz combination would be capable of displaying “**content in a web browser-readable language**” because both Shimada and Buchholz describe the use of HTML, with Shimada additionally describing the use of GIFs. SAMSUNG-1008, 6:56-62, FIG. 16, FIG. 17; SAMSUNG-1009, 5:9-13. Indeed, the ’545 Patent describes both HTML, images, and GIFs as “standard web content,” “standard internet content,” and “machine readable information.” SAMSUNG-1001, 4:29-34, 17:11-14, 21:60-64.

[1.4]: a definition of a first content element for the networked information monitor template, the definition of the first content element referencing a first network location from which the first content element for the networked information monitor template is served over the network;

169. Shimada discloses that screen configuration information (“**a first content element**”) is received from a server (“**served over the network**”), and describes that “the addition of a new screen display area to the screen configuration information which is **received from the server** 101 and contains **data to be displayed and information** on the configuration of the screen for displaying this data.” SAMSUNG-1008, 5:52-65. Shimada also discloses that the server is connected to the client via a “network.” *Id.*

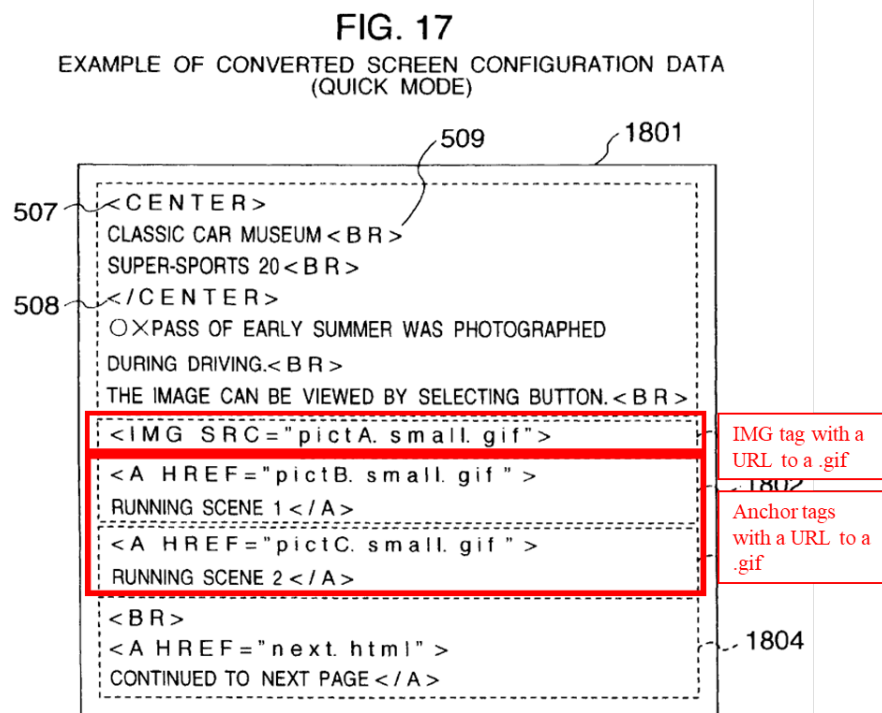
170. A POSITA would have understood or found obvious that the network could be the internet, which is the most common example of a “**TCP/IP protocol.**” Indeed, Shimada states that “such a multimedia network system has spread in **world wide networks** and access to world-wide information can be acquired by making access to the **servers in the world.**” SAMSUNG-1008, 1:34-36.



SAMSUNG-1008, FIG. 1 and FIG. 4 (annotated)

171. Additionally, a POSITA would have recognized or found obvious that both Shimada’s IMG and anchor tags include a **URL** that “comprises a **network location** at which content ... is accessible” (“a **first network location**”) because Shimada describes these tags as including an “address representing a static image”

which is obtained from a “server.” SAMSUNG-1008, 6:30-5134. Presented below is an annotated figure of URLs in screen configuration data.



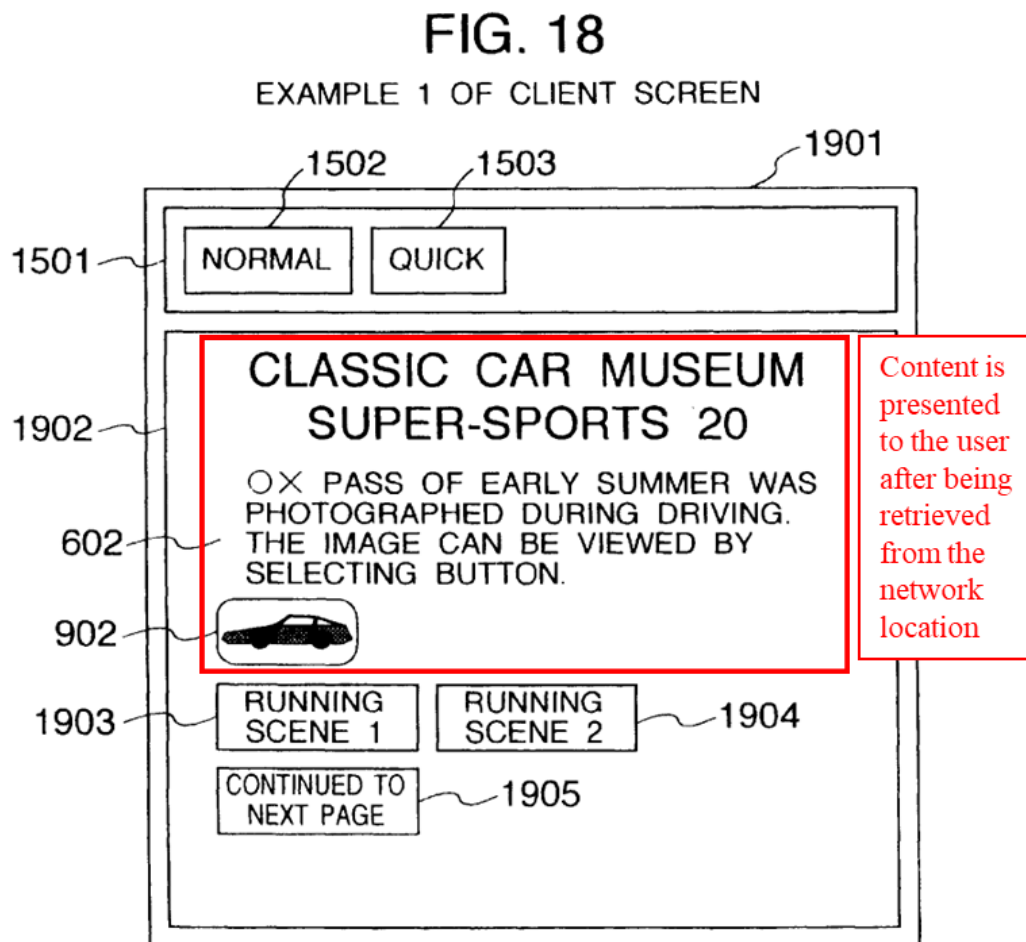
SAMSUNG-1008, FIG. 17 (annotated)

[1.5]: responsive to instructions included in the requested networked information monitor template, presenting the viewer graphical user interface defined by the networked information monitor on the display of the client computing device separate from and outside of any other graphical user interface that includes user controls for specifying the first network location from which the first content element for the networked information monitor is served over the network;

172. A POSITA would have understood or found obvious that the “instructions” for requesting the content in Shimada also cause the client to “[present] the viewer graphical user interface defined by the networked information monitor on the display of the client computing device” because the

tags that request content also define the presentation of the content on the screen.

The annotated figure below illustrates the presentation of content.



SAMSUNG-1008, FIG. 18 (annotated)

173. Alternatively, a POSITA also would have understood or found obvious that Shimada's anchor tags serve as "instructions" to both "**request content from the network location**" and "**generate the graphical user interface of the first networked information monitor**" as selecting the anchor tag results

in the execution of both of these tasks. SAMSUNG-1008, 6:39-51, *see at least* FIG. 22.

174. As indicated in FIG. 18, Shimada's screen configuration data is presented **“separate from and outside of any other graphical user interface that includes user controls for specifying the first network location from which the first content element for the networked information monitor is served.”** SAMSUNG-1008, *see at least* FIG. 6, FIG. 7, FIG. 17, FIG. 18, FIG. 22. To the extent that it may be argued that screen configuration data can be created with such controls, the decision to include navigation controls in a desktop component would ultimately be a design decision for a POSITA, and, in networks where data transfer rates are limited or controls are not desired, a POSITA would be motivated to construct desktop components without extraneous features, such as navigation controls, to improve data transfer times or streamline use. Indeed, Shimada describes that “[w]hen the amount of data transmitted from the server to the client is reduced, the data access time can be reduced particularly when the transmission rate of the network is low.” SAMSUNG-1008, 1:45-48. Additionally, Yohanan describes such an implementation lacking controls to specify a network location (“a more efficient method for accessing network locations” using “a convenient method to access network locations without having to open a browser and key-in the desired site's URL).” SAMSUNG-1016, 2:18-23.

[1.6]: responsive to instructions included in the requested networked information monitor template, transmitting over the network a first content request to the first network location referenced by the definition of the first content element for the networked information monitor template;

175. *See* [1.4] (incorporated here). A POSITA would have understood or found obvious that URLs are “instructions” for “**transmitting over the network a first content request to the first network location referenced by the definition of the first content element**” as URLs were known in the art to reference content over a network. *See* [1.4] *above*.

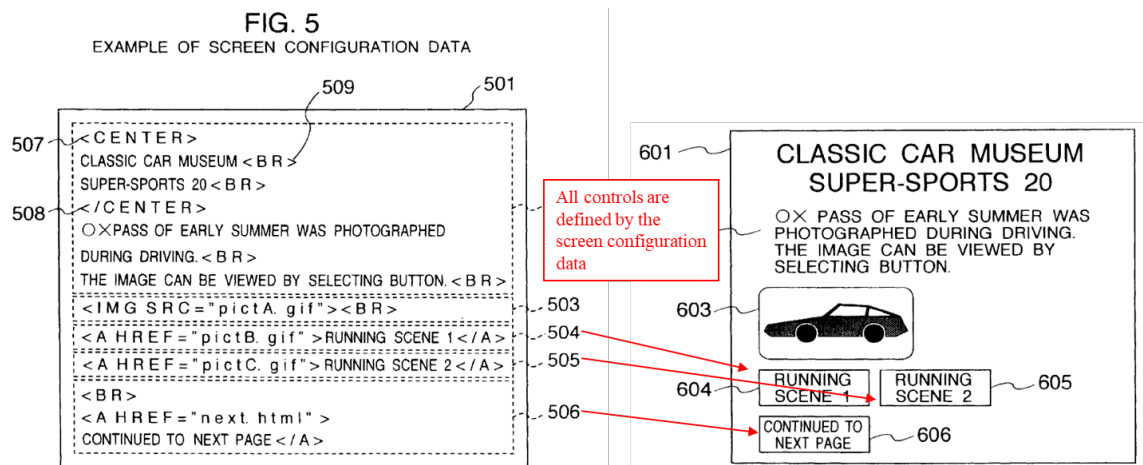
[1.7]: receiving, over the network, the first content element transmitted responsive to the first content request;

176. A POSITA also would have understood or found obvious that, once the request was transmitted, the client would “**receive**” the requested “**content element**” as this was well known in the art.

[1.8]: presenting the received the first content element in the viewer graphical user interface defined by the networked information monitor template, wherein the definition of the viewer graphical user interface and/or the first content element define all controls for enabling a user to interact with the first content element through the viewer graphical user interface.

177. *See* [1.5] (incorporated here) regarding “**presenting the received the first content element in the viewer graphical user interface defined by the networked information monitor template.**” A POSITA would have recognized or found obvious that a “**viewer graphical user interface and/or ... content element**” would define “**all controls for enabling a user to interact with [the] content element.**” As it can be seen from the figure, the “**viewer graphical user**

interface” defines “all controls for enabling a user to interact with the first content element.” *Id.*; SAMSUNG-1008, FIG. 18. Additionally, Shimada does not disclose any controls used for content interaction not bounded by the frame of the desktop component. SAMSUNG-1008, 6:39-51, FIG. 17. This implementation is consistent with the ’545 Patent, which describes that “[t]he space within the frame is the control space or viewer; visible controls are distributed within the control space or viewer.” SAMSUNG-1001, 22:34-38.



SAMSUNG-1008, FIG. 5 and 6 (annotated)

[2]: The method of claim 1, wherein the definition of the viewer graphical user interface includes a definition of at least one control effective for controlling an aspect of the viewer graphical user interface, and wherein presenting the viewer graphical user interface comprises presenting the at least one control.

178. See [1.1] (incorporated here) regarding “a definition of at least one control effective for controlling an aspect of the viewer graphical user interface.” A POSITA would have understood or found obvious that “presenting

the viewer graphical user interface” would include **“presenting the at least one control”** as the appearance of the controls is defined by the screen configuration data.

[3]: The method of claim 2, wherein the aspect is the location at which the user interface is rendered on a display device.

179. Buchholz describes that “[a] template can, for example, define **where**, and in what size and color, the corresponding template data is to be displayed.” SAMSUNG-1009, 5:11-13. A POSITA would have understood or found obvious that templates could be created to enable the user to specify their location (**“location at which the user interface is rendered on a display device”**) as this feature was well known in the art. Indeed, Brown describes prior art solutions where “Windows” in a GUI can “typically be resized, **moved around the display**, and stacked so as to overlay each other.” SAMSUNG-1005, 1:66-67.

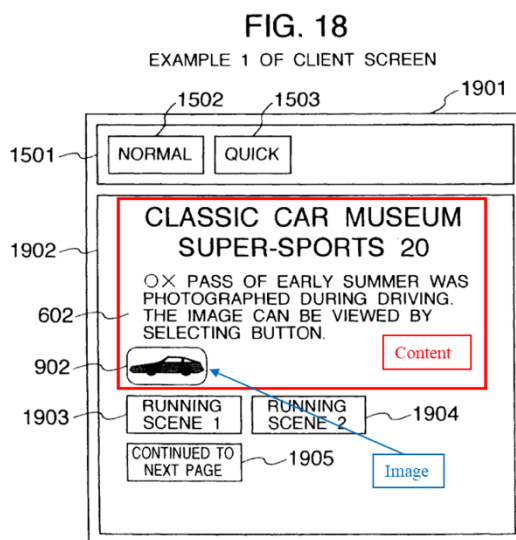
[4]: The method of claim 2, wherein the aspect is the size of the user interface when presented on the display of the client computing device.

180. Buchholz describes that “[a] template can, for example, define where, and in what **size** and color, the corresponding template data is to be displayed.” SAMSUNG-1009, 5:11-13. A POSITA would have understood or found obvious that templates could be created to enable the user to specify their size (**“size of the user interface when presented on the display”**) as this feature was well known in the art. Indeed, Brown describes prior art solutions where “Windows” in a GUI

can “typically be **resized**, moved around the display, and stacked so as to overlay each other.” SAMSUNG-1005, 1:66-67.

[6]: The method of claim 1, wherein the definition of the viewer graphical user interface defined by the networked information monitor template comprises an image, and wherein presenting the viewer graphical user interface defined by the networked information monitor template on the display of the client computing device comprises presenting the image included in the definition as part of the viewer graphical user interface.

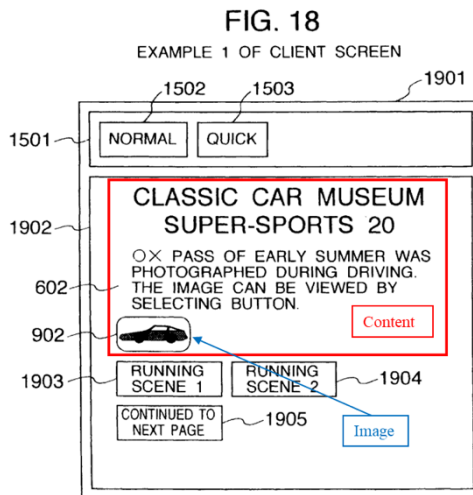
181. Shimada describes the use of .gif files, which a POSITA would have understood or found obvious to be “**image[s]**” associated with “**the definition of the viewer graphical user interface**” from reviewing, at least, the figures of Shimada. SAMSUNG-1008, *see at least* FIG. 18. A POSITA also would have recognized or found obvious that these images are presented with the GUI (“**presenting the image included in the definition as part of the viewer graphical user interface**”). *Id.*



SAMSUNG-1008, FIG. 18 (annotated)

[7]: The method claim 6, wherein presenting the received the first content element in the viewer graphical user interface defined by the networked information monitor template comprises presenting the received the first content element in association with the image.

182. See [6] (incorporated here). A POSITA would have recognized or found obvious from reviewing the figures of Shimada that content could be presented “in association with” an image. SAMSUNG-1008, *see at least* FIG. 18.



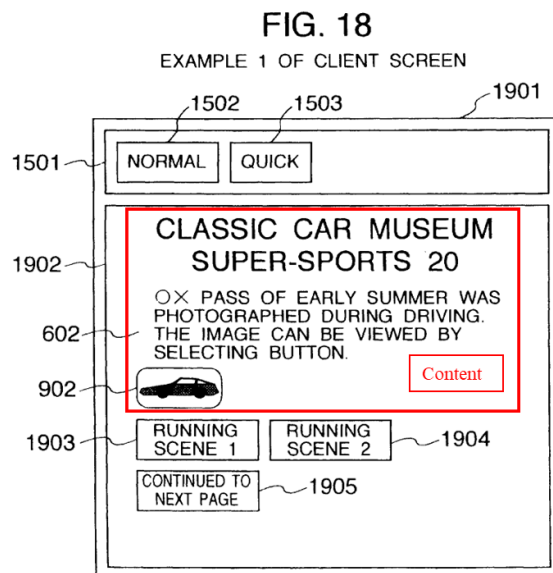
SAMSUNG-1008, FIG. 18 (annotated)

[9]: The method of claim 1, wherein the definition of the viewer graphical user interface defines at least one control permitting the modification of the appearance of the viewer graphical user interface defined by the networked information monitor template, and wherein presenting the viewer graphical user interface defined by the networked information monitor template on the display of the client computing device comprises presenting the at least one control.

183. See [1.1], [2], [3], and [4] (incorporated here). A POSITA would have understood or found obvious that modifying an “aspect” of the GUI would also modify the “appearance.”

[10]: The method of claim 1, wherein the first content element includes audio content, video content, graphics content, still image content, textual content and/or interactive content.

184. Shimada discusses various forms of content, and describes “transmission media” including “image (“graphics content, still image content”), speech data (“audio content”), sound-attached moving-picture data (“audio content, video content, graphics content”)” in addition to the text (“textual content”) evident from the figures. SAMSUNG-1008, 1:19-20, *see at least* FIG. 18. A POSITA would have understood or found obvious that Shimada’s content is “interactive content” as the user can interact with the content through the GUI. SAMSUNG-1008, FIG. 18.



SAMSUNG-1008, FIG. 18 (annotated)

185. Buchholz also discusses various forms of content and describes “up-to-date information on stocks, sports, news, and the like.” SAMSUNG-1009, 1:15-

16. More specifically, a POSITA would have recognized or found obvious that the various forms of content described in the claim would be present in the media contemplated by Buchholz as these forms of content were well known in the art.

[13]: The method of claim 1, wherein the networked information monitor is configured to cause the client computing device to periodically request the first content element from the first network location referenced by the definition the first content element for the networked information monitor template and to present the received first content element within the viewer graphical user interface in an ongoing manner.

186. Buchholz describes subscriptions for “[i]nformation services” with **“up-to-date information** on stocks, sports, news, and the like.” SAMSUNG-1009, 1:13-19. A POSITA would have recognized or found obvious that in order for information to be “up-to-date,” it would need to be **“periodically [requested] ... from the first network location referenced by the first content element”** and **“[presented] ... in an ongoing manner.”** For example, taking Buchholz’s example of “stocks,” a POSITA would have understood or found obvious that the timeliness of this information would be critical. *Id.* Indeed, both Wecker and Shaffer corroborate this by disclosing that stock information is **“time-critical”** and that user may prefer to “subscribe to a push service ... which transmits **scheduled updates** of prices of selected stocks.” SAMSUNG-1006, 10:46-51; SAMSUNG-1020, 4:17-20.

[14]: The method of claim 1, wherein the network is the internet.

187. *See* [1.4] (incorporated here). Shimada describes “**world wide networks** and access to world-wide information ... acquired by making access to the **servers in the world.**” SAMSUNG-1008, 1:34-36. A POSITA would have recognized or found obvious that “world wide networks” could include the internet, as the internet is the most common “world wide network.”

[15.1]: The method of claim 1, wherein the networked information template further comprising a definition of a second content element for the networked information monitor template, the definition of the second content element referencing a second network location from which the second content element for the networked information monitor template is served over the network, and wherein the method further comprises:

188. *See* [1.4] (incorporated here). More specifically, Shimada-Buchholz renders obvious multiple (e.g., first and second) content elements because Shimada discloses multiple tags, each with a content reference and associated network location. SAMSUNG-1008, FIG. 18. Moreover, a POSITA would have recognized or found obvious that multiple content elements could be downloaded to the device of the Shimada-Buchholz combination, as it would be known that a user would want the flexibility to request multiple pieces of content. Indeed, Buchholz discloses that the template “pack” comprises “**a bundle of templates** for formatting the template data for display on at least one page.” SAMSUNG-1009, 2:26-27.

[15.2]: responsive to instructions included in the requested networked information monitor template, transmitting over the network a second

content request to the second network location referenced by the definition of the second content element for the networked information monitor template;

189. *See* [1.6] (incorporated here). More specifically, Shimada-Buchholz renders obvious multiple (e.g., first and second) content requests and network locations because Shimada discloses multiple tags, each with a content reference and associated network location. SAMSUNG-1008, FIG. 18. A POSITA also would have understood or found obvious that, in order to retrieve content distinct from the first content, a second content request must be transmitted.

[15.3]: receiving, over the network, the second content element transmitted responsive to the second content request; and

190. *See* [1.7] (incorporated here). A POSITA also would have understood or found obvious that, once the request was transmitted, the client would “**receive**” the requested “**content element**” as this was well known in the art.

[15.4]: presenting the received second content element in the viewer graphical user interface defined by the networked information monitor template, wherein the definition of the viewer graphical user interface and/or the second content element define all controls for enabling a user to interact with the second content element through the viewer graphical user interface.

191. *See* [1.5] (incorporated here) regarding “**presenting the received the second content element in the viewer graphical user interface defined by the networked information monitor template.**” *See* [1.8] (incorporated here) regarding “**the definition of the viewer graphical user interface ... [defining] all controls for enabling a user to interact with the second content element through the viewer graphical user interface.**”

ANALYSIS OF SHIMADA, BUCHHOLZ, AND DARNELL

Darnell

192. Darnell is an academic reference directed to HTML and the creation of webpages. SAMSUNG-1011, *see at least* Cover, Introduction, xxxiii-xxxvii. Darnell describes that it teaches “an introduction into the basics of HTML, including basic page structure and all of the tags needed to build the page.” *Id.*, xxxvii. Darnell describes itself as “a comprehensive resource for HTML 3.2” and that it includes information on “tables, frames, [and] design.” *Id.*



SAMSUNG-1011, Cover

Motivation to combine Shimada, Buchholz, and Darnell

193. A POSITA would have found it obvious to combine the teachings of Darnell with the Shimada-Buchholz combination. Among other things, all three

references are directed to “accessing and viewing internet content.” SAMSUNG-1008, Abstract, 1:34-55; SAMSUNG-1009, Abstract, 1:49-54; SAMSUNG-1011, Introduction.

194. A POSITA would have recognized or found obvious that Darnell includes both basic and advanced methods for utilizing HTML, and that these methods could be used to improve the HTML screen configuration data described in Shimada. Additionally, given that a POSITA would have had “a bachelor’s degree in computer science, computer engineering, electrical engineering, or a related field,” it is likely that a POSITA would have encountered an academic HTML reference, similar to Darnell, in their formal education. *See* paragraph 192, *above*. Thus, a POSITA would have recognized that the techniques of these references were complementary, and each would enhance the abilities of the other.

195. Moreover, a POSITA would have been motivated to combine Darnell with the Shimada-Buchholz combination to increase usability, improve GUI visual aesthetics, implement additional HTML functionality, and/or other relevant business or technical reasons.

Shimada, Buchholz, and Darnell Renders Obvious Claims 5, 8, and 12

[5]: The method of claim 1, wherein the networked information monitor template includes instructions in extensible markup language (XML) format, and further wherein the method further comprises parsing the definition of the viewer graphical user interface.

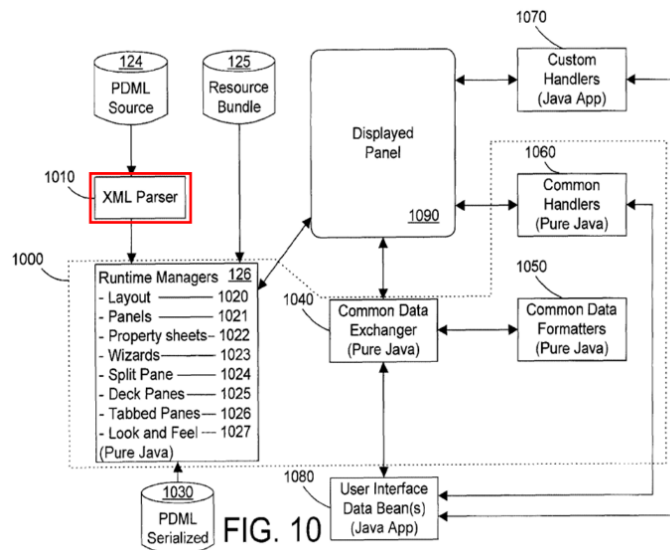
196. Darnell discusses the benefits of XML, and describes:

“XML (eXtensible Markup Language) is a simple and compact subset of SGML designed specifically for use on the Internet in the way that HTML is currently used. This new project of W3C is gaining momentum at a surprising rate, and everybody seriously concerned with HTML may want to check it out.” SAMSUNG-1011, 782.

“By attaching the [document data type] with the document sent over the network, you can ensure that the **XML software reading the document can parse it correctly** and thereby guarantee its correct formatting conversion, adding to a database, or whatever the receiver will choose to do with the document.” SAMSUNG-1011, 783.

197. A POSITA would have recognized or found obvious that XML could be used to create style templates, and that these style templates would be **“parsed,”** as both of these features were well known in the art.

198. Petty provides an additional example of style templates (“PDML”) built from XML and describes an “XML definition 123 of a panel definition markup language (PDML).” SAMSUNG-1013, 6:3-4. Petty, like Darnell, also describes parsing XML documents with an “XML parser,” as annotated in the figure below. *Id.*, see at least FIG. 10.



SAMSUNG-1013, FIG. 10 (annotated)

[8]: The method of claim 6, wherein presenting the received the first content element in the viewer graphical user interface defined by the networked information monitor template comprises presenting the received the first content element at least in part within the image.

199. A POSITA would have recognized or found obvious that a common way of presenting a content element “**at least in part within [an] image**” would be through the use of a background. Indeed, Darnell discusses the use of the HTML “BODY” tag and describes that “[the] **image** is placed in the **background of the Web page**, similar to hanging wallpaper in a bedroom. If the image is smaller than the space occupied by the browser window, it's tiled to fill the entire background.” SAMSUNG-1011, 242-243.

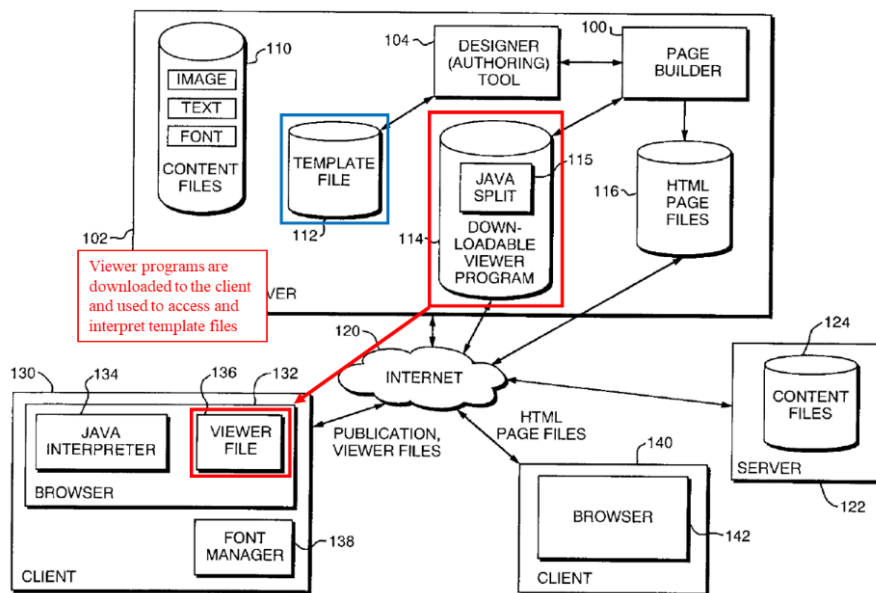
[12]: The method of claim 1, further comprising causing the networked information monitor to communicate with another networked information monitor.

200. A POSITA would have recognized or found obvious that actions in one “NIM” could affect another. Indeed, Darnell describes “frames” for presenting content and that “[it’s] also possible to have the user’s actions in one frame affect the content of other frames.” SAMSUNG-1011, 338. A POSITA would have recognized or found obvious from the above that “communication” would need to occur between the frames. For example, Darnell describes that “frames give you far more functionality, rather than just control over what is presented. With the frames extension, you can change the content of other frames, which makes it possible for you to use frames as a navigation tool. You could display the main menu for your site in one frame and the contents in another. When the user makes a selection on the main menu, the contents frame will be updated.” *Id.*

ANALYSIS OF SHIMADA, BUCHHOLZ, AND KRISHNA

Krishna

201. Krishna is directed to “[a] Page Builder software program that operates in connection with a dynamic content publishing program.” SAMSUNG-1021, Abstract. Krishna refers to these software programs as “Viewer programs” and describes that Viewer programs can be “activated to locate and interpret the object content and actions contained in [a] template file.” *Id.*, Abstract, *see at least* 2:9-21. An annotated overview of Krishna’s system is provided below.



SAMSUNG-1021, FIG. 1 (annotated)

Motivation to combine Shimada, Buchholz, and Krishna

202. A POSITA would have found it obvious to combine the teachings of Krishna with the Shimada-Buchholz combination. Among other things, all three references are directed to “accessing and viewing internet content.” SAMSUNG-1008, Abstract, 1:34-55; SAMSUNG-1009, Abstract, 1:49-54; SAMSUNG-1021, Abstract, 1:20-32.

203. A POSITA would have recognized or found obvious that Krishna’s methods of “producing dynamic content publications” could be implemented in the Shimada-Buchholz combination as all three references describe the use of HTML. SAMSUNG-1008, 6:59-62; SAMSUNG-1009, 5:9-13; SAMSUNG-1021, Abstract. Additionally, because Krishna “eliminat[es] the need to download specialized

Viewer applets or otherwise to make use of modified or programming-enabled browser programs” a POSITA would have recognized or found obvious that this is complementary to the objective of Shimada and Buchholz to mitigate long download times in networks with “small network transmission capacity.” SAMSUNG-1008, 1:40-44; SAMSUNG-1009, 1:26-37; SAMSUNG-1021, Abstract. Thus, a POSITA would have recognized that the techniques of these references were complementary, and each would enhance the abilities of the other.

204. Moreover, a POSITA would have been motivated to combine Krishna with the Shimada-Buchholz combination to increase usability, eliminate the need to download specialized applications, reduce client-side storage requirements, and/or other relevant business or technical reasons.

Shimada, Buchholz, and Krishna Renders Obvious Claims 11 and 16-21.

[11]: The method of claim 1, further comprising: executing a client parser application that is separate from the networked information monitor template, the client parser application being configured to present the viewer graphical user interface defined by the networked information monitor template on the client computing device, to generate the request for the content that is transmitted to the first network location referenced by the definition of the first content element for the networked information monitor template, and to present the first content element received from the first network location within the viewer graphical user interface defined by the networked information monitor template.

205. Krishna describes a “FutureTense™ viewer program” that can “use URLs contained within the template file 112 to **obtain the content and action information (“generate the request for the content”)** from servers 102 and/or

122. The content and action to information in the template file 112 are then used to **change the Visual display of the page** in response to the user inputs (“**present the viewer graphical user interface**” and “**present the first content element**”).” SAMSUNG-1021, 4:40-52, 5:16-31. More specifically, based on the above disclosure, a POSITA would have recognized or found obvious that the viewer program is “**separate from the networked information monitor template.**”

206. Additionally, a POSITA would have recognized that “viewer program” modules could be implemented as an “**application,**” as this is a common type of program module. *See* [11], *above*.

[16.pre]: A computer-implemented method of obtaining and displaying content obtained over a network to a user on a client computing device, the method being implemented in the client computing device, the client computing device including electronic storage, a display, and one or more processors configured to execute one or more computer program modules, the method comprising:

207. *See* [1.pre] and [11] (incorporated here). I believe that [16.pre] is obvious for the reasons discussed above in [1.pre] and [11].

[16.1]: executing on the client computing device client parser, wherein the execution of the client parser results in the client computing device:

208. *See* [11] (incorporated here). A POSITA would have understood that the terms “client parser” and “client parser application” could be used interchangeably. I believe that [16.1] is obvious for the reasons discussed above in [11].

[16.2]: transmitting over the network a first content request to a first network location referenced by a definition of a first content element in a networked information monitor template that is readable by the client parser;

209. *See* [1.6] and [11] (incorporated here). I believe that [16.2] is obvious for the reasons discussed above in [1.6] and [11].

[16.3]: receiving, over the network, the first content element transmitted responsive to the first content request;

210. *See* [1.7] and [11] (incorporated here). I believe that [16.3] is obvious for the reasons discussed above in [1.7] and [11].

[16.4]: presenting a viewer graphical user interface defined by the networked information monitor template on the display of the client computing device and wherein the viewer graphical user interface defined by the networked information monitor template is presented separate from and outside of any other graphical user interface that includes user controls for specifying the first network location from which the first content element for the networked information monitor is served over the network; and

211. *See* [1.5] and [11] (incorporated here). I believe that [16.4] is obvious for the reasons discussed above in [1.5] and [11].

[16.5]: presenting the received content element within the viewer graphical user interface defined by the networked information monitor template, wherein the definition of the viewer graphical user interface and/or the first content element define all controls for enabling a user to interact with the first content element through the viewer graphical user interface.

212. *See* [1.8] and [11] (incorporated here). I believe that [16.5] is obvious for the reasons discussed above in [1.8] and [11].

[17]: The method of claim 16, wherein execution of the client parser further results in the client computing device determining that the first element content modifies the networked information monitor template and

responsive to such determination, modifying the networked information monitor template prior to the step of presenting the graphical user interface.

213. *See* [11] (incorporated here). A POSITA would have understood or found obvious that time-varying content would drive regular (e.g., continual) modification to the GUI. For example, Buchholz describes subscriptions for “[i]nformation services” with **“up-to-date information** on stocks, sports, news, and the like.” SAMSUNG-1009, 1:13-19. A POSITA would have recognized or found obvious that, in order for information to be “up-to-date,” the GUI would need to be **“[modified] ... prior to the step of presenting the graphical user interface”** by the viewer program or computer program module.

[18]: The method of claim 16, further comprising presenting an icon representing networked information monitor associated with the networked information monitor template on the display of the client computing device, and wherein execution of the client parser to perform one or more of the transmitting operation, the presenting the viewer graphical user interface operation, or presenting the first content element operation is responsive to reception of selection by a user of the icon.

214. The use of icons was well known in the art as of the Critical Date, and a POSITA would have recognized or found obvious that selection of an icon would effectuate certain functions of a parser or similar computer program module. Indeed, Brown describes that an “icon corresponds to a program file, a program, or a resource **that is invoked** when a user selects and activates the icon (**“transmitting operation”** and/or **“presenting ... operation”**).” SAMSUNG-1005, 7:18-20. A POSITA would have recognized or found obvious that these

“program files” could be screen configuration data associated with screens (“**an icon representing networked information monitor associated with the networked information monitor template**”), or other similar templates, as Shimada describes these templates as HTML files. SAMSUNG-1008, 6:59-62. Additionally, a POSITA would have recognized that the previously discussed computer program modules could perform the actions recited by the claim. *See* [11], *above*.

[19]: The method of claim 16, further comprising invoking the client parser an initiating one or more of the transmitting operation, the presenting the viewer graphical user interface operation, or presenting the first content element operation automatically during a start-up process of the client computing device.

215. *See* [11] (incorporated here) with respect to “**the transmitting operation**” and “**the presenting the viewer graphical user interface operation.**”

I believe that [19] is obvious for the reasons discussed above in [11].

[20.1]: The method of claim 19, wherein execution on the client computing device of the client parser further results in the client computing device: transmitting over the network a second content request to a second network location referenced by a definition of a second content element in a second networked information monitor template that is readable by the client parser;

216. *See* [1.1], [1.6], and [11] (incorporated here). I believe that [20.1] is obvious for the reasons discussed above in [1.1], [1.6], and [11].

[20.2]: receiving the second content element transmitted responsive to the second content request;

217. *See* [1.7] and [11] (incorporated here). I believe that [20.2] is obvious for the reasons discussed above in [1.7] and [11].

[20.3]: presenting a second viewer graphical user interface defined by the second networked information monitor template on the display of the client computing device, wherein the second viewer graphical user interface lacks user controls, wherein the definition of the second viewer graphical user interface and/or the second content element define all controls for enabling a user to interact with the second content element through the second viewer graphical user interface; and

218. *See* [1.5] and [11] (incorporated here). I believe that [20.3] is obvious for the reasons discussed above in [1.5] and [11].

[20.4]: presenting the second content element within the viewer second graphical user interface,

219. *See* [1.8] and [11] (incorporated here). I believe that [20.4] is obvious for the reasons discussed above in [1.8] and [11].

[20.5]: wherein execution of the client parser to perform the transmitting the second content request, the presenting the second viewer graphical user interface operation, and the presenting the second content element is responsive to reception of a selection to initiate a second networked information monitor associated with the second networked information monitor template.

220. *See* [11] and [18] (incorporated here). I believe that [20.5] is obvious for the reasons discussed above in [11] and [18].

[21]: The method of claim 16, wherein the network is the internet.

221. *See* [14] (incorporated here). I believe that [21] is obvious for the reasons discussed above in [14].

ADDITIONAL REMARKS

222. I currently hold the opinions set expressed in this declaration. But my analysis may continue, and I may acquire additional information and/or attain supplemental insights that may result in added observations.

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

Dated: 03/28/2023

By: 