UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,
Petitioner

v.

DODOTS LICENSING SOLUTIONS LLC,
Patent Owner

Case IPR2023-00756

U.S. Patent No. 9,369,545

DECLARATION OF TED SELKER, PH.D.

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I, Dr. Ted Selker, declare as follows:

1. I have been asked to review U.S. Patent No. 9,369,545 ("the '545 Patent") to Kembel, *et al*.

2. I have also been asked to review the cited references in the Petition to determine if any of the references alone or in combination render any of the challenged claims invalid.

3. In forming my opinions, I have considered the materials cited in Exh. A attached to this Declaration.

4. Based on my analysis set forth below, it is my opinion that none of the references alone or in combination render any of the challenged claims 1-21 of the '545 patent invalid.

I. Experience and Qualifications.

5. Over a long career, I have cultivated and gained extensive experience in creating developer interfaces to present content, including internet content, to users through various forms. I currently work on several startups, have research and teaching positions at multiple universities, and consult for multiple companies. In particular, I am the Chief Technology Officer and co-founder of the Motocarma.com company, which is creating an AI based platform to help car buyers. I also have research and teaching responsibilities at the University of Maryland-Baltimore and Rochester Institute of Technology. And I am an

independent consultant with my own company, Selker Design Research. Ultimately, much of my work strives to demonstrate considerate technology, in which people's intentions are recognized and respected. Put another way, I work on researching and developing ways to create user interfaces that are intuitive and easy to use.

6. Recently, I also worked as the CTO of Alphyco over 2.5 years, a company focused on implementing AI to help detect and avoid potentially harmful communications to avoid unnecessary litigation risk. For three years, I worked extensively for Magic Leap, a startup in the augmented reality space. At the same time, I also worked on several research and development projects for future products and innovations for companies, such as Amazon, Google, and IBM. Specifically, I have created research technology prototypes at Magic Leap, Amazon, Master Card, Steelcase, Xerox PARC, Atari Research Labs, Brown & Sharpe, Weyerhaeuser Research Labs, and for several startups as well. At each of these positions, I have consistently applied the concepts of considerate technology to create intuitive ways for users to view information while also giving developers the tools to create these displays.

7. During the COVID-19 pandemic, I helped create and obtain funding for Oregon State University's Fast Respiratory Response project, for which I am also the Head of Innovation. I created PEEP-Alert.Com with two other founders to

build and get FDA approval for a device to address respiratory distress. The device allowed for continuous monitoring of respiratory patients, while also having visual and audible alarms to alert if pressure or flow are outside the bounds set by a medical provider.

8. Prior to this work, my innovation has created profitable and award-winning products, ranging from notebook computers to operating systems. For example, my design of the TrackPoint in-keyboard pointing device for IBM is used in many notebook computers to this day. My visualization and visual interface work have made impacts in the performance of the PowerPC, usability in OS/2, ThinkPad setup, Google maps, etc. My adaptive help system has been the basis of various commercial products as well.

9. I was also previously Director of Considerate Systems research at Carnegie Mellon University - Silicon Valley for 5 years. While there, I worked to develop the PhD program and campus' research mission. I taught a series of classes in research methods, HCI, Android product design, and research in voting with disabilities. I also spent ten years as an Associate Professor at the MIT Media Laboratory, where I created the Context Aware Computing group, directed the CI/DI kitchen of the future/design of the future project, and co-directed the Caltech/MIT Voting Technology Project. I have also held teaching positions at Aarhus university, Hampshire College, University of Massachusetts at Amherst,

and Brown University. I have given hundreds of invited lectures at other universities and conferences.

10. My successes at targeted product creation and enhancement in the late 1980s through the 1990s led to my role as an IBM Fellow and Director of User Systems Ergonomics Research at IBM. During some of that period, I served as a Consulting Professor at Stanford University where I taught my course: Proactive and Reactive Agents in User Interfaces. I also mentored students, especially the founders of Google, Larry Page and Sergey Brin from 1996 to 1998.

11. My work has also resulted in numerous awards, patents, and papers, and has often been featured in the press. For example, I was a co-recipient of the Computer Science Policy Leader Award for Scientific American 50 and of the Time magazine 2002 Best Inventions award. Outside of this, I am Chair of the Association for Computing Machinery's BayCHI SIG. Beyond this, I regularly lecture and meet with students at various other universities including Columbia and NYU.

12. Beyond my own work, I also helped supervise the development of over 100 cellphone apps with companies and including the apps my students made in my Android Product development courses at Carnegie Mellon University. These started with WAP phones in the 1990s, they include several apps I am working on right now that variously run native, in react native or in browsers such as the

Motocarma.com app. I was involved in designing an early proxy server, WBI, which was marketed by IBM in the mid-1990s. I worked on many wearable demonstration systems for business education and entertainment that were widely written about.

13. In sum, I have decades of experience in designing and implementing more intuitive and user-friendly means of accessing technological information.

14. In this case, my compensation is based solely on the amount of time that I devote to activity related to this case plus any direct expenses incurred and is in no way affected by any opinions that I render. I receive no other compensation from work on this action. My compensation is not dependent on the outcome of this case.

15. A copy of my curriculum vitae, which describes in further detail my qualifications, responsibilities, employment history, honors, awards, professional associations, lectures, and publications is submitted together with this declaration as DODOTS-2011.

II. Legal Standards.

A. Obviousness

16. I have been informed and understand that an invention cannot be patented if the subject matter as a whole would have been obvious to a person of ordinary skill in the art at the time of the invention.

17. I understand that the fundamental question in analyzing obviousness is whether, at the time of the invention, the subject matter of the claimed invention as a whole would have been obvious to a person of ordinary skill in the art, taking into account: (1) the scope and content of the prior art; (2) the differences between the prior art and the claimed invention; (3) the level of ordinary skill in the art; and (4) any objective indicia of non-obviousness referred to as secondary considerations.

18. It is my understanding that objective indicia of non-obviousness (secondary considerations) include industry praise, commercial success, long-felt but unresolved need, copying, taking of a license, whether the invention was contrary to accepted wisdom, failure of others, and/or unexpected results. I also understand that there should be a nexus between the objective indicia and the claimed invention.

19. I understand that multiple references can be combined, with one another and/or with the knowledge of a person of ordinary skill in the art, in rendering a claim obvious. I also understand, however, that obviousness cannot be established by simply demonstrating that each element was independently known in the prior art. Rather, it is necessary to identify a credible reason, such as a teaching, suggestion, or motivation, that would have prompted a person of ordinary skill in the art to combine the elements in the way the claimed invention does.

20. I understand that some appropriate factors to consider in regards to a reason that would have prompted a person having ordinary skill in the field of the invention to combine the known elements in the prior art in a way the claimed invention does include (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s); (2) whether the claimed invention provides an obvious solution to a known problem in the relevant field; (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention; (4) whether the prior art teaches away from combining elements in the claimed invention; (5) whether it would have been obvious to try the combinations of elements, such as when there is a design incentive or market pressure to solve a problem and there are a finite number of identified, predictable solutions. I further understand that in order to render the claimed invention obvious, the prior art must have provided a reasonable expectation of success.

21. I also understand that obviousness cannot be established through hindsight. I understand this to mean that the claimed invention cannot be used as a roadmap to combine elements from different pieces of prior art, or different embodiments of a single prior art reference, to create the claimed invention. I understand that the claimed invention as a whole must be compared to the prior art

as a whole, and one must avoid aggregating pieces of prior art through hindsight that would not have been combined absent the inventor's insight.

III. Person of ordinary skill in the art.

22. I have been informed of factors considered in determining the level of a person of ordinary skill in the art ("POSITA") may include: (1) type of problems encountered in the art; (2) prior art solutions to those problems; (3) rapidity with which innovations are made; (4) sophistication of the technology; and (5) educational level of active workers in the field. In a given case, every factor may not be present, and one or more factors may predominate.

IV. The person of ordinary skill in the art in the relevant field in the relevant time frame.

23. I have been informed and understand that claims are construed from the perspective of a POSITA at the time of the claimed invention.

24. The specification of the '545 patent provides a straightforward explanation in sufficient detail to permit people with an undergraduate degree in Electrical Engineering, Computer Science or Computer Engineering to implement the invention.

25. A POSITA with respect to the '545 patent would have deep understanding of the way web technology and mobile systems operate. They would most likely have a bachelor's degree in Computer Engineering, Computer Science, or a related field and have three or more years of corresponding industry work

experience. This is consistent with the definition of a POSITA in IPR2019-01278. (SAMSUNG-1012, 9), and Petitioner's definition (Pet. at 5).

26. In view of my qualifications, experience, and understanding of the subject matter of the '545 patent, I believe that I meet the above-mentioned criteria and consider myself a person with at least ordinary skill in the art pertaining to the '545 patent.

27. I understand the capabilities of a person of ordinary skill in the relevant field. I have supervised and directed many such persons over the course of my career.

V. Factual Background

A. Summary of the '545 patent

28. The '545 patent describes a system and method that supports an ecosystem for developers to author and distribute, and for users to acquire, share, and modify data structures (referred to as "NIM Definitions" or "Network Information Monitor ('NIM') Templates").[1] SAMSUNG-1001, 33:39-46. These

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[1] The specification uses these terms interchangeably, and there is no dispute that they all refer to the same inventive concept. *See e.g.,* SAMSUNG-1001, 24:44-49; 24:59; 33:5. For the sake of consistency, I will refer to these data structures as "NIM templates" in this declaration even if the specification uses a different term.

data structures, in turn, are instantiated by the client devices into non-browser-based user experiences (referred to as "NIMs") for interacting with web/Internet content. *Id.* Authoring and distributing NIM templates, rather than custom applications, provides numerous advantages that are disclosed in the '545 patent. *Id.,* 34:42-54. In fact, history has shown that this NIM/NIM template architecture creates advantages because it allows for cross platform NIMs, improved ease of installation, better performance, and more simplistic updating NIMs. And because of these advantages, the technology of the '545 patent has been widely adopted and is used as the primary means for distribution for mobile apps.

29. More specifically, the specification explains that NIM templates contain data that defines a fully configurable frame, its elements and controls, and specifies the web location of content. *Id.*, 30:34-44 ("The NIM definition module 418 contains details defining the NIM, such as the look-and-feel 419, of the Raw NIM, initialization URLs (Uniform Resource Locators) 420, and a location 421 of where the developer would like the NIM to open on a user's computer screen."); *Id.*, 6:34-45 ("Each NIM template defines the characteristics of a specific NIM, including fully configurable frame characteristics, viewer and control characteristics, and NIM content references."); *Id.*, 21:15-27 ("The NIM definitions, as discussed above, includes the NIM frame definition and the definition of the controls for filling the viewer within the frame with content..");

Id., Figs. 3-7. These fully configurable frames allowed developers to create unique and tailored frames that could present information to a user. This was a critical feature that distinguished the inventions from traditional web browsers that were severely limited by the requirements of browser compatibility. *Id.,* 4:59-61 ("The fully configurable frame utilized in accordance with the invention stands in contrast to present web browsers, which are branded by the browser vendor and which have limited means by which to alter the controls associated with the browser.")

30. Moreover, much of the invention's benefit emerged from the fact that a client device instantiates a NIM Template into a NIM, which is displayed on a client device. *Id.*, 2:28-49; 6:31-37. The NIM represents a mini-application that can operate on the client device. *Id.*, , 5:13-47. It is "a frame in which Internet content presented (focusing user attention on this application by not including a general navigation capability)." *Id.*, 8:32-35. Also, the NIM is separate and distinct from a traditional web browser and the operating system. And unlike emerging technologies at the time, including Microsoft's ActiveX and other traditional applications, multiple NIMs could be constructed on a client device using multiple NIM Templates that were downloaded from a server. *Id.*, 11:61-65, 13:24-30;

31. And because, all that is required to instantiate a NIM (on the client computer) is its definition one could easily distribute NIMs across various

platforms quickly and efficiently. *Id.*, 33:63-34:7. Additionally, a NIM template could be coded in markup languages, including XML, which were more efficient and effective data structures. *Id.*, 21:55-60. This made NIMs more versatile and broke it free from the structural limitations of HTML, which was a language for creating web pages not applications.

32. Further, as the Federal Circuit has already recognized, the code of a NIM template is not an executable computer program; and NIMs were content that are instantiated to create a fully configurable frame with content and controls. *See* DODOTS-2002. Thus, it is apparent to a POSITA that a NIM is not a conventional application or an applet, which are executable, compiled and interpreted like traditional computer program code. Finally, the '545 patent provides a succinct summary of the NIM/NIM Template architecture as well as the distribution system as shown below in Figure 11 of the '545 patent. In summary, the NIM template is requested by the client device, after which it is transmitted to the client device from a server. *Id.*, cols. 20-22. The client device instantiates the NIM from this NIM template. *Id.* Finally, the desired content is retrieved by the client device using information from the NIM template, which is produced to be displayed and interacted with in the NIM. *Id.*

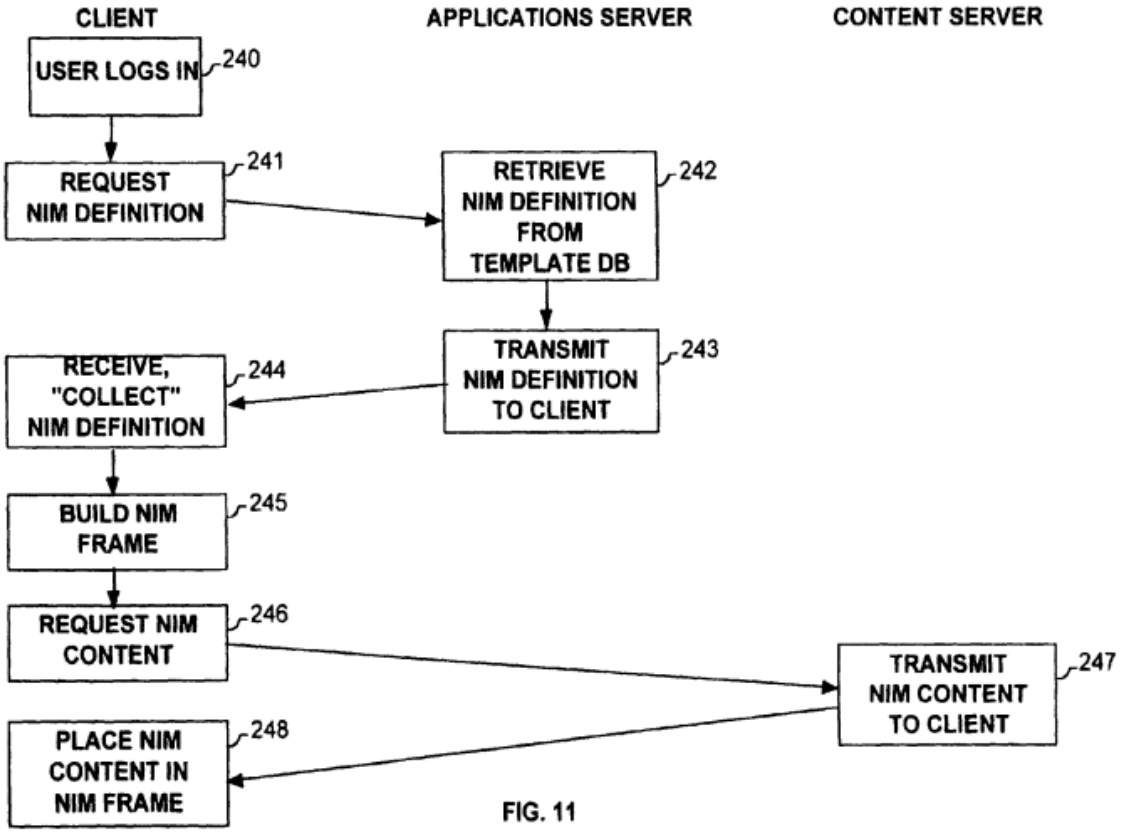

FIG. 11

SAMSUNG-1001, Fig. 11

B. The development of the DoDots technology

33. I also understand that the Kembel brothers developed the technology of the ’545 patent in response to a prevailing need created by the counter-intuitive and unwieldly web browser, which was the primary form of accessing the internet at the time of the invention. Notably, based on my experience at the time, it was well known that web browsers were difficult to use because the presented information in a stepwise manner like pages in a book.

34. [Omitted]

35. [Omitted]

36. On the other hand, DoDots created the NIM/NIM template architecture, which allowed for the distribution of applications they termed "Dots". These were fully configurable frames that allowed developers to create unique applications. This invention took internet content outside of a web browser and made it easier for people to access, share, and use internet-based information. It was a novel solution that was ultimately usurped by various companies to provide mobile applications to users as mobile devices became ubiquitous in our modern world.

VI. Claim Interpretation.

37. I understand that claim construction is the process of determining the meaning of words used in a patent claim in order to understand the meaning of the claim. I understand that the proper construction of a term is how a person of ordinary skill in the art (POSITA), at the time of the invention, would have understood the term based on its use in the claims, specification, and prosecution history (the intrinsic record) of the patent. I understand that in some cases it may be appropriate to consider information outside of the intrinsic record. Nevertheless, I understand that the intrinsic record controls.

38. In proceedings before the USPTO, I understand that claims are construed using the same standard used by district courts, meaning that claims are

given their ordinary and customary meaning in view of the specification from the perspective of a POSITA.

39. In comparing the claims of the ’545 patent to the known prior art, I have considered the ’545 patent based upon my experience and knowledge in relevant fields. In my opinion, with the exception of “networked information monitor,” “networked information monitor template,” and “execute,” the claim terms of the ’545 patent are generally used in their ordinary and customary sense as a POSITA would understand them.

A. “Networked information monitor”

40. I have used the undisputed definition for “network information monitor” (NIM), which is “a fully configurable frame, with one or more controls, through which content is presented to the user.” The PTAB and the Petition used this construction. SAMSUNG-1012; Petition, 3; SAMSUNG-1003, ¶28.

B. “Networked information monitor template”

41. I have used the undisputed definition for “network information monitor template,” which is “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.” The PTAB used this construction in IPR2019-00988 and the Federal Circuit affirmed. SAMSUNG-1012, 10; SAMSUNG-1014, 9.

VII. Discussion

42. I have reviewed the references cited in the Petition, and based on this review, determined that none of these references alone or in the combinations cited in the Petition render the challenged claims 1-21 of the ’545 patent invalid. In this section, I discuss those references and indicate why none of these references or their combinations referenced in Grounds 1A, 1B, 2A, 2B, and 2C in the Petition discloses each and every limitation of the challenged claims. I explain further why a POSITA would not be motivated to combine the references cited in the Petition.

A. Brown and Wecker do not render any of the claims obvious

1. Brown Overview

43. U.S. Patent No. 6,278,448 (“Brown”) describes a mechanism for creating and customizing a composite desktop[2] that can include web content. SAMSUNG-1005, 2:54-57; 4:13-15.

44. [Omitted]

45. Specifically, Brown discloses a system/method for a user to modify a graphical user interface in the operating system by embedding various web content

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[2] For windows-based operating systems such as Microsoft Windows or MacOS, this interface is referred to as a “desktop”, because it is the area on a screen in which a user works.

into a computer's desktop. Brown is tied directly to the desktop of Microsoft's Windows operating system. SAMSUNG-1005, 4:32-33, 10:29-39. In particular, Brown notes that, "[t]he composite desktop is implemented as a Web page, and the creation of the composite desktop includes building a composite Web page made up of one or more components selected and retrieved from one or more locations" using html. *Id.*, 4:15-19. Components of a web page(s) can be selected for and positioned on the composite desktop. *Id.*, 2:57-59. The components can be a static image, an active desktop component, an entire Web page, or an object that references an ActiveX control. *Id.*, 2:59-60, 4:21-24. Additionally, components could also be "retrieved from one or more locations" which include local storage, or remote computers comprised of Web pages and Active X controls and application programing interface (API)." *Id.*, 4:18-25. In sum, Brown describes a modified and enhanced Microsoft desktop that includes a web page with web content, and not a unique ecosystem of applications that could be created, distributed, and used through the usage of the NIM/NIM template architecture of the '545 patent.

46. Brown further explains that the composite desktop information is stored in a system registry local to and part of the operating system, and that local content is used to generate "HTML instructions," which could also be used to describe a web page. *Id.*, 4:14-23 (The composite desktop is implemented as a

Web page, and the creation of the composite desktop includes building a **composite Web page** ….); *see also id.*, 6:33-41. As a result, the composite desktop has elements that look and act like Windows operating system icons to control and retrieve material from the local operating system, its installed applications, and its users local stored environment. Additionally, the "HTML instructions" for multiple desktop components are located within in a single HTML file/document (for a single web page) on the client device named "desktop.htt." *Id.* An exemplary listing of a "desktop.htt" file is shown in Brown at columns 11 and 12. *Id.*, 11:43-12:43.

47. Brown also notes that "a registry is a mechanism for storing program data and preferably includes one or more files on persistent storage and associated code for accessing the data." *Id.* at 6:20-24. By disclosing these facts, Brown teaches away from the NIM/NIM template architecture of the '545 patent. Specifically, Brown emphasizes the special html viewer contemplated by Brown runs programs, interprets ActiveX, takes files from the client and integrates those programs into the Windows operating system on a computer. This is different from the invention of the '545 patent, where the NIM/NIM template architecture is designed to work across various platforms.

48. In fact, as shown below, Brown's composite desktop 302 operates with traditional Microsoft Windows icons 304 as well as desktop components that

display web-based content in the form of a web page in the form of a web page. Specifically, the desktop components include (1) a static desktop component 306 (green box), (2) an active desktop component 308 (red box), and (3) a web page desktop component 310 (blue box).

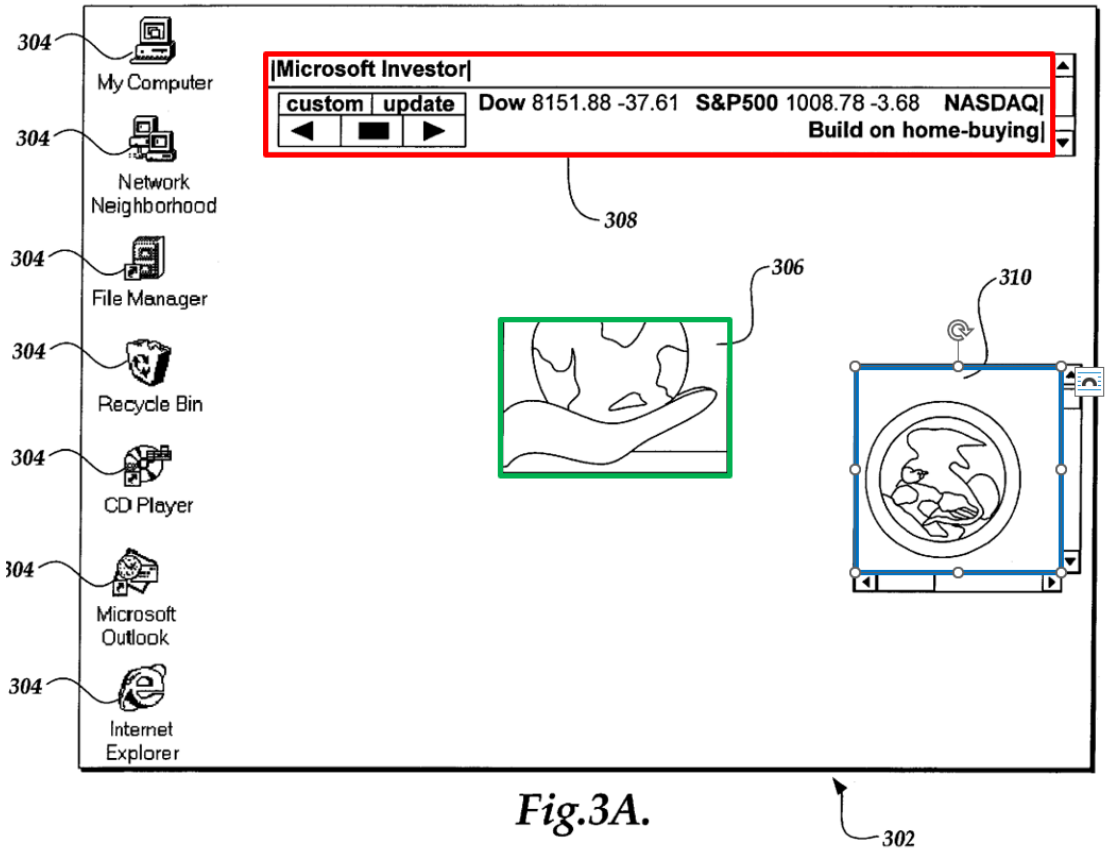


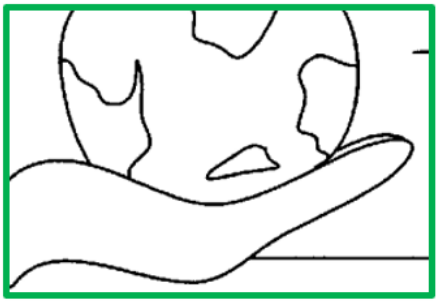
Fig.3A.

(SAMSUNG-1005, Fig. 3A, annotated)

49. It is also important to note that "[e]ach [desktop] component has an associated section of [in the single] hypertext markup language [HTML] instructions [that is used by the composite desktop] and is displayed on the composite desktop in the same manner as it is displayed on a Web page." *Id.*, 2:62-65. These instructions are contained in a single file – the desktop.htt file shown in

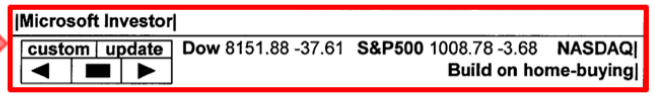
columns 11-12 of the patent. In fact, portions of the HTML document in Brown's HTML instructions corresponding to each desktop component 306, 308, 310 are shown below.

```
6. <IMG id=3 name="DeskMovr" src="http://
   www.microsoft.com/ie/images/ulg/ulg_ie40.jpg"
7. resizeable="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="DeskMovrW" src=
    "http://www.uspto.gov/"
11. resizeable="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>
```

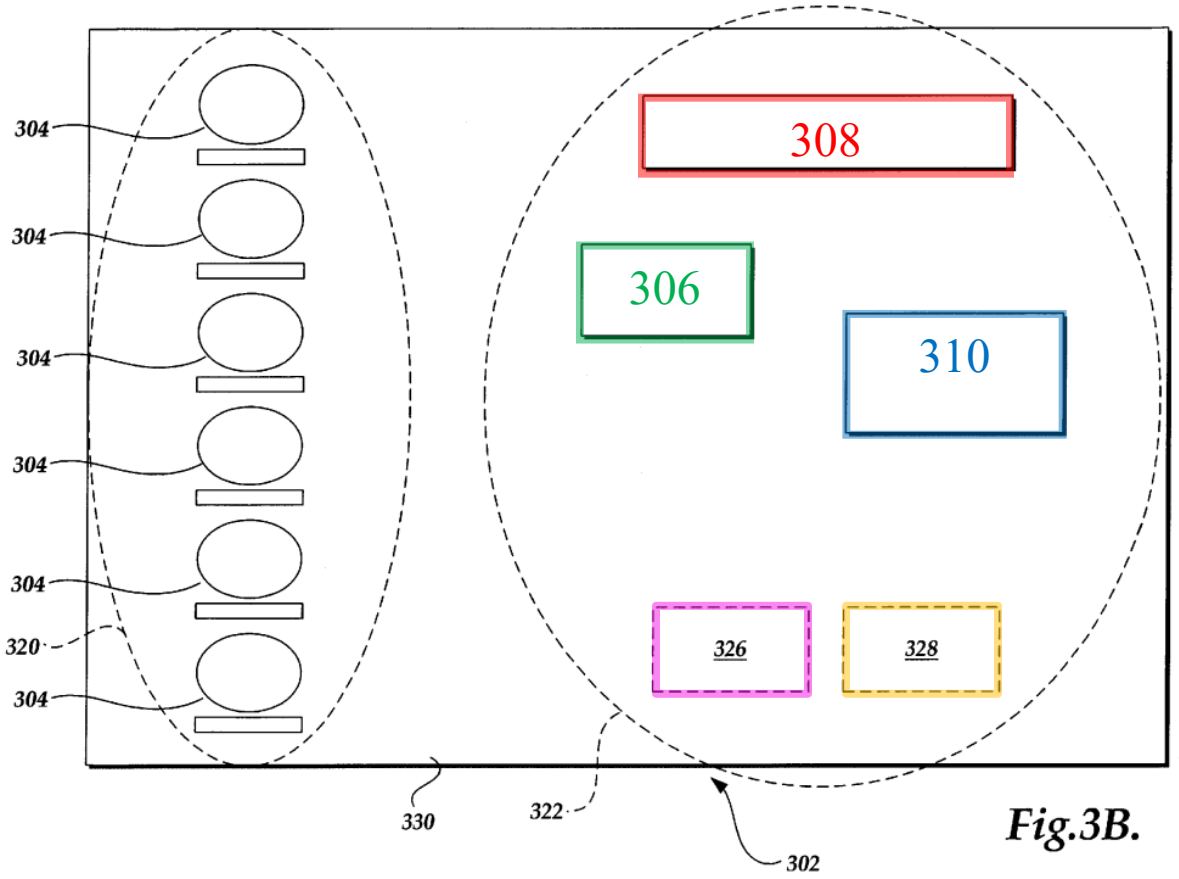
```
14. <IFRAME id=8 MARGINWIDTH=0
    MARGINHEIGHT=0 name="DeskMovrW" src=
    "http://www.microsoft.com/ie/ie40/gallery/ticker.htm"
15. resizeable="XY"
16. subscribed_url="http://www.microsoft.com/ie/ie40/
    gallery/cdf/g_stock.cdf"
17. frameborder=0 style="BACKGROUND: transparent;
    position:absolute;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



50. When the HTML document is rendered, each fragment shown above controls the visual appearance and location of a particular desktop component within the composite desktop 302. There are not separate HTML files/documents for each component.

51. Additionally, an HTML viewer 212 is used to read the HTML desktop.htt file 210 created from the registry and generate the HTML layer of the composite desktop display. *Id.*, 6:38-40; *see also id.*, 7:12-15, 7:52-56. The shell interface includes an API to allow computer programs, controls, or utilities to modify the composite desktop. *Id.*, 3:15-18. This specific control and display procedure teaches away from the '545 patent's NIM/NIM template architecture because the procedure is so closely integrated with the Windows OS and has a specific way of presenting and interacting with interface objects.

52. Brown also discloses that the desktop components can be resized and moved on the composite desktop. These are not controls in the actual web content. Rather, Brown discloses that this is accomplished by invoking manipulation controls 326 (pink box) and 328 (orange box) (preferably implemented as an Active X control). These controls are shared/used by multiple desktop components and are software objects that are defined separate and distinct from the desktop components identified in the HTML instructions.



(SAMSUNG-1005, Fig. 3B (annotated))

53. Notably, whereas the alleged NIMs (desktop components 306, 308, 310) are defined in lines 6-9, 10-13, 14-17 of the HTML document, as shown below, the manipulation controls 326, 328 are defined in lines 18-28 and 29-39 of the HTML document. *Id.*, 12:44-46; 12:61-62; 13:14-15; 13:22-24; 13:29-30.

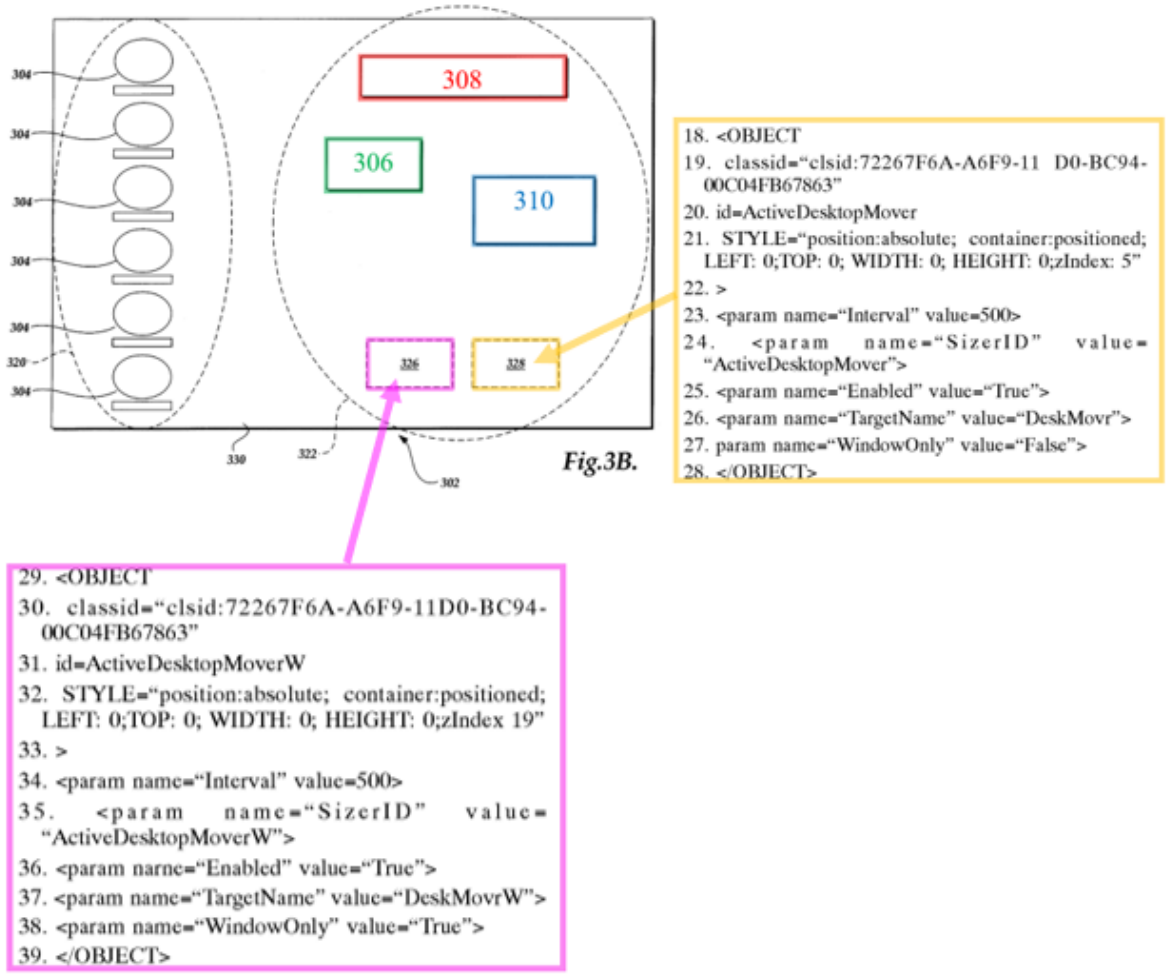


Fig.3B.

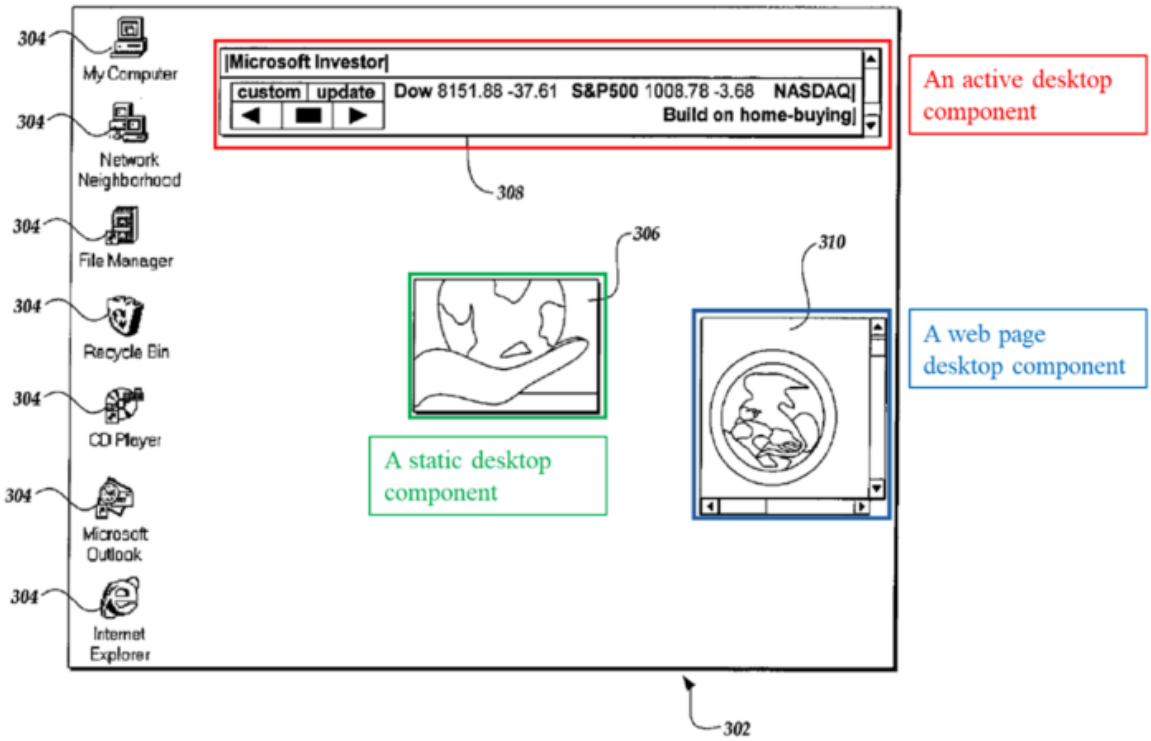
A POSITA would understand that manipulation controls 326, 328, are separate and distinct from the desktop components 306, 308, 310, because they are invoked within HTML OBJECT elements which are separate from the IMG and IFRAME elements specifying the desktop components and are <u>not</u> displayed. *Id.*, 7:59-61.

54. Despite the fact that Brown is a Microsoft specific solution, which focuses on changes to Microsoft's Windows operating system and computer desktop, the Petition relies on Brown as the foundation for Grounds 1A and 1B of unpatentability for the cross platform NIM/NIM template architecture of the.

a. Brown does not disclose a NIM template.

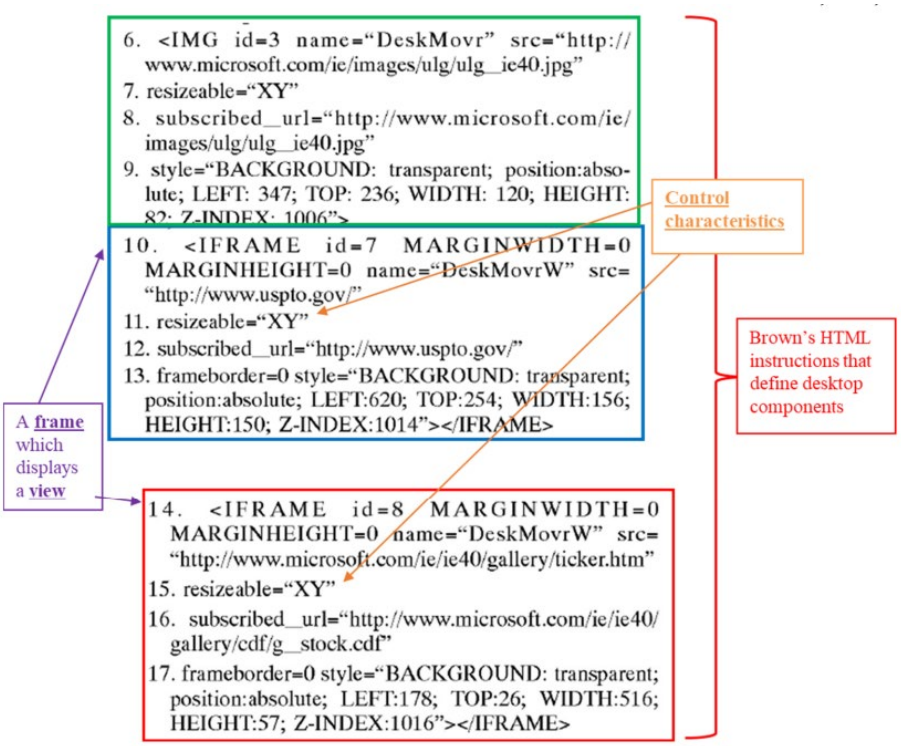
55. A "NIM template" is "a data structure that defines the characteristics of a NIM, including the NIM frame, view, and control characteristics, and that excludes executable applications/compiled code." Petition, 4. This data structure is absent from Brown because there are no control characteristics defined in the alleged NIM templates of Brown. Moreover, the alleged NIM templates are not data structures.

56. As a threshold matter, Petitioner alleges that the three desktop components (shown in red, green and blue boxes below) of Brown are each a NIM. Petition, 20-21; SAMSUNG-1003, ¶53.



(Excerpted from Petition, 9; SAMSUNG-1003, ¶30 (annotations by Petitioner))

57. The Petition then asserts that "the 'HTML instructions' that define Brown's 'desktop components'" are each a NIM template. Petition, 22-26; SAMSUNG-1003, ¶¶54-55. Thus, according to the Petition, Brown discloses *three* NIM templates – the HTML instructions in each box below are an alleged NIM template corresponding to the alleged NIMs. Petition, 24-25; SAMSUNG-1003, ¶55-56.



(Excerpted from Petition, 24; SAMSUNG-1003, ¶60 (annotations by Petitioner))

58. Further, in the orange arrows and box above (excerpted from the Petition), Petitioner identifies ***resizable* = *"XY"*** in the desktop components' HTML (the alleged NIM templates) as the control characteristic (see line 11, 15 of HTML above). Petition, 24 However, none of these are or can be a NIM Template.

i. The alleged NIM templates do not define "control characteristics."

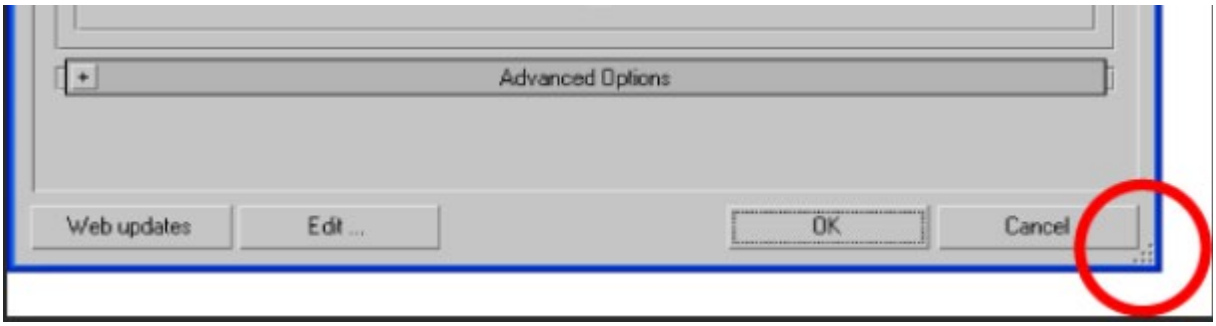
59. The characteristic that Petitioner identifies in the alleged NIM templates is a frame characteristic, not a "control characteristic" and, thus, Brown (alone or in combination with Wecker) cannot render obvious any of the challenged claims of the '545 patent.

60. A POSITA understands that a ***frame characteristic*** is a characteristic of the frame itself – for example, resizability, size, color, or position on a computer screen.

61. Unlike a frame characteristic, a ***control characteristic*** is a characteristic of a control. In the context of the '545 patent, this refers to the shape, size, position, and other attributes of the controls that can be placed within the frame. Indeed, one use of the term "control" in the '545 patent is a user interface element that is used to control the frame itself (*e.g.*, resize handle, close button, etc.) or that is within a frame (*e.g.,* a menu). The '545 patent the states that the "NIM definition also includes the definition of a frame 271 (NIM)" and that "visible controls are distributed within the control space or viewer" SAMSUNG-1001, 22:34-44. And, "the definition of a NIM includes tags that identify the NIM 270, define and configure the NIM frame 271, specify and layout the controls 273 in the NIM viewer." *Id*. 22:4-8; and 22:4-8; 23:49-60; 24:6-29; Figs. 4, 5. Thus, a

control characteristic is a characteristic of a control itself – *e.g.*, a characteristic of the resize handle, menu, close button, or control space.

62. For example, a resize handle is shown below as having six dots in the red circle in the lower right corner.



63. A person can put a cursor over the resize handle, hold down a mouse button, and drag the edge of the frame vertically and/or horizontally to resize the frame. The existence of this handle does not evidence a "control characteristic." Rather, a characteristic of the resize handle is the appearance (*e.g.*, visible or transparent, dots or lines), size, and/or location of the resize handle.

64. To further understand the differences between a frame characteristic and a control characteristic, consider a convertible car. Just like the ability to raise or lower the roof is a characteristic of the car, resizability is a characteristic of a frame. In a convertible car, the control is the button that causes the roof to retract. The control characteristics (*i.e.*, the characteristics of the control) are characteristics of the button. If the button is black and round, the characteristics of the control/button are black and round. Similarly, in the context of a NIM's resize

handle (a control), the control characteristic is the appearance, size, and location of the resize handle.

65. With this in mind, the Petition only identifies ***resizable* = *"XY"*** in the desktop components' HTML (the alleged NIM templates) as the alleged control characteristic. Petition, 39; SAMSUNG-1003, ¶¶58, 87. But this is a frame characteristic, not a control characteristic.

66. This is confirmed by comparing Brown with the '545 patent. Notably, the '545 patent incorporates by reference Application No. 09/558,925 (now U.S. Patent No. 7,660,868 ("'868 patent," DODOTS-2015)). The '868 patent expressly states that "resizeable" is a ***frame characteristic***. Specifically, the '868 patent (shown below) describes Figure 28B as showing "***resizable***" in either or both width and height (pink box) as a "frame characteristics." DODOTS -2015, 36:12-15.

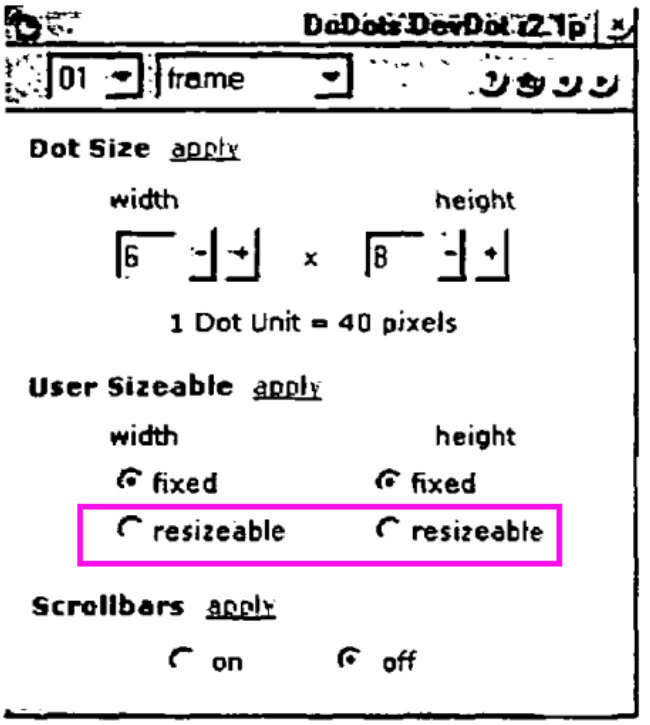


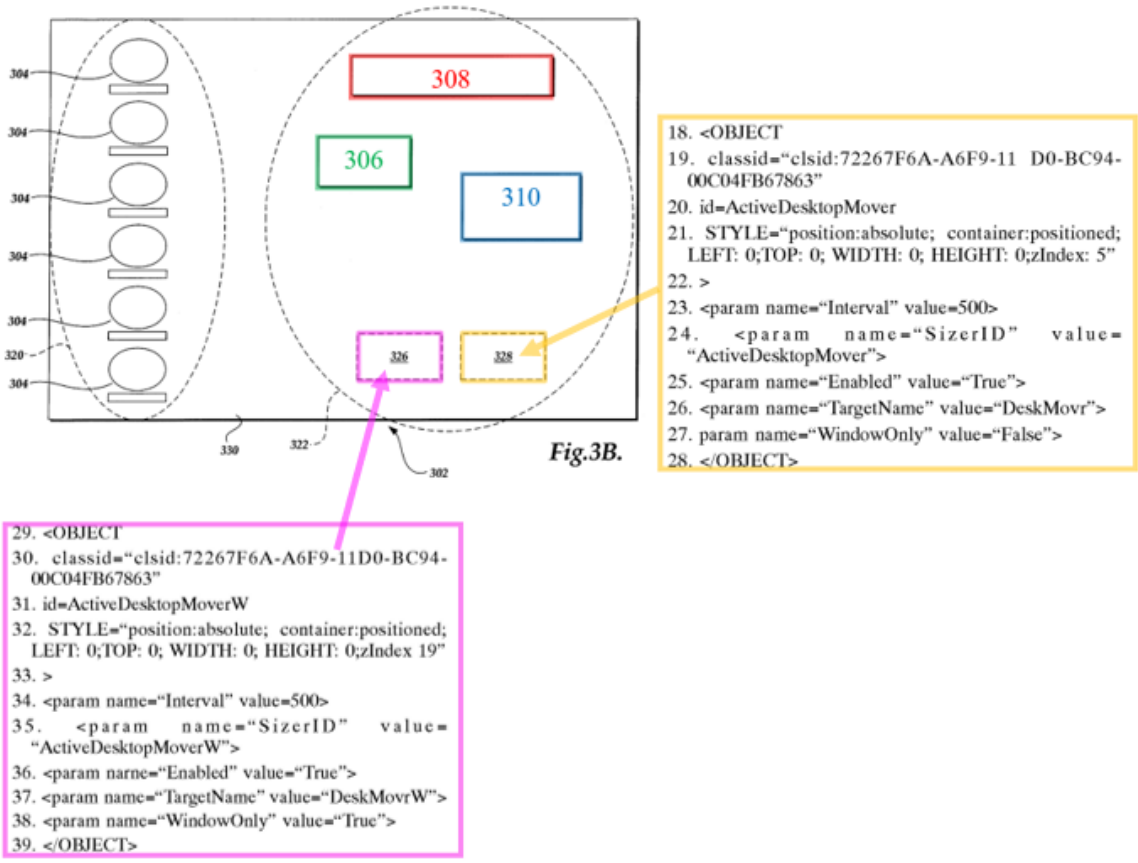
FIG. 28B

(DoDot 2015, Fig. 28B (annotated)).

67. "Resizeable" as shown above is the same as ***resizable = "XY"*** in Brown. Accordingly, based on the '545 patent disclosures, a POSITA would understand that "***resizable = "XY"*** is <u>not</u> a ***control*** characteristic defined by the alleged NIM templates of Brown.

68. Additionally, a POSITA would not recognize or find it obvious that the alleged NIM templates would define control characteristics because the actual controls for resizing – manipulations controls 326, 328 – are defined outside of the HMTL for the alleged NIM templates.

69. As noted above, the components that are actually responsible for resizing the frames in Brown are manipulation controls are not part of the desktop components. Specifically, as shown in the annotated Figure 3B of Brown below, control 326 (pink box) and control 328 (orange box), these controls are separate from desktop components 306 (green box), 308 (red box), 310 (blue box) and defined *separately* from the HTML fragments of the alleged NIM templates.



(SAMSUNG-1005, Fig. 3B; 12:10-42)

70. Thus, the desktop components' HTML instructions of Brown (the alleged NIM templates) do <u>not</u> define any controls (or control characteristics) for resizing, because the controls are defined elsewhere – in separate HTML fragments

defining controls 326, 328, and the HTML instructions do not relate to the characteristics of those of those controls.

71. Finally, a POSITA reading Brown would not recognize or find it obvious that Brown discloses the alleged NIM templates defining a control characteristic. Brown does not identify ***resizable* = *"XY"*** as a control characteristic nor does Brown provide any information about what ***resizable* = *"XY"*** actually means.

72. A POSITA, however, would understand from a reading of Brown that ***resizable* = *"XY"*** is a frame characteristic, not a control characteristic. Specifically, a POSITA would understand that ***resizable* = *"XY"*** indicates that the frame has the *capability* of being resized (*i.e.*, a user can choose to resize the desktop component's frame) in both width and height (X and Y directions). That a frame is *capable* of being resized is a characteristic of a ***frame*** itself (*i.e.*, a feature of the frame). The capability of a frame to be resized is not a characteristic of a control.

73. Thus, even independent of the explicit teaching of the '545 patent, a POSITA would understand ***resizable* = *"XY"*** to be a frame characteristic, not a control characteristic.

74. Because the HTML fragments associated with Brown's desktop components (the alleged NIM templates) do not define any resizing controls and

resizable* = *"XY" is not a control characteristic, the Petition has not identified any control characteristics within the alleged NIM templates.

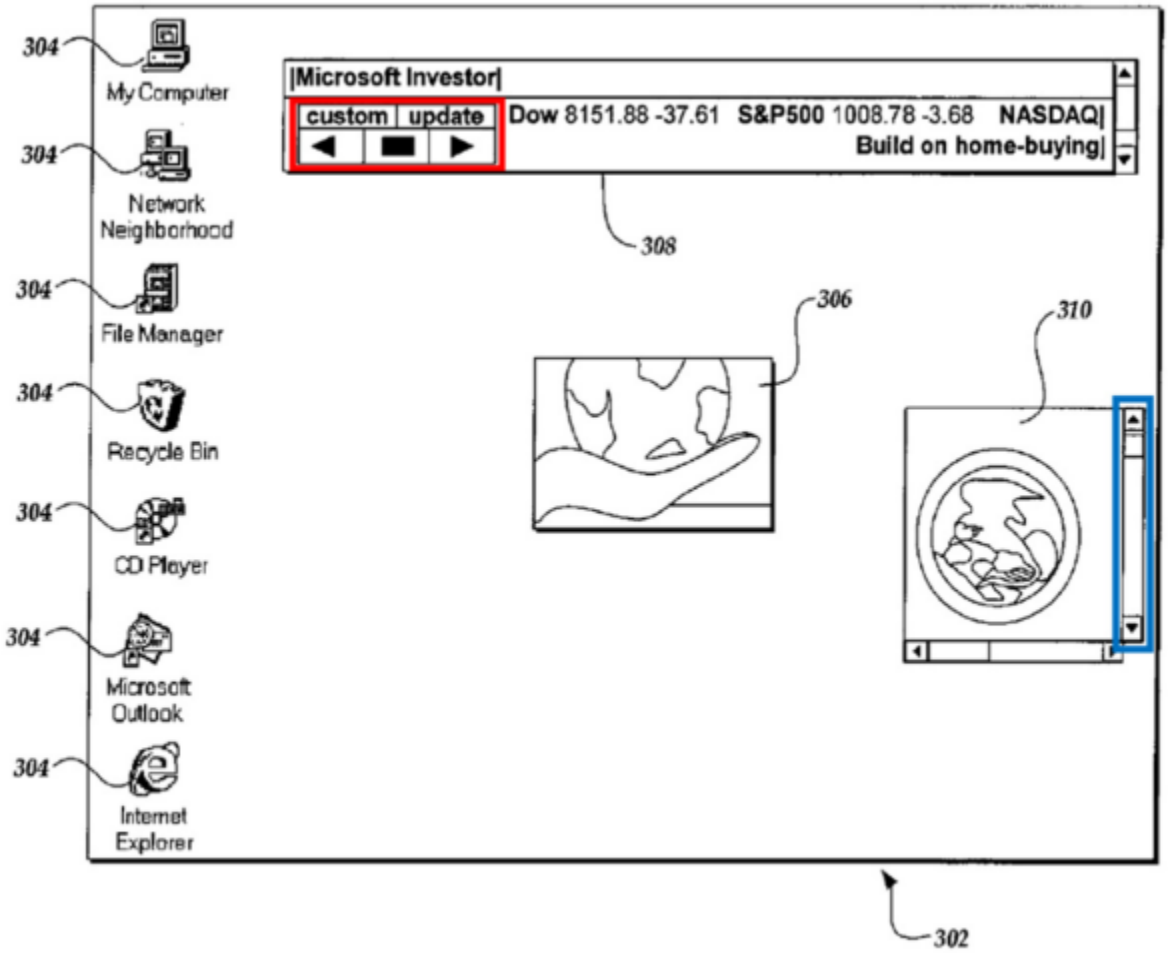
75. Thus, the HTML instructions that Petitioner identifies as NIM templates cannot be NIM templates under the agreed construction of a NIM template.

76. In essence, Brown relates to putting web content within a web page that is incorporated into a Windows style computer desktop. In contrast, the '083 patent relates to allowing a developer to define a fully configurable frame to give a developer flexible in terms of how to present web content to users.

ii. None of the alleged controls identified in the Petition have characteristics that are defined in the alleged NIM template.

77. Petitioner does not elaborate any control characteristics other than ***resizable*=*"XY"***. That said, Petitioner makes a passing mention of other alleged controls. None of these controls, however, have characteristics that are defined in the HTML fragments associated with the desktop components (the alleged NIM templates).

78. In particular, Petitioner points to the red box and blue box below as allegedly showing controls.



(Excerpted from Petition, 40; SAMSUNG-1003, ¶88 (annotations by Petitioner))

79. None of these alleged controls (nor their characteristics), however, are defined within the alleged NIM templates (the HTML fragments alleged to be NIM templates for the desktop components 306, 308, 310). Petition, 23-24; 37-39 SAMSUNG-1003, ¶¶58, 86.

80. With regard to the alleged controls in the red box depicted above – what look like "rewind, stop, and play buttons" (SAMSUNG-1003, ¶88.) – these

are displayed on Brown's composite desktop as content of a web page that is transmitted from a computer different from that displaying the active desktop.

81. A POSITA would understand that the "rewind, stop, [or] play" in the red box is displayed as part of the third-party web content. Thus, the alleged control in the red box depicted above is merely part of the web content displayed in desktop component 308 and, therefore, not defined in the alleged NIM template for desktop component 308. Thus, characteristics of these alleged controls are not found in the alleged NIM template disclosed in Brown's HTML. SAMSUNG-1005, 11:43-12:42.

82. Moreover, to the extent that Petitioner is alleging that ***resizable* = *"XY"*** is what results in the alleged controls shown in the red box above, Petitioner is wrong. Neither the Petition, nor Dr. Schmidt, suggest that "rewind, stop, and play buttons" relate in any way to resizeability. A POSITA would understand that they do not relate to resizeability. This is demonstrated by the fact that ***resizable* = *"XY"*** is found in desktop components 306 and 310 but these do not have the alleged controls shown in the red box above.

83. I also note that the alleged controls highlighted in red in desktop component 308 have nothing to do with resizing or moving it. Controls 326, 328 in Brown's composite desktop are the only entities disclosed in Brown that affect resizing or moving of any desktop component.

84. With regard to the scroll bars (*e.g.*, shown in the blue box above) next to desktop component 310 (or component 308) shown above, a POSITA would understand that these scroll bars are not attributes, characteristics, or features specified anywhere within the alleged NIM templates (or anywhere else within the HTML of Brown's desktop.htt file). Rather, a POSITA would understand that the scroll bars are a standard feature of the Windows operating system, implemented by software not disclosed by Brown. Generally, the operating system displays scroll bars whenever the content of a window is larger (in either or both of the X and Y dimensions of the window) than the window itself. In other words, the scroll bars are provided by and managed by the operating system, not Brown's HMTL document or any fragments thereof.

85. That scroll bars (and their characteristics) are not defined by the alleged NIM templates is evidenced by comparing the IFRAME elements describing the static desktop component 306 and those describing the active desktop component 308. Even though both elements list an *identical* collection of

attributes (id, MARGINWIDTH, MARGINHEIGHT, name, src, resizeable, subscribed_url, frameborder, and style), component 308 has a scroll bar and component 306 has no scroll bar. Thus, a POSITA would understand that nothing in the HTML fragments (the alleged NIM templates) associated with the desktop components 306 and 308 have any relation to whether a scroll bar was presented on the composite desktop. As such, nothing within the alleged NIM templates for those desktop components could define, specify, or affect the display and function of the scroll bars and cannot define control characteristics for those scroll bars.

86. Petitioner also appears to allege that the scroll bar relates to one property within the definition of structure employed in an application program interface for modifying the composite desktop contents as shown below in the blue box. Petitioner, 39-40; SAMSUNG-1003, ¶88.

```
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?
         COMPPOS 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.

(Excerpted from Petitioner, 43; SAMSUNG-1003, ¶79 (annotations by Petitioner))

87. The property specification in the blue box above is not contained in any of the alleged NIM templates; it is not in any HTML instructions found in Brown's desktop.htt file (the HTTP document that is the HTML layer of the active desktop). There is no definition for the scroll bar or its characteristics in the alleged NIM templates.

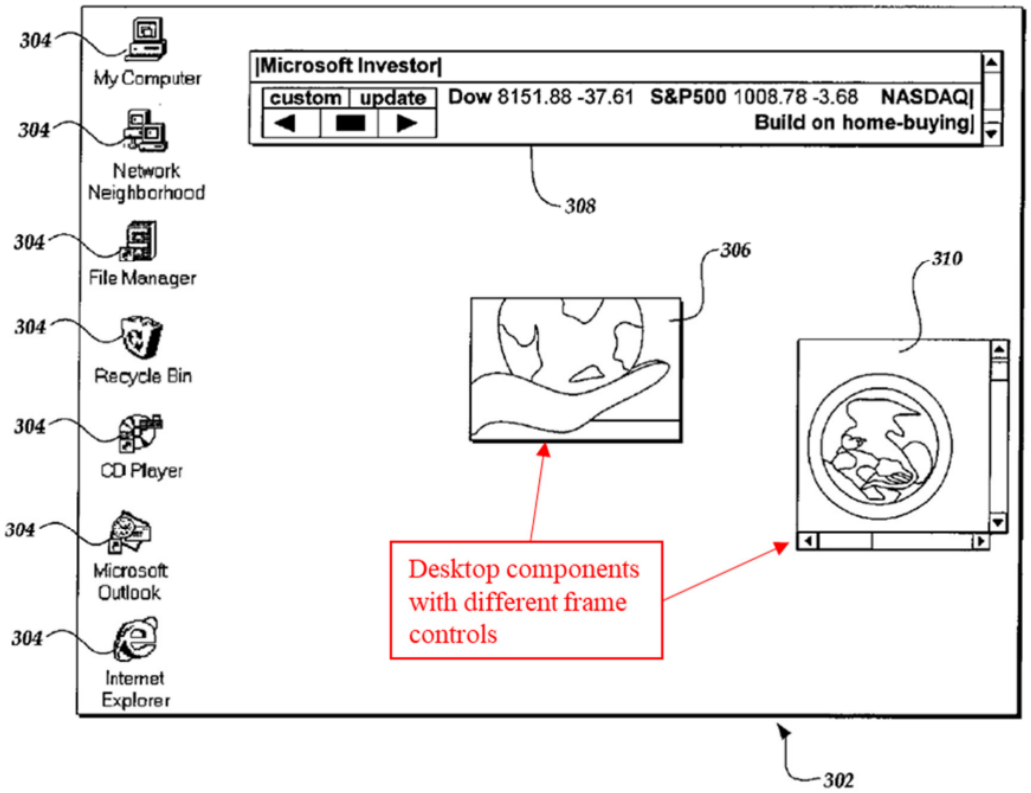
88. The property in the blue box above is part of a specification of an Application Programming Interface ("API"). SAMSUNG-1005, 8:11-17; 9:13-27. A POSITA would understand that APIs are not part of any of the HTML fragments that are identified in the Petition as the alleged NIM templates.

89. Thus, the property in the blue box cannot be a control characteristic as required by the NIM template as construed.

90. Petitioner also discusses Jones (SAMSUNG-1010), which discloses a user's ability to put a cursor on the edge/border of a desktop component and resize the desktop component by dragging the cursor. Petition, 41; SAMSUNG-1003, ¶89 (citing SAMSUNG-1010, 5:1-7, FIG. 4). To the extent Petitioner alleges that this is some sort of control, any control characteristic related to this are not defined in the alleged NIM templates.

91. Finally, as shown in the below diagram annotated by Petitioner, Petitioner appears to allege that controls associated with the thickness of the

borders, scroll bars, and/or resizing or moving desktop components 306, 308, 310 are frame controls. Petition, 21; SAMSUNG-1003, ¶51-52.



(Excerpted from Petition, 3; SAMSUNG-1003, ¶51(annotations by Petitioner))

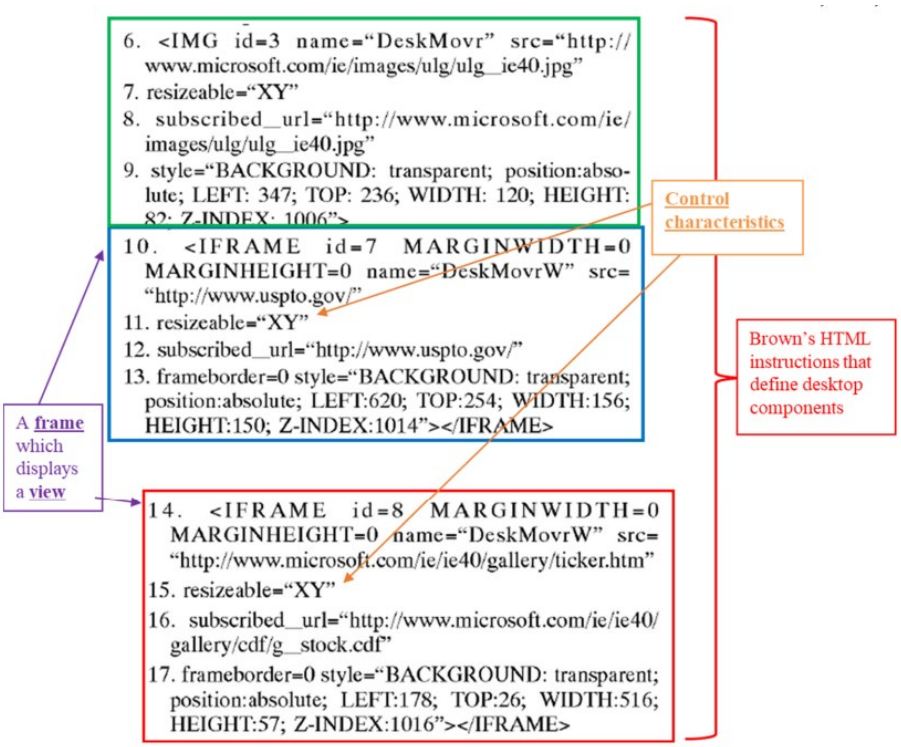
92. But, as discussed above, the controls for resizing and moving as well as for the scroll bars (and any characteristics of those alleged controls) are not defined by the desktop components' HTML instructions of Brown (the alleged NIM templates). Moreover, the characteristics of the thickness of the frame border is not defined in the alleged NIM templates.

93. For the foregoing reasons, the HTML fragments that Petitioner identifies as NIM templates cannot be NIM templates because they do not define control characteristics.

iii. The alleged NIM templates are not "data structures."

94. All challenged claims require a NIM template to be a "data structure." The alleged NIM templates that Petitioner identifies, however, are not "data structures" and, thus, Brown (alone or in combination) cannot render obvious any of the challenged claims of the '545 patent.

95. The Petition alleges that the NIM templates of Brown are the three fragments of HTML (shown in the red, green, blue boxes below) that correspond to desktop components 306, 308, 310.



(Excerpted from Petition, 24; SAMSUNG-1003, ¶60 (annotations by Petitioner))

96. According to the Petition, each of the HTML instructions shown above is a data structure because they are "generated from the data stored in the registry 208." Petition, 22-23 (citing SAMSUNG-1005, 14:7-8). Petitioners are wrong. That HTML instructions are generated using data in a data structure (registry 208) does not mean the HTML instructions themselves are data structures.

97. Critically, the Petition and Dr. Schmidt do not explain why the HTML instructions would be considered a data structure or what data structure is.

98. [Omitted].

99. It is my opinion that at the time of the invention, a POSITA would understand that "a data structure is a way of organizing and storing data in a computer so that it can be accessed and used efficiently. It refers to the logical or mathematical representation of data, as well as the implementation in a computer program." This stands in contrast with HTML, which is code for displaying a webpage. *See, e.g.,* DODOTS-2016, (https://www.geeksforgeeks.org/data-structure-meaning/).

100. [Omitted]

101. In view of this understanding, a POSITA would look at Brown's HTML instruction and see that it is not a data structure. Indeed, unlike a data structure, (1) Brown's HMTL instructions are simply written and read sequentially from beginning to end. SAMSUNG-1010, 2:16-18 ("A browser executes each script as it reaches the position in the script during interpretation of the HTML document."), and (2) Brown's HTML instructions are not being used for data organization.

102. As further evidence that HTML is not a data structure, the organization responsible for publishing the HTML standards describes "parsing data from an HTML page ***into a data*** structure." DODOTS-2017 HTML Data Guide, W3C Interest Group Note 08 March 2012. That data from an HTML page (data that would be found in Brown's HTML instructions) can be parsed to create a

data structure indicates to a POSITA that the HTML is different from (and not itself) a data structure.

103. To the extent that Petitioner is alleging that using data from registry 208 to generate Brown's HTML instructions makes the resulting HTML instructions a data structure, Petitioner is incorrect. A POSITA would not understand that extracting data from a data structure to generate HMTL makes the resulting HTML instructions data structures.

104. Finally, Brown makes no mention (nor does Brown imply to a POSITA) that Brown's HTML is a data structure, nor would a POSITA understand that the HTML in Brown is a data structure. Indeed, Brown specifically refers to "HTML documents." SAMSUNG-1005, 2:18-26. These documents merely incorporate information for how a computer should render web content on a computer screen. Petitioners attempt to unilaterally define HTML as a data structure without any support.

b. The Petition fails to identify a NIM.

105. The parties agree that a "NIM" is "a fully configurable frame, with one or more controls, through which content is presented to the user." Petition, 3-4. And all challenged claims require a NIM. None of the alleged NIMs that the Petitioner identifies, however, is a "fully configurable frame" and, thus, Brown

alone or in combination with Wecker cannot render obvious any of the challenged claims of the ’545 patent.

106. None of the alleged NIMs of Brown is “a fully configurable frame . . . through which content is presented to the user.” The ’083 patent discloses that the frame of the Dot/NIM can be customized such that the web content and controls can be configured/presented in different ways depending on how a Dot/NIM developer wants them to appear to a user. DODOTS-2054, 10:55-57 (“[T]he frame shape and content may be wholly defined by the Dot developer.”); 11:11-15, 65-67; 12:20-45; 16:61-65. This is what it means to be a fully configurable frame. So, for example, within the frame of a Dot/NIM, web content can be arranged completely differently from the original web page(s) that contains the content and the frame can include different controls than are found in the web page(s). Contrary to Petitioner’s assertions (Petition 23-24), a fully configurable frame is not one that can simply be moved around, resized, or that can be affected by controls located/defined external to the NIM/NIM templates. Whereas the web page that makes up the HTML layer of Brown's composite desktop can be configured with different desktop components, that is not the configuration that is relevant to the construction of NIM. The desktop components 306, 308, 310 (the alleged NIM) themselves must be fully configurable. They are not. The content for each desktop component appears exactly as it appears on the original web page

from where the content is retrieved. For example, there is no HMTL in Brown makes the stock ticker in desktop component 308 or the USPTO website in desktop component 310 appear any differently than they appear on the web page from which it came. Thus, Brown's desktop components (the alleged NIMs) are not fully configurable frames as required by the construction of NIM.

107. Moreover, based on the disclosures in the specifications, a POSITA understands that "fully configurable frame, with one or more controls" means that the NIM itself must include its own fully configurable controls/control characteristics. The Petition, however, does not identify any such controls/control characteristics and, thus, the Petition fails to identify a NIM as that term is construed. Instead, the Petition identifies controls and control characteristics that are visually external and defined separate from the alleged NIMs. Petition 21, 33, 37.

108. The specifications explain that the display of content was trapped within the frame of a web browser and, thus, vendors of web browsers were in the position to brand the browser and regulate the controls associated with the browser. DODOTS-2054, 1:39-51. Application developers and users had limited control over the design of displayed of Internet content. *Id.* The patent identifies that the problem with existing browsers is that "the controls associated with a browser are not fully configurable." *Id.*, 2:60-3:4.

109. To address this problem, the patents discloses a NIM and a NIM template, where each NIM template "defines the characteristics of a ***specific*** NIM, including ***fully configurable*** frame characteristics, viewer and ***control characteristics*** . . . ." *Id.*, 6:34-39.

110. The alleged NIMs in Brown, however, do not include any of their own controls nor do the alleged NIM templates define control characteristics. Instead, the alleged NIMs in Brown share controls that are external to the NIM and/or have controls defined somewhere other than the alleged NIM templates. Thus, none of the alleged NIMs of Brown is a "fully configurable frame, with one or more controls."

111. Contrary to Petitioner's assertion discussed above, a NIM cannot just be a frame that merely has some *external* controls that work with the NIM in some way (*e.g.*, to change the NIM's size or position or provide a scroll functionality). In view of the '545 patent specification, a POSITA understands that each NIM must include (define) at least one or more of their own controls, which are defined in their respective NIM templates.

112. In particular, under the definition of "control," as found in the '083 patent[3], states "A *Dot [NIM] comprises of at least one control,* each of which is *arranged within the frame according to the* Dot *Definition [NIM template]*." (DODOTS-2054, 9:61-63). The specification also states that: "The *Dot Definition [NIM template] contains data used to* define and configure a frame and its elements, *specify and lay out the controls*, and specify parameters that initialize all the Dot's [NIM's] components with content and data." *Id.,* 15:26-29; 7:19-23; 10:11-19; 13:47-48; 24:11-14; Fig. 8. As such, if the NIM template does not define a control, the NIM cannot have a control.

---

[3] The Dot and Dot Definition of the '083 patent, as the Federal Circuit noted, is an analogous term (DoDots-2002, fn.2). As a result, any discussion of that term is also applicable in this case.

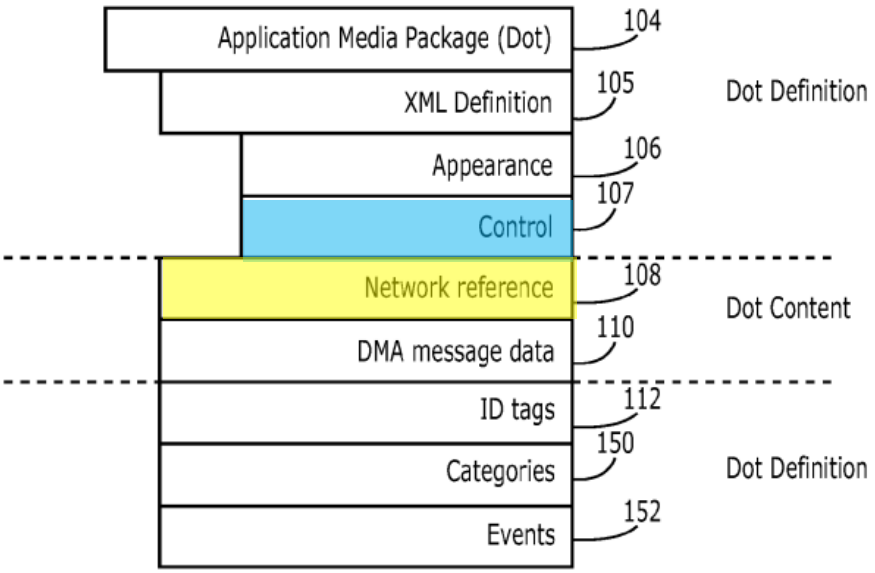


FIG. 3

(DODOTS-2054, Fig. 3 (annotated))

113. Indeed, Figure 3 of the ’083 patent (above) specifically shows that control 107 (blue) is defined within the NIM template and is separate from web content 108 (yellow).

114. As discussed in Section VII.A.2.a above, Petitioner alleges that the controls are components for resizing/moving the desktop components, scroll bars, frame border, or “rewind, stop, and play buttons.” None of these alleged controls, however, are defined within the alleged NIM templates and, thus, none of the desktop components 306, 308, 310 (the alleged NIMs) are “fully configurable frame, with one or more controls” as required by the construction of NIM. Indeed, as discussed in Section VII.A.2.b, all the alleged controls that Petitioner identifies

are shared controls and/or are defined externally to the alleged NIM templates. Accordingly, Brown fails to disclose a NIM.

c. The Petition fails to identify "a definition of a first content element … the definition of the first content element referencing a first network location …."

115. All of the challenged claims require a NIM templates that includes "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." SAMSUNG-1001.

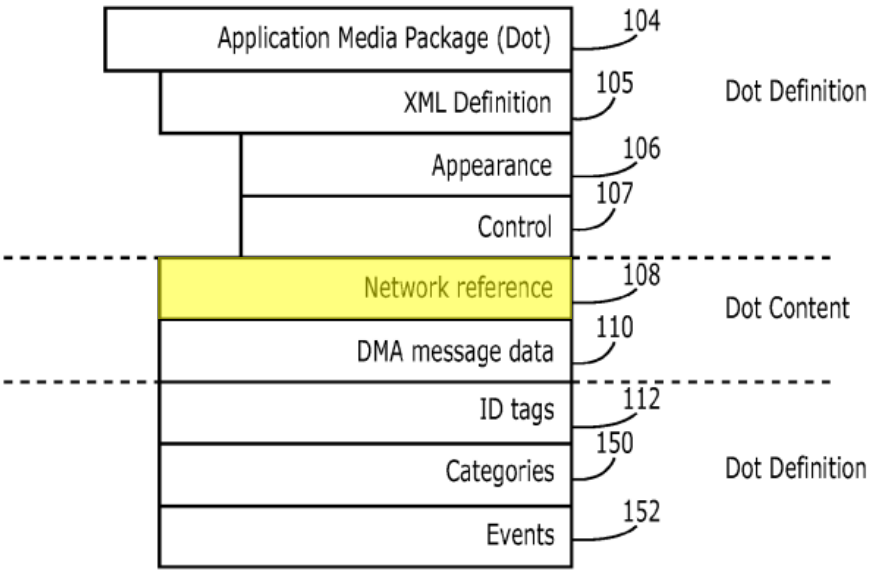


FIG. 3

(DODOTS-2054, Fig. 3 (annotated))

116. Based on the '083 specification, including Figure 3 (above), a POSITA understands the claim language require that the NIM template itself must

identify/include the network location of the content to be displayed in the NIM. The Petition, however, fails to identify this limitation. Given this understanding, the Petition concedes that the alleged content element/reference does not include the network location at which content of a NIM is accessible. Rather, Petition asserts that the content element reference is a "CDF subscription" and the "network location" is a URL referenced in the CDF subscription. Petition, 29-30; SAMSUNG-1003, ¶70. The Petition points to the URL in the red box below as the network location of content.

```
14.  <IFRAME  id=8  MARGINWIDTH=0
     MARGINHEIGHT=0  name="DeskMovrW"  src=
     "http://www.microsoft.com/ie/ie40/gallery/ticker.htm"
15. resizeable="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"></IFRAM
```

A URL corresponding to a CDF file.

(Excerpt from Petition, 30; SAMSUNG-1005, 12:1-8 (annotations by Petitioner)

117. This URL, however, is not a network location of content that is displayed in the NIM. Instead, the URL is the network location of a CDF file, which is not itself content. In other words, the content for the alleged NIM is not accessible at the URL that the Petition identifies; only a CDF file is accessible at that URL. This is not what the claims require. Petitioner points to Wecker's

disclosure that web content is "described in a CDF file. Petition, 29. But describing web content does not make it accessible to the CDF file's URL. *Id*. Indeed, that Brown discloses using a URL of a CDF file instead of the URL of content in the alleged NIM templates demonstrates that it would not be obvious to include a network location of content in the alleged NIM template. This would be contrary to the disclosure of Brown.

118. Moreover, to the extent that the Petitioner asserts that the CDF file includes a URL/network location of content, Petitioner has failed to provide the actual CDF file referenced in Brown let alone identify any network location in this undisclosed CDF file. And even if Petition asserts that the CDF file includes a URL to the network location of content, that is not what the claim requires – the network location must be in the alleged NIM template itself which it would not be. Nor would it be obvious to take a URL found in a CDF file and put it in Brown's HTML. Such an assertion would require a POSITA to abandon the teaching of Brown, which discloses a URL of a CDF file, not a URL of content. Accordingly, Brown (alone or in combination with Wecker) cannot render obvious any of the challenged claims of the '545 patent.

2. Wecker Overview

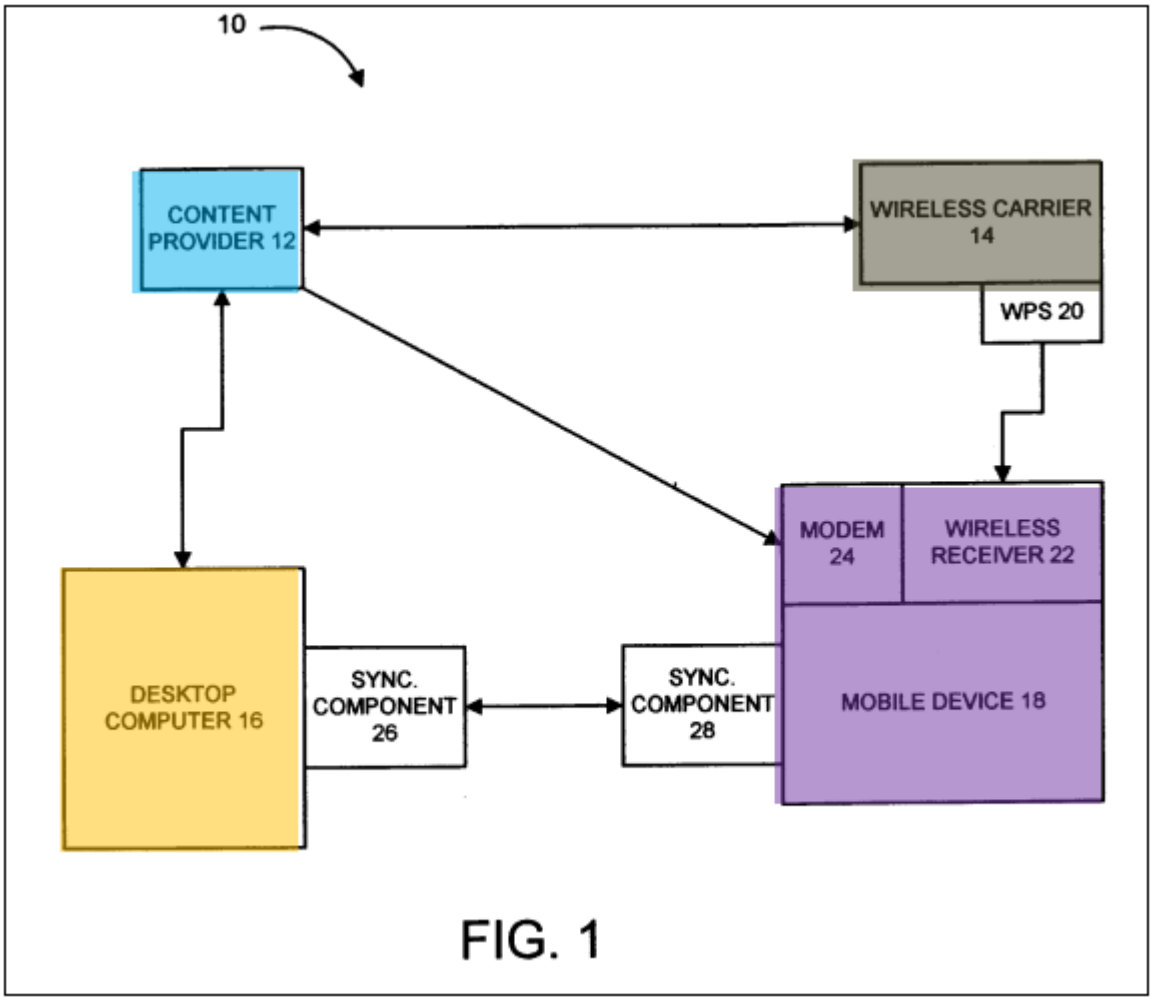
119. As a threshold matter, U.S. Patent No. 6,449,638 ("Wecker") seeks to solve a different need than '545 patent. Wecker focuses on effective ways of

eliminating HTML and squeezing data to a personal digital assistant ("PDA") by utilizing specialized rendering for a small display and a limited bandwidth for downloading content from the internet. SAMSUNG-1006, 1:13-24. On the other hand, the '545 patent focuses on having many apps on a mobile device, organizing their installation, and providing developer with the ability to create fully configurable frames.

120. Notably, Wecker employs a mechanism for identifying something is to read and rending it on a more limited display. Therefore, as opposed to using the rich NIM/NIM template architecture, Wecker works by using simplified rendering scripts and rendering data as needed. Moreover because of differences in goals, the '545 patent relies on non-executable code in the form of NIM Templates, while Wecker explicitly describes the scripts as being written in a programming language like Visual Basic. Thus, a POSITA could clearly see that they are tackling different problems.

121. With that in mind, Wecker notes that issues arise with delivering web content to mobile devices/PDAs wirelessly because bit rates of wireless channels can be very low and delivery of large content is "highly impractical." SAMSUNG-1006, 1:44-45, 50-61; 1:58-59 ("The bit-rate of conventional wireless channels is very low."); 6:10-17 ("It should be noted that the display 45 for the mobile device as shown in FIGS. 3 and 4 . . . would typically be much smaller than a

conventional display used with a desktop computer. For example, displays 45 shown in FIGS. 3 and 4 may be defined by a matrix of only 240×320 coordinates, or 160×160 coordinates, or any other suitable size.”).



(SAMSUNG-1006, Fig. 1)

122. Therefore, Wecker’s method entails interaction with desktop computers as well as a network. *Id.*, 3:66-4:6. As shown above, Wecker discloses content being provided to both mobile device 18 (purple) (either through a dial-up connection from a content provider 12 (blue) or through a wireless connection

from a wireless carrier 14 (brown)) and desktop computer 16 (orange) (in the "standard fashion" from a content provider 12 (blue)). *Id.*, Fig. 1, 3:54-4:21.

123. Wecker teaches "pushing" content to a mobile device in a wireless manner in "small segments of data instead of full HTML pages." *Id.*, Fig. 1, 1:54-61, 3:34-41; 10:45-47. To do so, Wecker discloses sending "a content structure file, a data file and a script file" to the mobile device, which then uses these files to display web content. *Id.*, Abstract; 2:8-10; 4:47-51 ("The script is associated with a certain data file (typically a text file) that holds the raw data for the web content. Thus, the script interpreter operates on the data associated with a given script to provide a rendering of the web content to the user of mobile device 18."). "The content structure file, data file and script file are independently receivable by the computer." *Id.*, Abstract; 2:13-15.

124. By separating the delivery of the script file from the data file, web content can be transmitted "over very low bit-rate channels." *Id.*, 4:52-61. Elaborating on the three files, Wecker notes an individual data file is "typically much smaller than the script files, the data can be updated quite frequently" so as to give a user web content without transmitting a new script file. *Id.* The script file, on the other hand, is only transmitted very infrequently. "Thus, the separation of the script and data allows the transmission of web content information in a very efficient manner over low bit rate channels." *Id.*

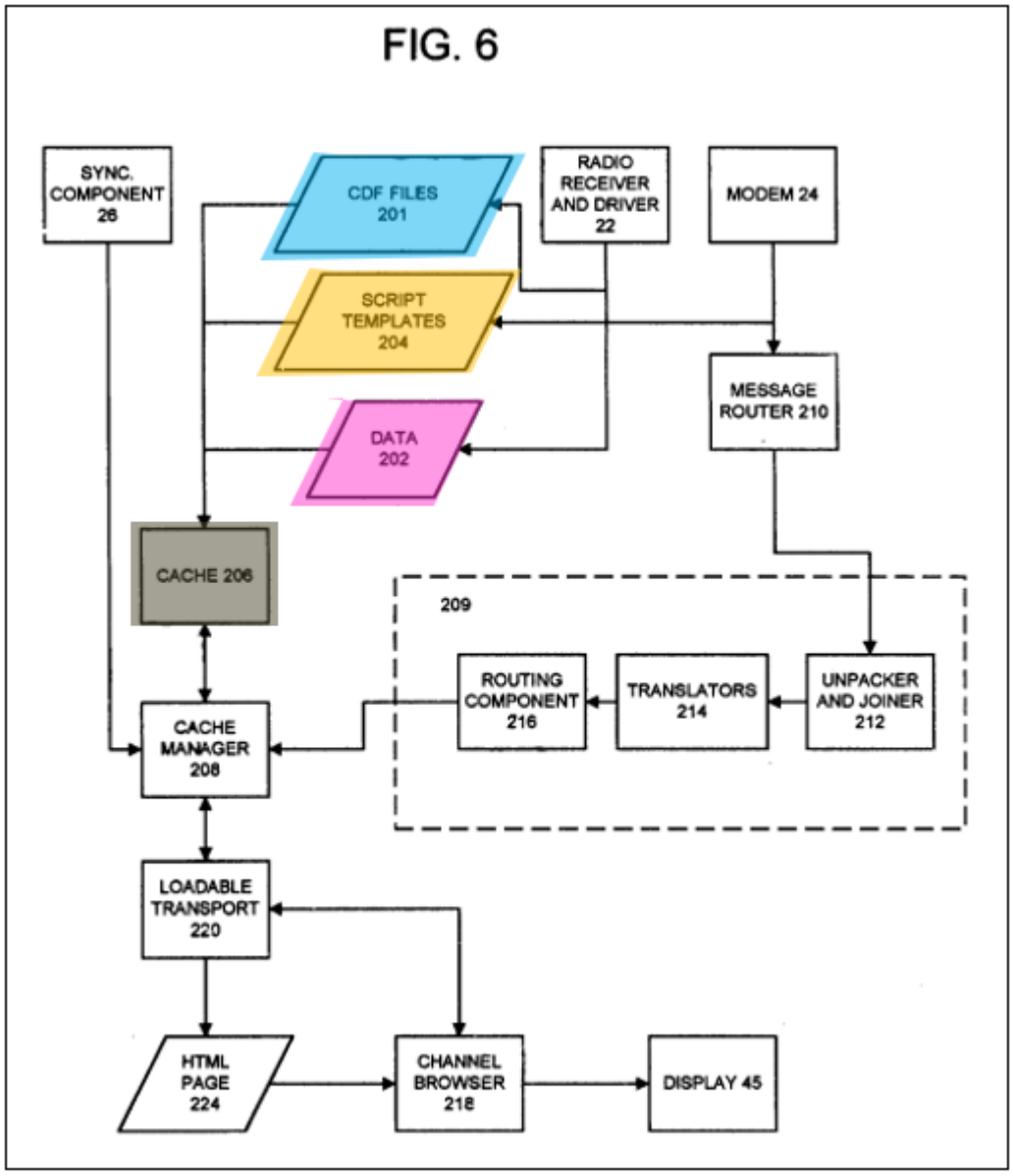
125. Finally, "the content structure file (implemented as a channel definition format (CDF) file augmented with additional tags) is read to ascertain which script in the script file is associated with data to be rendered. The data from the data file is retrieved and the associated script file is executed to render the data." *Id.*, Abstract; 2:15-18. Wecker recognizes that while this method "is more complex than conventional systems and methods where full HTML pages are transferred from a server to a client, this method is beneficial. This incremental approach makes it efficient and economical to update time-critical information, such as stock market values during peak network hours." *Id.*, 10:40-45.

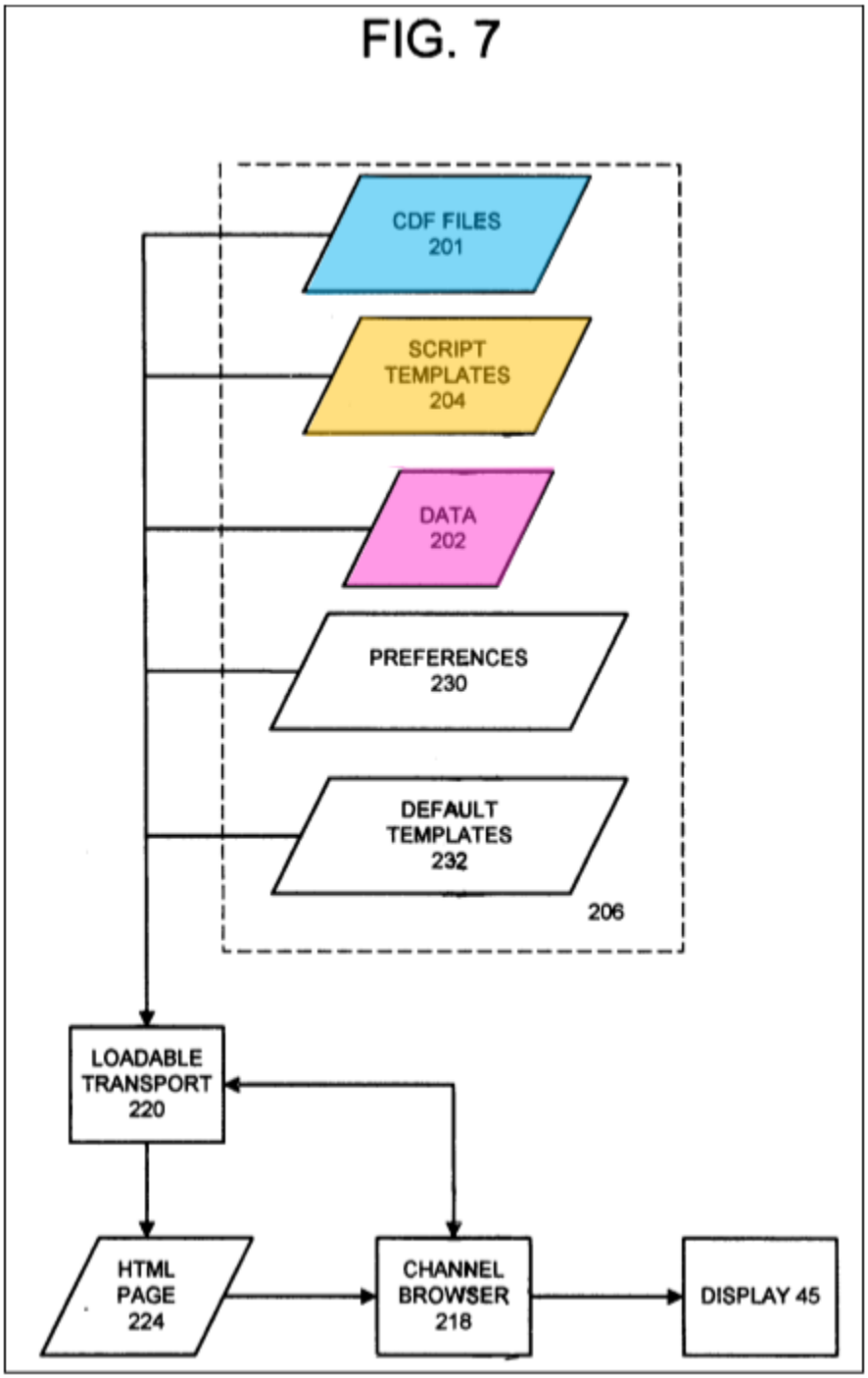
126. Additionally, Wecker discloses using a "mobile channel," which is a portion of content such as a "self-describing web site that contains all of the information necessary for efficient download of web content to a mobile device 18." *Id.*, 3:8-10. A mobile user can use a channel browser to choose a channel, that is, the content (*e.g.*, news, weather, business, sports, traffic) that the user wants to view. *Id.*, 9:24-26; Fig. 8; 1:45-57; 20:1-14.

127. Each mobile channel contains aforementioned components: (1) a content structure file, (2) a script files, and (2) data files. *Id.*, 3:10-16, 10:59-66. The channel is then viewed though a web browser specialized to the mobile device, referred to as a "channel browser". *Id.*, 9:45-48. Also, because the files are stored

on the mobile device, a user of a mobile device can view the web content off-line. *Id.*, 4:8-13; 9:20-26.

128. Figures 6 and 7 (which is a simplified version of Figure 6) of Wecker illustrate the operation of the mobile device for constructing an HTML page.





(SAMSUNG-1006, Figure 7)

129. In these flow charts, a mobile device receives CDF files 201 (blue), data files 202 (pink), and script templates 204 (orange), which are provided to cache memory 206 (brown). *Id.*, 8:34-53. The script templates 204 are executable code, preferably written in visual basic script (VBS). *Id.*, 3:19-20. "By examining the CDF file for the top-level channel 242, the loadable transport 220 determines which script file will be executed from the script templates 204 …" *Id.*, 20:23.

3. Beer Overview

130. United States Patent Nov. 5,793,368 ("Beer") ostensibly discloses "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, without comprising security over a network system." SAMSUNG-1007, abstract. In practice, Beer allowed users to overlay their preferred interface over various applications, such as a word processor. *Id.* at 3:15-35.

131. To achieve this, Beer teaches "The 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). Since the UIL user interface description is a text file that is parsed during interpretation, corruption of the file can be readily detected and handled in error routines. However, the UIL description may also be compiled to a binary format and/or compressed to reduce size." *Id.* at 3:35-55.

Importantly, Beer is not related to a stand-alone application or the retrieval of internet content. Instead, Beer is focused solely on the visual appearance of a pre-existing application.

4. There is No Motivation to Combine Brown and Wecker

132. There is no motivation to combine Brown and Wecker. The systems are too different with Brown being designed to implement a sophisticated composite desktop into the Windows Operating system for personal computers and Wecker aimed at displaying content on an impoverished display with limited data. These are fundamentally different systems requiring different types of code and different solutions. Thus, there is no reasonable expectation of success in combining Brown and Wecker and combining these references would not lead to predictable results. Because of the disparate nature of Brown and Wecker, a POSITA would understand that there is no predicting how the combined Brown-Wecker system would operate.

133. To determine whether a POSITA would be motivated to combine Wecker with Brown, I understand that one needs to consider the state of the art in the relevant time frame.

134. Wecker was filed in 1998 and, on its face, the ’545 patent has a priority date of April 1999. Between 1998 and April 2000, the Internet became widely used and adopted. At this time, there were a huge number of publications,

patents, and other articles by many different companies, universities, and individuals directed to many ways of delivering and displaying web content.

135. Moreover, unlike today's powerful mobile devices (having gigabytes of storage (RAM), 4G/5G speeds for accessing web content, and large screens), between 1999 and 2000, mobile devices, as discussed above, had limited capability to display web content, were in their infancy and had very limited capabilities compared to personal computers. *See e.g.*, SAMSUNG-1006, 1:58-59; 6:10-17). For example, the Palm VII, released in 1999, had 2 megabytes of RAM whereas personal computers typically ranged from 32 to 128 megabytes of RAM. *See* DODOTS-2018, Specifications of Personal Computers Over Time (available at) https://www.hp.com/us-en/shop/tech-takes/specifications-personal-computers-over-time.

136. Indeed, during this time, mobile devices/PDAs were first starting to have Internet access and displaying web content – the first PDA with wireless Internet was the Palm VII which was released in May 1999. DODOTS-2019, Palm VII Review (available at https://www.pencomputing.com/palm/Reviews /palm7_main.html.)

137. Device manufacturers built portable devices with such limited computing and communication resources for one overriding reason – portability. In contrast to personal computers, these devices could readily travel with their users. Consequently, use cases in which frequent access to small amounts of time-varying data, without requiring a user to continually request the data became important. Supporting this use case for delivering "push style content" is what Wecker addresses. SAMSUNG-1006, 1:55.

138. Additionally, PDAs of the time had limited communications bandwidth; limited computing and storage; and low-quality small displays to help be affordable and save power. This was another motivation for using nonstandard

specialized PDA centric rendering approaches, not standard HTML with font definition, possibly with images and animation. Frame definitions, such as that which the NIM/NIM template architecture includes, had much less value for a low-resolution small display. Such constraints do not speak to the Brown composite desktop at all.

139. In view of this background, a POSITA would not be motivated to combine Brown and Wecker, for numerous reasons.

140. First, although Brown and Wecker both discuss desktops, pertain to accessing web/Internet content, and mention the use of CDF, Brown and Wecker are directed to completely different objectives, so a POSITA would not look to Wecker to combine it with Brown.

141. The "desktops" referred to in Wecker and Brown do not have the same capabilities; they are not the same thing. The desktop referred to in Wecker is a type of computer – a "desktop computer" (as opposed to a laptop or mainframe computer) (*see e.g.*, SAMSUNG-1006, 3:58). The desktop being referred to in Brown, on the other hand, is the computer's desktop, *i.e.*, the graphical user interface to an operating system on a computer.

142. Second, Brown is directed at a new type of graphical user interface – a so-called composite desktop that could embed web content within a widely-used existing user interface format. And for this new type of desktop, Brown proposed a

new way to display web content and web pages. Brown discloses a way to embed web content within the computer's desktop itself so that content can be displayed directly on a computer's desktop integrated with the traditional computer desktop.

143. As discussed above, Brown discloses a way of building and displaying a web page containing content from multiple websites/sources and overlaying an icon layer over the web page on a computer's desktop. The elements 306, 308, and 310 (red, green, blue boxes discussed previously) appear on the desktop at the same time.

144. On the other hand, Wecker, discloses a new type of application (called a "channel browser") incorporating a specific way to present a traditional web page information (for display in that application's window on a computer screen) on devices with limited capabilities. Wecker has nothing to do with generating a web page integrated into a computer's desktop.

145. Wecker's ultimate focus is on bringing a web browser to a smaller device using a specific method of transmitting and displaying a webpage having "push style content" on a screen of a smaller PDA device using a content structure file (CDF file), script template, and data file Wecker's "web pages" for impoverished devices are merely pared down webpages for a PDA version of a web browser.. Wecker uses visual basic along with these building blocks to build a web page and display it within a browser application unique to the PDA. This is

wholly different from Brown which attempts to integrate a web page into a computer's desktop. Wecker stands in stark contrast to the '545 patent which sought to break free of the web browser and implement the NIM/NIM template architecture.

146. More to the point, as shown below from Figure 8 of Wecker, a user selects, for example, a specific "mobile channel" such as a web site for news, weather, sports, or traffic. SAMSUNG-1006, 1:44-47;19:60-20:19. These channels are part of a structure, even described as a hierarchy in the patent. Such an integrated approach to avail users of different sources was not a problem either Brown or the '545 patent were concerned about. Brown contemplated independent elements of a composite desktop and the '545 patent contemplated independent apps.

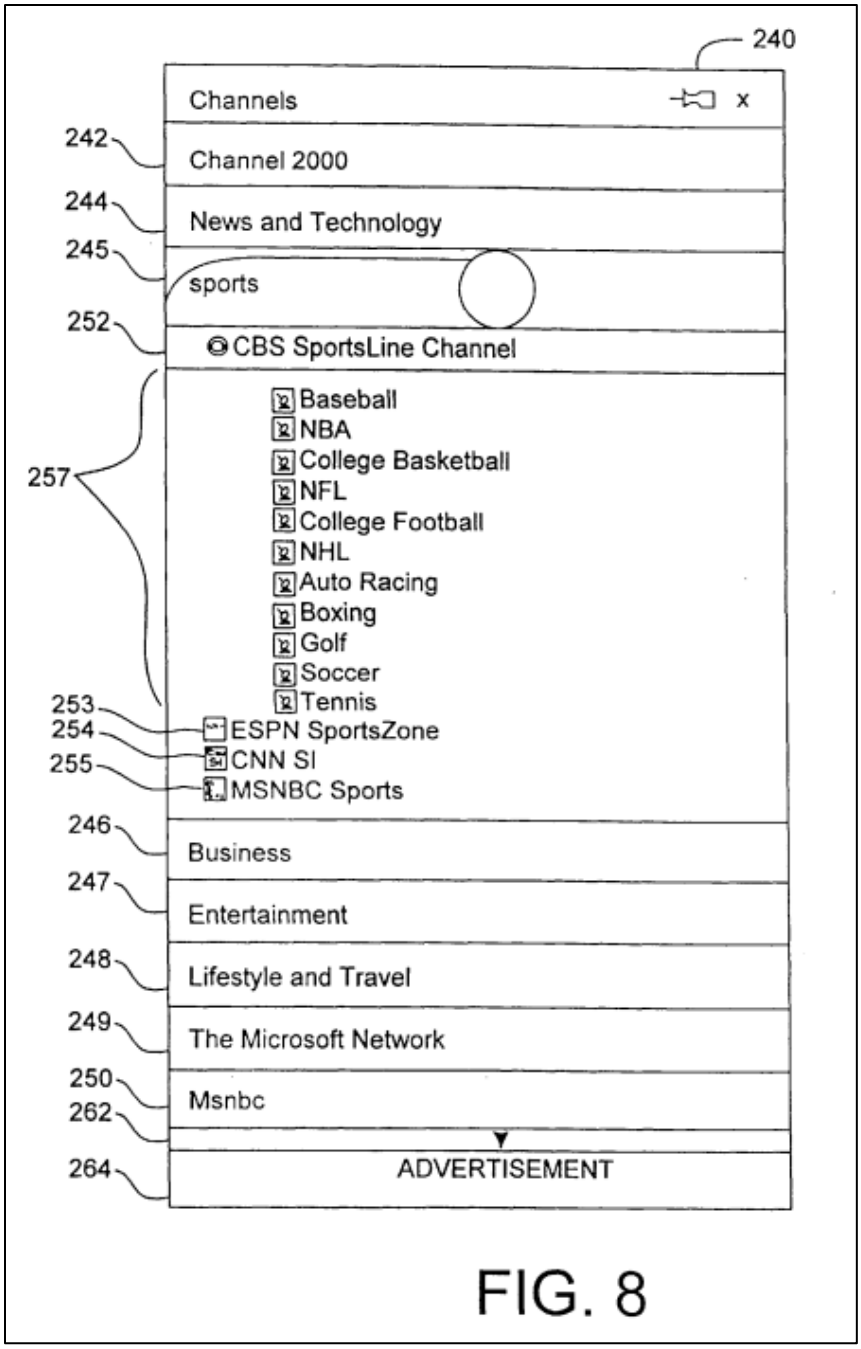


FIG. 8

(SAMSUNG-1006, Fig. 8)

147. Then, using the structural information in the content structure file (CDF file), the user device executes the script template to access the data to build a web page and displays that "web page" in the window of the "channel browser"

application on a screen. *See Id.*, 10:25-41; 20:20-45. So, in contrast to Brown, the "web page" of Wecker is not integrated with a computer's desktop, it is specified in a script file likely written for this particular channel in visual basic.

148. Second, as noted above, Wecker sought to address ways of providing web content for mobile devices/PDAs having limited capabilities. Thus, a POSITA would look to Wecker for solutions to providing web content on limited capability devices/mobile devices. Contrary to Petitioner's position, a POSITA, however, would not look to Wecker for solutions for displaying web content on Brown's computer desktop (the place to display or organize icons on a screen) because the constraints facing Wecker simply were not present in Brown. Put another way, a POSITA would not look to solutions for displaying web content on mobile devices, which was in its infancy in 1999/2000, to address issues related to displaying web content on personal computers – technology that was well developed at the time.

149. Third, Wecker concedes that its method is "more complex than conventional systems and methods where full HTML pages are transferred from a server to a client." SAMSUNG-1006, 10:41-45. Wecker proposed this more complex method to address the limited capabilities of mobile devices. On the other hand, personal computers of Brown had sufficient resources to effectively receive and render web content at the time. Thus, a POSITA would not be motivated to use

the more complex method in Wecker and apply it to Brown's personal computers when there was no reason to do so. This would be counterintuitive to a POSITA.

150. Moreover, Wecker pertains to mobile device operating systems, such as Windows CE, while Brown pertains to more capable computer operating systems that had access to great memory, computing, and communication resources such as Windows 95, Windows 98, Windows 2000. SAMSUNG-1005, 1:41-46; 6:26-30, 58-60. These operating systems were neither interchangeable nor coded in a similar manner.

151. Indeed, Wecker and the features of Windows CE that Wecker employed were developed rapidly to meet an immediate, specific market need for a mobile operating system. By contrast, Brown and the features of Windows 95/98/2000 were designed as incremental features in a long line of Windows operating system releases for personal computers. A POSITA would not be motivated to expect success in combining systems having such disparate compatibility requirements.

152. Thus, Dr. Schmidt's suggestion that one would have motivation to combine Brown and Wecker is wholly inapposite. First, Dr. Schmidt incorrectly asserts that "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."

SAMSUNG-1003, ¶35. But, while both reference CDFs, the fact is that the operating systems use the CDFs in entirely different matters, as discussed above.

153. Additionally, there is no merit to Dr. Schmidt's argument that both are combinable because both Brown and Wecker discuss desktops and that Brown refers to "hand-held devices." *Id.*, ¶¶37, 39. Again, Wecker discuss desktops in the context of syncing PDAs to a desktop. It does not discuss pushing content to the desktop or using the system and method disclosed therein to produce content.

154. Dr. Schmidt also notes that both Brown and Wecker discuss the Windows 95 operating system and are assigned to the Microsoft Corporation and suggest that one would be motivated to combine them because of this singular connection. *Id.*, ¶38. This point is disingenuous. It ignores the fact that Wecker is actually focused on a technical solution for Windows CE, which is a wholly different operating system than Windows for desktop PCs. "Though it shares many low-level programming calls with its true Windows brethren, Windows CE is a different operating system all together and it will not run Windows applications or use the same drivers." DODOTS-2020, CNET: Windows CE to become "Windows powered" (available at https://www.itprotoday.com/windows-78/cnet-windows-ce-become-windows-powered#close-modal.)

155. Beyond these points, Dr. Schmidt asserts that "a POSITA would have found it obvious to leverage Wecker's disclosure of a cache to store HTML style templates." SAMSUNG-1003, ¶35. I disagree.

156. As a threshold matter, Brown does not disclose the "style templates" referenced by Dr. Schmidt nor would a POSITA understand that Brown discloses style templates. Dr. Schmidt takes the concept of "style templates" from the Beer and Petty references[4] – one of which is a background references that are not relied on for invalidity. *Id.*, ¶46. Thus, Petitioner is using the unasserted combination of Brown, Beer/Petty, and Wecker.

157. Also, Brown makes no mention of a cache or whether the undisclosed "style templates" would be stored in cache. More importantly, Wecker's templates are executable code, contain no HTML, and are downloaded from a web site. The alleged templates of Brown, on the other hand, are fragments of an HTML document which is composed on a user's device. Using a cache to store HTML that would need to be discarded whenever the user made a change (or frequent change) to the interface to the operating system simply makes no sense.

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[4] SAMSUNG-1007, U.S. Patent No. 5,793,368 (Beer); SAMSUNG-1013, U.S. Patent No. 6,342,907 (Petty).

158. Further, Dr. Schmidt discusses how both Brown and Wecker obtain content from remote computers and Wecker describes that the "same types of applications" can run on both desktop computers and mobile devices. SAMSUNG-1003, ¶39 (citing SAMSUNG-1005, 4:16-21; SAMSUNG-1006, 3:34-38; 7:55-63; 1:39-44). Thus, according to Dr. Schmidt, Brown's desktop components "would have been compatible with certain features of the interfaces running on mobile devices, as contemplated by Wecker" and "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 26 desktop) to yield predictable results." SAMSUNG-1003, ¶¶39, 40. I disagree.

159. Wecker teaches that its approach to efficient transmission of web content to a device for display by a browser can be implemented on both desktop computers and mobile devices. However, nothing in Wecker suggests that this approach is possible or effective for implementing Brown's interface to the operating system. Further, the severely limited resources of mobile devices at the time meant that, in general, those devices could not run the "same types of applications" as personal computers. The use of the same type of applications on mobile devices and personal computers would not motivate a POSITA to combine Wecker and Brown.

160. In addition, Brown is directed to user interface technology that does not require content providers to alter their web pages on their "remote computers." "The invention allows a composite desktop to display images from any Web page …" SAMSUNG-1005, 3:38-39. Wecker, by contrast, requires the web sites which it can display to be structured in a specific way, having 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, 3:10-14. Wecker's technique (rendering content using templates/script files stored on a web page) is explicitly inapplicable to Brown's structure (composite desktop to display images from web pages).

161. Additionally, Dr. Schmidt asserts that "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." SAMSUNG-1003, ¶41 (citing SAMSUNG-1006, 4:53-62; 3:26-31; SAMSUNG-1015, Cover; 2:3-9). I disagree. These generic benefits would apply generally to any software system. But the way this would work across

different types of communication, processor, operating system and user interface capabilities is unaddressed.[5]

162. Finally, Dr. Schmidt asserts that because U.S. Patent 5,737,560 ("Yohanan") is cited on the face of Brown, this provides motivation to combine Brown with Wecker. *Id.,* ¶41. Dr. Schmidt cites Yohanan's discussion of increasing access to network locations without having to open a browser and type a URL address (citing SAMSUNG-1016, 2:18-23) and asserts that this "provides motivation to improve the usability of graphical displays that present internet content." *Id.* I disagree. A POSITA would look at the technology disclosed in Brown itself. Moreover, Brown provides a way to avoid using a browser to type in a URL by embedding web content in a computer's desktop interface. A POSITA

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[5] I note that Dr. Schmidt states that Wecker describes a co-pending application (Wecker 2) directed to delivering data over a low bit rate transmission channel and that in some prior applications a mobile device is used in conjunction with a desktop computer. SAMSUNG-1003, ¶41. First, Wecker 2 is an unasserted combination, and second, Wecker 2 suffers from the same deficiencies as Wecker, because the mobile device is a PDA connected to a computer, and uses an incompatible operating system capable of being combined with Brown.

would not look to Wecker which deals with using a browser to display a web page and has nothing to do with embedding content in a desktop.

5. The combination of Brown and Wecker does <u>not</u> render obvious "transmitting a request to the server over the network, the request requesting networked information monitor template."

163. All of the claims require "transmitting a request to the server over the network, the request requesting networked information monitor template."

164. Brown does not disclose these limitations. With regard to Brown, the Petition merely identifies Brown's disclosure of a web page having a shell user interface control 220 that can be selected in order to add a corresponding desktop component to the composite desktop. Petition, 56-58; SAMSUNG-1003, ¶¶92-95 (citing Fig. 2, SAMSUNG-1005, 7:3-7). I also note that Figure 4 in Brown and the corresponding disclosure (SAMSUNG-1005, 10:29-62) (which is not discussed in the Petition) indicates that Brown's API, discussed earlier, also fails to provide details on exactly what is transmitted to Brown's computer. That API includes no capability for accessing HTML documents (or fragments thereof). SAMSUNG-1005, 8:20-10:9.

165. There is no disclosure or suggestion in Brown, however, that, in response to a user request using the interface control 220, the alleged NIM templates are transmitted to Brown's computer. Brown provides no details whatsoever (and the Petitioner points to none) showing what would be returned

when the shell user interface control 220 was selected on the web page. Critically, Brown does not disclose that the alleged NIM template would be transmitted from the server housing the web page. A POSITA would understand from Brown that the alleged NIM template for the static desktop component 306 was generated from data (the image displayed within a web page on the client computer desktop) already resident on the client computer, and the alleged webpage desktop component 310 was generated from data typed by the user to the client computer. (SAMSUNG-1005, 10:46-57, 11:1-14). For the active desktop component 308, and for an alternative method of generating a static desktop component 306 Brown discloses that "the API described above" would be employed. (SAMSUNG-1005, 10:29-45, 10:57-62). As discussed, that API includes no capability for accessing HTML documents (or fragments thereof). Brown does not even disclose that what is being transmitted from the server (1) would be a data structure, (2) would define the characteristics of a NIM, (3) would define NIM frame characteristics, (4) would define NIM view characteristics, (5) would define NIM control characteristics, and (6) would not include any executable applications/compiled code. But these are all requirements of a NIM template under the construction of NIM template. If what is transmitted is missing any of these requirements, it is not a NIM template.

166. The Petition is completely silent on these details and, thus, there is no way to tell what is being transmitted from a website server in Brown. Other than through hindsight with the ’083 patent in mind, a POSITA would not understand that the alleged NIM template is being transmitted from a website server in response to a user requesting the alleged NIM.

167. Wecker does not resolve this deficiency. The Petition merely points to Wecker for the fact that Wecker periodically retrieves new and updated scripts, data, and CDF files. Petition, 43; SAMSUNG-1003, ¶92. The Petition also asserts that the subscription of Wecker would be implemented in a Brown-Wecker combination for the HTML instructions of Brown. Petition, 36, 54-56; SAMSUNG-1003, ¶94.

168. First, the Petition points to no evidence that Wecker’s scripts, data, and CDF files are transmitted based in response to a user request. Second, Wecker’s scripts, CDF files, script templates, and default templates are not NIM templates as construed nor has the Petitioner alleged that they are. Third, similar to Brown, Wecker provides no details regarding what would be contained in any scripts, data, or CDF files that are transmitted from a server and whether what is transmitted and stored has all of the requirements of a NIM template as that term is construed. A POSITA would understand that all of these requirements are not met by what is transmitted from a server and stored in either Brown or Wecker. Finally,

there is no evidence in Wecker or Brown that the subscription of Wecker would be implemented as Brown's HTML instructions that are the alleged NIM template. Both Brown and Wecker are both completely silent with regard to the details of what is transmitted/stored and a POSITA would not assume that all (or any) of the HTML instructions that are the alleged NIM template would be transmitted from a server and stored.

169. Therefore, the combination of Brown and Wecker does not render obvious "transmitting a request to the server over the network, the request requesting networked information monitor template."

6. The Combination of Brown and Beer, and/or Brown and Wecker in view of Beer do not render Claims 5, 11-12, and 16-21 of the '545 patent obvious

170. As a threshold matter, there would be no motivation to combine Beer with either Brown or Brown in combination with Wecker. The Petition argues that the reference could be combined because both related to the "accessing and viewing internet content." Petition, 51; SAMSUNG-1003, ¶123. This is false. Beer does not discuss or address the accessing of internet content. Rather, as discussed above, Beer is concerned with obtaining user interface templates, which is not the same as internet content such as news, weather, or sports scores. Thus, Petitioners initial reasons for combining are without merit.

171. The Petition also argues that Brown and Beer could be combined because the UIL of Beer is similar to HTML template of Brown. There is no merit to this suggestion. Beer's UIL is a custom language related to a user interface, while HTML is markup language used to build a webpage. Both of these are fundamentally different goals. As such, one would not consider combining one with the other.

172. Additionally, the Petition suggest that the reference could be combined because a POSITA would recognize that "same content may be displayed in multiple styles across operating systems." Petition, 53. This argument is disingenuous because it mischaracterizes Beer and Brown. First, Beer is solely concerned with changing the visual appearance of applications by rapidly downloading a user interface. And, Beer indicates that it was necessary because "the Windows 95 system from Microsoft Corporation differs in "look and feel" from the Macintosh System 7 operating system from Apple Corporation, both of which differ from the Motif GUI often used on UNIX systems," and "such differences present a problem for employers who may have widely disparate types of computer systems, due to the cost of training employees on how to use different user interfaces." DoDots-1007, 1:15-40.

173. On the other hand, Brown is concerned with the implementation of a computer desktop incorporating a webpage. Brown's passing mention that the

invention could be "practiced with other computer system configurations" does not eliminate the fact that it is tied to a computer desktop. In view of this, there would be no reason to implement Beer, because there were no issues arising from appearance created by different operative systems. Likewise, Wecker is solely related to the Windows CE operating system, so there would be no need or desire to implement the Beer solution on a Windows CE device. For these reasons, Beer would not render claims 5, 11-12, and 16-21 of the '545 patent obvious because there would be no reason or motivation to combine.

B. Shimada and Buchholz

1. Shimada Overview

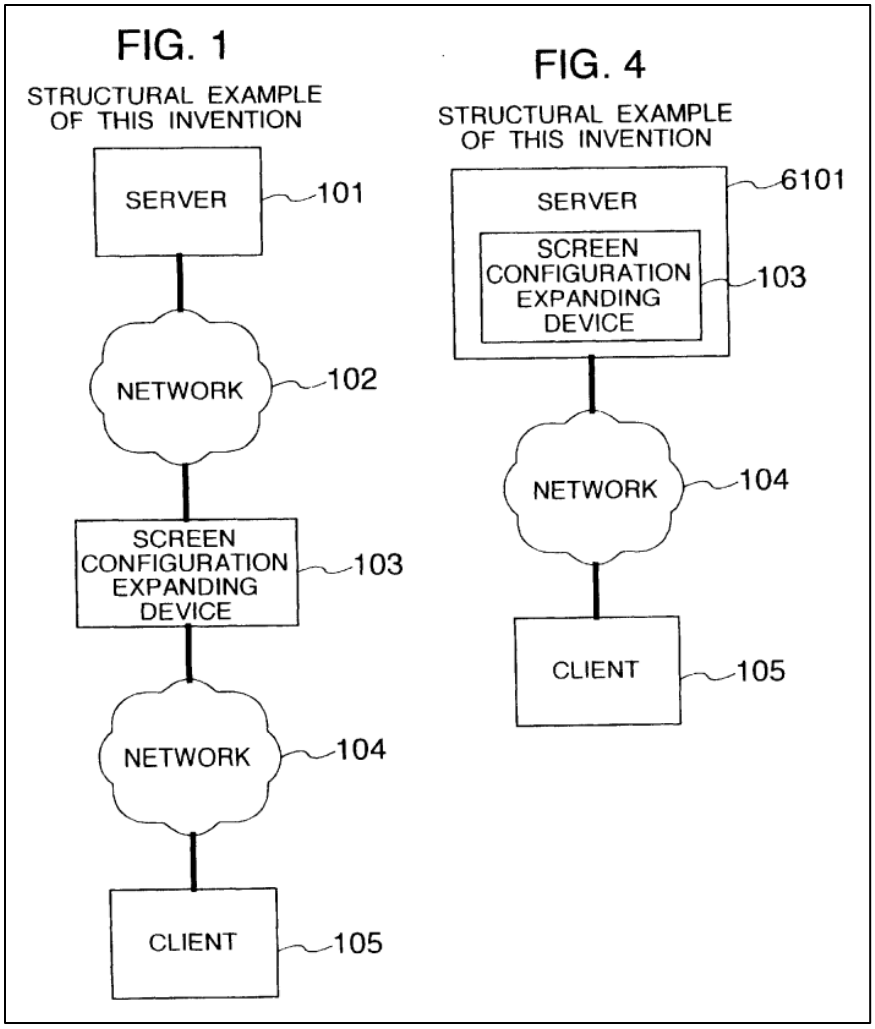
174. U.S. Patent No. 6,789,263B1 to Shimada ("Shimada") pertains to a method of displaying a web page. In particular, Shimada discloses an intermediary expanding device (located between a client device and server) that changes presentation of data sent to a client device. For purposes such as reducing transmission of data to a client device the expanding device reduces media resolution size or even creates a user interface to display it only at user request. By adding buttons that allow a normal, quick or no media, the expanding device can reduce communication to, or space on a client display. , Shimada's changing the media being sent, and adding user interface and control elements is in deep contrast to the '083 patent which describes ways in which a NIM/NIM template

architecture is not at the mercy of the browser. The approach of adding a system built user interface area that is not under the control of the content creator, which is just like a browser, teaches away from the goals of the ’545 patent.

175. In particular, Shimada focuses on reducing information by using a new type of data converting device (data relay apparatus) – referred to as a screen configuration expanding device – that is interposed between a client device (e.g., a computer) and a server. SAMSUNG-1008, Figs. 1-4; 2:15-32. Shimada notes that this is necessary because of the problem of transferring data in an “environment having a limited client media presentation capability or network transmission capacity.” *Id.*, 1:10-43. Shimada recognizes that “When 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, and the user can gain access to a greater amount of information within a predetermined time.” *Id.*, 1:44-48.

176. By using a data converting device, “the data access time can be reduced as a result of the reduction of the data transmission amount between the server and the client . . . .” *Id.*, 1:49-54.

177. Figures 1 and 4 illustrates how Shimada’s screen configuration expanding device 102 is located between a server 101 and a client 105.

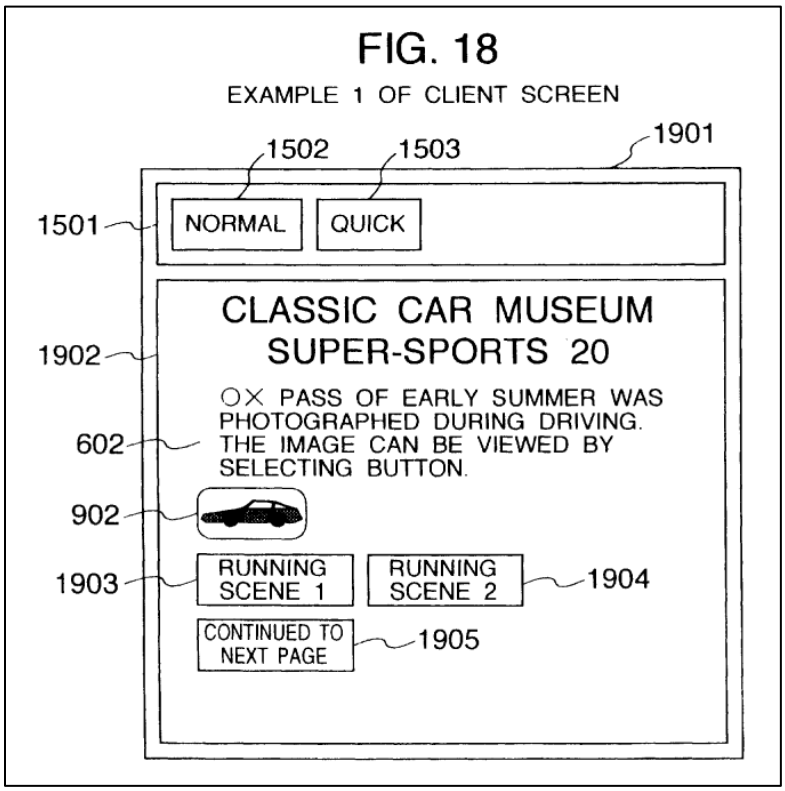


(SAMSUNG-1008, Figs. 1, 4)

178. Server 101 stores screen configuration data that is used for defining the screen configuration for displaying a web page on the screen of a client 105. *Id.*, 6:4-6. Figure 5 illustrates an example of screen configuration data 501. *Id.*, Fig.5; 6:14-62. Shimada explains generally how screen configuration data 501 is used by client 105 to display a web page on a screen such as that shown in Figure 6. *Id.*, Fig. 6; 6:63-7:28.

179. When a screen configuration expanding device 103 is being used, a screen configuration data file is transmitted from the server to the screen configuration expanding device 103. The screen configuration expanding device 103 modifies the screen configuration data before providing it to the client 105. *Id.*, 8:29-39. The screen configuration expanding device 103 is described in reference to Figures 2 and 3. *Id.*, 7:32-8:53.

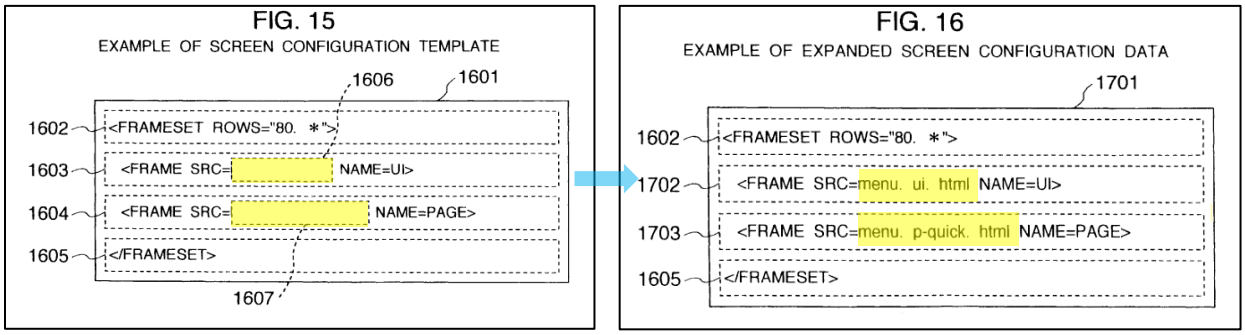
180. In particular, Shimada teaches that the screen configuration expanding device 103 contains templates which are used in an eleven-step process to provide screen configuration data to the client 105 so that the client can display the web page. *See Id.*, Figs. 11, 15; 8:56-9:3.



(SAMSUNG-1008, Fig. 18)

181. In this eleven-step process, the client first requests web content from a server. *Id.*, 9:26-28. The screen configuration expanding device 103, however, intercepts the request and this is the start of extensive back-and-forth communications with the client 105. Below I describe this process.

182. First, the client requests web content from a server: "First, the client 105 transmits a command [GET menu. html] to the server 101." *Id.*, 9:26-28. The screen configuration expanding device 103, however, intercepts the request and this is the start of extensive back-and-forth communications with the client 105.

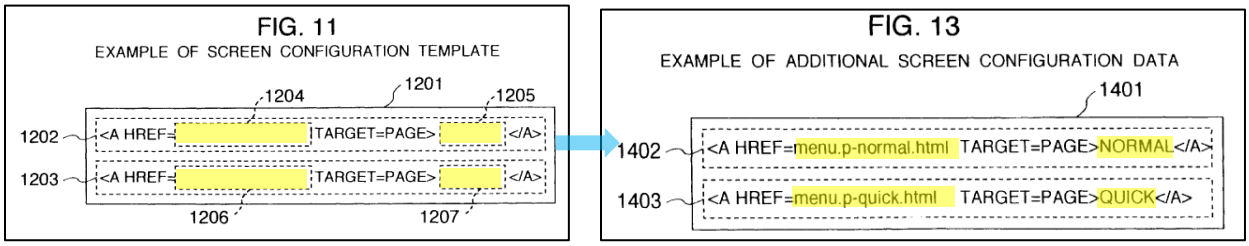


(SAMSUNG-1008, Figs. 15, 16 (annotated))

183. Second, as shown above, in response to the request from the client 105, the screen configuration expanding device 103 retrieves a template 1601 (Figure 15) and fills in its blanks 1606, 1607 (Figure 15, yellow) with file names ("menu.ui.html" and "menu.p-quick.html") (Figure 16, yellow). *Id.*, Figs. 34; 10:25-45.

184. Third, the data 1701 is provided to client 105, which analyzes its content. *Id.*, 10:56-57.

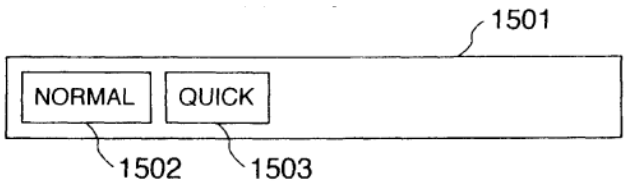
185. Fourth, the client 105 transmits a request for the file referenced in line 1702 of Figure 16 – "menu.ui.html": "the client 105 transmits the command [GET menu. ui. html] for requesting the transfer of [menu. ui. html] . . . ." *Id.*, 10:62-65.



(SAMSUNG-1008, Figs. 11, 13 (annotated))

186. Fifth, as shown above, in response to receiving the request for "menu.ui.html," the screen configuration expanding device 103 retrieves another template 1201 (Figure 11, above left) and fills in its blanks 1204, 1206 (Figure 11, yellow) with file names ("menu.p-normal.html" and "menu.p-quick.html") and fills in blanks 1205, 1207 with the words "NORMAL" and "QUICK" (which will be the names of buttons), producing expanded screen configuration data 1401 as shown in Figure 13. *Id.*, Fig. 35; 11:11.

187. Sixth, this data 1401 is provided to client 105.



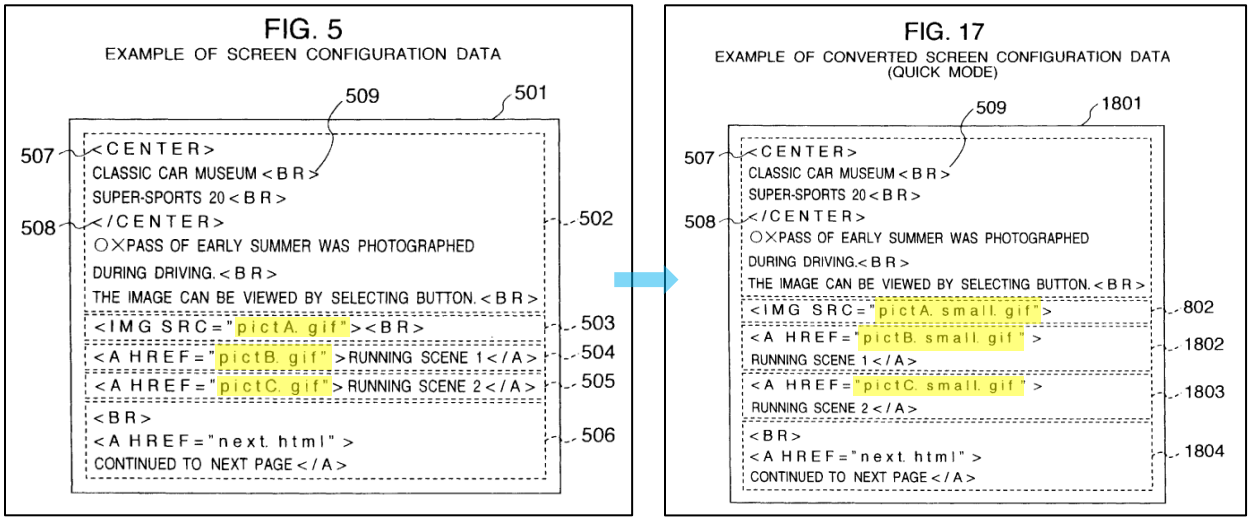
(Excerpt of SAMSUNG-1008, Fig. 14)

188. Figure 14 (above) illustrates the portion 1501 of the client screen

display of Figure 18 that will be generated by the client using data 1401. "NORMAL" and "QUICK" in the data 1401 become the names of buttons 1502, 1503.

189. Seventh, the client 105 transmits a request for the file referenced in line 1703 of Figure 16 – "menu.p-quick.html": "Next, the client 105 transmits the command [GET menu. p-quick. html] requesting the transfer of [menu. p-quick. html] . . . ." *Id.*, 11:33-36.

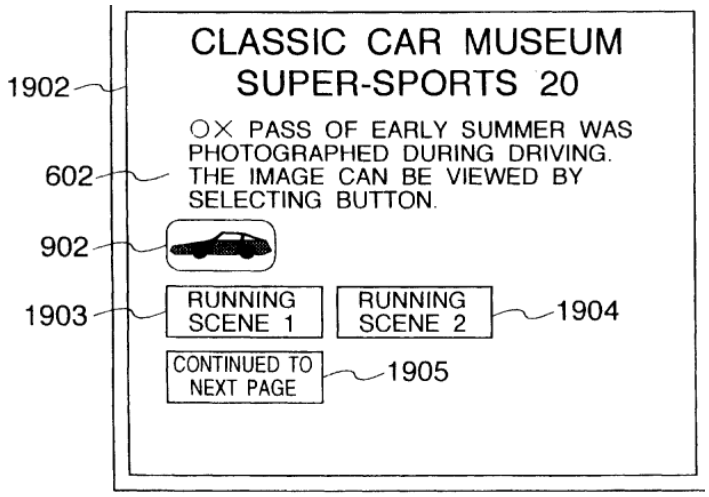
190. Eighth, in response to receiving the request for "menu.p-quick.html," the screen configuration expanding device 103 relays the request for the file "menu.p-quick.html" to the server 101. *Id.*, 11:37-47. The server 101 then transmits the screen configuration data 501 (Figure 5) to the screen configuration expanding device 103. *Id.*



(SAMSUNG-1008, Figs. 5, 17 (annotated))

191. Ninth, as shown above, the screen configuration expanding device

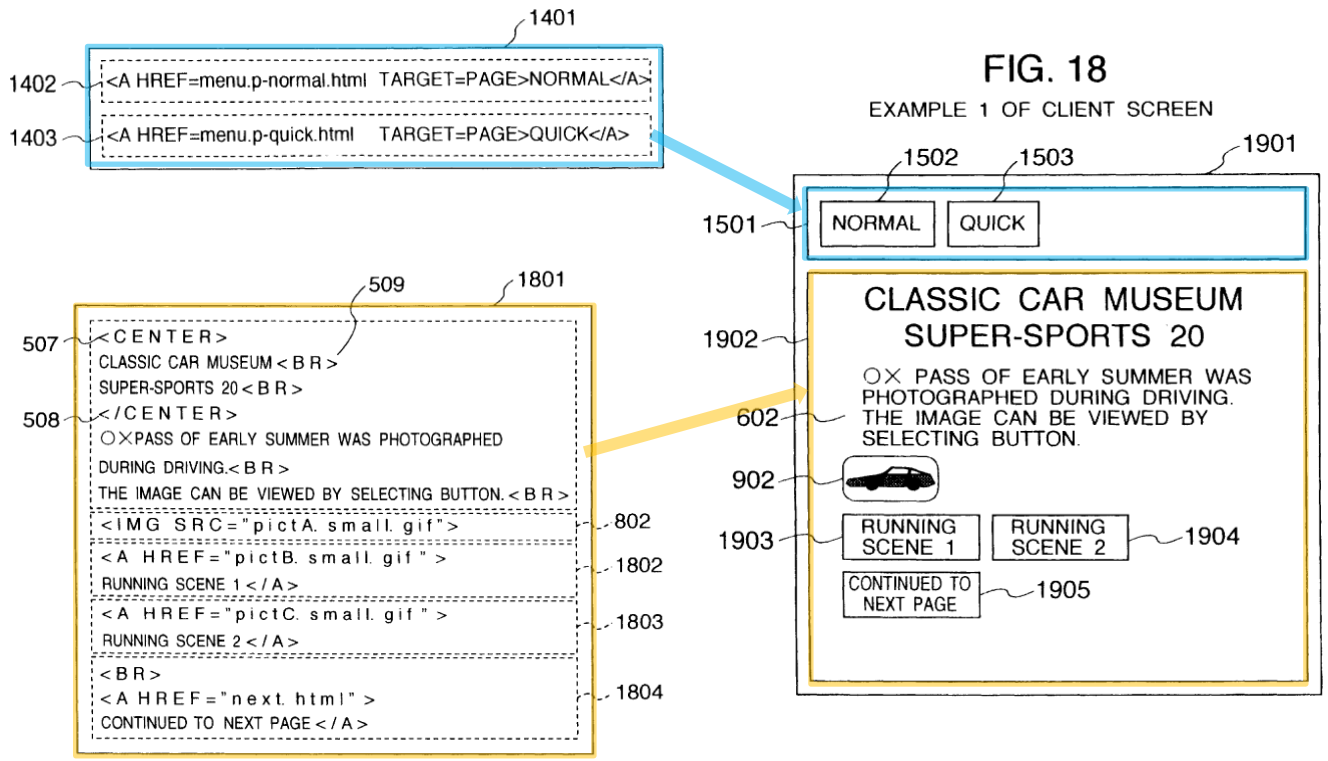
103 converts the data received from the server as screen configuration data 501 (Figure 5) into what is shown in screen configuration data 1801 (Figure 17). Specifically, screen configuration expanding device 103 converts "pictA.gif" to "pictA.small.gif"; converts "picB.gif" to "pictB.small.gif"; and converts "pictC.gif" to "pictC.small.gif." *Id.*, 11:49-12:14.



(Excerpt of SAMSUNG-1008, Fig. 18)

192. Tenth, the data 1801 (Figure 17) is provided to client 105. *Id.*, 12:15-16.

193. Finally, as shown below, now that the client 105 has the data 1401 (Figure 13) and 1801 (Figure 17), the client employs that data (in an undisclosed process) to display the content shown in Figure 18. *Id.*, 12:17-26. As shown in blue, client 105 uses data 1401 to generate screen portion 1501; as shown in orange, client 105 uses data 1801 to generate screen portion 1802.



194. The petition suggests that anchor tags 1402 and 1403 are NIMs. Petition, 76; SAMSUNG-1003, ¶158. A POSITA would understand that the teachings of Shimada are schematic, complex, and incomplete. Shimada does not speak to goals or solutions of the NIM/NIM template architecture disclosed in the ’545 patent. Moreover, Shimada’s screen configuration data are fragments of HTML created by filling in blanks in screen configuration templates. The screen configuration data are not a syntactically valid HTML document. Thus, a POSITA would know that no rendering software for standard HTML could render the display without additional processing to embed it within a valid HTML document. The client 105 must embed the HTML fragments within a syntactically valid HTML document, and then display it.

195. Hence, Shimada is disclosing a method to compose an HTML document that will change media, change formatting, add user interface elements of its own to display a web page that might be expanded as multiple screens on a small display.

2. Buchholz Overview

196. U.S. Patent No. 6,088,340 to Buchholz ("Buchholz") is a Motorola patent that relates to sending to mobile devices things such as stock quotes. Buchholz has nothing to do with the NIM/NIM template architecture. It sends data with reduced bandwidth for devices that have impoverished capability like a Pager 2000. Specifically, it relies on the idea of reducing data transmission requirements by leaving out formatting information and other details. Moreover Buchholz discusses customizing the display according to the users desire, but this is ultimately not the same as the '545 patent, which really focuses on allowing an app developer to create a user interface. These are two substantially different goals. Notably, Buchholz is a reference created by Motorola and when Motorola challenged the patent in its own IPR (which upheld patentability), Motorola did not assert the reference as relevant.

197. Buchholz discloses displaying of time-varying web content on a portable subscriber unit (e.g., a PDA) using a template stored on the portable subscriber unit. SAMSUNG-1009, Abstract, 1:7-10, 1:57-59. According to

Buchholz, in the wireless market, information services that provide users with up-to-date information on time-varying web content (e.g., stocks, sports, news, etc.) are becoming popular and that "[t]o increase the value of these services it is helpful to customize them for each individual subscriber." *Id.* 1:13-19.

198. Buchholz discusses the use of "digital selective call signaling protocols" and indicates that these protocols are designed for limited messaging with characters. They are not appropriate for the types of media such as images and audio discussed in Shimada.

199. Buchholz states that it is not desirable to customize such information services "if it requires a large increase in the amount of traffic traveling over the air." *Id.*

200. Buchholz also notes that existing wireless communications systems do not allow the end user to configure or customize the display, and that using wireline techniques for Internet access in wireless systems has encountered problems (such as excessive latency). *Id.*, 1:20-37. Specifically, one technique that had been used to address these problems caused "data download to be larger than necessary" because web pages (which are HTML documents) contain both data and formatting information, and the formatting information is unnecessary when the display format is fixed. *Id.*, 1:38-47.

201. Buchholz's method seeks to "reduce the size of data downloads" and "allow customization [of] the display of the data according to the desires of the end-user." *Id.*, 1:48-53; 6:63-67.

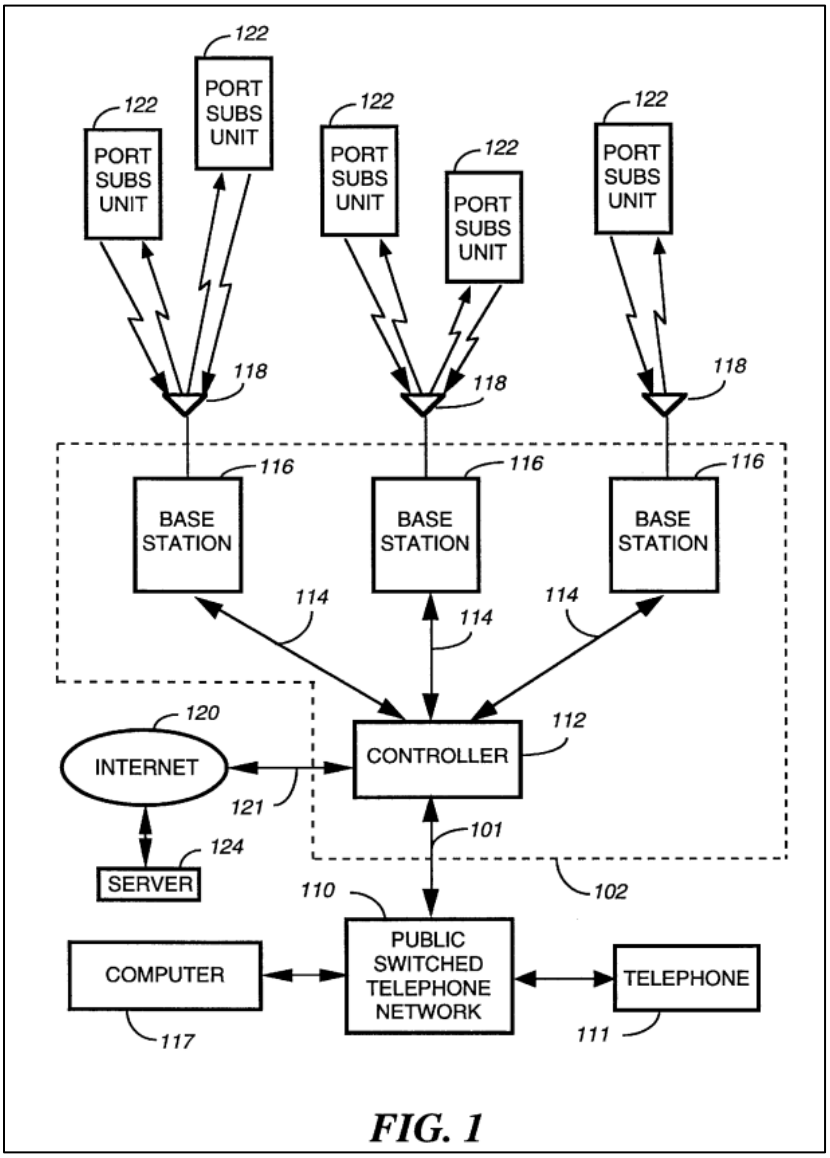


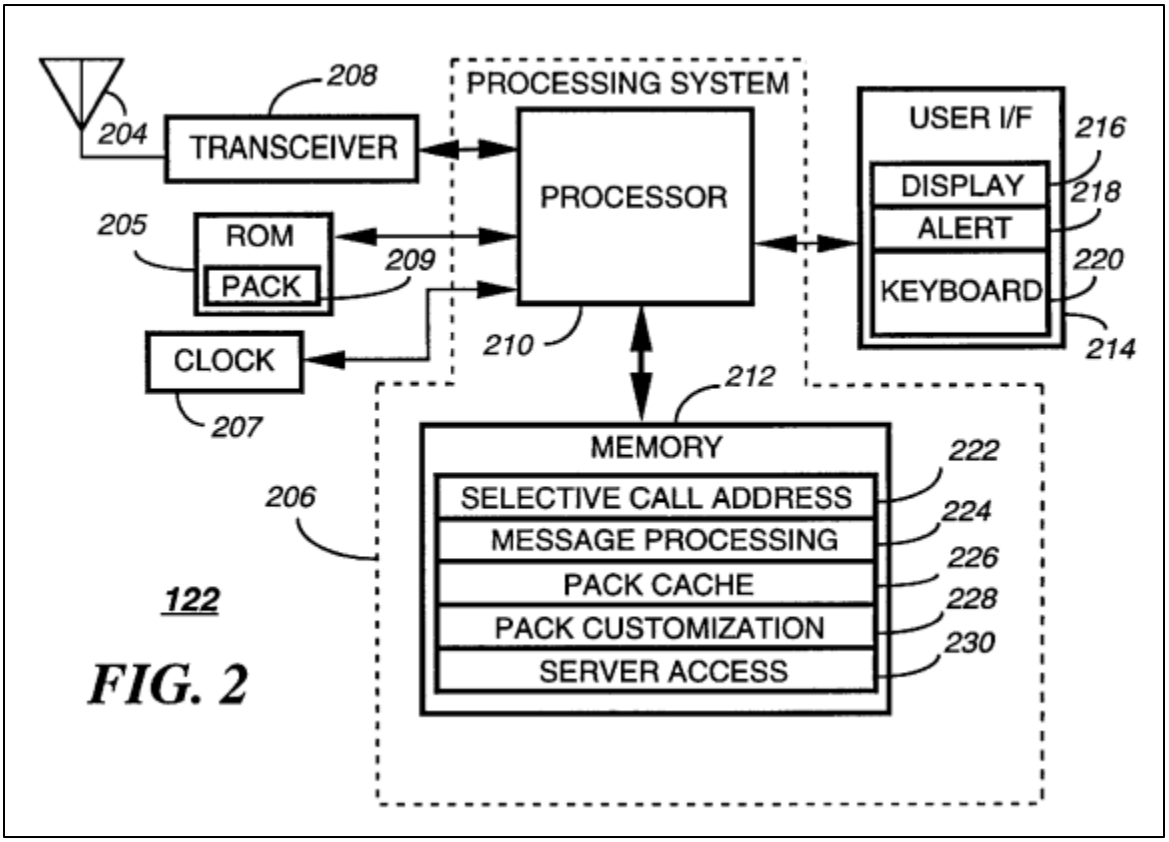
FIG. 1

(SAMSUNG-1009, Fig. 1)

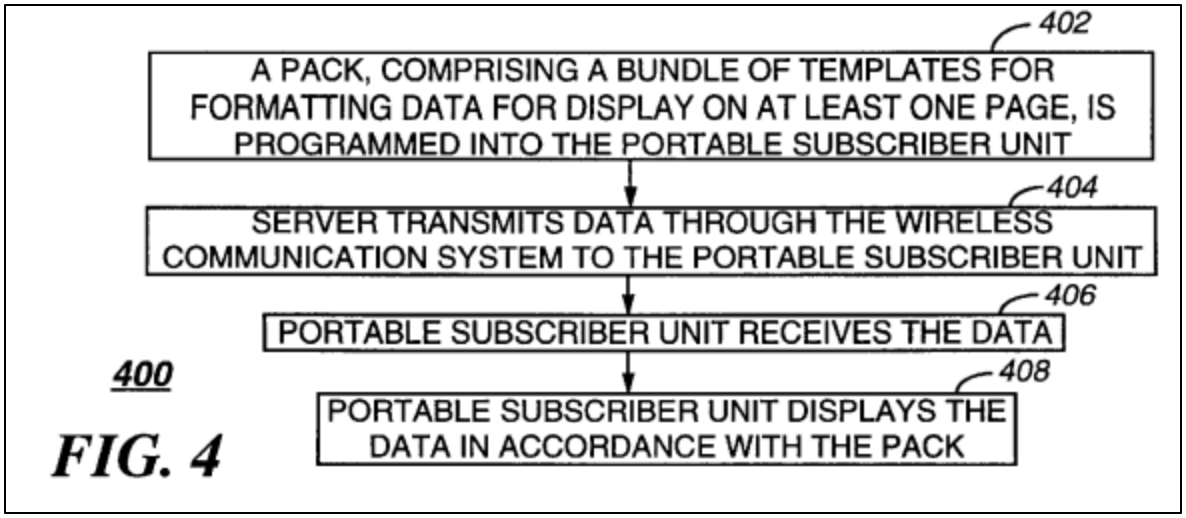
202. Buchholz's Figure 1 above illustrates a wireless communication architecture having portable subscriber units 122 that can be connected wirelessly

to base stations 116. The portable subscriber units 122 can access web content from server 124 over the Internet 120. *Id.*, Fig. 1.

203. Buchholz discloses using (1) multiple templates (referred to as a ("pack")), which is fixed, time-invariant data used for formatting, and (2) template data (time-varying data – stocks, sports, news information) in order to display web content on a screen of the portable subscriber unit 122. *Id.*, Abstract; 1:57-67; 5:16-22.



(SAMSUNG-1009, Fig. 2)



(SAMSUNG-1009, Fig. 4)

204. In particular, as shown in Figures 2 and 4 (above), a pack of templates is programmed into a portable subscriber unit 122 and stored in its pack cache 226 (customized packs, mentioned below, are also stored in memory). *Id.; see also Id.,* Fig. 8; 5:1-6. Storing the pack in portable subscriber unit 122 reduced latency for the template date. *Id.*, 5:37-41.

205. Template data is transmitted from server 124 to the portable subscriber unit 122 separately from the template pack. *Id.*, Abstract; Figs. 1, 3; 1:57-67; 5:29-35. Upon receiving the template data, portable subscriber unit 122 uses the templates to format the template data for display on the unit 122. *Id.*; *see also Id.*, 2:11-30; 4:50-64. Buchholz allows for customization of the templates. *Id.*, Figs. 5, 6; 4:26-31, 50-64; 5:47-67; 6:15-24.

206. "A template can, for example, define where, and in what size and color, the corresponding template data is to be displayed." *Id.*, 5:11-16.

207. The template is created using a template mark-up language "similar" to HTML. *Id.*, 5:9-11. But Buchholz emphasizes that it is different because of HTML's inherent problem because it includes the data to be displayed with the formatting instructions, thereby disadvantageously causing data downloads to be larger than necessary whenever the data uses a fixed display format." In other words, HTML did not solve Buchholz design problem because it didn't separate formatting from data adequately for Buchholz to reduce transmission as their patent is written to do.

208. As a result, a POSITA would view Buchholz as teaching away from using HTML type languages.

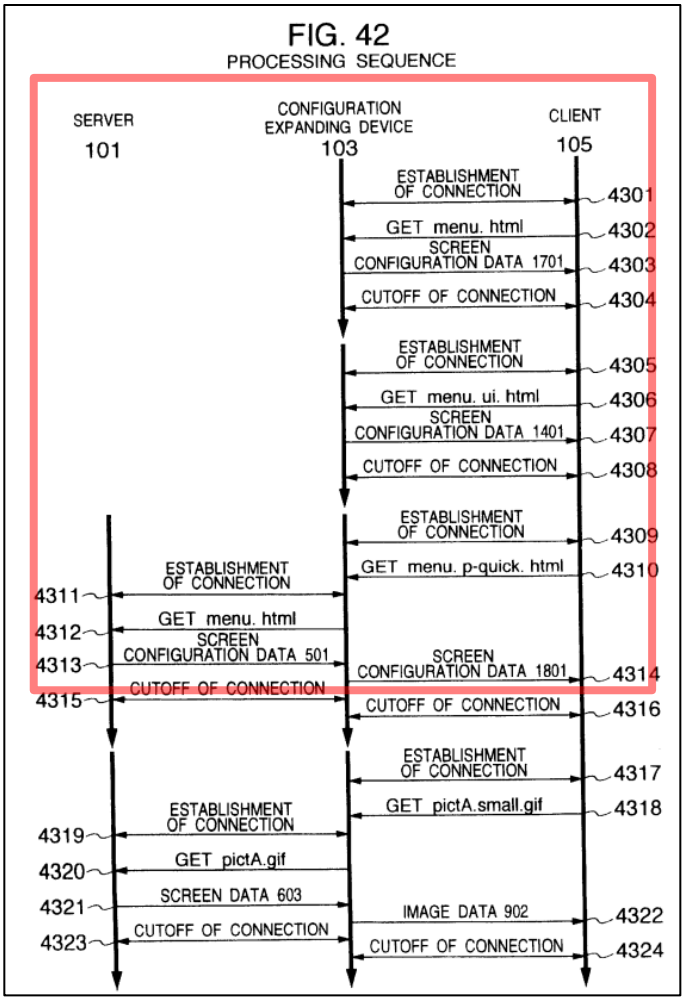
209. Additionally, Buchholz notes that it is meant to be implemented on the subscriber units described that are "Preferably similar to PageWriter 2000 data messaging units..." *Id.*, 3:9-14. PageWriter 2000 does not have the processing or presentation capability to present the kinds of interfaces Shimada or the '545 patent describes. The PageWriter or "other similar equipment" could present a few lines of content not audio or video or complex user interfaces of Shimada.

210. In sum, a POSITA would understand that Buchholz uses an undisclosed customized mark-up language, and it does not disclose, nor does the Petition argue, that Buchholz' templates are used as a data structure with content.

3. There is no motivation to combine Shimada and Buchholz

211. A POSITA would not be motivated to combine Shimada and Buchholz, for numerous reasons. First, Shimada and Buchholz are directed to completely different technologies and objectives. As I discussed in Section VII.B.2 above, between 1998 and April 2000, the Internet was widely used and adopted. At this time, there were a huge number of publications, patents, and other articles by many different companies, universities, and individuals directed to all sorts of ways of delivering and displaying web content on user devices. A POSITA would not look at the vast number of references that were available at this time that proposed various methods for displaying web content and reducing amounts of data sent to a client and look to Buchholz to combine it with Shimada.

212. Shimada discloses methods of reducing displayed web content on a screen of a client and adding user experience elements to a content provider's content to allow a user to control whether they wanted to see particular media. In particular, Shimada uses a screen configuration expanding device. The screen configuration expanding device modifies content received from the server and provides it to the client. Shimada discloses using specific types of templates that are stored only on the screen configuration expanding device, not the client device.



(SAMSUNG-1008, Fig. 42 (annotated))

213. Moreover, as shown in Fig. 42 above (and discussed in Section VII.B.1), unlike Buchholz, Shimada does not run offline after a template is downloaded but instead discloses numerous back-and-forth communications that must occur during an eleven-step process before content is passed from a server through an intermediary before it is finally seen on a client device. *See* SAMSUNG-1008, Fig. 44. Finally, Shimada only discloses wired connections shown in Figure 1 of Shimada, and there would be limited applicability to a

wireless environment. Shimada does not disclose caching data in the expanding device 103 or the client 105. Thus, the system would take the burden of retransmitting data instead of storing it during the complicated eleven-step process. This underscores the fact that Shimada is adding controls for reducing the interface space required over presenting HTML, not reducing bandwidth required to send the data as Buchholz is directed to. In short, Shimada reduces display space with compact images and buttons that allow transmission when users want it in a wired environment.

214. In sum, Shimada seeks to solve issues related to the display of internet content by using a screen configuration expanding device as a filter to process content based on a users desires, rather than creating a robust ecosystem like in the ’083 patent for app developers to create fully customizable frames that can be downloaded by users to consumer and digest internet content.

215. On the other hand, Buchholz is specifically directed to creating a language to separate data and content to reduce data transmission of web content. Buchholz’s method relies on a particular hardware and software configuration that is significantly different than Shimada. Specifically, Buchholz’s controller is preferably “a combination of the Wireless Messaging Gateway (WMG) administrator! paging terminal and the RF-Conductor!” SAMSUNG-1009, 3:4-10. Such a controller was not designed for and would not be appropriate or even work

for sending the kinds of loads that the NIM/NIM template architecture require. It is certainly would not allow for transmission of the same kind of data needed by Shimada to allow the disclosed intermediary expanding device to parse and evaluate the content of communication to decide appropriate user interface elements it will add to the communication. Indeed, Buchholz does not have any expanding device interposed between a server and client (portable subscriber unit) that modifies data to affect how a client displays data. Unlike Shimada, which does not store templates on a client (it stores templates on a screen configuration expanding device), Buchholz discloses storing templates on the clients portable subscriber units.

216. Further, whereas Shimada describes very specific formats for templates, Buchholz provides minimal details regarding its templates. Nevertheless, a POSITA understands that Buchholz templates are not the same as Shimada's templates or used in the same way. For example, Shimada's templates are filled in by the screen configuration expanding device to create screen configuration data (fragments of HTML). The screen configuration data, not templates, are sent to the client.

217. Further, because Buchholz is dealing with displaying time-varying content on a portable subscriber unit, Buchholz's templates allow for end user customization using the client or server, whereas Shimada does allow templates to

be customize. Indeed, there is no way disclosed in Shimada for an end user to modify templates in the screen configuration expanding device, server, or in or using the client.

218. Moreover, unlike Shimada where the client pulls data (sends requests to screen configuration expanding device for data) for generating a display, a POSITA would understand that the server of Buchholz pushes data such as up-to-date information on, for example, stocks, sports, news, etc.

219. Unlike Shimada, Buchholz does not require numerous back-and-forth communications in order for the client to be provided with all the data it needs to have a working HTML document and display web content. In Buchholz, a POSITA would understand that the client gets templates from a server and periodically receives data from a server. A POSITA would understand that the use of an intermediary device would burden Buchholz's limited communication system. In fact, Shimada is focused on a different problem than Buchholz: reducing communication bandwidth. Indeed, altering the user experience presentation is different than reducing a communication bandwidth. Thus, one would not look at the two references for the same solution.

220. Further, Shimada uses HTML whereas Buchholz specifically asserts it does not use HTML but, rather, something "similar" to HTML. A POSITA

understands this would not be compatible with HTML, which requires a specific syntax to be used to render a document.

221. Given the above as well as the fact that Buchholz does not specify the mark-up language used to display a document, a POSITA would not have a reasonable expectation of success in combining Shimada and Buchholz or expect predictable results. Combining these two references would be an unmotivated and unpredictable mash-up of disparate technology.

222. Moreover, even if Buchholz' templates were written in HTML (which they are not), a POSITA would understand that merely using the same mark-up language would not indicate that the combination of Shimada and Buchholz would have a reasonable chance of success or would yield predictable results. This is like saying that just because the software for a smart TV and a microwave are written in Java, one would want to combine them, expect success in doing so, and there would be a predictable result in doing so.

223. For the foregoing reasons, although both Shimada and Buchholz pertain to accessing web content and mention reducing data transferred to a client device, a POSITA would not look to Buchholz to address any deficiencies of Shimada, supplement Shimada's disclosures, or combine with Shimada (or vice versa).

4. Petitioner's assertions regarding motivation to combine are flawed.

224. As a basis for his conclusion regarding motivation to combine, Dr. Schmidt notes that "both references are directed to 'accessing and viewing internet content' and are further specifically directed to the desire to 'reducing data transfer times.'" Petition, 66-67 SAMSUNG-1003, ¶143 (citing SAMSUNG-1008, Abstract, 1:34-55; SAMSUNG-1009, Abstract, 1:49-54). These similarities are merely superficial characterizations of the two patents. Given the significant differences between the technology and objectives of Shimada and Buchholz discussed above, a POSITA would not find its obvious to consider the Buchholz disclosure in the context of Shimada (or vice versa) and, thus, there would be no motivation to combine Shimada and Buchholz.

225. Nevertheless, Dr. Schmidt suggests that "a POSITA would have recognized that the 'screen configuration data' of Shimada and the 'templates' of Buchholz are both implemented in HTML." SAMSUNG-1003, ¶146 (citing SAMSUNG-1008, 6:59-62; SAMSUNG-1009, 5:9-13). This is false. While Shimada's "screen configuration data" may written in the format and syntax of

HTML[6] ,[7,] Buchholz specifically states it is not using HTML but, rather, using something "similar" to HTML: "The template is created by using a template mark-up language, similar to the Hypertext Mark-up Language (HTML) used in creating World Wide Web pages." SAMSUNG-1009, 5:9-11. Thus, a POSITA would understand that Buchholz is using a custom variant of HTML for a mobile device, not HTML. Therefore, any suggestions that one would have a reasonable expectation of combining the two references because of passing mentions about HTML (SAMSUNG-1003, ¶144-145) is based on a false premise and, thus, is incorrect.

226. Dr. Schmidt asserts that "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'" and be "complementary, and each would enhance the abilities of the other." SAMSUNG-1003, ¶147 (citing SAMSUNG-1008, 1:40-44 and SAMSUNG-1009, 1:26-37).

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[6] *See e.g.*, SAMSUNG-1008, Fig. 5, 8, 11, 13, 15-17, 20, 38, 6:14-62 (describing and showing HTML format and syntax.

[7] Shimada's "screen configuration data" is not a valid HTML document, however. It must be embedded within more HTML to be able to be rendered on the client device.

227. Dr. Schmidt fails to provide any discussion or basis explaining how the distinct designs of Shimada and Buchholz for reducing download times would be complementary rather than contradictory. A POSITA would understand that Shimada and Buchholz are configured differently, they are not compatible, and would require significant experimentation to determine if they complement each other.

228. As discussed above in detail, Shimada describes using a screen configuration expanding device to in an eleven-step process to reduce the size of entire files transmitted from a server to a client device. Buchholz, on the other hand, describes requiring the information stored on the server to be reconfigured into two components – (1) templates and (2) template data (time-varying data) – and caching the templates on the wireless device. Dr. Schmidt has not explained if or how these approaches would work together. Without an expectation that the designs would complement one another, a POSITA would not be motivated to combine them.

229. Dr. Schmidt provides no discussion or analysis of why combining Shimada and Buchholz would improve the ability of either system to mitigate long download times, improve data transfer times, increase usability, reduce client-side storage requirements, and/or other relevant business or technical reasons. Dr. Schmidt does not offer any rationale for a POSITA to combine these references.

SAMSUNG-1003, ¶144-147. Dr. Schmidt has not provided any discussion or analysis to support these statements.

230. Finally, these generic benefits would apply generally to any computer system. There is nothing special about Shimada and Buchholz that would cause a POSITA to look specifically at these benefits and be motivated to combine Shimada and Buchholz. Additionally, there is nothing to suggest that combining these would lead to the creation of a NIM/NIM Template architecture.

231. In short, none of these benefits have anything to do with whether a POSITA would look to Buchholz to combine with Shimada given their specific configurations and methods. Thus, a POSITA reading Shimada would not then look to references like Buchholz (or vice versa). A POSITA would not look to Buchholz, which deals with customizing the display of time-varying content with Shimada, which requires an intermediary acting as a filter for internet content.

5. The combination of Shimada and Buchholz does not render obvious any of the challenged claims.

232. Based on the disparate nature of Shimada and Buchholz, it is clear that the Petition uses knowledge of the ’545 patent as a roadmap to allege obviousness based on hindsight.

233. Nevertheless, as discussed below, even if combined, both Shimada and Buchholz are missing numerous claim elements. Indeed, the logic that the

Petition uses when combining Shimada and Buchholz is wrong and makes no sense to a POSITA.

234. Accordingly, Shimada and Buchholz cannot render obvious any of the challenged claims of the ’545 patent even if they were combined.

a. The Petition fails to identify a NIM template

235. To begin with, I note that the Petitioner and Dr. Schmidt appear to have a fundamental misunderstanding of NIMs and NIM templates. The Petitioner and Dr. Schmidt assert that Shimada’s screen configuration data is a NIM template. Petition, 68-69, 75; SAMSUNG-1003, ¶¶148-149. But they explicitly contradict this by stating that “multiple features within Shimada’s screen configuration data can also correspond to the NIMs as claimed.” Petition, 79; SAMSUNG-1003, ¶161. The two positions are contradictory. The claimed NIM is a fully configurable frame; the claimed NIM template is a data structure used to instantiate the NIM.

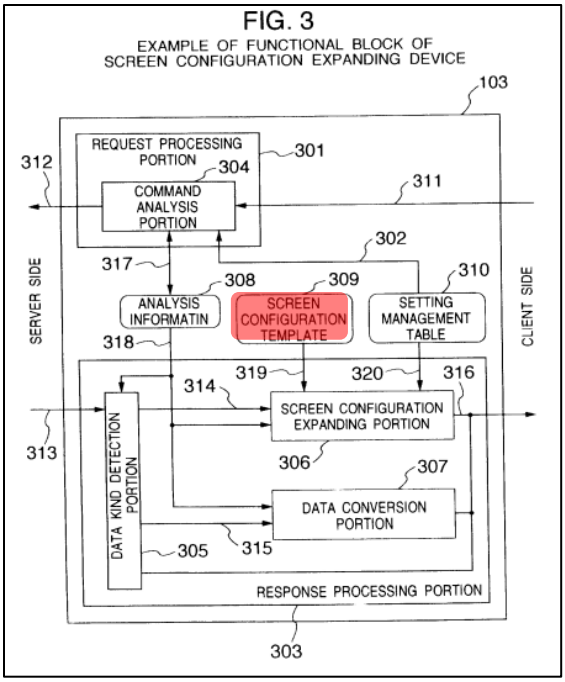
236. The Petitioner and Dr. Schmidt also state that a “POSITA would have understood or found obvious that the ‘screens’ of Shimada correspond to the claimed ‘networked information monitors’ in view of their similar features” and a “POSITA would also have recognized or found obvious that the ‘screen configuration data’ that defines Shimada’s screens and anchor tags is a “networked information monitor template” because screen configuration data has similar

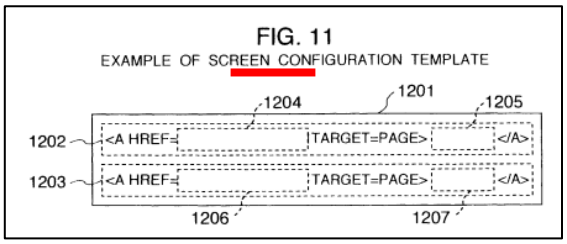
features." Petition, 76, 79; SAMSUNG-1003, ¶¶157, 163. Petitioner and Dr. Schmidt fail to identify what these similar features may be. Moreover, this argument relies on hindsight because it requires knowledge about NIM template to suggest obviousness, rather than arriving at a NIM template based on the prior art.

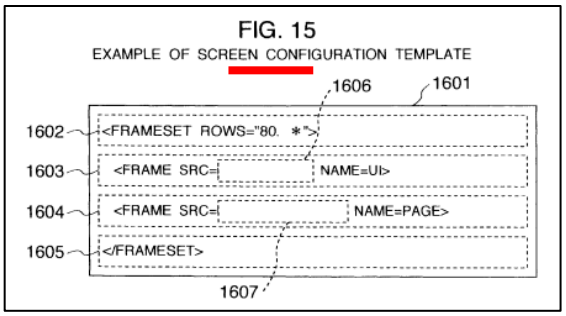
i. Shimada's screen configuration data is not the same as the "templates" of Buchholz

237. The Petition asserts, with no relevant supporting analysis, that Buchholz discloses NIM templates. Petition, 68-69. Buchholz, however, is completely silent regarding any details of its templates. Notably, the Petition provides no analysis whatsoever to suggest that Buchholz's "template" can be a NIM template as that term is construed. In particular, the Petition identifies nothing in Buchholz that indicates that its templates are a "data structure," define "frame, view, and control characteristics" and "excludes executable applications/compiled code." There are also no details regarding how its "templates" are configured, how web content is put together, or how web content appears on a user device Additionally, the Petition simply waves its hands regarding the details of Buchholz's templates. *Id.*

238. Specifically, the Petition takes Buchholz – which provides no details regarding how its "templates" are configured, how web content is put together, or how web content appears on a user device – and uses Shimada to attempt to supplement all of the missing information. A POSITA would not do so.







(SAMSUNG-1008, Figs. 3, 11, 15 (annotated))

239. As shown in Figures 3, 11, and 15 above, Shimada specifically identifies "templates" as screen configuration template 309 and screen configuration templates 1201 (Figure 11), 1601 (Figure 15). as shown in Figure 3, Shimada's templates are stored in (and only exist in) the screen configuration expanding device 103. SAMSUNG-1008, 8:56-57. The templates are not stored in the client as disclosed in Buchholz. Additionally, Shimada does not disclose these templates as generating multiple anchor tags. Because Shimada's templates are not stored in the client like Buchholz, the Petition does not rely on what Shimada itself identifies as templates. Instead, the Petition asserts that the templates of Shimada are something else – the "screen configuration data."

FIG. 16

EXAMPLE OF EXPANDED SCREEN CONFIGURATION DATA

1701

1602 <FRAMESET ROWS="80. *">

1702 <FRAME SRC=menu. ui. html NAME=UI>

1703 <FRAME SRC=menu. p-quick. html NAME=PAGE>

1605 </FRAMESET>

FIG. 17

EXAMPLE OF CONVERTED SCREEN CONFIGURATION DATA (QUICK MODE)

509 1801

507 <CENTER>
CLASSIC CAR MUSEUM
SUPER-SPORTS 20

508 </CENTER>
○×PASS OF EARLY SUMMER WAS PHOTOGRAPHED
DURING DRIVING.
THE IMAGE CAN BE VIEWED BY SELECTING BUTTON.

<IMG SRC="pictA. small. gif"> 802

<A HREF="pictB. small. gif">
RUNNING SCENE 1</A> 1802

<A HREF="pictC. small. gif">
RUNNING SCENE 2</A> 1803

<A HREF="next. html">
CONTINUED TO NEXT PAGE</A> 1804

240. In fact, as shown above, the Petition points to screen configuration data 1701 and 1801 and falsely asserts that these are NIM templates, which is inconsistent with Shimada. Shimada actually takes templates and fills them in with data. After the templates are filled in, the templates are no longer templates – they are completed documents referred to as screen configuration data as shown in Figures 16 and 17 above (underlined in red). Put another way, these are not data structures with information about how to present a fully configurable frame.

241. The Petition asserts that a POSITA would have recognized or found it obvious that Shimada's screen configuration data would be a "template" as that term is used by Buchholz is because "screen configuration data is also an HTML data structure that defines the presentation of content." Petition, 74; SAMSUNG-1003, ¶156. I disagree.

242. The Petition relies solely on the false premise that both Shimada and Buchholz use HTML. *Id.*, ¶127. Shimada's screen configuration data consists of

fragments of HTML and do not in themselves constitute a valid HTML document. Buchholz is explicit that it does not use HTML. Shimada reduces display space with compact images and buttons that allow transmission when users want it. Buchholz doesn't concern itself with this but focuses on separating data and formatting to reduce transmission. Buchholz specifically states that it uses something "similar" to HTML, and a POSITA would also understand that such a variant of HTML would not be compatible with the HTML standard because it would not conform to the specific format and syntax of HTML. *Id.*

243. In view of the foregoing, it would not be obvious to a POSITA that Shimada's screen configuration data would be the same as Buchholz's "template" or a pack/bundle of templates.

ii. The Petition fails to identify "view" characteristics.

244. All challenged claims require that a NIM template defines "view" characteristics. The Petition, however, is completely silent as to what constitutes "view" characteristics in Shimada-Buchholz.

245. The Petition's only reference to view characteristics in Shimada-Buchholz is annotated diagrams and a vague reference to "view": "[A]s can be seen from the annotated Figures 16 and 17 below, screen configuration data also specifies the content frame ("NIM frame [and] view")." Petition, 80-81; SAMSUNG-1003, ¶163, 164.

246. The Petition provides no discussion of what a view characteristic means to a POSITA in the context of the '545 patent, Shimada, or Buchholz. Moreover, the Petition does not identify anything in the Shimada or Buchholz specifications or figures as being a "view" characteristic.

FIG. 16

EXAMPLE OF EXPANDED SCREEN CONFIGURATION DATA

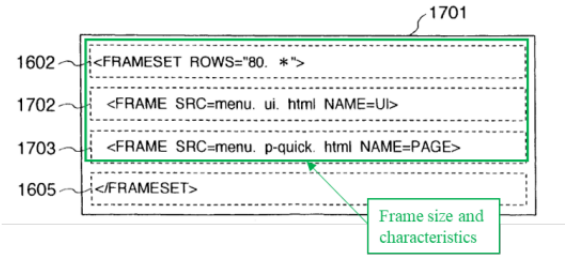
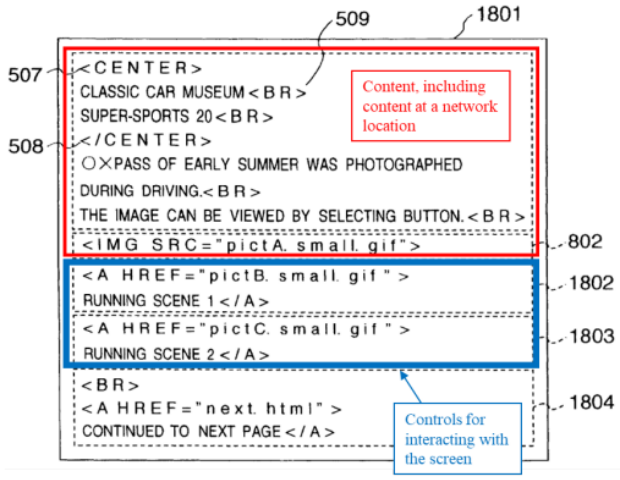


FIG. 17

EXAMPLE OF CONVERTED SCREEN CONFIGURATION DATA (QUICK MODE)



(Excerpt from Petition, 80-81; (annotations by Petitioner))

247. Indeed, as shown above, there is nothing identified by the Petition in its annotated Figures 16 and 17 (above) as specifying a view, let alone being "view" characteristics. As shown above, the only mention of characteristics in

Petitioner's annotated figure is in annotated Figure 16 which refers to frame characteristics.

248. The'545 patent, however, make it clear that "size" of the frame is a "frame" characteristic, not a "view" characteristic": "***frame characteristics*** defining one or more a color, a ***size***, . . ." SAMSUNG-1001, claim 1 (47:57-58); claim 9 (49:15-16).

249. Accordingly, the Petition fails to identify "view" characteristics in the Shimada/Buchholz combination and, thus, has not identified a NIM template as that term has been construed.

iii. The Petition fails to identify a "data structure"

250. All challenged claims require that a NIM template be a "data structure." The Petition does not identify any data structure. The Petition provides no discussion of exactly what a "data structure" means to a POSITA in the context of the '545 patent, Shimada, or Buchholz. Instead, the Petition merely states in a conclusory manner that "Shimada's screen configuration data possesses" this feature. Petition, 79; SAMSUNG-1003, ¶163-164. The Petition does not explain why "screen configuration data" is or includes a "data structure."

251. Moreover, Shimada's "screen configuration data" is merely fragments of HTML. The Petition incorrectly assumes without support or justification that a file whose name has a .html suffix is a data structure. HTML (and certainly

fragments of HTML) are not data structures for the reasons set forth in Section VII.A.2 with regard to Brown. Indeed, in his declaration, Dr. Schmidt describes HTML as a language – "a platform independent language" – not a data structure. SAMSUNG-1003, ¶164 (citing Darnell). A POSITA understands that a language is not a data structure.

252. Accordingly, the Petition fails to identify "a data structure" and, thus, has not identified a NIM template as that term has been construed.

iv. The Petition fails to identify "a data structure that defines . . . NIM frame, view, and control characteristics"

253. All challenged claims require that a NIM template be a "a data structure that defines . . . NIM frame, view, and control characteristics." The Petition does not identify such a data structure that defines "control characteristics." And the Petition does not identify anything in Buchholz as an alleged NIM template.

FIG. 16

EXAMPLE OF EXPANDED SCREEN CONFIGURATION DATA

1701

1602 <FRAMESET ROWS="80, *">

1702 <FRAME SRC=menu. ui. html NAME=UI>

1703 <FRAME SRC=menu. p-quick. html NAME=PAGE>

1605 </FRAMESET>

Frame size and characteristics

FIG. 17

EXAMPLE OF CONVERTED SCREEN CONFIGURATION DATA (QUICK MODE)

509 1801

507 <CENTER>

CLASSIC CAR MUSEUM

SUPER-SPORTS 20

508 </CENTER>

○×PASS OF EARLY SUMMER WAS PHOTOGRAPHED

DURING DRIVING.

THE IMAGE CAN BE VIEWED BY SELECTING BUTTON.

Content, including content at a network location

<IMG SRC="pictA. small. gif"> 802

<A HREF="pictB. small. gif">

RUNNING SCENE 1 </A> 1802

<A HREF="pictC. small. gif">

RUNNING SCENE 2 </A> 1803

<A HREF="next. html">

CONTINUED TO NEXT PAGE </A> 1804

Controls for interacting with the screen

(Excerpt from Petition, 73-74; SAMSUNG-1003, ¶135 (annotations by Petitioner))

254. Relying solely on Shimada (SAMSUNG-1008), the Petition identifies the alleged NIM template is a combination of separate HTML fragments shown in Figure 16 and 17 of Shimada above. But nothing in Shimada or the Petition's analysis suggests that these HTML fragments are part of a single data structure, and a POSITA would understand that the HTML fragments of Figures 16 and 17 are stored separately. In particular, as discussed in Section VII.C.1, the screen configuration data for Figures 16 and 17 are sent to Shimada's client 105 at

different times. Notably, the screen configuration data of Figure 17 does not even exist at the time that screen configuration data of Figure 16 is transmitted to Shimada's client 105. The screen configuration data 1801 of Figure 17 is only created after a series of communications between the client 105 and screen expanding configuration device 103. In particular, the file names of 802, 1802 and 1802 of Figure 17 are added by the screen configuration expanding device 103 after screen configuration data 1701 of Figure 16 has been transmitted to the client 105.

255. Shimada does not disclose what the client 105 does with screen configuration data once it receives it, so a POSITA would not infer that even after 1701, 1802 are transmitted to the client 105, they would or could be placed within some data structure or screen configuration data itself a data structure.

256. Additionally, the Petition merely states in a conclusory manner that "Shimada's screen configuration data possesses" control characteristics. Petition, 71; SAMSUNG-1003, ¶134. The Petition does not identify anything in the Shimada or Buchholz specification or figures as being a "control" characteristic.

FIG. 17

EXAMPLE OF CONVERTED SCREEN CONFIGURATION DATA (QUICK MODE)

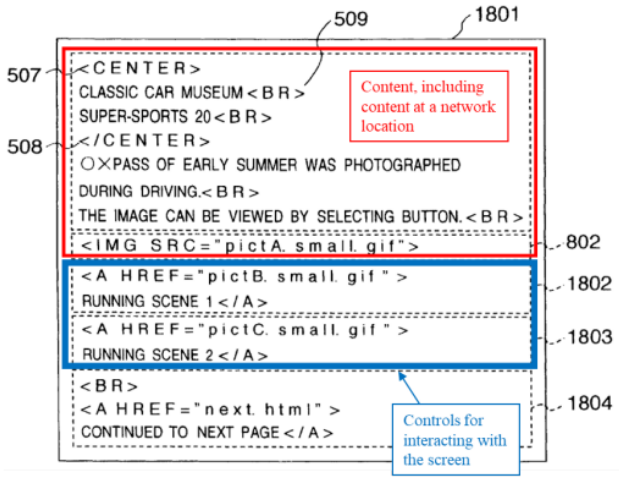
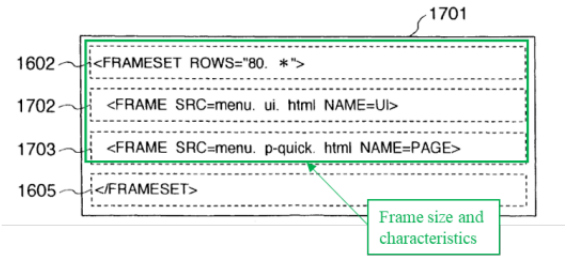


FIG. 16

EXAMPLE OF EXPANDED SCREEN CONFIGURATION DATA



(Excerpt from Petition, 73-74; SAMSUNG-1003, ¶135 (annotations by Petitioner))

257. Again, the petition merely points to annotated Figures 16 or 17 (above) as being "control" characteristics But, there is no explanation of why anything in Figures 16 or 17 is a "control" characteristic. The Petition makes the conclusory allegation that what is in the blue box in Figure 17 are controls, but does not identify anything in the blue box as being a "characteristic."

258. [Omitted]

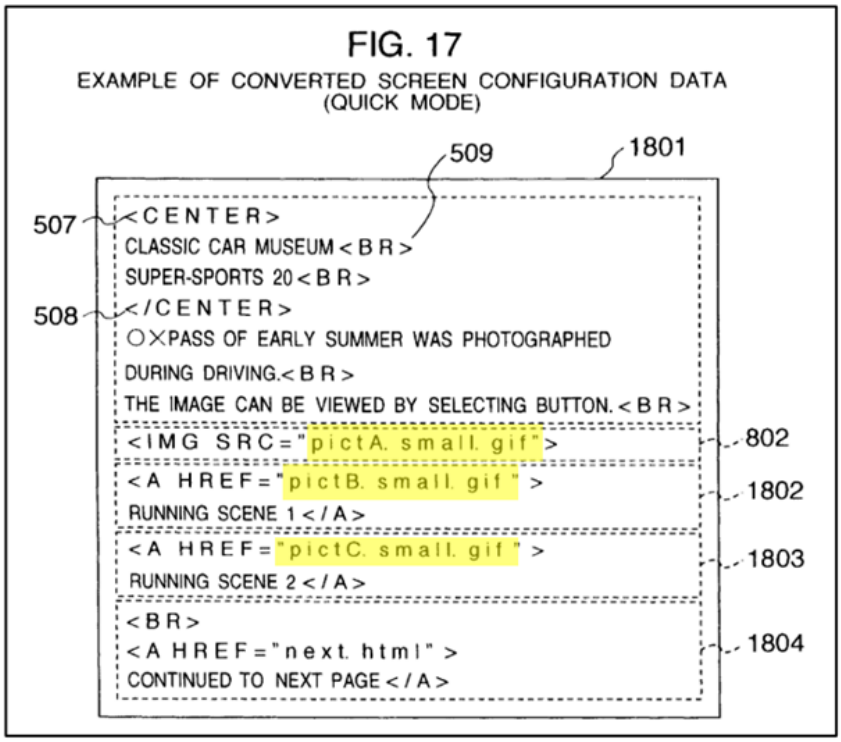
259. [Omitted]

260. [Omitted]

261. Accordingly, the Petition fails to identify "a data structure that defines . . . NIM frame, view, and control characteristics" and, thus, has not identified a NIM template as that term has been construed.

v. The Petition fails to identify content element

262. All challenged claims require "a first content element referencing a first network location." Shimada-Buchholz does not disclose or render obvious this element. The Petition merely asserts that this element is met beause "both Shimada's IMG and anchor tags include a URL because Shimada describes these tags as including an 'address representing a static image' which is obtained from a 'server.'" Petition, 77; SAMSUNG-1003, ¶159. This, however, is wrong. The claim language requires the URL that Petitioner identifies (the alleged network location) to be in the alleged NIM template itself. But Shimada does not disclose any URLs in the screen configuration data (the alleged NIM template). A POSITA reading Shimada would understand that Shimada employs file names in the screen configuration data and obtains content without referencing URLs in the screen configuration data. Shimada is completely silent regarding the details of how content is obtained or where any URLs are located.



(SAMSUNG1008, Fig. 17 (annotated))

263. As shown in Figure 17 above in the yellow highlights, Shimada's IMG tag only contains "pictA.small.gif" and the two anchor tags (HREF) only contain "pictB.small.gif" and "pictC.small.gif." "pictA.small.gif," "pictB.small.gif" and "pictC.small.gif" are file names, not URLs or addresses of a server (a network location) at which content is accessible. A POSITA understands that the file names above are not a network location from which content is accessible. Yet, Shimada specifically decided to use a file name and not a URL in its screen configuration data (the alleged NIM templates). Indeed, Shimada is completely silent regarding how it would use these file names to access content from a server. Shimada just says that content is being retrieved from a server.

SAMSUNG-1008, 6:34-35, 42-44. A POSITA would not abandon the express teaching of Shimada, which uses file names, and replace it with a URL. The Petition notes that Shimada describes a file name as an "address representing a static image." Petition, 83, SAMSUNG-1003, ¶171. A POSITA understands that "address" simply refers to a file name of a file that exists in the world, not the address of a network location – *e.g.*, not the address of the server at which content is accessible.

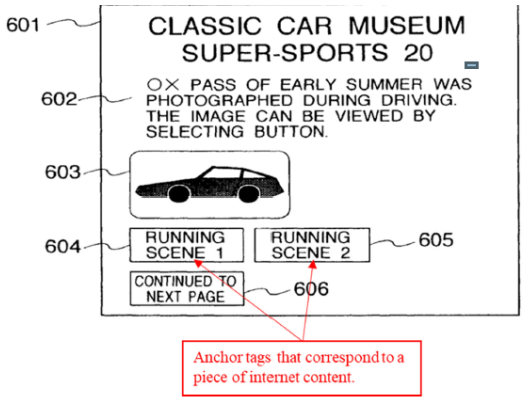
b. The Petition fails to identify a NIM.

264. The Petition identifies Shimada's "screens (e.g., Figure 18) and "anchor tags" as the alleged template NIM Template. Petition 20-21. All challenged claims require "networked information monitor" (NIM) that is a "fully configurable frame . . . through which content is presented to the user."

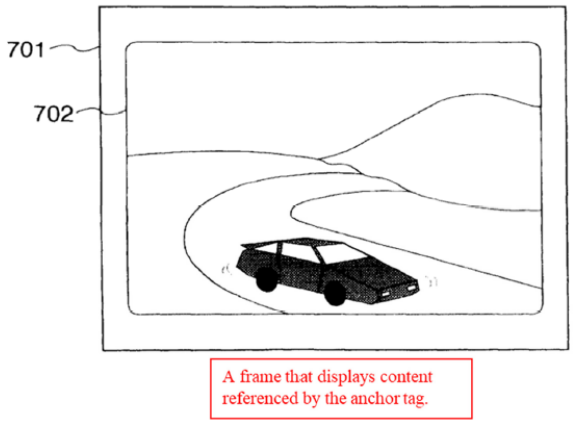
265. A POSITA would not understand that the screens of Shimada are fully configurable frames. As shown in the figures, Shimada's screens all have a similar and specific layout indicating that they are not fully configurable frames.

266. Anchor tags are not fully configurable frames through which content is presented and, thus, are not NIMs. A POSITA understands that "through which content is presented to the user" in the definition of NIM requires that content must be displayed within the fully configurable frame itself, not that a frame is merely used to display content outside the frame or on another page as Petitioner

shows below. But, as shown below by Petitioner's annotations, content is not presented within the anchor tags (shown in blue) nor do the anchor tags cause a frame with one or more controls to be rendered. Rather, the anchor tags results in buttons labelled "running scene" and "continue to next page" being displayed on a screen. Anchor tags also include the files names of pictures or the next HTML page to display upon clicking the button. The anchor tags are not fully configurable frame that include control(s). The right box below is just an image that appears after a "running scene" button is clicked; what is shown is not a fully configurable frame, nor are there controls within the frame. Additionally, whereas each NIM must be instantiated by a separate NIM templates, the anchor tags are all part of the same alleged NIM template.



SAMSUNG-1008, FIG. 6 (annotated)



SAMSUNG-1008, FIG. 7 (annotated)

(Excerpt from Petition, 64 (annotations by Petitioner))

267. Accordingly, the Petition fails to identify a NIM.

6. The combination of Darnell in combination with Shimada and Buchholz does not render Claims 5, 8, and 12 of the ’545 patent obvious.

268. Darnell is a commercial textbook entitled HTML 4 Unleashed. Darnell is a nearly thousand page book covering various aspects of HTML development. The Petition cites Darnell in combination with Shimada and Buchholz to allege that claims directed towards “parsing” (claim 5), “ presenting the received the first content element at least in part within the image,” (claim 8), and “ causing the networked information monitor to communicate with another networked information monitor” (claim 12). Petition, 94-99.

269. As a threshold matter, there would be no motivation to combine these references. Notably, Darnell is directed solely towards HTML development. Indeed, it bears repeating that Buchholz explicitly states that it does not use HTML, and Shimada’s disclosures consists of fragments of HTML and do not in themselves constitute a valid HTML document. Thus, the teachings of Darnell are wholly inapposite to Shimada and Buchholz. Thus, for this reason, claims 8 and 12 are not rendered obvious by this combination.

270. Additionally, although Darnell is cited as part of the combination for Claim 5, the relevant arguments are actually from another patent, Petty. And Petty is actually discussing the parsing of an XML document, not HTML. As such, there is nothing in the disclosure that related to how one would parse to thealleged

templates of Shimada and Buchholz. For this reason, Darnell (which is actually Petty) in combination with Shimada and Buchholz would not render the claims obvious.

7. The Combination of Krishna in combination with Shimada and Buchholz does not render Claims 11 and 16-21 of the '545 patent obvious.

271. United States Patent No. 6,055,522 ("Krishna") discloses " A Page Builder software program that operates in connection with a dynamic content publishing program such as FutureTense Designer™. The Page Builder program accepts a dynamic content publication file as input and generates one or more hypertext markup language (HTML) pages for each navigable state of the dynamic content file." Samsung-1022, Abstract

272. The primary purpose of Krishna was to "provide a way for publishers to view the production of Web pages as a dynamic content process, while at the same time permitting users of browsers located at the client computers to have such dynamic content functionality delivered to them without requiring embedded Viewer programs." *Id.* 3:10-25.

273. The Petition relies on Krishna to argue that limitations directed towards "executing on the client computing device client parser" (claim 16) and "executing a client parser application that is separate from the networked information monitor template." Petition, 101-103.

274. On this, there would be no reason to combine Krishna with Shimada and Buchholz. Notably, Krishna is concerned with the conversion of more complex webpages into HTML so that it could be read by an older and outdated browsers that were incapable of reading ActiveX or JavaScript. This is not what Shimada and Buchholz are directed towards. As a result, the patents are wholly incompatible and a POSITA would neither have the motivation to combine or a reasonable expectation of success.

275. Moreover because Krishna is related to HTML, while Shimada-Buchholz does not event use HTML, these claims would not be rendered obvious because one could not combine the teachings of Krishna with the combinations above.

VIII. Discussion Of Dependent Claims

276. Claims 2-15 and 17-21 depend from Claims 1 and 16, respectively. Because the Petition fails to identify disclosure of the claim elements that I identify above, the Petitioner fails to demonstrate that the references it cites, alone or in combination, render obvious dependent claims 2-15 and 17-21 for the same reasons I set forth above with regard to the independent claims.

IX. Secondary Considerations Of Non-Obviousness

277. I also understand that even if a party is able to establish a prima facie case of obviousness, the Panel can consider secondary considerations to find a

patent non-obvious. In this case, I have reviewed the declarations of George and John Kembel.

A. A nexus exists between the claims of the ’545 patent and the DoDots technology.

278. As a threshold matter, I have been informed that for secondary considerations to be relevant there must be a nexus between the challenged claims and the objective evidence. I have also been informed that a nexus exists if there is evidence tied to a specific product that is coextensive with the claimed features. But a product is not coextensive with a claim if it includes critical, unclaimed features that are claimed by a different patent and that impact the product’s functionality. Moreover there is a presumption of a nexus when a commercial product “is the invention disclosed and claimed in the patent.”

279. In this case, I have reviewed the declaration of John Kembel (DODOTS-2020) who is an inventor on the ’545 patent and was involved in the design and development of the “Dot” product. I have gained intimate knowledge about the DoDots technology commercialized in the Dot product including its functionality. I have also reviewed the underlying documents that include source code and product development materials (DoDots-_2026, 2027, -2028, -2029, -2045) and spoken with John. Based on this information it is my opinion that a nexus exists between the DoDots technology because the DoDots technology is the invention disclosed and claimed by the ’545 patent. This is shown, for example, by

the fact that the DoDots technology met each and every element of claim 1 of the ’545 patent, which is exemplary of the other claims is met by the DoDots technology. I have reviewed the elements contained in the other claims as well, and it is also my opinion that all other claims of the ‘545 patent also have such a nexus based on the foregoing.

280. Notably, exemplary claim 1 covers the following:

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:

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

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;

receiving, over the network, the first content element transmitted responsive to the first content request;

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

281. Here, the DoDots technology was on a computer implemented method with a client device having (1) electronic storage that could store NIM Templates (2) an electronic display; and (3) one or more processors to instantiate the NIM Templates. In fact, as noted in John Kembel's declaration the Dots Technology could be used on a wide range of portable and next generation internet access devices (DODOTS-2021, John Kembel Declaration, ¶¶ 30 and 31.)

282. Additionally, the DoDots technology used NIM Templates, which were known as Dot Definitions *(Id.,* ¶¶ 28, 35). Those Dot Definitions met the definition of NIM Templates discussed above, and allowed the creation and instantiation of NIMs, known as Dots that were fully configurable frames (*Id.,* ¶¶ 32-34), and the Dots Definitions included a content reference (*id.,* ¶¶ 25-27),

definitions of the graphical user interface for the NIM (*id.,* ¶¶ 32, 44) and instructions to obtain content from the network location (*id.,* ¶¶ 25-27, 39).

283. Furthermore, the DoDots Technology included the ability to transmit and receive from a server a NIM Template *(Id.,* ¶¶ 46-48) and content for a NIM after instantiating the NIM Template. *(Id.)* Thus, each and every element of claim 1 of the ’545 patent was practiced by the DoDots Technology. Additionally, based on my review of the other claims, it is my opinion that each and every clam of the ‘545 patent is practiced by the DoDots Technology.

284. As such, there is a nexus because the DoDots technology is the “Dot” commercial product of the claims of the patent. Thus, evidence of the secondary considerations for the DoDots technology developed by DoDots, Inc., which is discussed below, is highly relevant and shows that the claims are non-obvious.

285. Specifically, in view of this nexus, and based on the information that I have read there, it is also my opinion that the ‘083 patent is not obvious based on (1) a long felt need to obtain content without using web browser; (2) praise by others of the invention of the ‘083 patent, and (3) commercial success.

B. The DoDots technology met a long felt need to improve on the browser experience.

286. With regards to long felt need, I note that there was certainly the existence of a need to change how users accessed and interacted with internet content. At the time of invention, there was a growing concern with browsers and

their limitation. *Id.*,¶ 5. Indeed, in my personal experience as an expert in the field, I note that there were various attempts by companies to develop alternatives to the traditional web browsers.

287. This is confirmed by the patents and also based on my experience. Notably, "internet content and web applications are designed to fill the entire web page." *See* SAMSUNG-1001, 2:5-35. "Users and application developers therefore have limited control over the presentation of internet content: content is typically trapped within the frame of the browser." *Id.* Because of this, I agree with the Kembel's assertions that the following issues existed with browsers.

a) Internet content was typically viewed by users one page at a time, with each page displayed serially displayed in a browser application window which typically takes up the majority of the user's computer screen real estate.

b) Internet content was designed by companies and web developers for delivery in the form of web pages. Even if content was modularized, it was reassembled into a full web pages and served up as part of a larger document or site and viewed serially in the window of browser application taking up a significant portion of the user's desktop.

c) There is a distinction both visually and architecturally between the "viewer application" (browser) and the "content/document" (web page) such that a browser window was not tailored to the content being displayed, but rather mediated the capability of displaying of any web content.

d) Internet content was effectively limited and trapped within the "frame" of the browser (viewer application). Therefore, content and web developers, users and web-application developers were limited in how interactive their content could be as well as in the types of user experiences they could offer.in how the user experience is controlled.

e) Although internet programming technologies (such as Java script, CSS, layers, flash, etc.) are giving web pages more functionality, the pages have limited access to application functionality such as controlling access and control of the window and frame, the size of the frame, branding, application behavior such as size and menu items, etc.

DODOTS-2021, ¶ 6.

288. This long felt but unmet need is further confirmed by various articles, which John Kembel cited. Notably, a February 21, 2000, article published in Forbes magazine, confirmed that various experts in the field expressed dissatisfaction and concerns with the then-existing paradigm. Specifically, "Tim Berners-Lee, the creator of the World Wide Web, thinks [the browser] stifles creativity. Jakob Nielsen, the reigning guru of Web usability, thinks it's [web browsers are] a disgrace. Bill Gates wishes it would just go away and become "part of the operating system." (DODOTS-2021, ¶ 8 and *see* ¶¶ 9-10).

289. In fact, the same article noted that some people "hate[d] the browser because it turns the Web into nothing more than "'pages."' That metaphor works well for reading text, but less well for other purposes. Like a book, the browser functions best when one is looking at one page, and much worse if one wants to look at several at once. It does little to help people exchange information (unless pasting Web addresses into e-mail is your ideal information-management solution). When it comes to building applications, adapting software to the "page" makes for clunky design." *Id.*, ¶ 11.

290. And, as John Kembel noted, this point was echoed by another article stating that "[t]he big problem with the typical browser is that it relies on the metaphor of pages in a book; you can view only one page at a time then click on another. That is fine for displaying a simple brochure, but it's a big step backward as far as users' interfaces are concerned. Some experts liken it to the limited interfaces of computers in the 1970s. The printed page is a wonderful thing for communication but it is crippling what we can do on the internet." *Id.*, ¶ 12.

291. Because of this structure, navigating the internet was a tedious process. In that regard, a May 15, 2000 article in USA Today noted that "there's too much happening, and accessing even the simplest stuff - a quickie stock quote or weather forecast - takes too long. Sure, I can bookmark favorite sites or customize a portal page. But those involve surfing from site to site. What if I'm not in the mood, or simply don't have the time? Why must I be exposed to a full Web page each time I want to digest a slice of the material on display?" *Id.*, ¶ 13

292. Elaborating on this point, a Forbes article/journalist noted that at its core, browsers were an issue because "[l]inks go only in one direction instead of two, so it is difficult to retrace your steps; it takes too many mouse clicks to get from one place to another; the arrangement of information sometimes makes no sense. And many sites are just plain ugly." *Id.*, ¶ 14.

293. The Forbes article also emphasized that a significant issue existed with web browsers because "the basic problem is that typical Web sites arrange information in a hierarchical structure. You spot an underlined "link," click on it and go down one step, then another, then another-then realize you're in the wrong place. So, you back up, back up, back up, then start all over again on a different ladder." *Id.,* ¶ 15

294. This archaic structure was simply cumbersome. "Nobody would expect to explore the world's biggest library page by page, yet some would say that's exactly what it's like trying to get around on the Internet" using a web browser. *Id.,* ¶ 16. In fact, Donald Norman – a recognized interaction design guru and President of Unext's learning division at the time noted, "We need to just forget the browser. The browser has set us back ten years." *Id.,* ¶ 17.

295. In sum, a "growing dissatisfaction with the way the Web looks and works. Many critics blame the browser and are trying to develop an entirely new way of navigating the Internet." *Id.,* ¶ 18. And another expert noted "Web usability is a disgrace. . . For seven years, we've had close to zero progress in enhancing the user's main tool for using the internet." *Id.*

296. People craved change. In a May 18, 2000 article in the Wall Street Journal, it noted that "[f]or lots of people, the Web has ceased to be about idle browsing. Instead, they've settled on a routine collection of sites related to their

work or interests. . . . "[when you approach the Web that way, the standard browser experience becomes tedious." *Id., ¶ 19.*

297. In sum, all of these articles pointed to the existence of a growing and long-felt need to access internet content without a web browser, which was not being met by any of the technology companies for a shift away from web browsers. On the other hand, the DoDots technology met this need and ushered in a sea change in the creation and presentation of internet content. Given the tech-bubble financial crisis which hampered DoDots' financial viability, these needs were not fully met until others – like Apple and Samsung – adopted DoDot's technology years later. And, contrary to their positions now, these companies filed for and received numerous patents related to the ecosystem that DoDots created. *See* DODOTS-2048-2053 (Apple and Samsung app and app store patents). It is also noteworthy that the now ubiquitous Apple App Store did not even launch until 2008 (DoDots-2054), and Samsung's first App Store did not launch until 2009 (DoDots-2055) well after DoDots pioneered the technology described in the '083 patent.

298. Thus, it is my opinion that this is evidence of non-obviousness of the '083 patent.

C. The DoDots Technology was met with industry praise.

299. Based on my review of George Kembel's declaration and my own personal experience and expertise, the DoDots technology was met with praise from investors, content providers, and gatekeepers; they all began to heap praise on the DoDots product.

300. For example, George notes that "Tom Kosnik, a professor at Stanford University and Harvard Business School thought the DoDots technology was groundbreaking and he was 'More excited about the [Dots] concept than any I have seen since Netscape browser first gave us graphical access to the WWW. In fact, MORE excited. Their concept creates enormous leverage for anyone who multitasks on computer based task in real-time business, as well as anyone who channel surfs!'" *See* DODOTS-2030 (George Kembel Declaration, ¶ 15) (citing DODOTS-2031).

301. Articles from well-regarded technology writers also praised the Dots technology. A February 21, 2000, Forbes Article, mentioned above, noted that "the ideas of DoDots, a Palo Alto startup, [were] interesting. The company unveiled the prototype of a platform that online companies can use to develop Internet applications that don't feel like Web pages but like handy virtual appliances." *See* DODOTS-2030, ¶ 17(citing DODOTS-2022).

302. The Dots technology was so groundbreaking that Softbank ventures invested in the company. Indeed, they noted that "[u]nlike the full-screen document model of the Web which forces users to a single page at a time, DoDots enables online companies to engage users with a simultaneous collection of content, services, and Web applications. Not only can online companies enable users to do more at once, they can also notify the user of certain content events, such as reaching a particular stock price, sale price, or auction bid." DODOTS-2030, ¶16). And Softbank further noted "DoDots has the potential to revolutionize the way people use the Internet. They have created a very powerful technology for both Internet content providers as well as Internet users." *Id.*

303. And content providers quickly adopted the "Dots" because DoDots enables online companies to exploit the multibillion-dollar opportunity that exists 'outside the browser' with a whole new approach for Internet content. DoDots' "technology delivers the benefits of consumer packaging and distribution to the Internet, enabling online companies to fully brand and appropriately package their content so it can be instantly distributed and shared between users.'" *Id.,* ¶ 17.

304. These content providers included several major players including ABC, which noted "in our continuing effort to find new ways to connect with our audience, the ABC Dot truly stands out as a revolutionary new communication device," said Alan Cohen, executive vice president, marketing, advertising &

promotion, ABC Entertainment Television Group. "The ABC Dots will allow people to experience the stars, the shows, and everything ABC has to offer in a whole new way." *Id.,* ¶¶ 19-20. Many other providers also praised the Dots product. *Id.* ¶ *21-25.*

305. Moreover, aside from the growing client base, I note that DoDots and the "Dot" technology was met with significant praise at the Demo 2000 conferences. In my experience, Demo conferences were attended by many important experts and inventors in the start-up business. The fact that DoDots was an invited participant at these conferences highlights the praise its was receiving. Notably, the conference guide for one Demo conference noted that "Internet is a vast source for information, yet most people connect to one site at a time. DoDots is an innovative way to connect to multiple sites allowing anyone to track fast changing information and other forms of internet content." *Id.,* ¶ 26-29. Another guide noted "DoDots extensible software architecture is a rare find in today's world. It increases the power and capabilities of handheld computers and other small form factor internet devices. And what makes DoDots more remarkable is that it uses a tool to extend web presence to new emerging form factors." *Id.,* ¶ 30

306. More impressively, DoDots received the DemoGod award. *Id.,* ¶ 30. In my experience working with, and for technology start-up companies, only a handful of companies won this award, and DoDots' selection meant that a majority

of start-up investors, experts in the fields, and competitors thought that the "Dot" product was among the best of the best at the time of the invention.

307. The Dots technology also received an award at the Investor's Choice conference because it was seen as the most likely to succeed based on votes from an audience that included leading ecommerce companies as well as a panel of distinguished investors, and observers. *Id.*, ¶ 31. Notably, Richard A. Shaffer, founder of Technologic Partners stated that "As a recipient of the Investors' Choice award, DoDots was recognized above and beyond other presenting companies to receive one of 10 Investors' Choice awards. We believe DoDots exemplifies the key characteristics needed to succeed in this competitive market environment and are looking forward to seeing its positive growth in the coming year." *Id.*

308. Finally, George Kembel's declaration indicates that even after the tech bubble burst, "a leading mobile network operator in Europe (Hutchinson Whampoa and Orange UK)" sought to acquire the DoDots' technology. *Id.,* ¶42-43. Although the deal never closed, this near acquisition showed that other players in the market recognized the value and novelty of DoDot's technology.

309. In short, there was widespread praise for DoDots' technology from investors, customers and other start-ups. This industry-wide praise is evidence that DoDots invention, embodied by the '545 patent, was non-obvious at the time.

D. The Success of the DoDots Startup

310. It is also my opinion that there is strong evidence of commercial success for the DoDots technology. First, as George Kembel's declaration indicates, shortly after launching their product, there were two separate and highly-regarded investors willing to provide venture capital. (DODOTS-2030 , George Kembel Declaration, ¶ 33). In fact, Softbank proposed a 4.5 million dollars pre-money valuation, with an initial investment of 1.5 million dollars from Softbank and another 1.5 million dollars from another investors. *Id.* On the other hand, Menlo Ventures proposed a 5 million dollar valuation. *Id.* Ultimately the Softbank deal was executed by the parties.

311. As someone with substantial experience in the start-up space, it is my opinion that these initial valuations and the Softbank investment are strong indications of the commercial success of the commercial product because these investments are large for an initial round of funding. Additional evidence of commercial success is shown by the fact that DoDots eventually met with Chase H&Q in San Francisco and received information showing a $275 million pre-money valuation that would lead to a proposed term sheet for a second round investment of $60 Million dollars. *Id.,* ¶ 35. While shifting economic realities caused this term sheet to be withdrawn, I believe that the eventual funding, valuing DoDots closer to $175M pre-money and raising $17M, showed commercial

success because it showed DoDots could obtain funding even as investors pulled back during the dot-com bubble burst. This showed that there was still commercial value in the "Dots" technology. Additionally, even as the tech bubble collapsed, DoDots received term sheets for Series C round from late stage investors in New York.

312. For these reasons, there is also strong evidence that the "Dots" product was a commercial success even before the dot-com bubble burst.

X. MISCELLANEOUS MATTERS

313. For my efforts in connection with the preparation of this declaration I have been compensated at my standard hourly rate for this type of consulting activity. My compensation is in no way contingent on the results of these or any other proceedings relating to the above-captioned patent.

314. I reserve the right to supplement my opinions in the future to respond to any arguments that Petitioner raises and to take into account new information as it becomes available to me.

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

and that such willful false statements may jeopardize the results of these proceedings.

I declare under penalty of perjury that the foregoing is true and correct.

Sworn to this 23rd day of February, 2024 in Alamo, California.

Ted Selker

EXHIBIT A

LIST OF MATERIAL CONSIDERED BY TED SELKER, PH.D.

IPR2023-00756 (U.S. Patent No. 9,369,545)

Exhibit No.	Description
2001	*Lenovo Holding Co, Inc. et al. v. DoDots Licensing Sols.*, IPR2019-01278 (P.T.A.B. Jan. 19, 2021)
2002	*Lenovo Holding Co. v. DoDots Licensing Sols. LLC,* 2021 U.S. App. LEXIS 36126, at *2 (Fed. Cir. Dec. 8, 2021)
2003	Jones and Brown considered by Patent Examiner (IDS)
2008	July 27, 2023 Order from the United States District Court, Western District of Texas in *DoDots Licensing Solutions LLC v. Samsung Electronics Co., Ltd. et al.,* 6:22-cv-00535-ADA, (W.D. Tex.)
2014	Introduction to Active Channel Technology, dated 08/15/2017
2015	U.S. Patent No. 7,660,868
2016	What is Data Structure? (available at https://www.geeksforgeeks.org/data-structure-meaning/)
2017	HTML Data Guide, W3C Interest Group Note 08 March 2012
2018	Specifications of Personal Computers Over Time (available at https://www.hp.com/us-en/shop/tech-takes/specifications-personal-computers-over-time)
2019	Barnett, S., Palm VII: Like its predecessors, the Palm VII doesn't do all that a desktop does, but it just might do enough
2020	CNET: Windows CE to become "Windows powered" (available at https://www.itprotoday.com/windows-78/cnet-windows-ce-become-windows-powered#close-modal)
2021	Declaration of John Kembel
2022	Imagining a Web Beyond the Browser; Fortune Magazine, February 21, 2000
2023	Lyons, D., Browser Bashers; Forbes, May 15, 2000
2024	Baig, E., Bits of organization clear clutter; USA Today
2025	Heim, K., Tools turn browser into galaxy, July 7, 2000
2026	Mossberg, W., New Metabrowsers Allow You To Create a Quilt of Web Pages, May 18, 2000

Exhibit No.	Description
2027	A New World Needs a New Internet
2028	DoDots Technical Overview
2029	How to Build Dots
2030	Declaration of George Kembel
2031	June 15, 1999 Email from Tom Kosnik to investors re: Periphio (next steps)
2032	SOFTBANK Venture Capital's Technology Fund Invests in DoDots, Inc., October 13, 1999
2033	DoDots Website
2034	DoDots Technology Embraced by ABC Television Network and ABC.com to Deliver Innovative ABC Dots on the Internet, October 2, 2000
2035	Leading Online Companies Do Dots With DoDots ; DoDots ' Technology Delivers Internet Packaging and Distribution for Internet Content, Applications and Services, March, 13, 2000
2036	Excite@Home Partners With DoDots to Enhance Service for Business Professionals On Work.com, March 13, 2000
2037	DoDots Announces Partnership With Wireless Solution Provider 2Roam at DEMOmobile 2000 Wireless Conference in Pasadena, California, September 7, 2000
2038	Dots Go Live; Web Sites Now Offer Internet Applications, Content, and Services in Dots, April 3, 2000
2039	Conference Guide to Demo 2000
2040	DemoMobile Conference Program, September 6-8, 2000
2041	Demo 2000: The innovation Continues, March 6, 2000
2042	DoDots Named "Investors' Choice" Winner at Telenelogic Partners' Internet Outlook Conference in Burlingame, California, September 20, 2000
2043	Stanford Business School Case Study of DoDots, June 2000
2044	Stanford Business School Case Study of DoDots, September 2001
2045	Dots Messaging and XML specification

Exhibit No.	Description
2046	Yurko, C., DoDots: The Web without a browser, April 7, 2000
2047	Back to the launch pad: after a few dormant years, tech entrepreneurs are returning to the game.
2048	U.S. Patent No. 8,099,332
2049	U.S. Patent No. 8,935,690
2050	U.S. Patent No. 9,325,795
2051	U.S. Patent No. 9,817,545
2052	U.S. Patent No. 10,180,831
2053	U.S. Patent No. 10,955,994
2054	U.S. Patent No. 8,020,083
2055	The App Store turns 10, July 5, 2018
2056	Samsung Launches Its Own App Store for WM and Symbian Devices, February 4, 2009
2057	Ted Selker's list of materials considered
SAMSUNG-1001	U.S. Patent No. 9,369,545 to Kembel, et al. ("the '545 Patent")
SAMSUNG-1002	Excerpts from the Prosecution History of the '545 Patent ("the Prosecution History")
SAMSUNG-1003	Declaration of Dr. Douglas C. Schmidt
SAMSUNG-1004	Curriculum Vitae of Dr. Douglas C. Schmidt
SAMSUNG-1005	U.S. Patent No. 6,278,448 B1 ("Brown")
SAMSUNG-1006	U.S. Patent No. 6,449,638 B1 ("Wecker")

Exhibit No.	Description
SAMSUNG-1007	U.S. Patent No. 5,793,368 ("Beer")
SAMSUNG-1008	U.S. Patent No. 6,789,263 B1 ("Shimada")
SAMSUNG-1009	U.S. Patent No. 6,088,340 ("Buchholz")
SAMSUNG-1010	U.S. Patent No. 6,819,345 B1 ("Jones")
SAMSUNG-1011	*HTML 4 Unleashed* ("Darnell")
SAMSUNG-1012	IPR2019-00988 Final Written Decision
SAMSUNG-1013	U.S. Patent No. 6,342,907 B1 ("Petty")
SAMSUNG-1014	*Lenovo Holding Company, Inc. v. DoDots Licensing Solutions LLC*, No. 2021-1247, 2021 WL 5822248 (Dec. 8, 2021)
SAMSUNG-1015	U.S. Patent No. 6,311,058 B1 ("Wecker 2")
SAMSUNG-1016	U.S. Patent No. 5,737,560 ("Yohanan")
SAMSUNG-1017	CNET News, "PointCast unveils free news service," https://web.archive.org/web/20110616130215/http://news.cnet.com/PointCast-unveils-free-news-service/2100-1023_3-204658.html, last accessed Feb. 16, 2023
SAMSUNG-1018	Declaration of June Ann Munford
SAMSUNG-1019	Complaint, *DoDots Licensing Solutions LLC v. Samsung Electronics Co., Ltd. et al.*, 6:22-cv-00535, W.D. Tex., filed May 24, 2022

Exhibit No.	Description
SAMSUNG-1020	U.S. Patent No. 6,094,681 ("Shaffer")
SAMSUNG-1021	U.S. Patent No. 6,055,522 ("Krishna")
SAMSUNG-1022	U.S. Patent No. 6,185,614 B1 ("Cuomo")
SAMSUNG-1023	Board's email of August 14, 2023, authorizing Petitioner's reply
SAMSUNG-1024	Joint Claim Construction Statement, 6:22-cv-00535, W.D. Tex., filed May 15, 2023
SAMSUNG-1025	IPR2019-00988, Paper 40 (CAFC Decision)