

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION,
HP INC., DELL INC., DELL TECHNOLOGIES INC.,
ASUSTEK COMPUTER INC., ASUS GLOBAL PTE. LTD.,
Petitioners

v.

LITL LLC,
Patent Owner.

IPR2024-00458

U.S. Patent No. 10,564,818

DECLARATION OF DR. HENRY HOUH
REGARDING U.S. PATENT NO. 10,564,818

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I, Dr. Henry Houh, hereby declare as follows:

I. INTRODUCTION

1. I have been retained on behalf of Microsoft Corp. (“Microsoft” or “Petitioner”) to offer technical opinions related to U.S. Patent No. 10,564,818 (“the ’818 patent”) (EX-1001). I understand that Microsoft is requesting that the Patent Trial and Appeal Board (“PTAB” or “Board”) institute an *inter partes* review (“IPR”) proceeding for certain claims of the ’818 patent. Specifically, I have been asked to consider the validity of claims 1–4 and 11–14 of the ’818 patent (the “Challenged Claims”) in view of prior art and obviousness considerations from the perspective of a person of ordinary skill in the art at the time of the invention (“POSITA”) as it relates to the ’818 patent.

2. I am being compensated for my time at my standard consulting rate. I am also being reimbursed for expenses that I incur during the course of this work. My compensation is not contingent upon the results of my study, the substance of my opinions, or the outcome of any proceeding involving the Challenged Claims. I have no financial interest in the outcome of this matter or on the pending litigation between Petitioners and Patent Owner.

3. My analysis here is based on my years of education, research and experience, as well as my investigation and study of relevant materials, including those cited herein.

4. I may rely upon these materials, my knowledge and experience, and/or

additional materials to rebut arguments raised by the Patent Owner. Further, I may also consider additional documents and information in forming any necessary opinions, including documents that may not yet have been provided to me.

5. My analysis of the materials in this proceeding is ongoing and I will continue to review any new material as it is provided. This declaration represents only those opinions I have formed to date. I reserve the right to revise, supplement, and/or amend my opinions stated herein based on new information and on my continuing analysis of the materials already provided.

II. BACKGROUND AND QUALIFICATIONS

6. I am over the age of 18 and am competent to write this declaration. I have personal knowledge, or have developed knowledge of these technologies based upon education, training, or experience, of the matters set forth herein.

7. My qualifications are set forth in my curriculum vitae, a copy of which is attached as Appendix A to this Declaration. The following is a brief summary of my relevant qualifications and professional experience.

8. I received a Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology (“MIT”) in 1998. Beforehand, I received a Master of Science degree in Electrical Engineering and Computer Science in 1991, a Bachelor of Science degree in Electrical Engineering and Computer Science in 1989, and a Bachelor of Science degree in Physics in 1990, all from MIT.

9. I am currently self-employed as an independent technical consultant. Until

late 2022, I was also president of a company that provides supplemental science, technology, engineering, and mathematics (“STEM”) education to children of all ages.

10. I first entered telecommunications in 1987 when I worked as a summer intern at AT&T Bell Laboratories as part of a five-year dual degree program at MIT. During my first summer, I worked designing digital hardware including using programmable logic devices. I continued to work at AT&T Bell Laboratories as part of this MIT program. While at MIT, I was a teaching assistant (“TA”) in the Electrical Engineering and Computer Science Department’s core Computer Architectures course. I first was a TA as a senior for a role typically reserved for graduate students. I later became head TA. The course covered various topics in computer architectures, including programmable logic arrays, multiprocessor systems and parallel processing. As a TA, I helped write homework assignments, lab assignments, and exams. I also taught in the recitation sections.

11. Later, as part of my doctoral research at MIT from 1991-1998, I was a research assistant in the Telemedia Network Systems (“TNS”) group at the Laboratory for Computer Science. The TNS group built a high-speed gigabit network and created applications that ran over the network. Example applications included ones for remote video capture, processing, and display of video on computer terminals. In addition to working on the design of core network components, designing and building the high-speed links, and designing and writing the device drivers for the interface cards, I also helped design the switch, which was composed of an array of FPGAs at the core.

12. I also set up the group's web server and helped to build the web pages that initiated the above-mentioned video sessions via a web interface. Vice President Al Gore visited our group in 1996 and received a demonstration of—and remotely drove—a radio-controlled toy car with a wireless video camera mounted on it that was built by our group. This toy car device received commands transmitted over a network from a remote computer, and video data from the toy car was transmitted wirelessly then over a computer network back to the user controller. On occasion, we allowed users visiting our web site to drive the toy car from their remote computer while they watched the video on their computer. The video stream was encoded by TNS-designed hardware, streamed over the TNS-designed network, and displayed using TNS-designed software.

13. I defended and submitted my Ph.D. thesis, titled “Designing Networks for Tomorrow's Traffic,” in January 1998. As part of my thesis research, I analyzed local area and wide area flows to show a more efficient method for routing packets in a network, based on traffic patterns at the time.

14. From 1997 to 1999, I was a Senior Scientist and Engineer at NBX Corporation, a start-up that made business telephone systems for streaming packetized audio over data networks instead of using traditional telephone lines. NBX was later acquired by 3Com Corporation and the phone system is still used today by numerous businesses.

15. As part of my work at NBX, I designed the core audio reconstruction algorithms for the telephones, as well as the packet transmission algorithms. I also

designed and validated the core packet transport protocol used by the phone system. The protocol was used for all signaling in the phone system, including for the setup of conference calls. The NBX system also featured a computer interface for initiating phone calls, which could also initiate conference calls. The NBX system also supported the Telephony Application Programming Interface (“TAPI”) that allowed other computer programs to integrate with our system telephony features. We obtained U.S. Patent No. 6,697,963, entitled “Telecommunication method for ensuring on-time delivery of packets containing time-sensitive data,” as part of this work.

16. From 1999-2004, I was employed by Empirix or its predecessor company, Teradyne. Empirix was a leader in test tools for telecommunications protocols and systems, providing functional testing tools as well as load testing tools. From 2000-2001, I conceived and built a test platform for testing Voiceover-IP (VoIP) based on highly parallel network processors. The first application on this new test platform was a cloud emulator for simulating the effects of transmitting VoIP over a busy network. The platform was based on a multi-core high performance network processor chip.

17. In 2006, as part of my role at BBN Technologies, I helped found PodZinger Inc., now known as RAMP Inc. PodZinger utilized BBN’s speech recognition algorithms to search through the spoken words in audio and video segments. While I was Vice President of Operations and Technology, PodZinger followed its initial prototype with a full streaming audio and video search solution. I also created a social networking web site, which BBN sold to a venture-funded startup company. In the

process of creating the web site, I designed and specified the authentication and authorization protocols.

18. Since I set up one of the web's first hundred or so servers around late 1993, I have continued to create web servers and their interfaces for various organizations and companies. I have coded the web user interface from scratch, and I have used various content management systems to create user interfaces.

19. I have been awarded several United States patents, and I have several patent publications including the following examples:

- U.S. Patent No. 7,975,296, "Automated security threat testing of web pages";
- U.S. Patent No. 7,877,736, "Computer language interpretation and optimization for server testing";
- U.S. Patent No. 7,801,910, "Method and apparatus for timed tagging of media content";
- U.S. Patent 7,590,542, "Method of Generating Test Scripts Using a Voice-Capable Markup Language";
- U.S. Patent No. 6,967,963, "Telecommunication method for ensuring on-time delivery of packets containing time-sensitive data."

III. LEVEL OF ORDINARY SKILL IN THE ART

20. In rendering the opinions set forth in this declaration, I was asked to consider the patent claims and the prior art through the eyes of a POSITA at the time of the alleged invention, which I understand is asserted to be April 1, 2008—the earliest

possible priority date of the '818 Patent. I understand that the factors considered in determining the ordinary level of skill in a field of art include the level of education and experience of persons working in the field; the types of problems encountered in the field; the teachings of the prior art, and the sophistication of the technology at the time of the alleged invention. I understand that a POSITA is not a specific real individual, but rather is a hypothetical individual having the qualities reflected by the factors above. I understand that a POSITA would also have knowledge from the teachings of the prior art, including the art cited below.

21. Taking these factors into consideration, in my opinion, at the relevant time, a POSITA relating to the technology of the '818 patent would have had a bachelor's degree in electrical engineering, computer engineering, computer science, or a similar field, plus two years of work experience in designing GUIs for computing devices. In my opinion, more education could substitute for experience and vice versa.

22. Before April 1, 2008, my level of skill in the art was at least that of a POSITA. I am qualified to provide opinions concerning what a POSITA would have known and understood at that time, and my analysis and conclusions herein are from the perspective of a POSITA as of that date.

IV. MATERIALS CONSIDERED AND RELIED UPON

23. In forming my opinions expressed herein, in addition to relying on my education and experience, I considered the totality of the following materials:

Exhibit	Reference
1001	U.S. Patent No. 10,564,818 (“the ’818 patent”)
1002	File History of the ’818 patent
1003	Declaration of Dr. Henry Houh in Support of Petition
1004	Dr. Henry Houh CV
1005	U.S. 90/014,958 Ex Parte Reexamination File History
1006	German Patent Application Publication DE10331185A1 (“Pröll”) with certified translation
1007	U.S. Patent 6,137,468 (“Martinez”)
1008	Joan Preppernau & Joyce Cox, <i>Step By Step Windows Vista</i> , Microsoft Press (Jan. 3, 2007) (“Preppernau”)
1009	U.S. Patent 5,847,698 (“Reavey”)
1010	RESERVED
1011	RESERVED
1012	RESERVED
1013	RESERVED
1014	RESERVED
1015	Declaration of June Munford
1016	Complaint, <i>LiTL LLC v. ASUSTeK Computer Inc.</i> , No. 23-cv-00122 (D. Del. Feb. 1, 2023)
1017	Complaint, <i>LiTL LLC v. Dell Techs. Inc.</i> , No. 23-cv-0121 (D. Del. Feb. 1, 2023)
1018	Complaint, <i>LiTL LLC v. HP Inc.</i> , No. 23-cv-00120 (D. Del. Feb. 1, 2023)
1019	Order Granting Microsoft Intervention, <i>LiTL LLC v. HP Inc.</i> , No. 23-cv-00120 (D. Del. Oct. 16, 2023)
1020	Scheduling Order, <i>LiTL LLC v. HP Inc.</i> , No. 23-120 (D. Del. Jan. 11, 2024), ECF No. 44
1021	Foley, James D., et al., <i>Computer Graphics Principles and Practice</i> , Second Edition in C (July 1997)
1022	RESERVED

Exhibit	Reference
1023	Maintenance & Service Guide, <i>HP Pavilion dv1600 Entertainment Notebook PC</i> (June 2006)
1024	Complaint, <i>LiTL LLC v. Lenovo (United States), Inc.</i> , No. 20-cv-00689 (D. Del. May 22, 2020)
1025	Stipulation of Dismissal, <i>LiTL LLC v. Lenovo (United States) Inc.</i> , No. 20-cv-00689 (D. Del. Feb. 3, 2023)
1026	File History for U.S. Patent No. 9,880,715
1027	Fujitsu LifeBook T3000 Tablet PC review: Fujitsu LifeBook T3000 Tablet PC, available at https://www.cnet.com/reviews/fujitsu-lifebook-t3000-tablet-pc-review/
1028	HP Compaq Tablet PC TC1100 review: HP Compaq Tablet PC TC1100, available at https://www.cnet.com/reviews/hp-compaq-tablet-pc-tc1100-review/
1029	Acer TravelMate C110 review: Acer TravelMate C110, available at https://www.cnet.com/reviews/acer-travelmate-c110-review/
1030	OLPC XO-1 (One Laptop Per Child) review: OLPC XO-1 (One Laptop Per Child), available at https://www.cnet.com/reviews/olpc-xo-1-one-laptop-per-child-review/
1031	Microsoft Indemnity Request
1032	RESERVED
1033	RESERVED
1034	RESERVED
1035	Q&A Microsoft Unveils Details for Ultra-Mobile Personal Computers
1036	Australia Patent Application Publication AU2001100022A4
1037	RESERVED
1038	RESERVED

I have also considered any materials cited in this declaration even if not included in

the list above.

V. LEGAL STANDARDS

24. I am not a lawyer and do not provide any legal opinions, but I have been advised that certain legal standards are to be applied by technical experts in forming opinions regarding meaning and validity of patent claims. I have applied the legal standards described below.

25. It is my understanding that assessing the validity of a U.S. patent based on a prior art analysis involves two steps. First, one must assess what meaning a POSITA would have given the terms. Second, after assessing the meaning of the claim terms, one may then assess validity by comparing a patent claim to the “prior art.” I understand that the teaching of the prior art is viewed through the eyes of a POSITA at the time the invention was made. My analysis as to what constitutes a relevant POSITA is set forth above.

A. Legal Standards for Prior Art

26. I understand that a patent or other publication must first qualify as prior art before it can be used to invalidate a patent claim. For purposes of this declaration, counsel for Petitioner has instructed me to assume that each prior art reference cited in the combinations described below (Pröll, Martinez, Preppernau) qualify as prior art to the '818 patent.

B. Legal Standards for Priority Date

27. I understand that the “priority date” (or “earliest effective filing date” or

“Critical Date”) of a patent is the date on which it is filed, or the date on which an earlier application was filed if the patentee properly claims the benefit of the earlier application’s filing date. For purposes of my analysis in this declaration, I have assumed that the ’818 patent is entitled to a priority date of April 1, 2008.

C. Legal Standards for Obviousness

28. My understanding is that a patent claim is invalid as obvious only if the subject matter of the claimed invention “as a whole” would have been obvious to a POSITA at the time the invention was made. To determine the differences between a prior art reference (or a proposed combination of prior art references) and the claims, the question of obviousness is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. Also, obviousness grounds cannot be sustained by mere conclusory statements. Rather, it is necessary to provide some articulated reasoning with rational underpinning to support the legal conclusion of obviousness.

29. I understand that a patent claim that comprises several elements is not proved obvious by simply showing that each of its elements was independently known in the prior art. In my evaluation of whether any claim of the ’818 patent would have been obvious, I considered whether the Petition, or any evidence submitted in this proceeding, presented an articulated reason with a rational basis that would have motivated a POSITA to combine the elements or concepts from the prior art in the same way as in the claimed invention.

30. It is my understanding that there is no single way to define the line between true inventiveness on one hand—which is patentable—and the application of common sense and ordinary skill to solve a problem on the other hand—which is not patentable. For instance, factors such as market forces or other design incentives may be the source of what produced a change, rather than true inventiveness.

31. I understand that the decision-maker may consider whether the change was merely the predictable result of using prior art elements according to their known functions, or whether it was the result of true inventiveness. And, the decision-maker may also consider whether there is some teaching or suggestion in the prior art to make the modification or combination of elements recited in the claim at issue. Also, the decision-maker may consider whether the innovation applies a known technique that had been used to improve a similar device or method in a similar way. The decision-maker may also consider whether the claimed invention would have been obvious to try, meaning that the claimed innovation was one of a relatively small number of possible approaches to the problem with a reasonable expectation of success by those skilled in the art.

32. I have been instructed by counsel that if any of these considerations are relied upon to reach a conclusion of obviousness, the law requires that the analysis of such a consideration must be made explicit. I understand that the decision-maker must be careful not to determine obviousness using the benefit of hindsight and that many true inventions might seem obvious after the fact. I understand that the decision-maker

should consider obviousness from the perspective of a POSITA at the time the claimed invention was made, and that the decisionmaker should not consider what is known today or what is learned from the teaching of the patent.

33. I understand that in order to determine whether a patent claim is obvious, one must make certain factual findings regarding the claimed invention and the prior art. Specifically, I understand that the following factors must be evaluated to determine whether a claim is obvious: the scope and content of the prior art; the difference or differences, if any, between the claim of the patent and the prior art; the level of ordinary skill in the art at the time the claimed invention was made; and, if available, the objective indicia of non-obviousness, also known as “secondary considerations.”

34. I understand that the secondary considerations include: commercial success of a product due to the merits of the claimed invention; a long felt need for the solution provided by the claimed invention; unsuccessful attempts by others to find the solution provided by the claimed invention; copying of the claimed invention by others; unexpected and superior results from the claimed invention; acceptance by others of the claimed invention as shown by praise from others in the field or from the licensing of the claimed invention; teaching away from the conventional wisdom in the art at the time of the invention; independent invention of the claimed invention by others before or at about the same time as the named inventor thought of it; and other evidence tending to show obviousness.

35. I understand that, to establish a secondary consideration, the evidence must

demonstrate a nexus between that secondary consideration and the claimed invention.

VI. SUMMARY OF OPINIONS

36. For the reasons I discuss below, it is my opinion that claims 1–4 and 11–14 of the '818 patent are disclosed in the prior art, and are rendered obvious by the prior art.

VII. BRIEF DESCRIPTION OF THE TECHNOLOGY

37. Convertible notebook computers appeared in the early 2000's. For example, the Fujitsu Lifebook T3000 was introduced in 2003. The T3000 was able to convert from a notebook to a tablet by swiveling the screen, so that when it folded back down, the screen was on the outside and covered the keyboard. In particular, when converted to table mode, the screen automatically switched from landscape to portrait mode.¹ The T3000 ran Windows XP Tablet PC Edition. Other tablet PCs available in 2003 included the Acer TravelMate C110 Tablet, and the HP Compaq Tablet PC TC1100, and they also ran Windows XP Tablet PC Edition. Both the C110 and the TC1100 also featured a swivel screen that could fold down.² This convertibility feature was also included in the low-cost “One Laptop Per Child” effort with its first release, the OLPC XO-1, in late 2007.³

38. Early handheld computing devices included the Apple Newton, introduced

¹ See EX-1027, <https://www.cnet.com/reviews/fujitsu-lifebook-t3000-tablet-pc-review/>

² See EX-1028, <https://www.cnet.com/reviews/hp-compaq-tablet-pc-tc1100-review/>, <https://www.youtube.com/watch?v=nQ0-PaKkHE4>, EX-1029, <https://www.cnet.com/reviews/acer-travelmate-c110-review/>, <https://www.youtube.com/watch?v=yQguX29KDW0>.

³ See EX-1030, <https://www.cnet.com/reviews/olpc-xo-1-one-laptop-per-child-review/>

in 1993. Handheld devices began more widespread adoption with the introduction of the PalmPilot in 1996. Microsoft introduced its Pocket PC in 2000. The iPhone was introduced in 2007, and the iPhone included the Safari web browser. With a diversity of screen sizes accessing web sites, the designers of web sites worked to adapt the presentation to the size of the screens. This was recognized by the W3C (the web’s standard-setting consortium) in the early days of the web in 1993 that the rendering of web pages should be guided by user preferences.⁴

39. Thus, by 2008, it was recognized and known that user interfaces would be customized based on the configuration of the computing devices.

VIII. OVERVIEW OF THE ’818 PATENT

A. Subject Matter Overview of the ’818 Patent

40. The ’818 patent is titled “System and method for streamlining user interaction with electronic content,” and issued from Application 15/858,955 (“’955 application”), filed on December 29, 2017. The ’955 application is a continuation of the application that led to U.S. Patent 9,880,715 (“the ’715 patent”), which itself claims priority to a series of continuation and continuation-in-part applications, with the earliest being a provisional application filed April 1, 2008.

41. The ’818 patent is “directed to a graphical user interface [(‘GUI’)] that organizes interface elements into modes of content for presentation to a user” and includes “a customized user interface for a computer system with a plurality [of]

⁴ See https://web.archive.org/web/19970605134644/https://www.w3.org/MarkUp/HTMLPlus/htmlplus_7.html

selectable I/O profiles configured to present computer operations to a user in a format configured to a selected I/O profile.” EX-1001, 2:49–51, 2:63–67. In one embodiment, the plurality of views includes a “home view configured to organize a plurality of content modes.” *Id.*, 4:6–9. Figure 2 is one example of a GUI showing a home view:

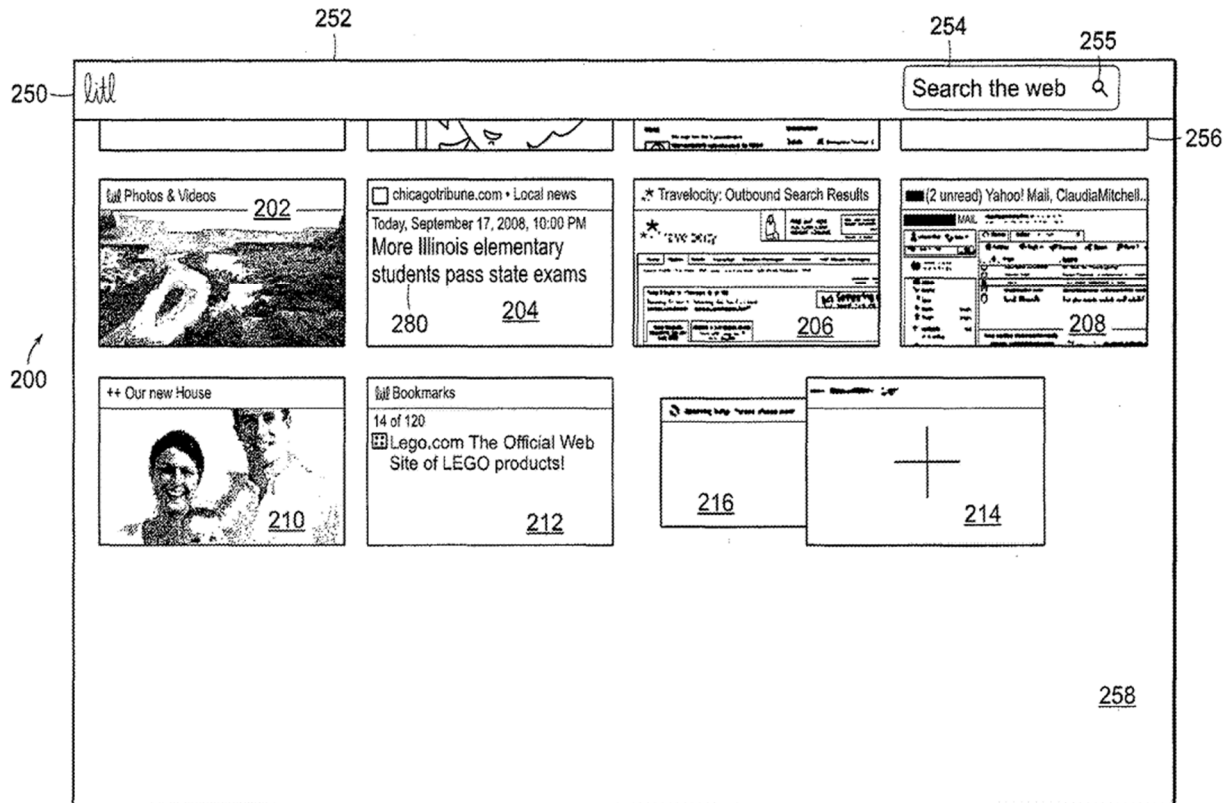


FIG. 2

42. In another embodiment, the interface is implemented on a “portable computer configurable between a plurality of display modes including a closed mode, a laptop mode[,] and an easel mode.” *Id.*, 6:43–46. In laptop mode, the keyboard is accessible to the user, as shown in Figure 1:

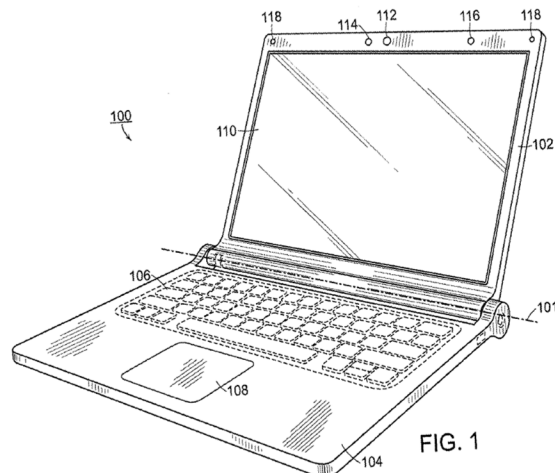


FIG. 1

43. In easel mode and frame mode, the laptop is pivoted so the keyboard is “concealed and not easily accessible” to the user, as shown below:

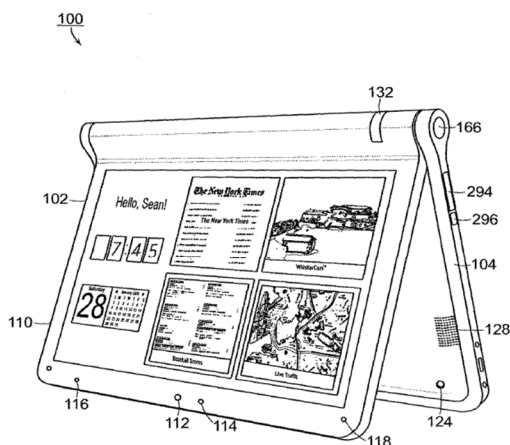


FIG. 4

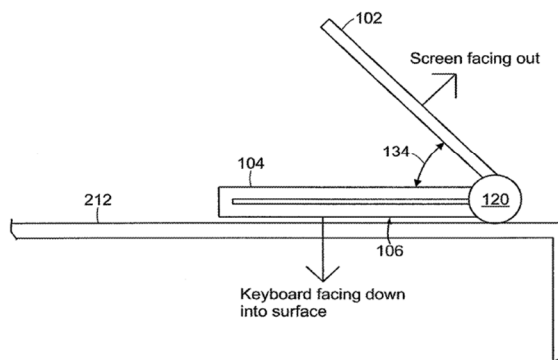


FIG. 26

Id., Figs. 4 (Easel Mode), 26 (Frame Mode), 25:1-3.

B. Prosecution History

1. '955 application

44. The '955 application had limited prosecution with no prior art-based rejections. *See* EX-1002. The examiner rejected the pending claims on the basis of double patenting in light of the '715 patent claims. EX-1002, 317. In doing so, the examiner explained that the independent claims “have no 102/103 rejection because

they are very similar to independent claim 1 of the allowed parent case,” referring to the ’715 patent. *Id.*, 319. The applicant filed a terminal disclaimer, and the examiner allowed the ’818 patent to issue. *Id.*, 396/495, 408/495.

2. ’715 patent prosecution

45. The ’715 parent patent was allowed after a single office action. IPR2024-00457, EX-1002.

46. In that Office Action, the Examiner rejected pending independent claim 1 as obvious over “Creating a Digital Home Entertainment System with Windows Media Center” (“Miller”) in view of U.S. Patent Publication No. 2008/0059888 (“Dunko”). I note that the Examiner found Miller taught a “plurality of views of a plurality of visual representations of computer content” because Windows Media Center has a start screen that displays all categories of content and an online spotlight that displays only online content. IPR2024-00457, EX-1002, 342-43.

47. The applicant then amended claim 1 to add the underlined limitations: “detect a current computer system configuration from at least a first computer system configuration where the keyboard is operable to receive input from an operator of the computer system to control the computer system and a second computer system configuration where the keyboard is inoperable to receive input from the operator of the computer system to control the computer system.” *Id.*, 392. The applicant argued the prior art failed to teach these limitations because Dunko’s device identified whether it was in portrait or landscape mode and not whether the keyboard was operable or inoperable. *Id.*, 399.

48. The Examiner then issued a Notice of Allowability. *Id.*, 417. In doing so, the Examiner maintained that Miller taught a plurality of views of content. *Id.*, 418. The Examiner also maintained that Dunko taught sensing a portrait or landscape orientation and determining the default mode of operation for that sensed orientation. *Id.*, 419. The Examiner, however, found this combination of references did not teach the limitations of the independent claims (which recited configurations with an operable or inoperable keyboard). *Id.*, 419-421.

C. Brief Summary of Prior Patent Office Proceedings Involving the '715 Patent

49. The '818 patent has not been subject to any prior post-grant proceedings (IPR or ex parte reexamination (“EPR”)), and PO did not assert the '818 patent in any district court litigation until February 2023. It is my understanding that PO sued Lenovo alleging infringement of the '715 patent in May 2020, and Lenovo subsequently filed an IPR petition challenging claims 1-20 of the '715 Patent. *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00786 (“-786 IPR”), Paper 1 (May 4, 2021). I had no involvement in that IPR. I understand that during that IPR, for purposes of its decision denying institution, the Board construed “plurality of views” as “referring to a plurality of ways of organizing visual representations of computer content” and found that that limitation “is distinct from merely providing a plurality of ways of displaying content (by, for example, changing display orientation, color, resolution, etc.).” *Id.*, Paper 6, 13-16.

50. I understand that Lenovo subsequently filed a request for ex parte

reexamination with the Patent Office, again challenging claims 1-20 of the '715 patent, based on four obviousness challenges. EX-1005. I understand the Office found all of those challenges raised a substantial new question of patentability (SNQ), but the Examiner subsequently issued a non-final office action rejecting claims 1-20 based only one of the SNQs. In reviewing the file history for the reexamination, I noted that in its response to the office action, PO argued (1) “the keyboard being inoperable to receive input means the keyboard is disabled, which is different from the keyboard being oriented so it is inaccessible”; and (2) “a plurality of views of a plurality of visual representations” was not met by different content being displayed. I also noted that in issuing a notice of intent to issue a reexamination certificate (NIRC), confirming claims 1-20, the Examiner agreed with (2) above, finding “the changing of content alone is not sufficient to meet the interpretation that has been established of a ‘plurality of views’ as ‘organizing visual representations of content differently.’” The reexamination certificate issued on January 19, 2023.

IX. CLAIM CONSTRUCTION

51. I have given all the claim terms of the Challenged Claims their plain and ordinary meaning, as would have been understood by a POSITA, at the time of the alleged invention, unless otherwise discussed below.

52. As I discussed above, in the -786 IPR (involving the '715 parent patent), for purposes of its institution decision, the Board construed a “plurality of views of a plurality of visual representations of computer content” as “referring to a plurality of

ways of organizing visual representations of computer content,” and the Board found that that limitation “is distinct from merely providing a plurality of ways of displaying content (by, for example, changing display orientation, color, resolution, etc.).” -786 IPR, Paper 6, 13-16. Because the Board denied institution, it did not further consider that construction based on a full trial record. *See id.* During the EPR (also involving the ’715 parent patent), the Examiner also clarified that the “plurality of views” limitation does not encompass merely changing to entirely different content. EX-1005, 1680.

53. In forming my opinions, I have applied the Board’s construction of “plurality of views of digital media content,” as clarified during the EPR.

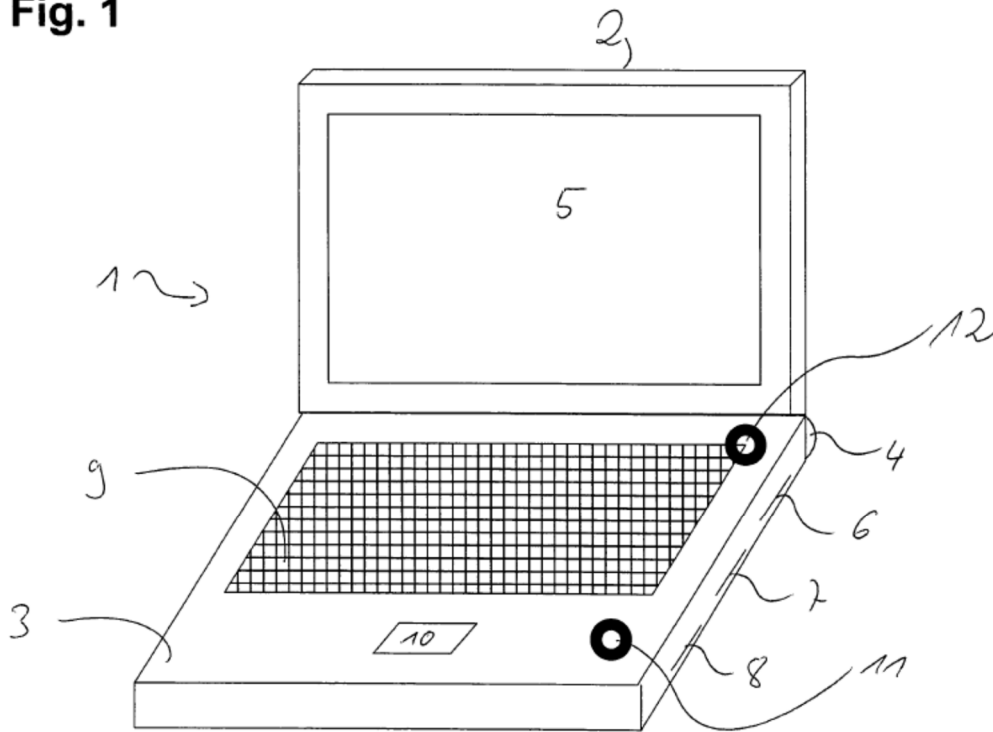
X. DETAILED EXPLANATION OF GROUNDS

A. Ground 1: Obviousness over Pröll and Martinez (Claims 1-4, 11-14)

1. Pröll (EX-1006)

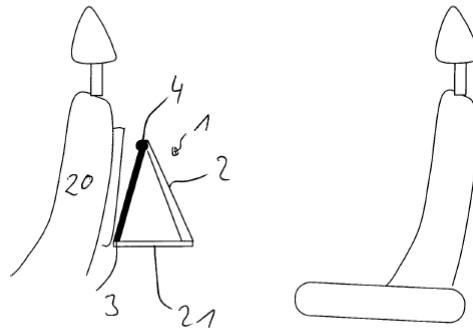
54. Pröll is directed to a “[m]obile data processing device,” such as a laptop, with two housing halves (one with a screen and one with an input unit, such as a keyboard) connected by a hinge that can rotate 360 degrees. *See* Pröll, Title, Abstract, claims 1, 3, 5. Figure 1 of Pröll is reproduced below:

Fig. 1



55. Figure 1 shows Pröll's device in a laptop configuration (housing half 2 pivoted less than 180°) where housing halves 2 and 3 can rotate “almost 360°” relative to one another using pivoting device 4. *Id.*, [0033]. Housing half 2 contains display device 5, and housing half 3 contains keyboard 9. *Id.*, [0034]. Other figures in Pröll show its device in other configurations (i.e., housing half 2 pivoted at varying degrees). *E.g., id.*, Fig. 6 (360°), Fig. 7 (270°), Fig. 8 (360°). Pröll describes using its Figures 6-8 in mobile environments such as a moving vehicle. *Id.*, [0051]-[0057]. Figure 7, for example, is reproduced below:

FIG. 7

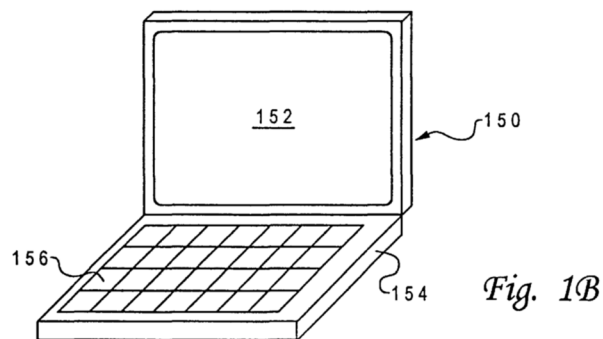


Pröll, Fig. 7 (rotated 270°).

56. Pröll discloses that it has a switch in pivoting device 4 to detect whether the housing half 2 has been pivoted towards housing half 3 by more than 180°; if so, the representation on the display device is rotated by 180° and the input devices, including keyboard 9, are automatically blocked. *Id.*, [0049]–[0050].

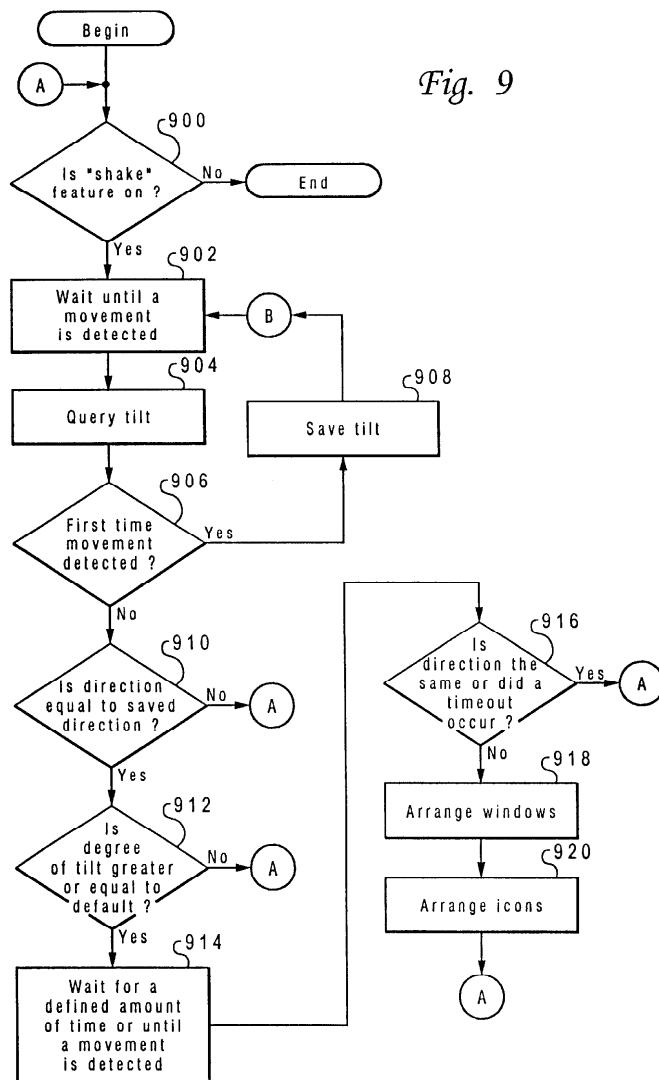
2. Martinez (EX-1007)

57. Martinez is directed to “altering the display of an object on a display device in a data processing system.” Martinez, Abstract. Martinez depicts a similar laptop as Pröll, in Fig. 1B reproduced below:



58. Martinez describes numerous ways it adjusts its display based on sensor

input, one of which is in response to a “shake,” reflected in Martinez’s Figure 9:



59. In this process, Martinez detects a shake (i.e., tilting the device containing the sensor to the left and right relative to the user) in steps 902-916. *Id.*, 6:5–31. If a shake is detected, “the process then arranges the windows (step 918). For example, the windows could be arranged in a tile or cascading fashion. Next, the icons are arranged (step 920). The icons can be arranged in any preselected manner the user or programmer desires.” *Id.*, 6:32–37.

3. Motivation to Combine

60. Pröll teaches a mobile processing device that displays different content views depending on how its housing halves, 2 and 3, are arranged relative to one another. Pröll, [0049]. Pröll teaches that housing half 2 may pivot toward housing half 3 by as much as 360°. *Id.*, [0049]–[0052]. Pröll also discloses adjusting the display on display device 5 based on the detected pivot rotation—e.g., rotating the display contents 180° when the pivot angle exceeds 270°. *Id.*, [0049]. Pröll’s mobile data processing device detects this pivot angle, or configuration of the two halves, “with a pure software solution, [or a] . . . realiz[ation] in hardware.” *Id.* [0053]. Pröll also contemplates different organizations of content for different configurations of the two housing halves. *Id.*, [0061] (explaining that display device 5 may be “realized as a touch screen . . . when used in [a] vehicle” as depicted in Figs. 7 and 8).

61. Although Pröll discloses adjusting the text and graphics on its GUI in a plurality of ways, Pröll is not explicit about the organization of content on its GUI. In my opinion, a POSITA would have been motivated to combine Pröll with Martinez such that Pröll’s GUI displays a different organization of content when its housing halves are arranged in various configurations.

62. Martinez teaches using a sensor to detect movement (i.e., “the shake feature”) and arranging (i.e., organizing) windows and/or icons, based on that movement. Martinez, 6:1-37. For example, Martinez discloses a process that can arrange windows in “a tile or cascading fashion” and arrange icons “in any preselected

manner the user or programmer desires.” Martinez, Fig. 9, 5:66-6:37; *see also id.*, 2:24-27. Both cascading and tiling are well-known graphical arrangements, which are discussed in computer graphics textbooks, and used to organize computer content in different ways. *See* Foley (EX-1021), 366 (discussing a “cascading hierarchy”), 426-27 (discussing various icon layouts). Examples of cascading (top) and tile (bottom) arrangements are depicted below.

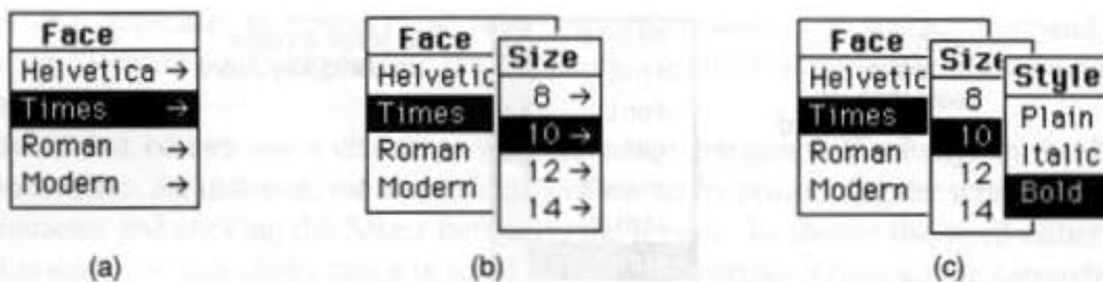


Fig. 8.10 A pop-up hierarchical menu. (a) The first menu appears where the cursor is, in response to a button-down action. The cursor can be moved up and down to select the desired typeface. (b) The cursor is then moved to the right to bring up the second menu. (c) The process is repeated for the third menu.

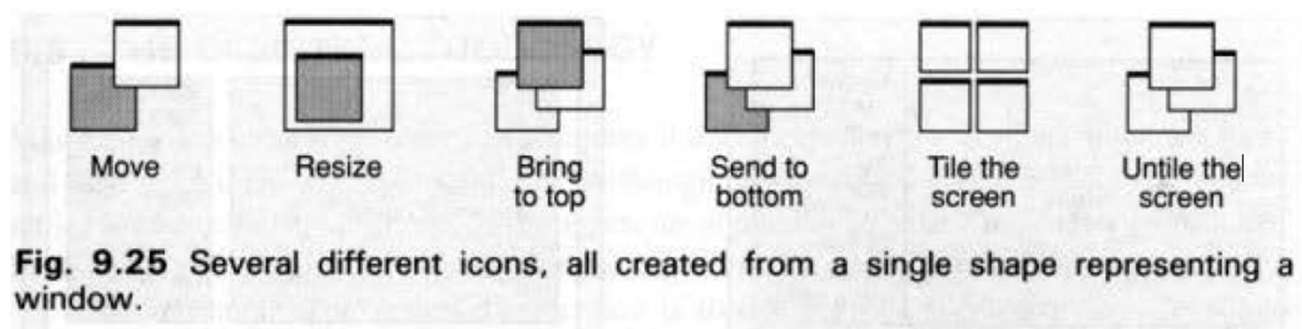


Fig. 9.25 Several different icons, all created from a single shape representing a window.

63. As evidenced by the above figures, in my opinion, a POSITA would have recognized tile and cascading as two different ways of organizing windows which would include “visual representations of computer content.” *See id.*, 366, 426-27. A window is typically thought of as a rectangular screen area that “act[s] as [a] virtual graphics terminal . . . running an application.” *Id.*, 2. Graphical interfaces have long

made use of windows and “almost all interactive application programs, even those for manipulating text (e.g., word processors) or numerical data (e.g., spreadsheet programs), use graphics extensively in the user interface and for *visualizing and manipulating the application-specific objects*.” *Id.* (emphasis added). Thus, in my opinion, a POSITA would have understood that the windows discussed in Martinez contain “selectable digital content,” “selectable computer operations,” and “passive digital content.” *See id.*; *see also* Martinez, 1:15-41 (explaining that GUIs include “icons, menus,” and “application programs”). Accordingly, in my opinion, Martinez organizes those visual representations into different arrangements when the windows are cascaded or tiled.

64. Similarly, Martinez discusses arranging icons “in any preselected manner.” Martinez, 6:35-37. In my opinion, a POSITA would have also understood that Martinez’ icons are “visual representations of computer content.” *Id.*, 1:34-37 (“A GUI is an interface system . . . by which a user interacts with a data processing system, system components, and/or system applications via windows or via ports, icons, menus, pointing devices, etc.”).

65. In my opinion, a POSITA would have been motivated to combine the teachings of Martinez with Pröll because Martinez teaches that it would be “advantageous to have a method and apparatus to detect various changes in orientation of hardware associated with a data processing system in which the display is altered in response to various changes in orientation of the hardware.” Martinez, 1:62-67. As

Martinez explains, GUIs are used “to provide an intuitive” interface to users and help simplify users’ interactions with complex data processing systems. *Id.*, 1:23-33. In my opinion, a POSITA would have understood that arranging the display to correspond to a new hardware configuration would ensure that the arrangement is best suited to the user’s needs. Indeed, it was well-known that “[t]he visual design of a user-computer interface affects both the user’s initial impression . . . and the system’s longer-term usefulness.” Foley, 418. In my opinion, a POSITA would have understood that organizing content to account for the manner in which a user interacts with the computer would increase the computer’s usefulness to the user. *Id.* (“Visual design comprises all graphic elements of an interface, including overall screen layout . . . [and] strives for clarity, consistency, and attractive appearance.”). And, as I discussed previously, Pröll already contemplates changing the organization of displayed content to simplify and improve the interface for a user. *See* Pröll, [0061] (implementing the display as a touchscreen interface when the pivot angle is 360°).

66. In addition, instead of Martinez’s shake feature, in my opinion, a POSITA would have been motivated to trigger Martinez’s views based on Pröll’s switch indicating rotation of Pröll’s two halves by more or less than 180°. *See* Pröll, [0049]-[0050]. Pröll and Martinez disclose similar systems with a laptop configuration of a computing device with display, keyboard, and processing components containing a hardware-based trigger that detects physical changes to the two halves of the device and responds to such changes with a different GUI display. The switch in Pröll is a sensor

that detects the degree of rotation and Martinez teaches rearranging a GUI based on a sensor “attached to the hardware of interest” that “provides numeric values to a register.” Martinez, 5:24-28. Thus, in my opinion, a POSITA would have been motivated to simply apply the known technique of rearranging the display in response to sensor data to improve the usability of Pröll. Further, in my opinion, a POSITA would have recognized that doing so would have allowed Pröll’s system to be more effectively used in different mobile environments, such as switching between cascading and tiled views (Martinez, 6:32-37) depending on the available precision of a user input from a keyboard at a stable, permanent work station or touching a screen while riding in a moving car (Pröll, Figs. 6-8, [0048]-[0051], [0057]). In my opinion, such a modification would have been well within the programming skills of a POSITA because the combination would require only reading a value from sensor data and using that value, via the processor executing instructions, to make changes to the display. Further, it would have been within the skills of a POSITA to program Pröll’s switch to rearrange windows as Martinez teaches because it was well known at the time of the invention to use mechanical multi-functional gravity and ball-detent hinge mechanisms like Pröll’s switch to interface with screen orientation processing software to automatically alter text and graphics on a screen, according to a desired layout. *See* Reavey (Ex. 1009) Fig. 7, 5:66–6:10, 6:33–36, 7:24–31; Pröll, ¶[0049] (switching a displayed view 180 degrees when that displayed view would otherwise be upside down).

67. Indeed, such “interrupt-driven interaction,” which allows applications to

respond to hardware events or input (e.g., sensor data) was commonly taught in graphics textbooks. *See* Foley, 42-43. Through interrupts, an “application enables one or more devices for input and then continues normal execution until interrupted by some input *event* (a change in a device’s state caused by user action); control then passes asynchronously to an interrupt procedure, which responds to the event.” *Id.* An event trigger may be defined for “each input device” and “the event trigger is the user action that causes an event to occur.” Thus, in my opinion, a POSITA would have been motivated to simply apply the known technique of rearranging the display in response to sensor data to improve the usability of Pröll. In my opinion, such a modification would have been well within the programming skills of a POSITA because the combination would require only reading a value from sensor data and using that value, via the processor executing instructions, to make changes to the display.

4. Claim 1

- a. ***1[/pre]: “At least one non-transitory computer-readable storage medium storing processor-executable instructions that, when executed by at least one processor in a computer system comprising a display and a keyboard and being configurable between a plurality of computer system configurations, cause the at least one processor to perform a method comprising:”***

68. To the extent it is limiting, in my opinion, Pröll discloses or suggests the preamble. Pröll discloses a mobile data processing device (“computer system”) that includes a display device 5 (“a display”) and a keyboard 9 (“a keyboard”). Pröll, Title, Abstract, claim 1, [0014], [0023], [0033]-[0034]. I have provided an annotated version of Pröll’s Figure 1 below:

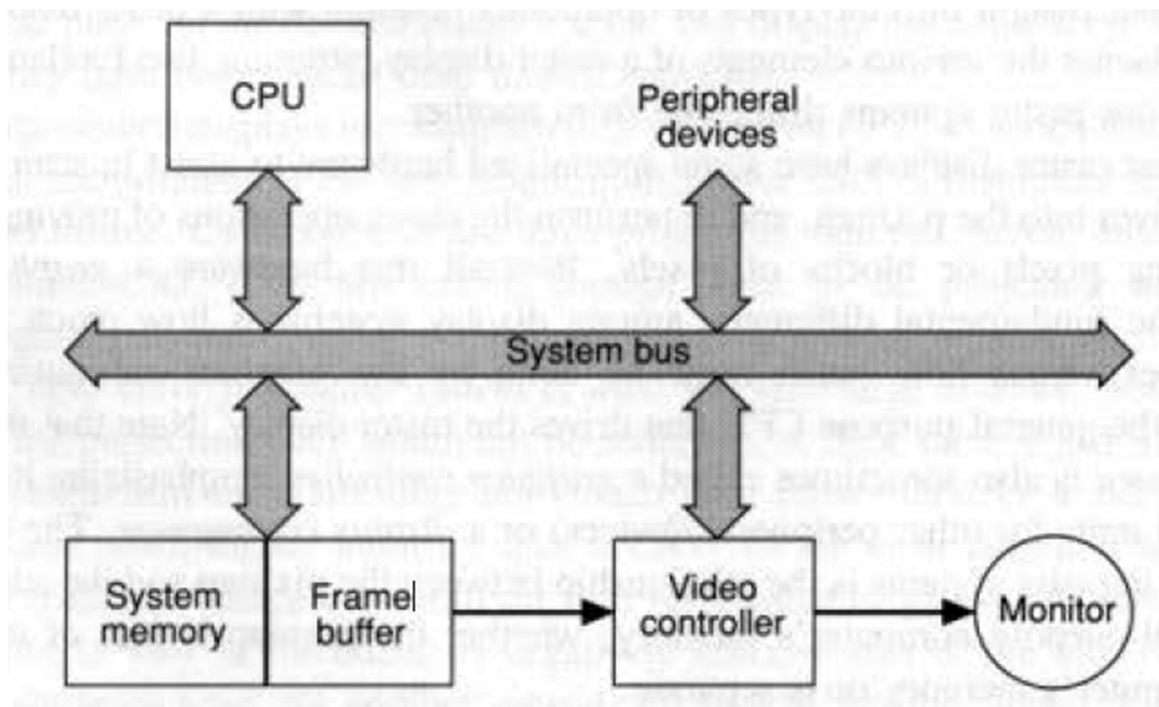
Fig. 1

Computer system including processor, computer readable storage medium (1)

69. In my opinion, Pröll also discloses or suggests “at least one processor.” *See* Pröll, [0002]. Specifically, in my opinion, a POSITA would have understood that Pröll’s computer system has a processor connected to a memory (“non-transitory computer-readable storage medium”). Pröll discloses that the second housing half 3 of the mobile data processing device 1 contains “[a] computing unit, a memory and various peripheral units and interfaces” Pröll, [0034]. In my opinion, a POSITA would have understood that the computing unit in Pröll is a processor. The computing unit is responsible for processing data and must execute instructions to do so, which is what a processor does. *See* ’818 patent, 68:28-47 (explaining that the processor executes programs and reads data from memory); Pröll, [0034], [0041].

70. In addition, in my opinion, Pröll teaches that the first and second housing halves are “an arrangement of a commercially [available] known portable computer system...” *Id.*, [0033]. A POSITA would have understood that commercially available laptops and notebooks commonly included a processor connected to a memory. *See* EX-1023 (HP Manual) at 1-2 (listing the various processor models, hard drive

capacities, and DRAM sizes associated with various laptop models). Having such a computer system with a processor connected to a memory was well-known at the relevant time. *See, e.g.*, Martinez, Fig. 2 (item 202 (Pentium, i.e., processor), 206, 208, 210 (memory), connected through item 200 (system bus)). Further, it was well known that the processor, or CPU, made use of memory to execute instructions and was connected to the memory via a system bus (“storing processor-executable instructions”). *See* Foley, 166-67, Fig. 4.18 (reproduced below).



71. Further, in my opinion, Pröll’s housing halves are “configurable between a plurality of computer system configurations.” In the first configuration, the halves are rotated less than 180° (e.g., the laptop configuration of Fig. 2) and the keyboard 9 is not blocked. Pröll, [0036] (“Fig. 2 shows a lateral plan view of a . . . device 1 folded open to 90° degrees, wherein the first housing half 2 and the second housing half 3 . . . assume an angle of approx. 90° degrees in reference to each other.”).

72. In the second configuration, the halves are rotated more than 270° (e.g., the configurations in Figs. 6, 8, or 10) and the keyboard 9 is “automatically blocked.” *See* Pröll, [0045] (“When swiveling both housing halves . . . [360 °], the keyboard 9 . . . and the input units 10, 11 thus come to rest on the exterior. The display device 5 is then located on the opposite side.”), [0045]. In addition, Pröll’s mobile data processing device contains “a switch [] arranged in the hinge 4, by means of which it . . . detect[s] that the first housing half 2 is swiveled in reference to the second housing half 3 by more than 270°” and detects whether the degree of rotation goes below 180 ° (i.e., detects a new configuration). Pröll, [0049].

b. *1[a]: “displaying a plurality of views of a plurality of visual representations of computer content;”*

73. In my opinion, the Pröll-Martinez combination teaches or suggests “displaying a plurality of views.” As I discussed above, I understand that the Board previously construed a “plurality of views” as “referring to a plurality of ways of organizing visual representations of computer content”; this limitation does not encompass merely changing the display’s orientation or changing to wholly different content. *See* Section IX. Further, the ’818 patent teaches that “visual representations” can include cards (’818 patent, Figs. 2 and 16, 15:62–16:19), “hot keys,” and clickable graphics (*id.*, 48:6–35).

74. Pröll teaches a mobile processing device that displays different content views depending on how its housing halves, 2 and 3, are arranged relative to one another. Pröll, [0049]. Pröll teaches that housing half 2 may pivot toward housing half

3 by as much as 360°. *Id.*, [0049]–[0052]. Pröll also discloses adjusting the display on display device 5 based on the detected pivot rotation—e.g., rotating the display contents 180° when the pivot angle exceeds 270°. *Id.*, [0049]. Pröll’s mobile data processing device detects this pivot angle, or configuration of the two halves, “with a pure software solution, [or a] . . . realiz[ation] in hardware.” *Id.* [0053]. Pröll also contemplates different organizations of content for different configurations of the two housing halves. *Id.*, [0061] (explaining that display device 5 may be “realized as a touch screen . . . when used in [a] vehicle” as depicted in Figs. 7 and 8).

75. Although Pröll discloses adjusting the text and graphics on its GUI in a plurality of ways, Pröll is not explicit about the organization of content on its GUI. In my opinion, a POSITA would have been motivated to combine Pröll with Martinez such that Pröll’s GUI displays a different organization of content when its housing halves are arranged in various configurations.

76. Martinez teaches using a sensor to detect movement (i.e., “the shake feature”) and arranging (i.e., organizing) windows and/or icons, based on that movement. Martinez, 6:1-37. For example, Martinez discloses a process that can arrange windows in “a tile or cascading fashion” and arrange icons “in any preselected manner the user or programmer desires.” Martinez, Fig. 9, 5:66-6:37; *see also id.*, 2:24-27. Both cascading and tiling are well-known graphical arrangements, which are discussed in computer graphics textbooks, and used to organize computer content in different ways. *See* Foley, 366 (discussing a “cascading hierarchy”), 426-27 (discussing

various icon layouts). Examples of cascading (top) and tile (bottom) arrangements are depicted below.

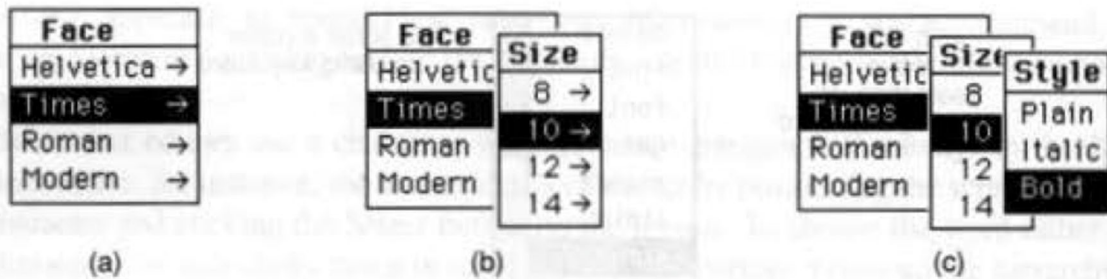


Fig. 8.10 A pop-up hierarchical menu. (a) The first menu appears where the cursor is, in response to a button-down action. The cursor can be moved up and down to select the desired typeface. (b) The cursor is then moved to the right to bring up the second menu. (c) The process is repeated for the third menu.

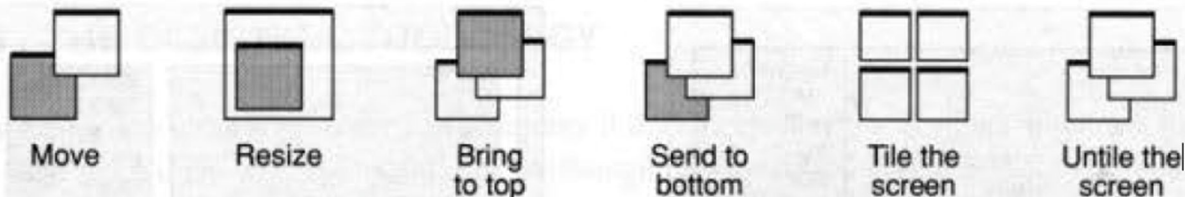


Fig. 9.25 Several different icons, all created from a single shape representing a window.

77. As evidenced by the above figures, in my opinion, a POSITA would have recognized tile and cascading as two different ways of organizing windows which would include “visual representations of computer content.” *See id.*, 366, 426-27. A window is typically thought of as a rectangular screen area that “act[s] as [a] virtual graphics terminal . . . running an application.” *Id.*, 2. Graphical interfaces have long made use of windows and “almost all interactive application programs, even those for manipulating text (e.g., word processors) or numerical data (e.g., spreadsheet programs), use graphics extensively in the user interface and for *visualizing and manipulating the application-specific objects.*” *Id.* (emphasis added). Thus, in my opinion, a POSITA would have understood that the windows discussed in Martinez

contain “visual representations of computer content.” Accordingly, in my opinion, Martinez organizes those visual representations into different arrangements when the windows are cascaded or tiled.

78. Similarly, Martinez discusses arranging icons “in any preselected manner.” Martinez, 6:35-37. In my opinion, a POSITA would have also understood that the computer content represented by Martinez’ icons are “visual representations of computer content.” *Id.*, 1:34-37 (“A GUI is an interface system . . . by which a user interacts with a data processing system, system components, and/or system applications via windows or via ports, icons, menus, pointing devices, etc.”). Further, a POSITA would have been motivated to combine the teachings of Martinez with Pröll for the reasons I discuss above in Section X.A.3.

79. In addition, in my opinion, a POSITA would have found the combination of Martinez’s views in Pröll’s system to be a predictable improvement upon Pröll’s system. Martinez’s teachings would have allowed users to optimize one of the views rendered by Pröll’s physical reconfigurations according to the rearrangement of windows and icons that Martinez teaches, and particularly to accommodate Pröll’s configurations, as shown in Figures 6-8, designed to be used with a touchscreen in a mobile environment (and where use of a keyboard would be impractical or even dangerous). And as I discussed immediately above, such modifications are within the skill of a POSITA. For example, when a user rotates the two halves of Pröll’s computing device to the point where the keyboard is blocked (i.e., when Pröll’s two

halves are rotated by more than 180° relative to each other), switching views as Martinez teaches would have allowed a user to predictably reorganize the interface to display larger, tile-sized icons on a touchscreen for a user to tap while the keyboard is inaccessible (e.g., when the user is riding in a car). It is well-known that touch optimized interfaces “use[] large buttons and icons to make it easy to find and open your favorite applications.” See, e.g., Ex. 1035 at 3; Ex. 1036 at 6:15-20 (“Some applications are designed specifically for touch screen technology, often having larger icons and links”). Conversely, when Pröll’s device is rotated to a more conventional laptop configuration, the user could reorganize the view to smaller, cascading windows on the screen as Martinez teaches, allowing the user to use the keyboard to transition between, and interact with, the smaller views using more precise inputs. See, e.g., Martinez, 6:32–37 (disclosing window and icon arrangement by user preference); Pröll, ¶[0061] (disclosing the display screen may be “realized as a touch screen”). A smaller screen would make precision inputs difficult with a touch-only input. See Foley, 359 (explaining that accuracy of touch input depends on screen size, screen resolution, and finger width).

- c. ***1[b]: “detecting a current computer system configuration from at least a first computer system configuration of the plurality of computer system configurations where the keyboard is operable to receive input from an operator of the computer system to control the computer system and a second computer system configuration of the plurality of computer system configurations where the keyboard is inoperable to receive input from the operator of the computer system to control the computer system”***

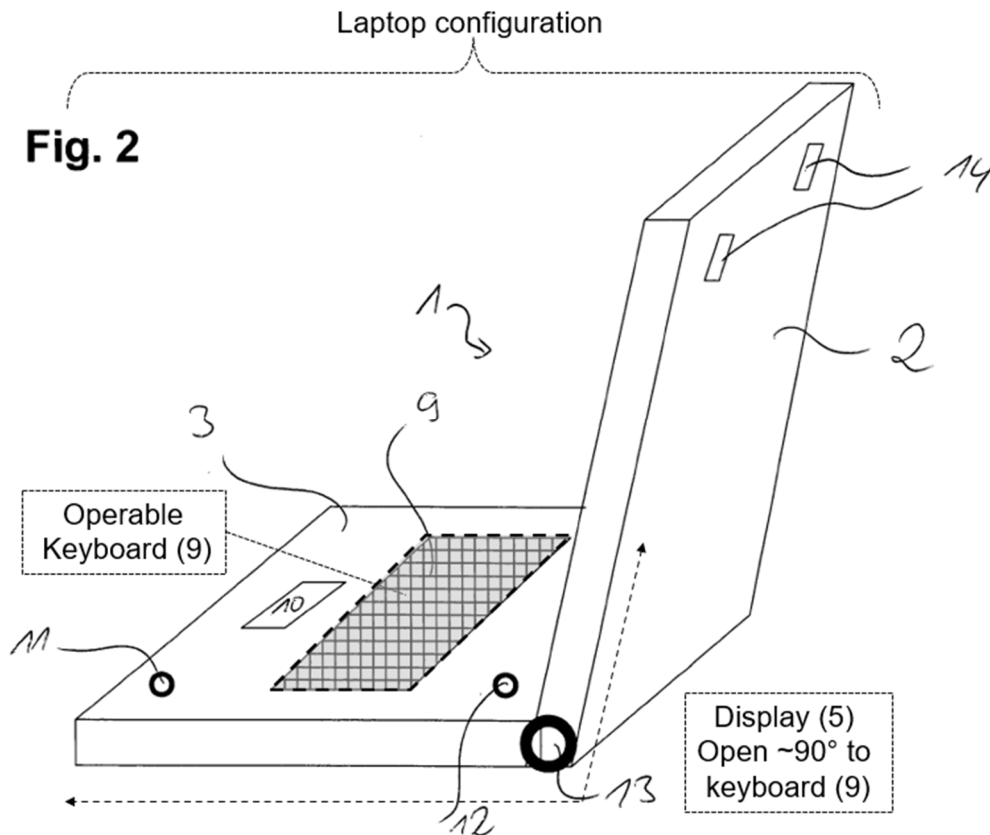
80. In my opinion, Pröll teaches claim 1[b]. As I discussed in Section X.A.4.a,

Pröll teaches a “plurality of computer system configurations.” Pröll’s mobile data processing device includes a switch in pivoting device 4 that detects whether housing half 2 has been pivoted towards housing half 3 by more than 180°. Pröll, [0049]-[0050]. When that occurs, keyboard 9 is “automatically blocked.” *Id.*, [0049]-[0050]. Thus, in my opinion, Pröll discloses detecting a first and second “computer system configuration.” In the first configuration, the halves are rotated less than 180° (e.g., the laptop configuration of Fig. 2) and the keyboard 9 is not blocked (“a first computer system configuration . . . where the keyboard is operable to receive input from an operator of the computer system to control the computer system”). Pröll, [0036] (“Fig. 2 shows a lateral plan view of a . . . device 1 folded open to 90° degrees, wherein the first housing half 2 and the second housing half 3 . . . assume an angle of approx. 90 ° degrees in reference to each other.”).

81. In the second configuration, the halves are rotated more than 270° (e.g., the configurations in Figs. 6, 8, or 10) and the keyboard 9 is “automatically blocked” (“a second computer system configuration where the keyboard is inoperable to receive input from the operator of the computer system to control the computer system”). *See* Pröll, [0045] (“When swiveling both housing halves . . . [360 °], the keyboard 9 . . . and the input units 10, 11 thus come to rest on the exterior. The display device 5 is then located on the opposite side.”), [0050]. Pröll’s mobile data processing device contains “a switch [] arranged in the hinge 4, by means of which it . . . detect[s] that the first housing half 2 is swiveled in reference to the second housing half 3 by more than 270

°” and detects whether the degree of rotation goes below 180°. Pröll, [0049].

82. Figure 2, which I have reproduced below, shows Pröll’s laptop configuration (i.e., housing halves rotated less than 180°):



83. Figures 6, 8, and 10, which I have reproduced below, show configurations where the first housing half is rotated more than 270°. When this rotation “is detected [i.e., via the switch in the pivoting device], input via the input units 9, 10, 11 is automatically blocked.” Pröll, [0050].

FIG. 6

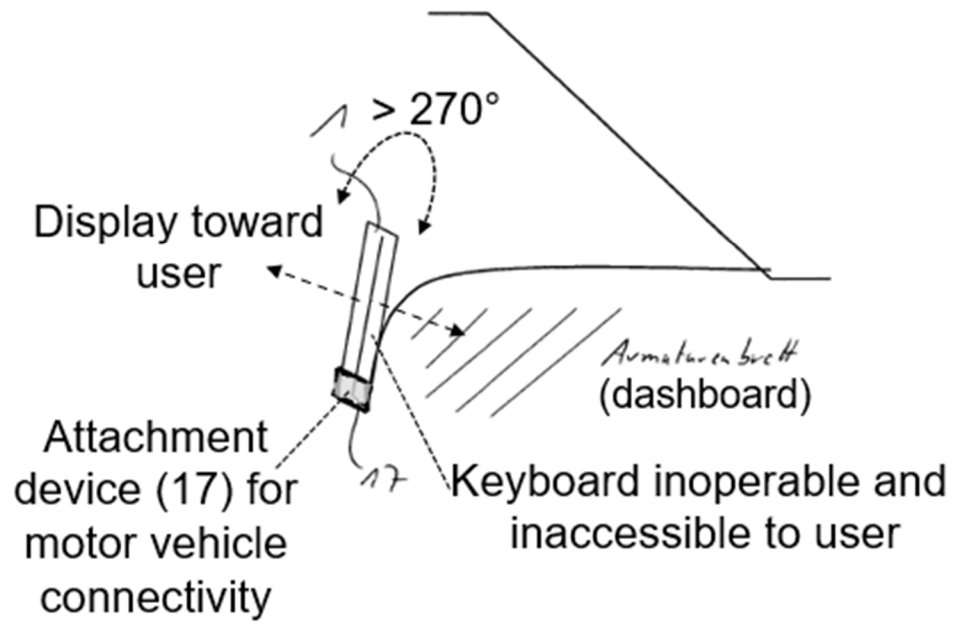
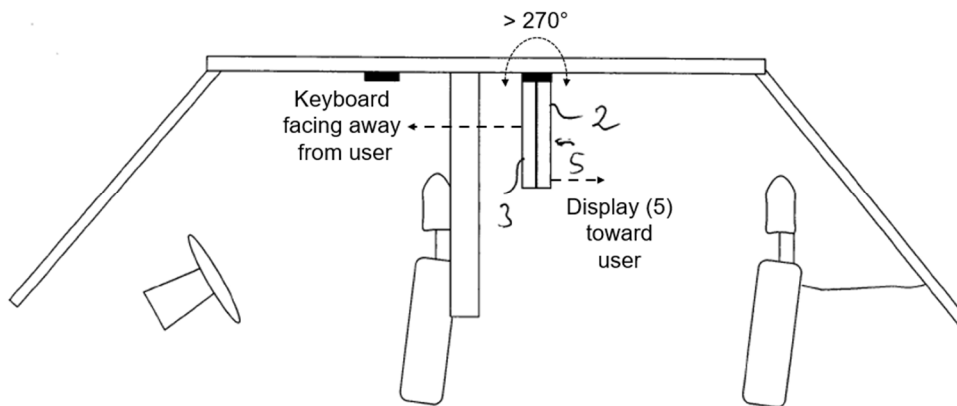
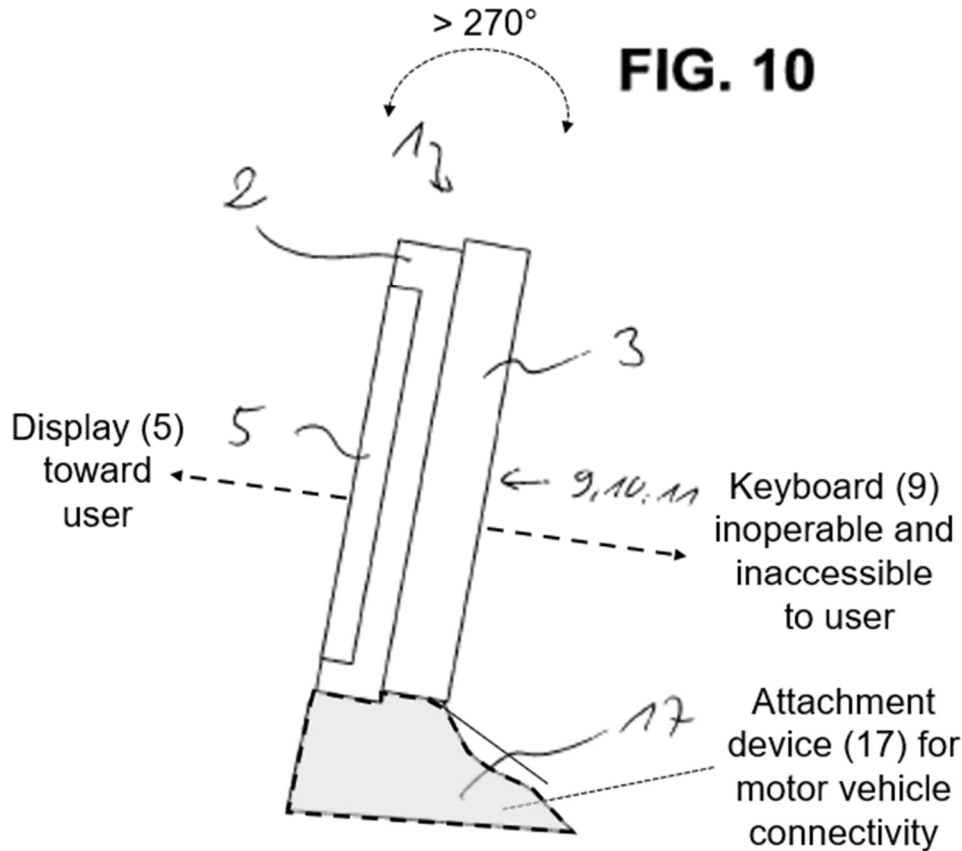


FIG. 8





- d. ***1[c]: “selecting one of the plurality of views for display on the computer system in response to the detected current computer system configuration”***

84. In my opinion, the Pröll-Martinez combination teaches or suggests “select[ing] one of the plurality of views.” As I discuss above in Section X.A.4.c, in my opinion, Pröll teaches changing the orientation of the display in response to the detected computer system configuration, and Martinez teaches changing to one of a plurality of views (e.g., organization of windows and/or icons) based on detected motion of the computer system. Specifically, Martinez teaches a process that arranges windows or icons in a “preselected manner” after detecting tilt from sensor data. Martinez, 5:24-30, 6:32-37. In other words, Martinez “select[s] one of the plurality of views” in response to sensor data. Pröll, as I discuss above in Section X.A.4.c, discloses a switch

in pivoting device 4 that detects whether housing half 2 has been rotated towards housing half 3 by more than 270° (i.e. “detect[s] current computer system configuration”). Pröll, [0049]. Pröll also teaches automatically blocking keyboard 9 if the rotation is more than 270°, and then rotates the display 180°, “since otherwise the display would be upside down.” Pröll, [0049]-[0050].

85. It is also my opinion that a POSITA would have found it obvious to combine Pröll with the teachings in Martinez regarding the selection and transition to one of a plurality of views (e.g., cascading or tiled windows, or a custom arrangement of icons). *See* Section X.A.3. As I discussed above for Section X.A.3, in my opinion, a POSITA would have been motivated to apply Martinez’s views to be triggered based on Pröll’s switch indicating rotation of Pröll’s two halves by more or less than 270° to predictably improve usability of Pröll’s system. Thus, in my opinion, the Pröll-Martinez combination discloses selecting and transitioning to cascading windows, tiled windows, or “any preselected” arrangement of icons (“select one of the plurality of views for display on the computer system”) in response to detecting that the first housing half is rotated by more than 270° (“in response to the detected current computer system configuration”).

e. ***1[d] and 1[e]: “transitioning to the selected one of the plurality of views; and displaying the selected one of the plurality of views”***

86. In my opinion the Pröll-Martinez combination teaches or suggests 1[d] and 1[e]. As I discussed for 1[a], Pröll discloses adjusting the display on display device 5

based on the detected pivot rotation—e.g., rotating the display contents 180° when the pivot angle exceeds 270° (“transitioning to” and “displaying” the selected view). *Id.*, [0049]. In addition, Martinez teaches a process that arranges windows or icons in a “preselected manner” after detecting tilt from sensor data. Martinez, 5:24-30, 6:32-37. In other words, Martinez “transition[s] to the selected one of the plurality of views” and “display[s] the selected one of the plurality of views” in response to sensor data.

87. In my opinion, a POSITA would have found it obvious to combine Pröll with the teachings in Martinez regarding the selection and transition to one of a plurality of views (e.g., cascading or tiled windows, or a custom arrangement of icons). *See* Section X.A.3. As I discussed above for Section X.A.3, in my opinion, a POSITA would have been motivated to apply Martinez’s views to be triggered based on Pröll’s switch indicating rotation of Pröll’s two halves by more or less than 180° to predictably improve usability of Pröll’s system. Thus, in my opinion, the Pröll-Martinez combination discloses selecting and transitioning to cascading windows, tiled windows, or “any preselected” arrangement of icons in response to detecting that the first housing half is rotated by more than 180°.

5. Claim 2:

- a. **“The at least one non-transitory computer-readable storage medium of claim 1, wherein each of the first and second computer system configurations comprise a physical positioning of the display relative to the keyboard.”**

88. In my opinion, the Pröll-Martinez combination teaches claim 1 (*see*

Section X.A.4), and Pröll teaches the additional limitations of claim 2. As I discussed for 1[pre], Pröll teaches multiple configurations based on rotating two housing halves—one containing a display device and the other containing a keyboard (“first and second computer system configurations comprise a physical positioning of the display relative to the keyboard”). Pröll, [0049]–[0050]. For example, if the housing containing Pröll’s keyboard is rotated more than 180°, Pröll will change from its laptop configuration to one where the keyboard is disabled and the display is rotated 180°, as shown below in annotated Figures 2 and 8, respectively. *Id.*, Figs. 2 and 8 (both annotated), [0049] (“in the form of use as a portable computer with an angle between the first and second housing halves 2, 3 of more than 180° degrees, . . . the display on the display device must be rotated by 180° degrees since otherwise the display would be upside down”).

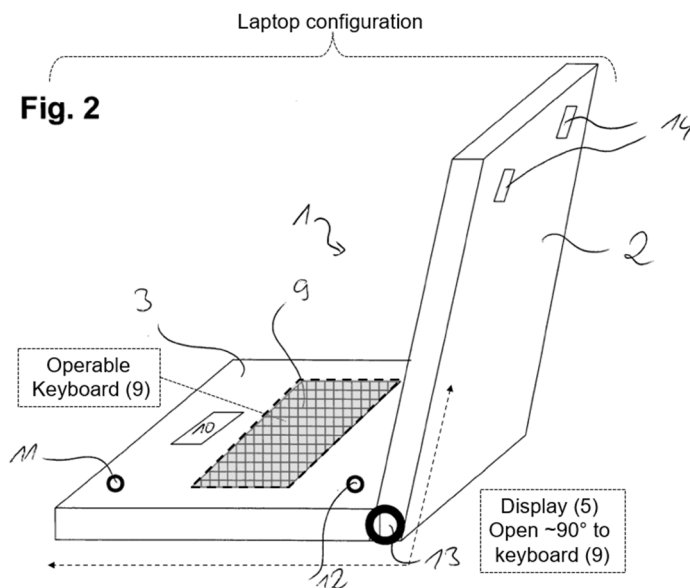
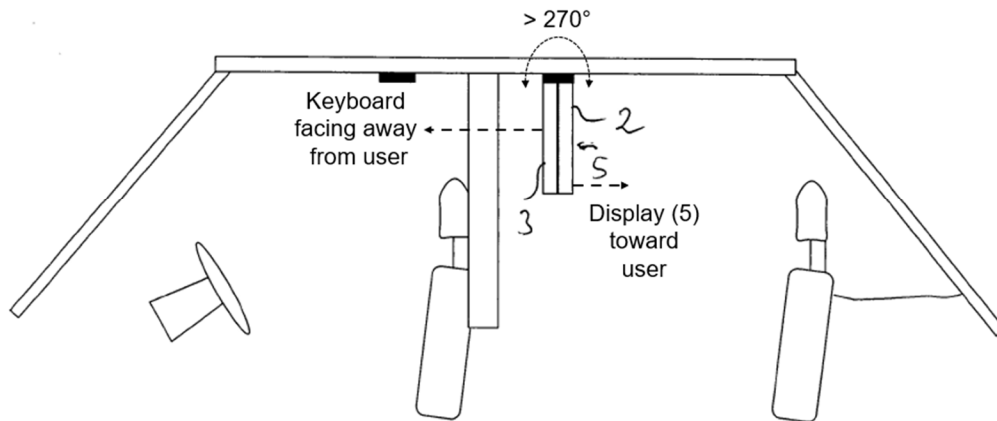


FIG. 8



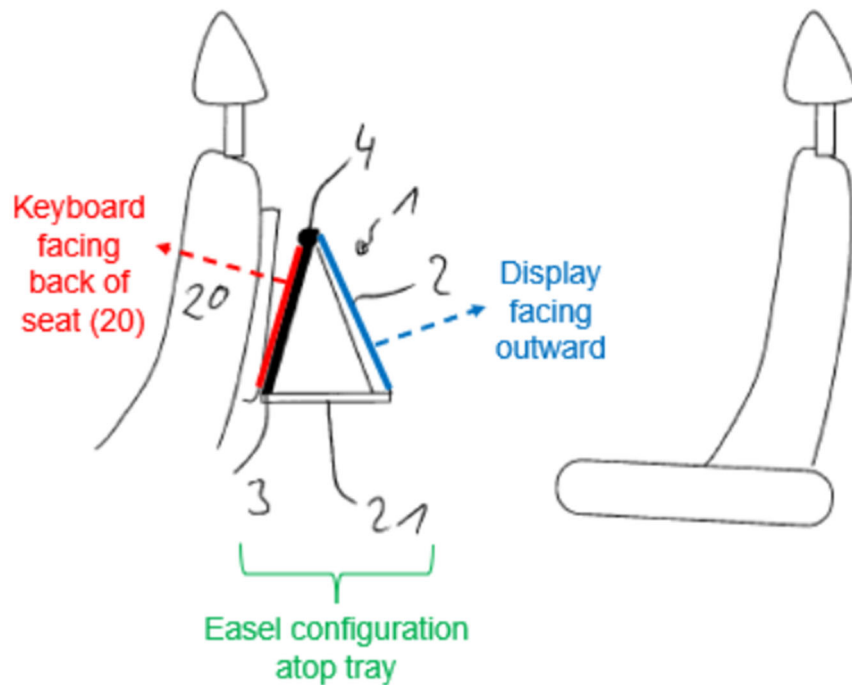
89. Pröll’s teachings for the additional limitations of claim 2 are the same as I discussed for claim 1 and, in my opinion, a POSITA would have been motivated to combine those teachings with Martinez for the same reasons I discussed above in Section X.A.3.

6. Claim 3:

- a. “The at least one non-transitory computer-readable storage medium of claim 1, wherein the first computer system configuration is a laptop mode where the keyboard is oriented to be accessible to the operator and wherein the second computer system configuration is an easel mode or a frame mode where the keyboard is oriented to be inaccessible to the operator.”**

90. In my opinion, the Pröll-Martinez combination teaches claim 3. As I discuss above in Section X.A.4.c, Pröll teaches a laptop configuration (housing halves rotated less than 180°) and several configurations where the housing halves are rotated more than 270°. Figure 2 of Pröll, reproduced below, depicts “a laptop mode where the keyboard is oriented to be accessible to the operator.”

FIG. 7



92. In my opinion, Pröll’s teachings for the additional limitations of claim 3 are similar to those I discussed for claim 1, and a POSITA would have been motivated to combine those teachings with Martinez for the same reasons I discussed above in Section X.A.3.

7. Claim 4:

- a. **“The at least one non-transitory computer-readable storage medium of claim 1, wherein the plurality of views includes a home view and wherein the method further comprises displaying the home view.”**

93. In my opinion, the Pröll-Martinez combination teaches claim 1 (*see* Section X.A.4), and also teaches the additional limitations of claim 4. I note that the ’818 patent does not explicitly define a “home view,” but it explains that a home view can be “configured to organize a plurality of content modes” or can “organiz[e] a

plurality of visual representations of digital content.” See, e.g., ’818 patent, 4:6–9, 4:47–51; see also *id.*, 4:58–60 (“[T]he home view comprises a header display and a body display.”). As I discussed in Section X.A.4.d, Pröll automatically alters its display based on the rotation of its two housing halves, and Martinez teaches that it can rearrange its icons and windows based on sensing movement of the computer (shaking, etc.).

94. In my opinion, a POSITA would have understood that the views discussed in Martinez include a “home view.” Martinez discloses a process that can arrange windows in “a tile or cascading fashion” and arrange icons “in any preselected manner the user or programmer desires.” Martinez, Fig. 9, 5:66–6:37; see also *id.*, 2:24–27. As I explain for 1[a], a POSITA would have recognized tile and cascading as two different ways of organizing windows which would include “visual representations of computer content.” See Foley, 366, 426–27. Thus, in my opinion, a POSITA would have understood that such a view is a “home view” consistent with the ’818 patent’s broad disclosure. Further, in my opinion, a POSITA would have been motivated to combine Martinez’s views with Pröll for the same reasons I discussed above in Section X.A.3.

8. Claim 11

- a. ***11[pre]: “At least one non-transitory computer-readable storage medium storing processor-executable instructions that, when executed by at least one processor in a computer system comprising a display and a keyboard and being configurable between a plurality of computer system configurations, cause the at least one processor to perform a method comprising:”***

95. 11[pre] recites a similar limitation to 1[pre], which I discuss in Section

X.A.4.a. In my opinion, 11[pre] is taught in the prior art for the same reasons discussed in that Section.

b. 11[a]: “displaying a plurality of views of a plurality of visual representations of computer content;”

96. 11[a] recites a similar limitation to 1[a], which I discuss in Section X.A.4.b. In my opinion, 11[a] is taught in the prior art for the same reasons discussed in that Section.

c. 11[b]: “detecting a current computer system configuration from at least a first computer system configuration from the plurality of computer system configurations where the keyboard is positioned to receive input from an operator of the computer system and a second computer system configuration from the plurality of computer system configurations where the keyboard is not positioned to receive input from the operator of the computer system;”

97. 11[b] recites a similar limitation to 1[b], which I discuss in Section X.A.4.c. In my opinion, 11[b] is taught in the prior art for the same reasons discussed in that Section.

d. 11[c]: “selecting one of the plurality of views for display on the computer system in response to the detected current computer system configuration; and”

98. 11[c] recites a similar limitation to 1[c], which I discuss in Section X.A.4.d. In my opinion, 11[c] is taught in the prior art for the same reasons discussed in that Section.

e. 11[d]: “transitioning the display component to the selected one of the plurality of views.”

99. 11[d] recites a similar limitation to 1[d], which I discuss in Section X.A.4.e. In my opinion, 11[d] is taught in the prior art for the same reasons discussed

in that Section.

9. Claim 12:

- a. “The at least one non-transitory computer-readable storage medium of claim 11, wherein each of the first and second computer system configurations comprise a physical positioning of the display relative to the keyboard.”**

100. I discuss claim 11 in Section X.A.8. Claim 12 recites a similar limitation to claim 2, which I discuss in Section X.A.5. In my opinion, claim 12 is taught in the prior art for the same reasons discussed in that Section.

10. Claim 13:

- a. “The at least one non-transitory computer-readable storage medium of claim 11, wherein the first computer system configuration is a laptop mode where the keyboard is oriented to be accessible to the operator and wherein the second computer system configuration is an easel mode or a frame mode where the keyboard is oriented to be inaccessible to the operator.”**

101. I discuss claim 11 in Section X.A.8. Claim 13 recites a similar limitation to claim 3, which I discuss in Section X.A.6. In my opinion, claim 13 is taught in the prior art for the same reasons discussed in that Section.

11. Claim 14:

- a. “The at least one non-transitory computer-readable storage medium of claim 11, wherein the plurality of views includes a home view and wherein the method further comprises displaying the home view.”**

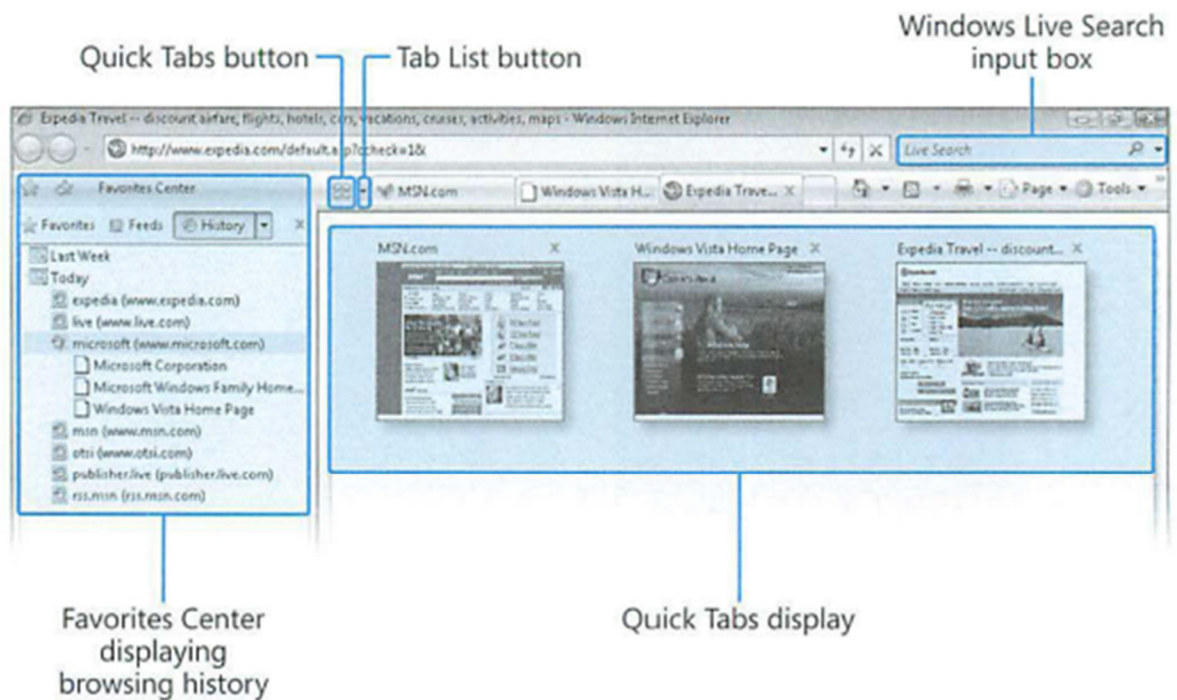
102. I discuss claim 11 in Section X.A.8. Claim 14 recites a similar limitation to claim 4, which I discuss in Section X.A.7. In my opinion, claim 14 is taught in the

prior art for the same reasons discussed in that Section.

B. Ground 2: Obviousness over Pröll and Preppernau (Claims 1–4 and 11–14)

1. Preppernau (EX-1008)

103. Preppernau is a Microsoft January 2007 publication (*see* EX-1015) detailing step-by-step instructions for operating the Windows Vista operating system (“OS”) by Microsoft. Preppernau, Title, xi. In particular, Preppernau discloses tab-based internet browsing organized in multiple ways. *Id.*, 182. As one example, a figure from Chapter 6 is reproduced below.⁵ *Id.*

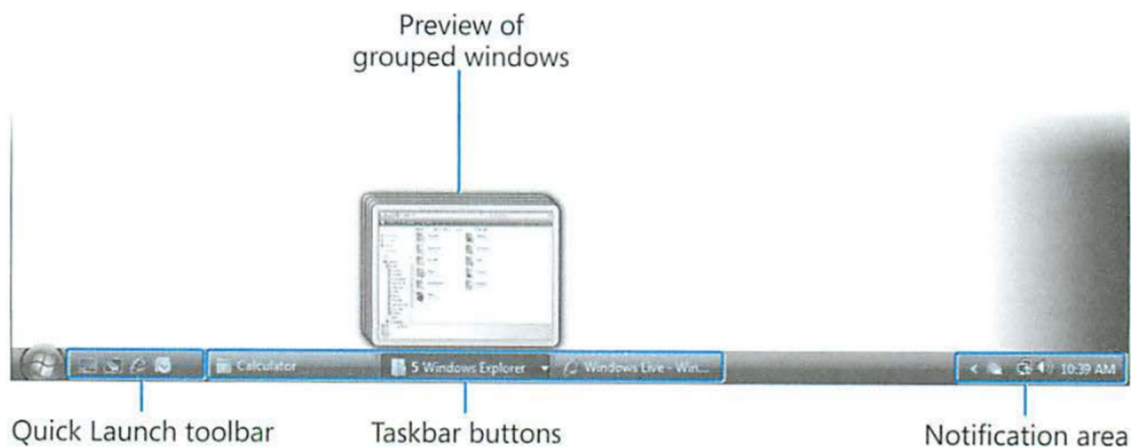


104. As shown, Preppernau teaches the use of a “Favorites Center” that “contains [1] links you have saved to Web sites, folders, and files; [2] links to RSS feeds

⁵ All blue annotations in Preppernau figures are original; I have made any further annotations in separate color.

you have subscribed to; and [3] a record of your internet browsing history.” Preppernau, 182; *see also* ’818 patent, 68:15-19 (“[V]isual representations of online content that are mapped to for example the most frequently accessed sites on the recipient’s home computer.”). Preppernau also teaches the use of a “Quick Tabs display” that “displays screenshots of all web pages currently open.” *Id.*

105. In addition, Preppernau discloses interface tools in Windows Vista that help a user navigate the applications on their computer, including a “taskbar” at the bottom of the user’s screen, shown below. *Id.*, 46.



106. Preppernau teaches that the taskbar button “displays a thumbnail of the window (or windows) it represents,” allowing a user to:

- Display one window by clicking the taskbar button and then in the list, clicking the window you want to display.
- Display all the windows in the group by right-clicking the taskbar button and then clicking the arrangement you want:
- Cascade displays the windows on top of each other, with the title bar of each window visible and the contents of only the top window visible.
- Show Windows Stacked displays the content of all the windows arranged in a grid, with more windows stacked vertically than horizontally. For example, eight windows are arranged in two columns of four.
- Show Windows Side By Side displays the content of all the windows

arranged in a grid, with more windows stacked horizontally than vertically. For example, eight windows are arranged in four columns of two.

Id., 47.

2. Motivation to Combine

107. In my opinion, a POSITA also would have been motivated to combine the teachings of Preppernau with Pröll. Like Pröll, Preppernau aims to improve the way a user interacts with an electronic device that contains large collections of data by “increas[ing] the efficiency with which [users] can move among sites [they] are currently viewing or have viewed in the past, and to make it easier to find . . . the information [they] need” Preppernau, 182; *see* Pröll, 61. Further, in my opinion, a POSITA would have understood that “key goals in user-interface design are increase in speed of learning, . . . reduction of error rate, encouragement of rapid recall of how to use the interface, and increase in attractiveness” and, thus, would have been motivated to include teachings from Preppernau that further improved the way a user interacts with the Pröll combination. *See* Foley, 391-92.

108. In addition, in my opinion, a POSITA would have understood that making changes to the GUI elements, as taught by Preppernau, merely applied known techniques (e.g., arranging the layout of icons and applications on a desktop or application objects within an application window) to yield predictable results (e.g., increased usability). *See* Foley, 426 (“Individual elements of a screen not only must be carefully designed, but also, to work together, must all be well placed in an overall context.”). Pröll discloses how to change the GUI on a screen in response to the configuration of the computer device, and Preppernau teaches different ways of

organizing content that a POSITA would have recognized as beneficial to implement in Pröll's device. Preppernau's **tools** and **tool bars**, for example, aggregate useful tools for interacting with the application and, thus, advantageously "*minimize the eye movements* necessary as the user acquires the various units of information required for a task, and [] *minimize the hand movements* required" to access information. *Id.*, 421 (emphasis in original).

109. Further, in my opinion, a POSITA would have been motivated to use the Windows Vista OS, which Preppernau discusses, with Pröll. As I discuss in Section X.A.4.a, Pröll teaches that the first and second housing halves are "an arrangement of a commercially [available] known portable computer system..." Pröll, [0033]. A POSITA would have understood that commercially available laptops and notebooks commonly ran, or supported, Windows operating systems. *See, e.g.*, EX-1023 (HP Manual) at 1-2 (supporting Windows XP Home Edition or Windows XP Professional, varying by model). In addition, Preppernau teaches that Windows Vista is suitable for operation on tablet computers, including devices with displays that could receive input via a user's touch or pen. Preppernau, xiv, xxxiii, 142–47 (instructing how to configure Tablet PC options). Specifically, Preppernau teaches that "[a] variety of new and improved features for working with a Tablet PC are built in to Windows Vista" *Id.*, 142. Pröll discloses a tablet configuration (i.e., housing halves rotated 360°) and a POSITA, in my opinion, would have been motivated to use Windows Vista with Pröll to take advantage of the improved Tablet features that it offered. *See id.*; *see also* Pröll,

[0059], [0061] (“[T]he display device 5 of the mobile data processing device 1 is realized as a touch screen. The display device 5 can then be used as an input medium.”).

3. Claim 1

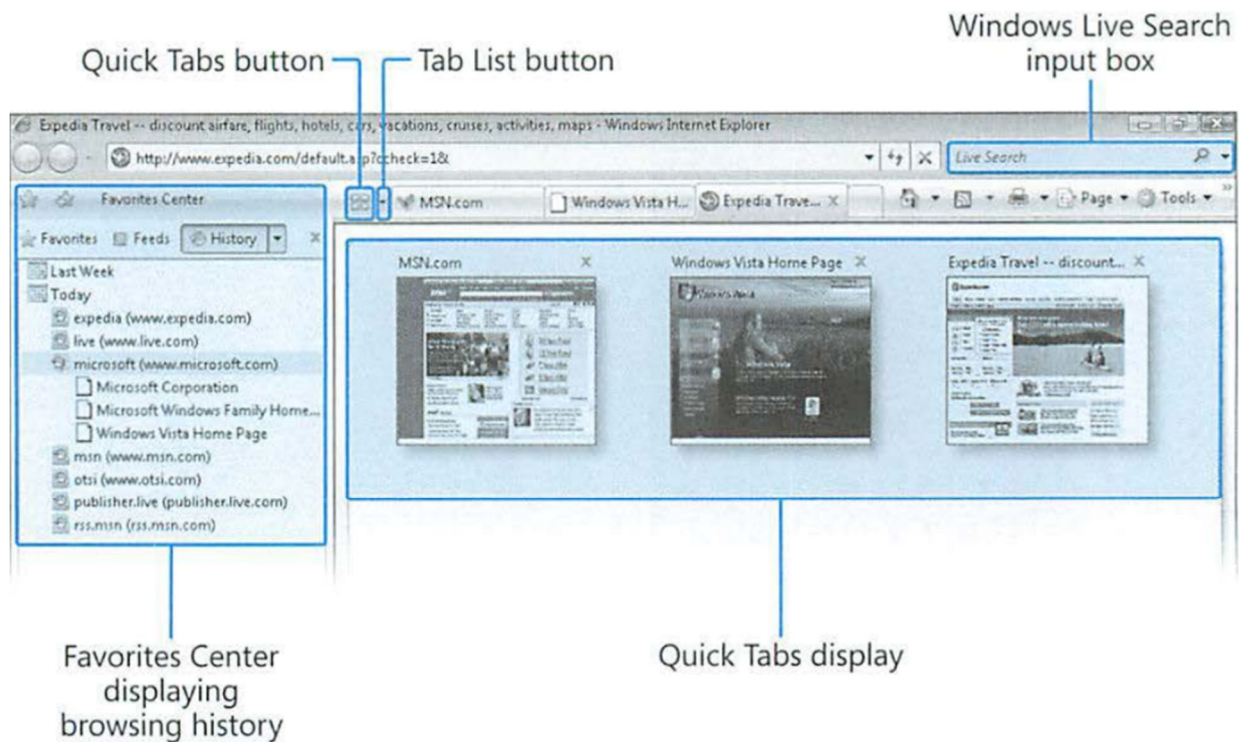
- a. ***1[pre]: “At least one non-transitory computer-readable storage medium storing processor-executable instructions that, when executed by at least one processor in a computer system comprising a display and a keyboard and being configurable between a plurality of computer system configurations, cause the at least one processor to perform a method comprising:”***

110. In Section X.A.4.a, I explained that Pröll teaches 1[pre].

- b. ***1[a]: “displaying a plurality of views of a plurality of visual representations of computer content;”***

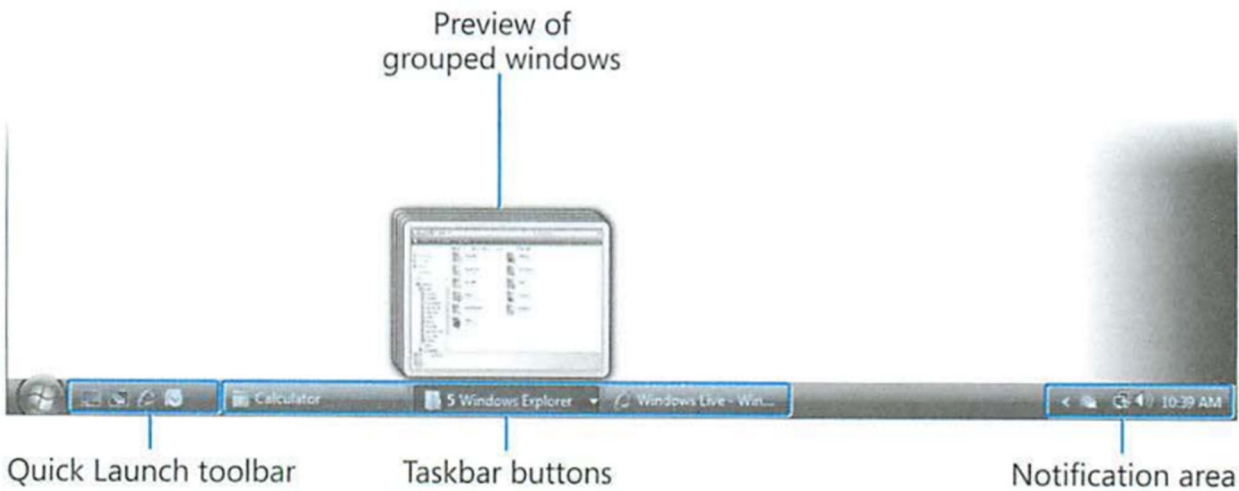
111. In my opinion, Pröll-Preppernau teaches 1[a]. As I discussed above, Pröll’s device displays a first view when operated as a “laptop” and a second view when rotated more than 180°, but Pröll does not explicitly discuss the organization of content on its GUI. See Section X.A.4.b. A POSITA would have been motivated, in my opinion, to look to Preppernau for ways to display different organizations of content, including to augment Pröll’s device when its keyboard is disabled.

112. Preppernau teaches multiple ways to navigate and organize content (“visual representations of computer content”) on a user’s computer. For example, Preppernau documents Windows Internet Explorer at that time, as shown below. Preppernau, 182.

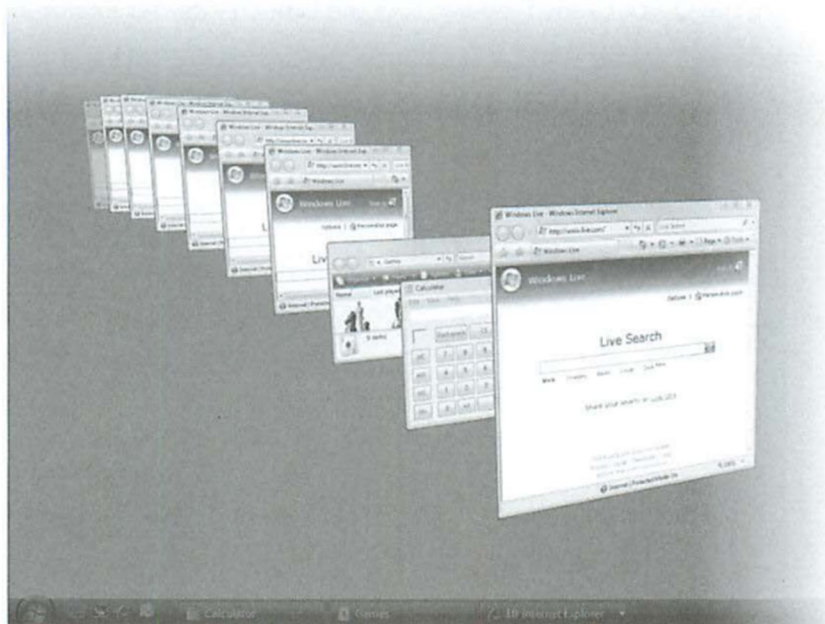


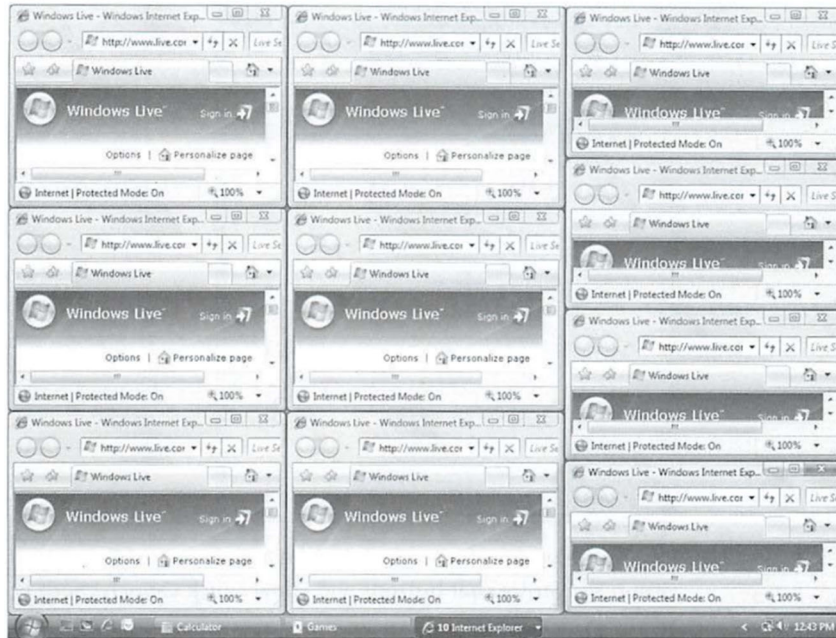
113. Preppernau’s “Quick Tabs” feature displays a thumbnail of all web pages the user is currently viewing, allowing them to easily select a particular page they may have misplaced. Preppernau, 182. Preppernau’s “Favorites Center” includes three ways—“Favorites,” “Feeds,” and “History” tabs—to organize websites a user frequents or follows. Preppernau, 182. As the above image shows, digital content is represented in several ways, including by listing URLs, titles of webpages, and thumbnails (“visual representations of computer content”). *Id.* As the ’818 patent teaches, computer content can “comprise[] online content viewed through a web browser.” *See* ’818 patent, 38:3-5. The aforementioned digital content is viewed through a web browser and acts as a link to web content (i.e., webpages). Thus, in my opinion, a POSITA would have understood the above image from Preppernau to show “visual representations of computer content.” And Preppernau’s taskbar permits a user to organize groups of

windows in various ways, with one example shown below. Preppernau, 46.



114. Preppernau's taskbar allows a user to display all windows in a group of applications, cascade displays of windows, arrange windows in a grid, and/or arrange windows side-by-side. *Id.*, 46–47. As another example, Preppernau teaches the use of a “Quick Launch toolbar” that can display a user's active windows in various configurations, as shown below. *Id.*, 50-51.





115. In my opinion, a POSITA would have been motivated to combine the teachings of Pröll and Preppernau for the reasons I discussed in Section X.B.2 above. In addition, in my opinion, a POSITA would have found the combination of Preppernau's GUI elements in Pröll's system to be a predictable improvement upon Pröll's system. Preppernau's teachings would have allowed users to optimize one of the GUIs rendered by Pröll's physical reconfigurations according to the rearrangement of windows and icons that Preppernau teaches (Preppernau, 46-47, 50-51), and particularly to accommodate Pröll's configurations (as shown in Figures 6-8), designed to be used with a touchscreen in a mobile environment (and where use of a keyboard would be impractical or even dangerous). For example, when a user rotates the two halves of Pröll's computing device to the point where the keyboard is blocked (i.e., when Pröll's two halves are rotated by more than 180° relative to each other), switching to a Quick Tabs view as Preppernau teaches would have allowed a user to predictably

reorganize the interface to display larger, tile-sized icons on a touchscreen for a user to tap while the keyboard is inaccessible (e.g., when the user is riding in a car). Preppernau, 142 (“A variety of new and improved features for working with a Tablet PC are built in to Windows Vista . . .”). It is well-known that touch optimized interfaces “use[] large buttons and icons to make it easy to find and open your favorite applications.” See, e.g., Ex. 1035 at 3; Ex. 1036 at 6:15-20 (“Some applications are designed specifically for touch screen technology, often having larger icons and links . . .”). Conversely, when Pröll’s device is rotated to a more conventional laptop configuration, the user could reorganize the view to the grid arrangement as Preppernau teaches, allowing the user to use the keyboard to transition between, and interact with, the smaller views using more precise inputs. See, Preppernau 46-47; Pröll, ¶[0061] (disclosing the display screen may be “realized as a touch screen”). A smaller screen would make precision inputs difficult with a touch-only input. See Foley, 359 (explaining that accuracy of touch input depends on screen size, screen resolution, and finger width).

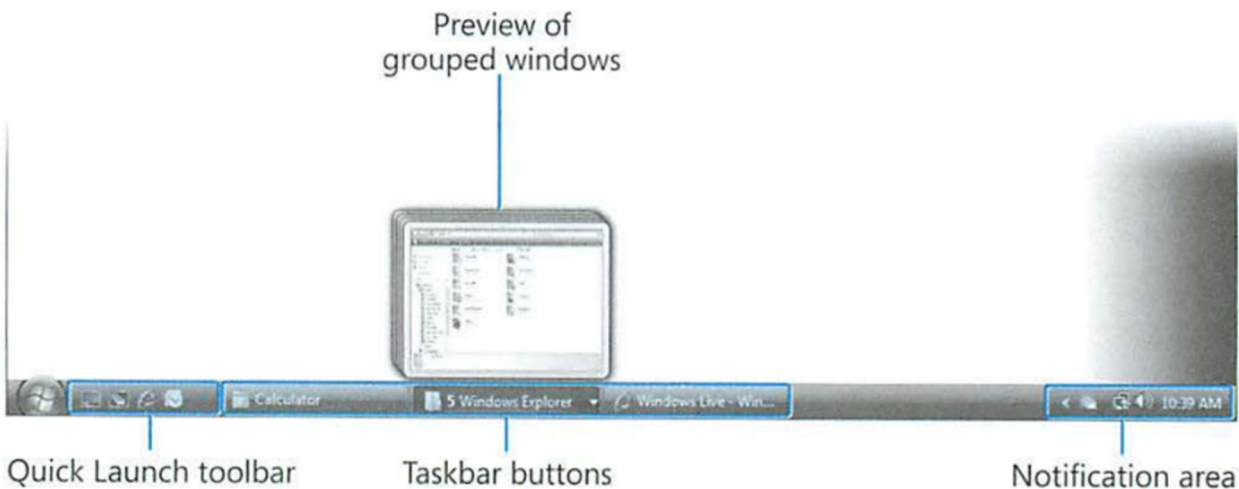
- c. ***1[b]: “detecting a current computer system configuration from at least a first computer system configuration of the plurality of computer system configurations where the keyboard is operable to receive input from an operator of the computer system to control the computer system and a second computer system configuration of the plurality of computer system configurations where the keyboard is inoperable to receive input from the operator of the computer system to control the computer system;”***

116. As I discussed in Section X.A.4.c, in my opinion, Pröll discloses 1[b].

- d. *1[c]: “selecting one of the plurality of views for display on the computer system in response to the detected current computer system configuration;”*

117. In my opinion, the Pröll-Preppernau combination teaches 1[c]. As I discussed in Section X.A.4.d, Pröll teaches adjusting the display on display device 5 based on the detected pivot rotation—e.g., rotating the display contents 180° when the pivot angle exceeds 270° (selecting a view “in response to the detected current computer system configuration”). *Id.*, [0049]. Pröll’s mobile data processing device detects this pivot angle, or configuration of the two halves, “with a pure software solution, [or a] . . . realiz[ation] in hardware.” *Id.* [0053]. Pröll also contemplates different organizations of content for different configurations of the two housing halves. *Id.*, [0061] (explaining that display device 5 may be “realized as a touch screen . . . when used in [a] vehicle” as depicted in Figs. 7 and 8).

118. Pröll is not, however, explicit about the organization of content on its GUI. In my opinion, a POSITA would have been motivated to combine Pröll with Preppernau such that Pröll’s GUI displays a different organization of content when its housing halves are arranged in various configurations. *See* Section X.B.2. Preppernau, for example, teaches that its taskbar can organize windows into multiple configurations, which is itself a “view” that is selected, as shown below. Preppernau, 46.



119. Preppernau also teaches that a user can select to “[d]isplay all the windows in the group,” “[c]ascade displays the windows on top of each other,” “display[] the content of all the windows arranged in a grid, with more windows stacked vertically than horizontally” or “display[] the content of all the windows arranged in a grid, with more windows stacked horizontally than vertically.” Preppernau, 47. In my opinion, a POSITA would have been motivated to combine Pröll and Preppernau to predictably improve the usability of Pröll’s system for the reasons I discussed in Section X.B.2.

- e. ***1[d] and [e]: “transitioning to the selected one of the plurality of views; and displaying the selected one of the plurality of views.”***

120. In my opinion, the Pröll-Preppernau combination teaches 1[d] and 1[e]. As I discuss in Section X.B.3.c, Pröll teaches changing the orientation of the display in response to the detected computer system configuration. Further, as I discuss for 1[a] and 1[c], a POSITA would have found it obvious to display one of the plurality of views taught in Preppernau when Pröll’s device detects a change in its configuration. See Sections X.B.3.b and X.B.3.d.

4. **Claim 2:**

- a. **“The at least one non-transitory computer-readable storage medium of claim 1, wherein each of the first and second computer system configurations comprise a physical positioning of the display relative to the keyboard.”**

121. In my opinion, the Pröll-Preppernau combination teaches claim 1 (*see* Section X.B.3), and Pröll teaches the additional limitations of claim 2 (*see* Section X.B.3.c). Pröll’s teachings for the additional limitations of claim 2 are the same as I discussed for claim 1, and a POSITA would have been motivated to combine those teachings with Preppernau for the same reasons I discussed above in Section X.B.2.

5. **Claim 3:**

- a. **“The at least one non-transitory computer-readable storage medium of claim 1, wherein the first computer system configuration is a laptop mode where the keyboard is oriented to be accessible to the operator and wherein the second computer system configuration is an easel mode or a frame mode where the keyboard is oriented to be inaccessible to the operator.”**

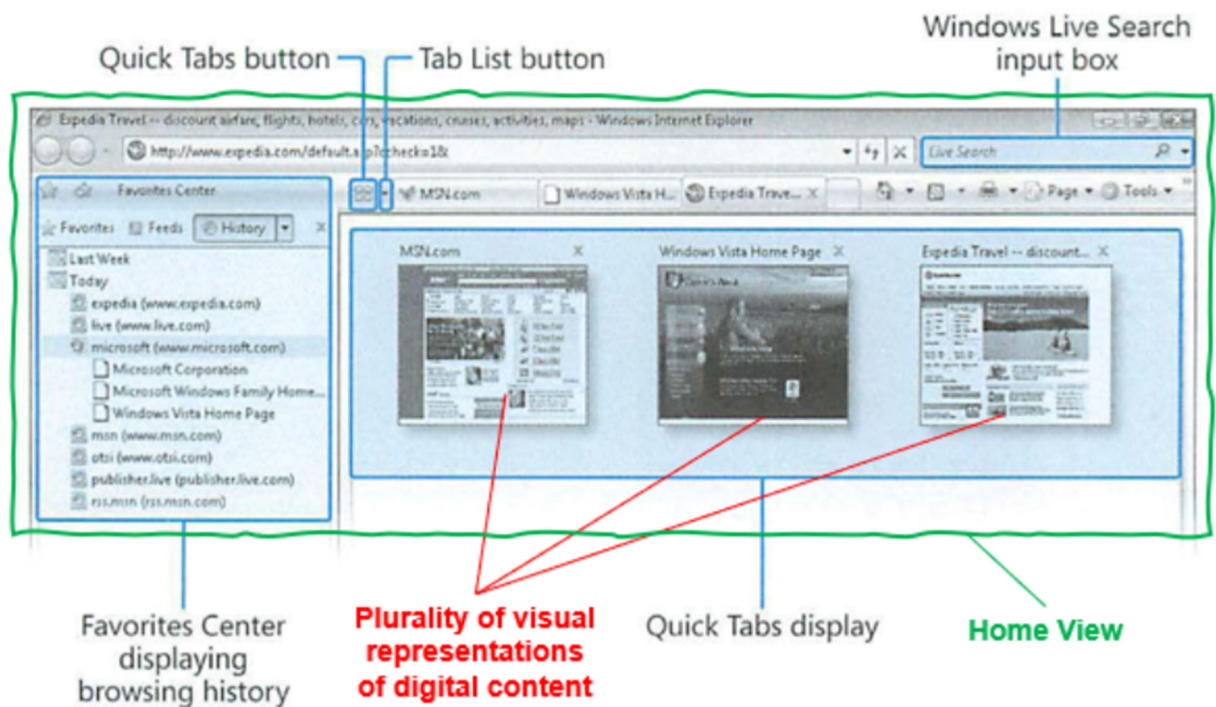
122. In my opinion, the Pröll-Preppernau combination teaches claim 1 (*see* Section X.B.3), and Pröll teaches the additional limitations of claim 3 (*see* Section X.B.3.c). Pröll’s teachings for the additional limitations of claim 3 are similar to those I discussed for claim 1, and a POSITA would have been motivated to combine those teachings with Preppernau for the same reasons I discussed above in Section X.B.2.

6. Claim 4:

- a. **“The at least one non-transitory computer-readable storage medium of claim 1, wherein the plurality of views includes a home view and wherein the method further comprises displaying the home view.”**

123. In my opinion, Pröll-Preppernau combination teaches claim 1 (*see* Section X.B.3), and the additional limitations of claim 4. I note that the '818 patent does not explicitly define a “home view,” but it explains that a home view can be “configured to organize a plurality of content modes” or can “organiz[e] a plurality of visual representations of digital content.” *See, e.g.*, '818 patent, 4:6–9, 4:47–51; *see also id.*, 4:58-60 (“[T]he home view comprises a header display and a body display.”).

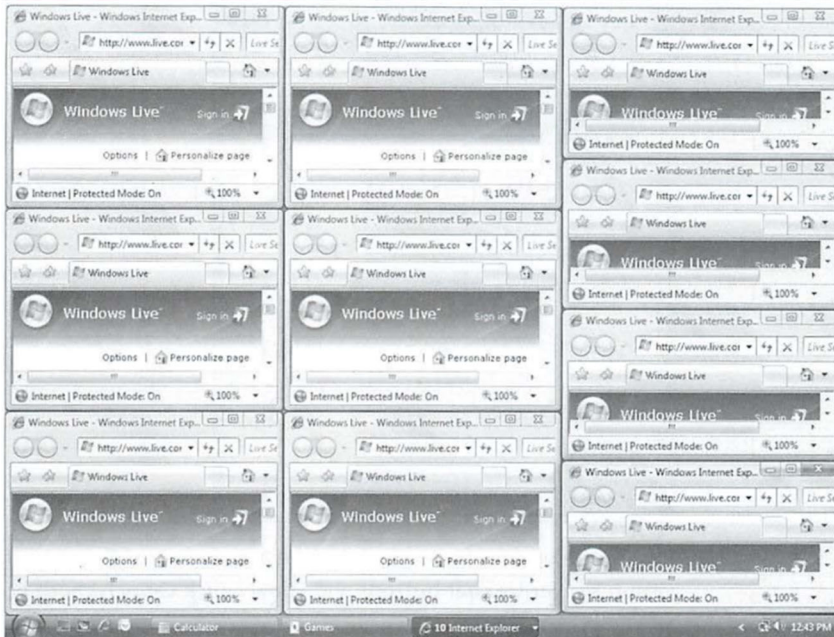
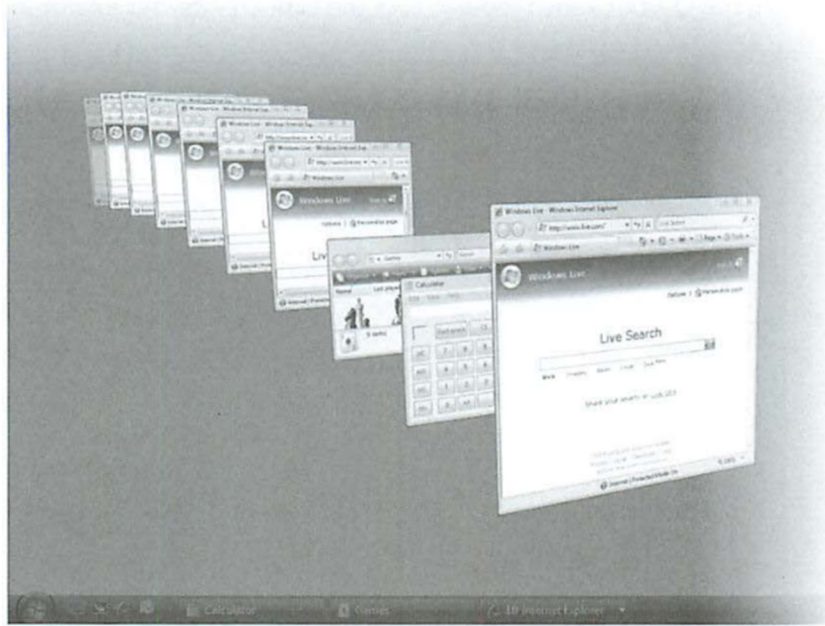
124. Pröll teaches changing the display based on detecting that the housing halves have rotated into a different configuration, and Preppernau teaches multiple ways to organize content, including through the use of a home view that displays other groupings of content. Specifically, Preppernau teaches a **“Quick Tabs display” below tool bars and tools** that arranges current, open web page-linked **thumbnail screenshots** in a grid-type layout (both being (“home views”) on a user’s computer screen (“displaying the home view”). Preppernau, 182. This is shown in the annotated figure below. *Id.*



125. Preppernau also teaches that its Taskbar can display various groupings of windows, as shown below. *Id.*, 46-47.



126. Preppernau further teaches the use of a “Quick Launch toolbar” that can display a user’s windows in various configurations, as shown below. *Id.*, 50, 51.



127. Each of these ways of organizing content disclosed in Preppernau discloses a “home view” that a POSITA would have found obvious to incorporate into Pröll. As I explained for 1[a], a POSITA would have recognized the views taught in Preppernau as different ways of organizing “visual representations of computer content.” Thus, a POSITA would have understood that such a view is a “home view” consistent with the ’818 patent’s broad disclosure. In addition, in my opinion, a POSITA would have been

motivated to combine Preppernau's views with Pröll for the same reasons I discussed above in Section X.B.2.

7. Claim 11

- a. ***11[pre]: “At least one non-transitory computer-readable storage medium storing processor-executable instructions that, when executed by at least one processor in a computer system comprising a display and a keyboard and being configurable between a plurality of computer system configurations, cause the at least one processor to perform a method comprising:”***

128. Claim 11[pre] recites a similar limitation to 1[pre], which I discuss in Section X.B.3.a. In my opinion, 11[pre] is taught in the prior art for the same reasons discussed in that Section.

- b. ***11[a]: “displaying a plurality of views of a plurality of visual representations of computer content;”***

129. Claim 11[a] recites a similar limitation to 1[a], which I discuss in Section X.B.3.b. In my opinion, 11[a] is taught in the prior art for the same reasons discussed in that Section.

- c. ***11[b]: “detecting a current computer system configuration from at least a first computer system configuration from the plurality of computer system configurations where the keyboard is positioned to receive input from an operator of the computer system and a second computer system configuration from the plurality of computer system configurations where the keyboard is not positioned to receive input from the operator of the computer system;”***

130. Claim 11[b] recites a similar limitation to 1[b], which I discuss in Section X.B.3.c. In my opinion, 11[b] is taught in the prior art for the same reasons discussed in that Section.

- d. ***11[c]: “selecting one of the plurality of views for display on the computer system in response to the detected current computer system configuration; and”***

131. Claim 11[c] recites a similar limitation to 1[c], which I discuss in Section X.B.3.d. In my opinion, 11[c] is taught in the prior art for the same reasons discussed in that Section.

- e. ***11[d]: “transitioning the display component to the selected one of the plurality of views.”***

132. Claim 11[d] recites a similar limitation to 1[d], which I discuss in Section X.B.3.e. In my opinion, 11[d] is taught in the prior art for the same reasons discussed in that Section.

8. Claim 12:

- a. **“The at least one non-transitory computer-readable storage medium of claim 11, wherein each of the first and second computer system configurations comprise a physical positioning of the display relative to the keyboard.”**

133. I discuss claim 11 in Section X.B.7. Claim 12 recites a similar limitation to claim 2, which I discuss in Section X.B.4. In my opinion, claim 12 is taught in the prior art for the same reasons discussed in that Section.

9. **Claim 13:**

- a. **“The at least one non-transitory computer-readable storage medium of claim 11, wherein the first computer system configuration is a laptop mode where the keyboard is oriented to be accessible to the operator and wherein the second computer system configuration is an easel mode or a frame mode where the keyboard is oriented to be inaccessible to the operator.”**

134. I discuss claim 11 in Section X.B.7. Claim 13 recites a similar limitation to claim 3, which I discuss in Section X.B.5. In my opinion, claim 13 is taught in the prior art for the same reasons discussed in that Section.

10. **Claim 14:**

- a. **“The at least one non-transitory computer-readable storage medium of claim 11, wherein the plurality of views includes a home view and wherein the method further comprises displaying the home view.”**

135. I discuss claim 11 in Section X.B.7. Claim 14 recites a similar limitation to claim 4, which I discuss in Section X.B.6. In my opinion, claim 14 is taught in the prior art for the same reasons discussed in that Section.

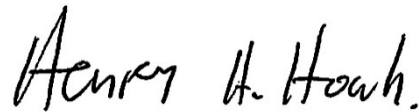
XI. CONCLUSION

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

137. I hereby declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge. I understand that willful false statements are punishable by fine or imprisonment or both. *See* 18 U.S.C. § 1001.

Date: January 29, 2024

By:

A handwritten signature in black ink that reads "Henry H. Houh". The signature is written in a cursive, slightly slanted style.

Dr. Henry Houh