

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.

IPR2024-00457

U.S. Patent No. 9,880,715

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 9,880,715**

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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)

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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	Dino Esposito, <i>New Graphical Interface: Enhance Your Programs with New Windows XP Shell Features</i> , MSDN Magazine
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	RESERVED
1027	Dan Littman, <i>Fujitsu LifeBook T3000 Tablet PC review</i> , CNET (Oct. 12, 2003)
1028	Stephanie Bruzese, <i>HP Compaq Tablet PC TC1100 review</i> , CNET (Oct. 12, 2003)
1029	Brian Nadel, <i>Acer TravelMate C110 review</i> , CNET (July 9, 2003)
1030	Mark Harris, <i>OLPC XO-1 (One Laptop Per Child) review</i> , CNET (Jan. 7, 2008)
1031	Ltr. From Lenovo Counsel to Microsoft Counsel re Indemnification
1032	RESERVED
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1034	RESERVED
1035	<i>Q&A: Microsoft Unveils Details for Ultra-Mobile Personal Computers</i> , Microsoft News (Mar. 9, 2006)
1036	AU Patent Application Publication 2001/100022 A4 (“Adamson”)

1037	RESERVED
1038	RESERVED

LISTING OF CHALLENGED CLAIMS:

Reference	Claim Limitation
Claim 1	
1[pre]	A customized user interface to display computer content on a display component of a computer system including a keyboard, the user interface comprising:
1[a]	at least one processor operatively connected to a memory of the computer system;
1[b]	a graphical user interface, executing on the at least one processor, configured to display the computer content on the display component of the computer system, the graphical user interface configured to:
1[c]	display a plurality of views of a plurality of visual representations of computer content, wherein the computer content includes at least one of selectable digital content, selectable computer operations and passive digital content;
1[d]	an execution component, executing on the at least one processor, configured to:
1[e]	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;
1[f]	select one of the plurality of views for display on the computer system in response to the detected current computer system configuration; and transition the display component to the selected one of the plurality of views.

Reference	Claim Limitation
Claim 2	
2	The user interface of claim 1, wherein in the plurality of views includes a home view configured to organize a plurality of content modes and a channel view configured to organize at least one of a single content mode and two content modes.
Claim 3	
3	The user interface of claim 1, wherein the plurality of views includes a screen saver view configured to organize selected content modes for passive viewing.
Claim 4	
4	The user interface of claim 1, wherein the plurality of views includes a home view organizing a plurality of visual representations of digital content, wherein the home view comprises a header display and a body display, and wherein the header display comprises a lateral frame extending from the left of the display component to the right of the display component, wherein the body display is rendered below the header display in the display component of the computer system.
Claim 5	
5	The user interface of claim 4, wherein the computer system configuration comprises a physical positioning of a computer system display relative to a base of the computer system that includes the keyboard about a longitudinal axis of rotation.
Claim 6	
6[a]	The user interface of claim 4, wherein the graphical user interface is further configured to display a search tool displayed in the header display, wherein the search tool is configured to accept search terms entered by a user and

Reference	Claim Limitation
6[b]	in response to execution, causes the computer system to navigate to a view of a first visual representation of digital content, wherein the digital content includes a search engine, and the search engine presents results for the search terms.
Claim 7	
7	The user interface of claim 1, further comprising a storage component configured to retain a previous view state.
Claim 8	
8	The user interface of claim 7, wherein the execution component is further configured to cause the computer system to transition to a previous view in response to execution of a navigation element by a user.
Claim 9	
9 ¹	The user interface of claim 7, further comprising the navigation element displayed in a header display.
Claim 10	
10[a]	The user interface of claim 4, wherein the body display comprises an organization of the plurality of visual representations of computer content rendered on the computer display, and

¹ Petitioner notes “the navigation element” lacks antecedent basis because claim 9 depends from claim 7 (which depends from claim 1), and neither claim 1 nor 7 recites “a navigation element.” Instead, that term appears in claim 8.

Reference	Claim Limitation
10[b]	the home view further comprises display pages in response to a display threshold establishing a maximal number of visual representations displayed per display page.
Claim 11	
11	The user interface of claim 10, wherein the home view further comprises an indication of visual representations displayed on adjacent display pages of the home view, wherein the indication is displayed within the body of the home view.
Claim 12	
12[a]	The user interface of claim 4, wherein the graphical user interface is further configured to display a nascent card in the home view,
12[b]	wherein the nascent card is configured to permit generation of additional visual representations of digital content.
Claim 13	
13[a]	The user interface of claim 12, wherein the execution component is further configured to execute a process for creating a visual representation in response to execution of the nascent card, wherein the process for creating a visual representation includes acts of:
13[b]	transitioning to a quick access view;
13[c]	generating a mapping to online digital content; executing the mapping; and displaying a first view of the mapped digital content.
Claim 14	
14	The user interface of claim 1, wherein the plurality of views includes a quick access view configured to permit user generation of a mapping between digital content and a visual representation.

Reference	Claim Limitation
Claim 15	
15	The user interface of claim 1, wherein the plurality of views includes a channel view including a channel selector that displays a sequence of visual representations.
Claim 16	
16	The user interface of claim 15, wherein the execution component is further configured to transition the computer system to the channel view in response to receiving user input via at least one input device integral to or operatively connected with the computer system.
Claim 17	
17[pre]	A customized user interface to display computer content on a display component of a computer system including a keyboard, the user interface comprising:
17[a]	at least one processor operatively coupled to a memory of the computer system;
17[b]	a graphical user interface, executing on at least one processor, configured to display a plurality of views of a plurality of visual representations of the computer content;
17[c]	an execution component, executing on the at least one processor, configured to:
17[d]	identify 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 based on sensor input indicating a position of the display component;

Reference	Claim Limitation
17[e]	select, responsive to the sensor input, a first content view from the plurality of views for the first computer system configuration; transition, automatically in response to the sensor input, the display component between at least the first content view of the plurality of views and a second content view of the plurality of views;
17[f]	receive user input via at least one input device integral to or operatively connected with the computer system; and
17[g]	transition, automatically in response to receiving the user input, the display component from one of the first content view and the second content view to a channel view including a channel selector that displays a sequence of visual representations.
Claim 18	
18	The user interface of claim 17, wherein the at least one input device includes at least one of a scroll wheel, a touchpad, and a mouse.
Claim 19	
19	The user interface of claim 1, wherein the first mode is a laptop mode where the keyboard is oriented to be accessible to the operator and wherein the second mode is an easel mode or a frame mode where the keyboard is oriented to be inaccessible to the operator.
Claim 20	
20[pre]	A customized user interface to display computer content on a display component of a computer system including a keyboard, the user interface comprising:
20[a]	at least one processor operatively connected to a memory of the computer system;
20[b]	a graphical user interface, executing on the at least one processor, configured to display the computer content on the display

Reference	Claim Limitation
	component of the computer system, the graphical user interface configured to:
20[c]	display a plurality of views of a plurality of visual representations of computer content, wherein the computer content includes at least one of selectable digital content, selectable computer operations and passive digital content;
20[d]	an execution component, executing on the at least one processor, configured to:
20[e]	detect a current computer system configuration from at least a first computer system configuration where the keyboard is positioned to receive input from an operator of the computer system and a second computer system configuration where the keyboard is not positioned to receive input from the operator of the computer system;
20[f]	select one of the plurality of views for display on the computer system in response to the detected current computer system configuration; and transition the display component to the selected one of the plurality of views.

I. INTRODUCTION

Microsoft Corporation (“Microsoft”); HP Inc. (“HP”); Dell Inc. and Dell Technologies Inc. (collectively, “Dell”); and ASUSTeK Computer Inc. and Asus Global Pte. Ltd. (collectively, “ASUS”) (all of which are collectively referred to herein as “Petitioners”) request *inter partes* review (“IPR”) of claims 1-20 (“Challenged Claims”) of U.S. Patent 9,880,715 (“the ’715 patent”; EX-1001).

In May 2020, LiTL LLC (“PO”) sued Lenovo (United States) Inc. and Lenovo (Beijing) Ltd. (collectively, “Lenovo”) in district court. At that time, PO did not sue any of the Petitioners. Thus, Lenovo alone previously challenged the ’715 patent in both an IPR and an ex parte reexamination (“EPR”) but made significant errors in doing so. Notably, Lenovo failed to prove unpatentability in both its IPR and EPR based on a limitation (“plurality of views”) that the Examiner found in original prosecution was taught by the prior art.

Having prevailed in Lenovo’s flawed IPR and EPR, PO began a new litigation campaign, suing HP, Dell, and ASUSTek (but not Microsoft) on February 1, 2023. This time, however, PO explicitly identified Windows functionality as a basis for its infringement allegations for certain patents including the ’715 patent, and so Microsoft intervened in those district court suits in October 2023. Petitioners have filed this Petition (their first) within four months of Microsoft’s intervention and before PO has filed any infringement contentions in district court. Importantly, this

Petition shows that all claims of the '715 patent are unpatentable as obvious, including the “plurality of views” limitation (consistent with the Examiner’s finding during original prosecution that this limitation was known) and the keyboard operability/inoperability limitations (which appear to have resulted in allowance in original prosecution).²

II. GROUNDS FOR STANDING

Petitioners certify the '715 patent is available for IPR, and Petitioners are not barred or estopped from requesting IPR on the grounds herein. Petitioners file this Petition within one year of service on HP, Dell, and ASUS of PO’s district court complaints (*see* EX-1016, 1017, 1018), and Microsoft has never been served with a complaint.

III. STATEMENT OF PRECISE RELIEF REQUESTED FOR EACH CLAIM CHALLENGED

Petitioners respectfully request review and cancellation under 35 U.S.C. §311 of the Challenged Claims in view of:

² Petitioner submits the declaration of Henry Houh (Ex. 1003), an expert in the field of the '715 Patent. *See* Houh Decl., ¶40 (summary of opinions), ¶¶1-19 (background and qualifications), ¶23 (materials considered).

Prior Art
Pröll (Germany Patent Application Publication DE10331185A1), filed on October 7, 2003, published on March 2, 2005, and qualifies as prior art under at least 35 U.S.C. § 102(b)) ³ (EX-1006) ⁴
Martinez (U.S. Patent 6,137,468), filed on October 15, 1996, issued on October 24, 2000; prior art under at least 35 U.S.C. §102(b) (EX-1007)
Chandhri (U.S. Patent Application Publication No. 2008/0062141), filed on June 22, 2007, published on March 13, 2008; prior art under at least 35 U.S.C. §102(a), (e) (EX-1011)
Preppernau, Windows Vista Step by Step, 2007; prior art under at least 35 U.S.C. §102(a) (EX-1008) ⁵

Ground (all under 35 U.S.C. §103)	Claims	References
1	1, 19, 20	Pröll, Martinez
2	2, 15-18	Pröll, Martinez, Chandhri
3	3-14	Pröll, Martinez, Preppernau
4	1, 3-14, 19, 20	Pröll, Preppernau
5	2, 15-18	Pröll, Preppernau, Chandhri

³ All references to 35 U.S.C. §§102, 103 are to the pre-AIA statutory framework.

⁴ EX-1006 includes a certified English translation, and all citations herein are to that translation.

⁵Preppernau was first publicly accessible as of January 9, 2007. EX-1015, ¶8.

IV. '715 PATENT OVERVIEW

At the time of the '715 patent, numerous computing devices existed on the market with a variety of display screens. Houh Decl., ¶¶41-43. Thus, POSITAs understood the need to customize user interfaces based on the specific configuration of a computing device. *Id.*, ¶43.

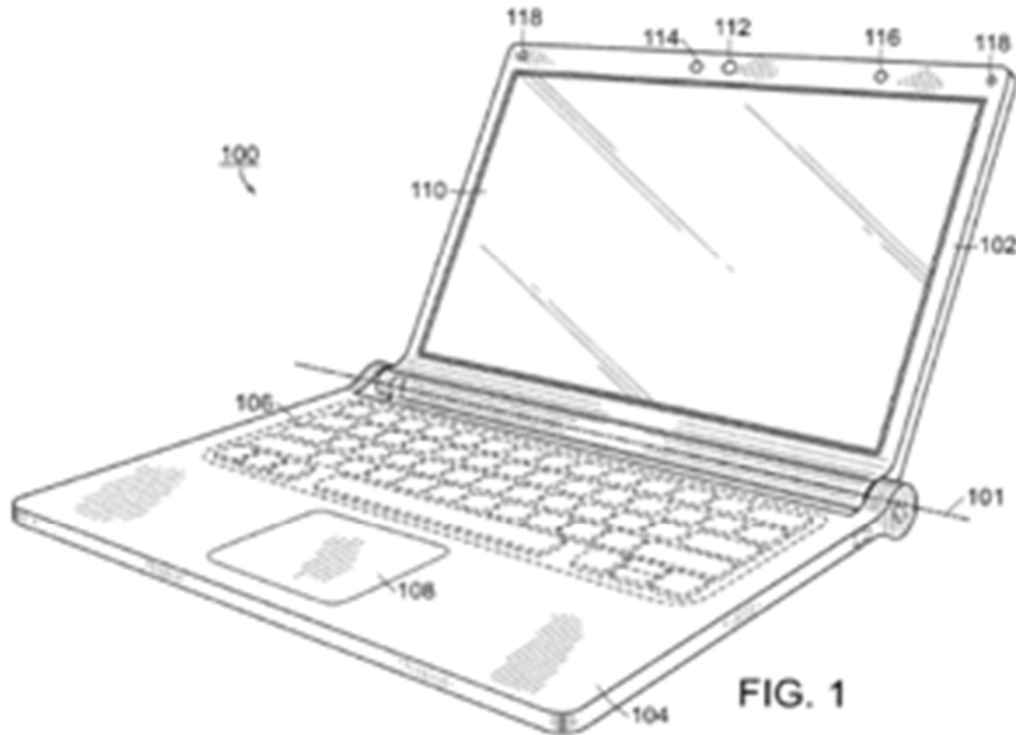
A. Specification

The '715 patent is titled “System and Method for Streamlining User Interaction with Electronic Content” and issued from U.S. Application No. 14/680,422, filed April 7, 2015, which claims priority to a series of continuation and continuation-in-part applications, the earliest of which was filed July 10, 2008, and to a provisional application filed April 1, 2008.⁶

The '715 patent is directed to a computer that “permit[s] the user to transition the device from one configuration to another during its use” and includes “a graphical user interface [(‘GUI’)] that organizes interface elements into views of computer content for presentation to [the] user.” EX-1001, Abstract; Houh Decl., ¶¶44-46. The plurality of computer system configurations includes a laptop mode

⁶ The references in this Petition are all prior art assuming the April 1, 2008 priority date. Petitioner may further address priority if PO attempts to swear behind any reference in this Petition.

(e.g., FIG 1 below) where a display component 102 is pivotably coupled to a base 104 that includes a keyboard 106. EX-1001, 19:12-31.



In laptop mode, the keyboard is accessible to the user. Other computer system configurations include an easel mode (FIG. 4 below) and a frame mode (FIG. 26 below). *Id.*, 19:51-52, 24:37-41.

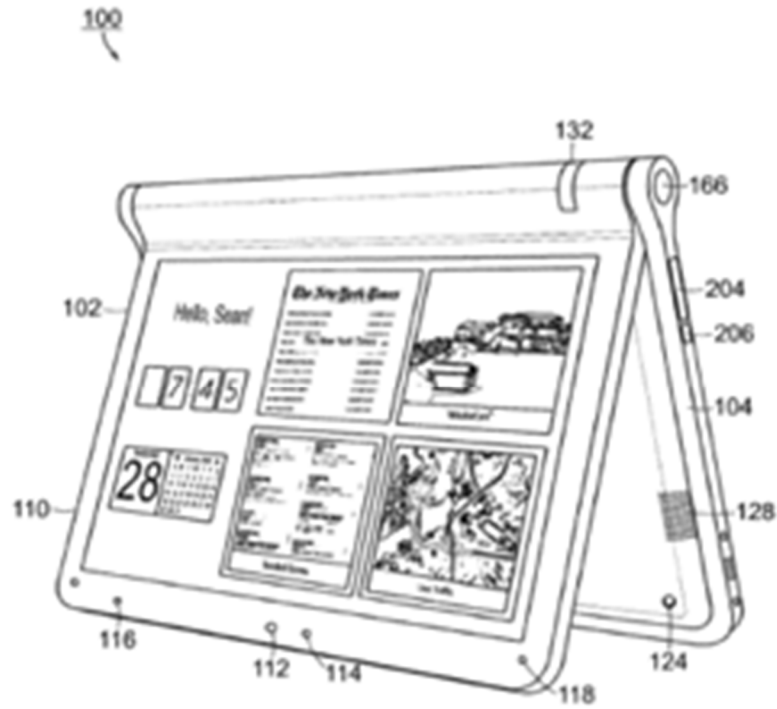


FIG. 4

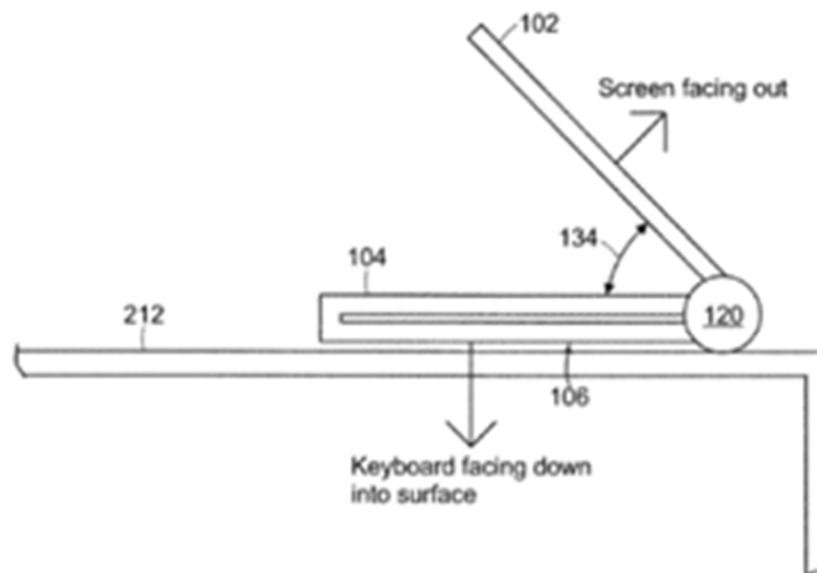


FIG. 26

In the easel and frame modes, the keyboard is “concealed and not easily accessible” to the user. *Id.*, 24:61-62. The ’715 patent describes various views including a “home view” and a “channel view,” as well as various content modes such as “media content mode” and “web content mode.” *Id.*, 3:26-4:67.

B. Prosecution History

The ’715 patent was allowed after a single office action. EX-1002; Houh Decl., ¶¶47-49. 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”). Notably, the Examiner found that 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. EX-1002, 342-43.

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 these

limitations overcame the prior art because Dunko's device identified whether it was in portrait or landscape mode, not whether the keyboard was operable/inoperable. *Id.*, 399.

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.*, 413, 418-21.

C. Prior Patent Office Proceedings

1. IPR2021-00786

PO sued Lenovo alleging infringement of the '715 patent in May 2020 (EX-1024), 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). That petition named only Lenovo entities as real parties-in-interest (*id.*, 2), and asserted two obviousness challenges based on references not relied upon in this Petition (*id.*, 3); Houh Decl., ¶50.

In the POPR, PO argued for a construction of "plurality of views" as recited in the '715 independent claims as "a plurality of ways of organizing displayed content." -786 IPR, Paper 5, 24, 27-45. PO argued that Lenovo's grounds did not

meet that construction because Lenovo's references taught only transitioning between different orientations and not between different organizations of displayed content. *See id.* Lenovo did not file a preliminary reply.

On October 21, 2021, the Board denied institution. -786 IPR, Paper 6. For purposes of its decision, the Board agreed with PO's proposed construction of "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.*, 13-16.

The Board found Lenovo had not shown a reasonable likelihood of success as to independent claims 1 and 20 because Lenovo relied on the references' teachings of different orientations of the same organization of displayed content, rather than different ways of organizing the content as the Board's construction required. *Id.*, 23-26. Petitioner had included another reference (Pogue) in its unpatentability ground for claims 2-19 and argued it disclosed the specific views ("home view" and "channel view") recited in dependent claim 2. *Id.*, 28. The Board, however, found that "[e]ven if Pogue teaches a plurality of views (within the claim construction we provide above), Petitioner does not rely on Pogue to meet the [plurality of views] recitation." *Id.*, 29. Thus, the Board determined Lenovo had not satisfied its burden on institution. *Id.*, 30.

2. Ex Parte Reexamination 90/014,958

On February 16, 2022, Lenovo filed an EPR request, again challenging claims 1-20 of the '715 patent, based on four obviousness challenges. EX-1005, 947, 1249; Houh Decl., ¶51. The Office ordered a reexamination, finding all four obviousness grounds raised a substantial new question of patentability (SNQ) (EX-1005, 1408-30), and the Examiner subsequently issued a non-final office action rejecting claims 1-20 based one of the SNQs (*id.*, 1445-89).⁷

An Examiner interview was then held (*id.*, 1494), following which, PO filed a response to the office action (*id.*, 1517-61). Notably, 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. *Id.*

On December 20, 2022, the Examiner issued a notice of intent to issue a reexamination certificate, confirming claims 1-20. *Id.*, 1675. In doing so, the Examiner agreed with (2) above, finding “the changing of content alone is not

⁷ The Examiner noted the other three SNQs were “highly material and relevant” but never further applied them, even after finding PO overcame the single rejection during reexamination. *Id.*, 1486.

sufficient to meet the interpretation that has been established of a ‘plurality of views’ as ‘organizing visual representations of content differently.’” *Id.*, 1679-1681.

The reexamination certificate issued on January 19, 2023.

V. DISCRETIONARY DENIAL WOULD BE INAPPROPRIATE HERE

A. Status of Prior and Co-Pending Litigation

The ’715 patent was the subject of a prior litigation in the District of Delaware against Lenovo, with the complaint filed on May 22, 2020. EX-1024. That suit asserted infringement by Lenovo of six patents. *Id.* Of those, Lenovo requested indemnity from Microsoft only as to U.S. Patent No. 8,577,957 (the ’957 patent). EX-1031. Microsoft filed an IPR petition challenging claims 1-36 of the ’957 patent. *Microsoft Corp. v. LiTL LLC*, IPR2021-01011, Paper 1 (May 25, 2021). PO subsequently disclaimed all challenged claims of the ’957 patent, and the Board denied institution because all challenged claims had been disclaimed. *Id.*, EX-2008, Papers 8-9. Lenovo did not request indemnity from Microsoft for any other patent involved in the litigation against Lenovo, and Microsoft had no involvement in the IPRs Lenovo filed against the other five patents (IPR2021-00681, -786, -800, -821, -822), including the IPR Lenovo filed challenging claims of the ’715 patent.

PO and Lenovo ultimately stipulated to dismissal with prejudice of the litigation against Lenovo, which was ordered on February 3, 2023. EX-1025.

Two days prior to that dismissal (on February 1, 2023), PO sued HP, Dell, and ASUS in the District of Delaware, accusing those defendants of infringing eight patents, including the '715 patent. EX-1016, 1017, 1018. On October 13, 2023, Microsoft filed a complaint in intervention for each of those suits, seeking a declaratory judgment of non-infringement, and on October 16, 2023, the district court permitted Microsoft's intervention. EX-1019. The district court issued a scheduling order on January 11, 2024. EX-1020. Under that Order, preliminary infringement contentions are due April 1, 2024, and preliminary invalidity contentions are due May 1, 2024; a Markman hearing is set for October 10, 2024; and four trial dates are set for January 20, 2026, February 17, 2026, March 16, 2026, and April 20, 2026. *Id.*, 8, 13, 16.

B. *General Plastic*

General Plastic factors 1–3 weigh heavily against exercising discretion to deny institution. This is each of the Petitioners' first challenge of the '715 Patent. Although Lenovo previously challenged the '715 Patent, Petitioners do not have a substantial relationship with Lenovo, unlike the petitioners in *Valve Corp. v. Electronic Scripting Products, Inc.*, IPR2019-00062, Paper 11, 9 (Apr. 2, 2019) (precedential).

For example, unlike in *Valve*, Petitioners and Lenovo are not co-defendants (PO sued Lenovo almost three years earlier), and the prior and co-pending district

court litigations accuse different products. Indeed, HP, Dell, and ASUS are direct competitors with Lenovo.

Although Petitioners file this Petition after the decision to deny institution in Lenovo's petition, the timing results from PO's litigation conduct, rather than Petitioners' choice. PO waited almost three years to sue HP, Dell, and ASUS after suing Lenovo (and PO has chosen never to sue Microsoft directly). In addition, any concerns of road-mapping are minimized because the previous Board decision rested on an issue of claim construction, as well as Lenovo's failure to explain that its secondary reference also taught the "plurality of views" limitation.

The remaining factors (4–7) also weigh against discretionary denial. Petitioners have diligently worked towards filing this Petition since learning of the asserted prior art. Finally, the Board will not be unduly burdened by addressing this Petition. *See United Fire Protection Corp. v. Eng'ered Corrosion Sols. LLC*, IPR2018-00991, Paper 10, 17 (Nov. 15, 2018).

In sum, this Petition is not an abusive serial attack, but rather these Petitioners' first petition to challenge a patent on which they were sued well after the prior petitioner. Particularly given the prior petition's shortcomings (not sufficiently alleging a claim element was met even though the examiner found that element in the prior art during original prosecution), evaluating this Petition on the merits will serve the Board's mission "to 'improve patent quality and restore confidence in the

presumption of validity that comes with issued patents.’” *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 272 (2016) (quoting H.R. Rep. No. 112-98, pt. 1, at 45, 48).

C. *Fintiv*

Petitioners expect PO will not raise *Fintiv* here because the earliest trial date set by the district court is January 20, 2026 (EX-1020), well after the expected FWD deadline in this IPR (likely August 2025).

D. Section 325(d)

The Board should not exercise its discretion under §325(d) to deny institution. *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, 17–18 (Dec. 15, 2017) (precedential); *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6, 9–11 (Feb. 13, 2020) (precedential). Here, only Martinez was before the Examiner during prosecution, it was cited only in an IDS, and the Examiner never applied it. EX-1002, 239, 388.

Considering the first part of the *Advanced Bionics* framework, including *Becton, Dickinson* factors (a), (b), and (d), although one of the same references was before the Office, the same or substantially the same art or arguments were not previously presented to or considered by the Office. During prosecution, the Examiner did not consider Pröll—which forms the basis for all of the unpatentability challenges in this Petition—at all, much less Pröll in combination with any of the other references on which this Petition relies, including Martinez. Additionally, the

Examiner did not consider Pröll-Preppernau-Chandhri combination, which render all Challenged Claims obvious, as discussed in Section VIII. Thus, substantially the same art or arguments were not previously before the Office.

Section 325(d) is inapplicable to the grounds raised in this Petition.

VI. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art (“POSITA”) 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. EX-1003, ¶21. More education could substitute for experience and vice versa. *Id.*

VII. CLAIM CONSTRUCTION

Other than as discussed below, Petitioners believe the Challenged Claims have their plain and ordinary meaning and express claim construction is unnecessary to demonstrate the Challenged Claims are unpatentable. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (explaining Board “need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”); Houh Decl., ¶52-55.

A. “plurality of views”

As discussed above, in the -786 IPR, 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 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; *see also* Houh Decl., ¶¶53-54. Because the Board denied institution, it did not further consider that construction based on a full trial record. *See id.* During the EPR, the Examiner also clarified that the “plurality of views” limitation does not encompass merely changing to entirely different content. EX-1005, 1680.

This Petition shows that the Challenged Claims are unpatentable under the Board’s construction of “plurality of views,” as clarified during the EPR.

B. Means-Plus-Function (“MPF”)⁸

No claim terms in the Challenged Claims use the term “means,” and there is a rebuttable presumption that the claim terms are not MPF. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015). The presumption, however, is

⁸ Petitioners reserve the right to raise and address indefiniteness, enablement, and/or written description issues for the Challenged Claims in other proceedings.

overcome for all “component” limitations in the Challenged Claims. *See* MPEP §2181 (“The following is a list of non-structural generic placeholders that may invoke 35 U.S.C. 112[, ¶6]: ... ‘component for.’”). Although Petitioners argue the claims are unpatentable regardless of whether the claims are treated as MPF, to the extent the Board agrees the claims are MPF and require corresponding structure in the specification, Petitioners identify the specific portions of the specification that describe the corresponding structure for each such limitation below. Houh Decl., ¶55.

1. “display component”

Limitation (Function Underlined)	Corresponding Structure
Claims 1, 17, 20: “ <u>display computer content</u> on a display component”	A display screen <i>See, e.g.</i> , EX-1001, Fig. 1 (item 102), 11:42-43, 19:12-50.

2. “execution component”

Limitation (Function Underlined)	Corresponding Structure
Claim 1: “an execution component, executing on the at least one processor, configured to: <u>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</u>	a program (or programs) executing on a processor that can (i) receive data from sensors, (ii) use that received data to determine the current computer system configuration, and (iii) use that determination to change to the view corresponding to the current computer system configuration, and its equivalents. <i>See, e.g.</i> , EX-1001, Figs. 26, 51, 20:10–38, 24:61–25:20, 57:9–18, 68:9–69:36, 70:19–35.

<u>computer system; select one of the plurality of views for display on the computer system in response to the detected current computer system configuration; and transition the display component to the selected one of the plurality of views”</u> Claim 20: “an execution component, executing on the at least one processor, configured to: <u>detect a current computer system configuration from at least a first computer system configuration where the keyboard is positioned to receive input from an operator of the computer system and a second computer system configuration where the keyboard is not positioned to receive input from the operator of the computer system; select one of the plurality of views for display on the computer system in response to the detected current computer system configuration; and transition the display component to the selected one of the plurality of views.”</u>	
Claim 8: “the execution component is further configured to <u>cause the computer system to transition to a previous view in response to execution of a navigation element by a user”</u>	a program (or programs) executing on a processor that can (i) detect execution of a navigation element, and (ii) based on that detection, change to the previous view, and its equivalents. <i>See, e.g.</i>, EX-1001, Fig. 51, 20:56–61, 21:8–11, 46:9–18, 68:9–34.
Claim 13: “the execution component is further configured to <u>execute a process for creating a visual representation in response to execution of the nascent card”</u>	a program (or programs) executing on a processor, that can (i) detect execution of a nascent card, (ii) transition the display to the quick access view in response, and (iii) map to, and display, online content

	in response to a request to display that content from the quick access view, and its equivalents. <i>See, e.g.,</i> EX-1001, 30:2–4, 30:15–17, 35:6–21, 38:62–39:1, 40:55–65, 41:10–13, 68:9–69:36.
Claim 16: “the execution component is further configured to <u>transition the computer system to the channel view in response to receiving user input via at least one input device integral to or operatively connected with the computer system</u> ”	a program (or programs) executing on a processor that can (i) receive user input via an input device, and (ii) transition the display to the channel view in response. <i>See, e.g.,</i> EX-1001, Figs. 9, 50, 20:62–21:29, 31:49–32:56, 68:9–69:36.
Claim 17: “an execution component, executing on the at least one processor, configured to: <u>identify 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 based on sensor input indicating a position of the display component; select, responsive to the sensor input, a first content view from the plurality of views for the first computer system configuration; transition, automatically in response to the sensor input, the display component between at least the first content view of the plurality of views and a second content view of the plurality of views; receive user input via at least one input device integral to or operatively connected with the computer system; and transition, automatically in response to receiving the user input, the</u>	a program (or programs) executing on a processor that can (i) receive data from sensors, (ii) use that received data to determine the current computer system configuration, (iii) use that determination to change to the view corresponding to the current computer system configuration, (iv) receive user input via an input device, and (v) transition the display to the channel view in response. <i>See, e.g.,</i> EX-1001, Figs. 9, 50, 20:62–21:29, 31:49–32:56, 68:9–69:36.

<u>display component from one of the first content view and the second content view to a channel view including a channel selector that displays a sequence of visual representations”</u>	
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3. “storage component”

Limitation (Function Underlined)	Corresponding Structure
Claim 7: “storage component configured to <u>retain a previous view state</u> ”	A local or remote storage device. <i>See, e.g.,</i> EX-1001, 16:53-64, 61:6-15, Fig. 51.

VIII. DETAILED EXPLANATION OF GROUNDS

A. Ground 1: Obviousness over Pröll and Martinez (Claims 1, 19, 20)

1. Pröll

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; Houh Decl., ¶¶56-58. Pröll's Figure 1 is reproduced below:

Fig. 1

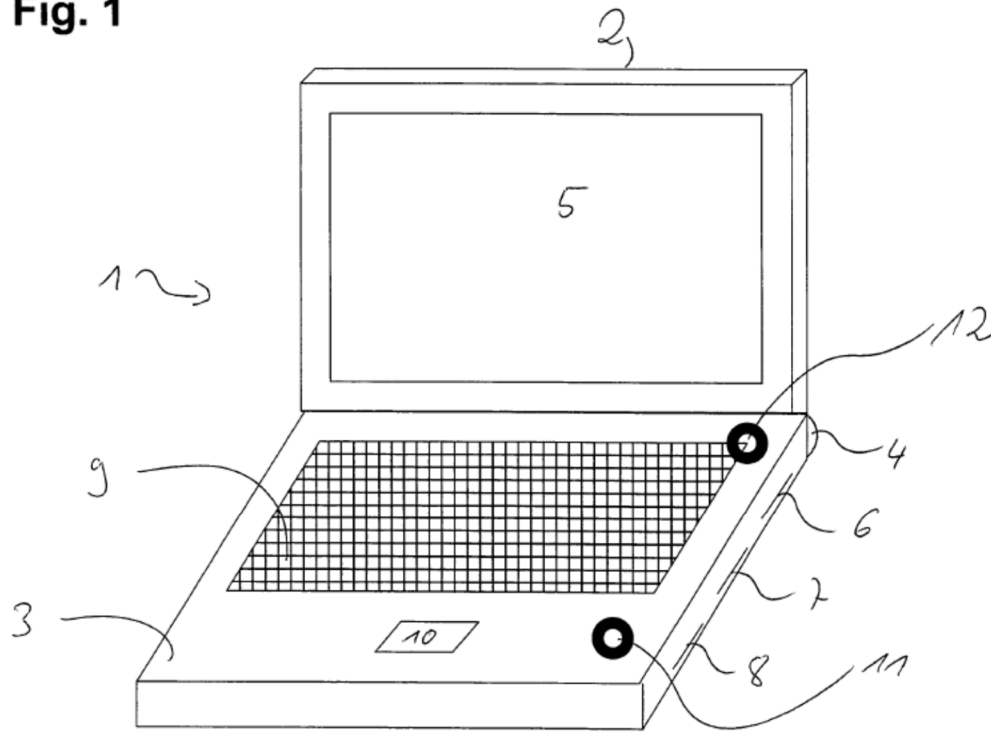
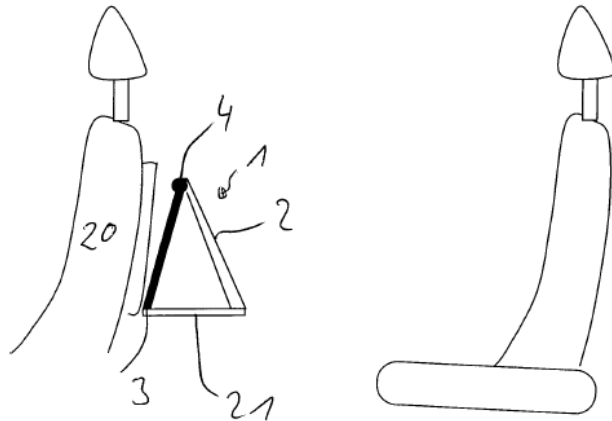


Figure 1 shows Pröll's device in a laptop configuration where housing halves 2, 3 can rotate "in reference to each other by almost 360° degrees" using pivoting device 4. Pröll, [0033]. Housing half 2 contains display device 5, and housing half 3 contains keyboard 9. *Id.* Other figures in Pröll show its device in other configurations. *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]. For example, Figure 7 (showing device 5 positioned on a seat tray) is reproduced below:

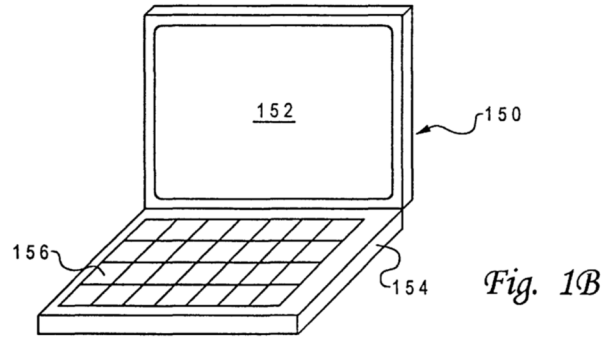
FIG. 7



Pröll discloses pivoting device 4 includes a switch to detect whether 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].

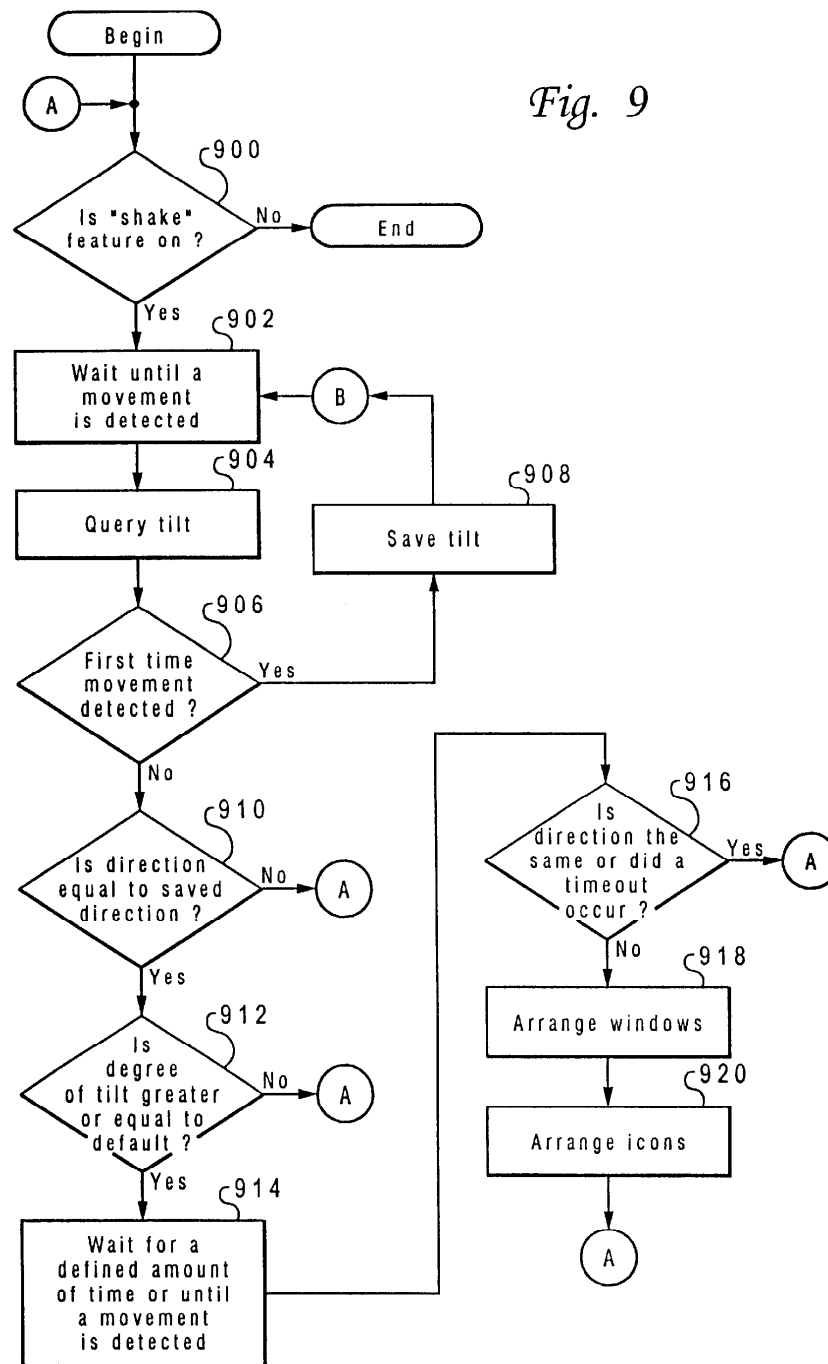
2. Martinez

Martinez is directed to “altering the display of an object on a display device in a data processing system.” Martinez, Abstract; Houh Decl., ¶¶59-61. Martinez depicts a similar laptop as Pröll, reproduced below:



Martinez, Fig. 1B. Martinez describes numerous ways it adjusts its display based on sensor input, one of which is in response to a “shake.” This process is depicted in Martinez’s Figure 9:

Fig. 9



Id. In this process, Martinez detects a shake (i.e., shake 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.

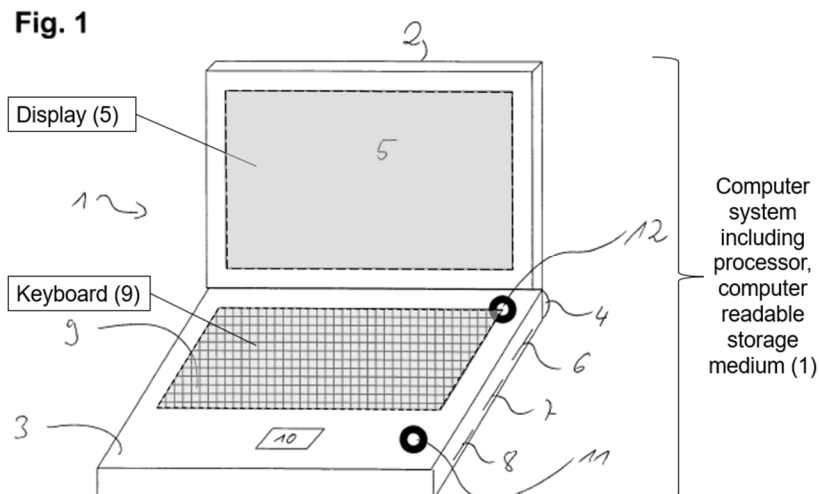
3. Claim 1

a. 1 ``` [pre] ```

To the extent limiting, Pröll discloses or suggests 1

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[pre]
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 under MPF or non-MPF. For MPF, the corresponding structure is a display screen. *See, e.g.*, EX-1001, Fig. 1 (item 102), 11:42-43, 19:12-50. Pröll discloses display device 5 (“a display component of a computer system”/“display screen”) including keyboard 9 (“a keyboard”). Pröll, Title, Abstract, claim 1, [0014], [0023], [0033]-[0034]. Pröll’s Figure 1 (annotated) is reproduced below.



In addition, a POSITA would have understood Pröll's display 5 has a customized user interface to display computer content. Pröll, [0049]–[0050]; Houh Decl., ¶¶64-65.

b. 1[a]

Pröll discloses or suggests 1[a]. A POSITA would have understood Pröll's computer system has a processor connected to a memory. Houh Decl., ¶¶66–67. Having such a computer system with a processor connected to a memory was well-known at the relevant time to execute conventional, required computer functions. *Id.*; Martinez, Fig. 2 (item 202 (Pentium, i.e., processor), 206, 208, 210 (memory), connected through item 200 (system bus), 3:34–59 (describing managing large input/output transfers from input/output devices—e.g., a keyboard—by “appropriat[ing] cycles from microprocessor 202” and reliance upon read only memory (ROM) and Random Access Memory (RAM) for controlling hardware operations according to system configuration information).

c. 1[b]

Pröll discloses or suggests 1[b]. A POSITA would have understood that Pröll's display 5 has a GUI to display computer content on screen 5. Houh Decl., ¶68. Having such a GUI was well-known at the relevant time. *E.g.*, Martinez, Fig. 5A-5C; Houh Decl., ¶68.

d. 1[c]

The Pröll-Martinez combination teaches 1[c]. As discussed above, 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 VII.A.

Pröll’s device displays a first computer content view for its laptop configuration that positions the display above a pivoting hinge and displays a second computer content view when the device rotates 180° and positions the hinge above the display. Houh Decl., ¶¶69–70; *e.g.*, Pröll, Figs. 1, 7, [0049]-[0050]. 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. A POSITA would have been motivated to combine Pröll with teachings from Martinez such that Pröll’s GUI displays a different organization of content when its keyboard is operable than when its keyboard is inoperable. *Id.*

Specifically, in its Figure 9 and associated description, Martinez teaches using a sensor to detect movement (in Martinez’s particular embodiment, a shake gesture) and based on that movement, to arrange (i.e., organize) windows and/or icons in a pre-selected manner, such as windows in “a tile or cascading fashion.” Martinez, Fig. 9, 5:66-6:37. Dr. Houh explains a POSITA would have recognized tile and

cascading as two different ways of organizing windows which would include “visual representations of computer content,” such as icons. Houh Decl., ¶¶71–73 . A POSITA would have also understood the computer content represented by Martinez’ icons (in its windows) are “selectable digital content,” “selectable computer operations,” and “passive digital content” because the icons and windows are integral to Martinez’s “interface system” that “allows a user to simultaneously access, display, and manipulate” all computing data on the user’s computer to help streamline that user’s interface with “a variety of related and/or unrelated computer application programs.” Martinez, 1:15–41; Houh Decl., ¶¶73–75.

Besides Martinez’s shake gesture, a POSITA would have been motivated to switch between views based on Martinez’s teachings when triggered in other ways, such as based on Pröll’s switch indicating rotation of Pröll’s two halves by more or less than 180°. In other words, a POSITA would have understood the desirability of switching views based on sensor output based on Martinez’s teachings, and would have been motivated to change between views in Pröll to accommodate the availability of the keyboard or not in different sensed physical configurations. Houh Decl., ¶¶75-77. A POSITA would have recognized that doing so would have allowed 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 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]). Houh Decl., ¶¶76-77.

Pröll and Martinez disclose similar systems with a laptop configuration with display, keyboard, and processing components containing a hardware-based trigger that detects physical changes to the device and responds to such changes with a different GUI display. Houh Decl., ¶¶75-77. A POSITA would have found the combination to predictably improve usability of Pröll's system to allow for views that include the reorganization of windows, 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). *Id.*, ¶¶76-77. Such a modification would have been well within the programming skills of a POSITA, and would have been desirable to allow for a user to optimize the GUI organization according to preference and utility for the applicable environment (e.g., Pröll's keyboard is blocked when Pröll's two halves are rotated by more than 180° relative to each other). For example, a POSITA would have recognized the combination would beneficially allow a user to use the touchscreen when the keyboard is inaccessible (e.g., when the user is in an environment like riding in a moving car) to tap larger, tile-sized icons and to use the keyboard to scroll through cascading smaller windows on the screen when that

keyboard is again accessible in a stationary environment (e.g., laptop mode).
Martinez, 6:32–37; Pröll, ¶[0061]; Houh Decl., ¶¶76-77.

e. 1[d]

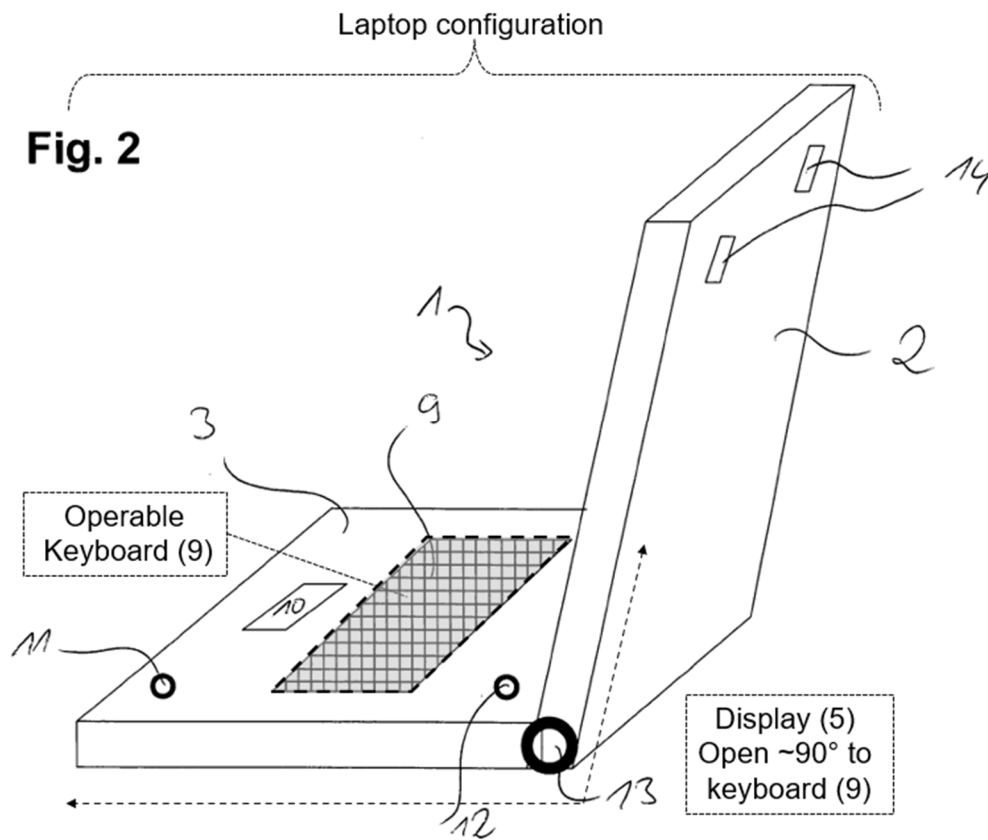
The Pröll-Martinez combination teaches 1[d]. As explained in Section VIII.A.3.b for 1[a], a POSITA would have understood that Pröll’s device includes at least one processor. Further, as explained in Sections VIII.A.3.f and VIII.A.3.g for 1[e] and 1[f] below, the Pröll-Martinez combination teaches the “execution component” (under MPF or non-MPF) is “configured to” perform each limitation by executing on the processor. Houh Decl., ¶78. For MPF, this limitation requires that the at least one processor is configured to (i) receive data from sensors, (ii) use that received data to determine the current computer system configuration, and (iii) use that determination to change to the view corresponding to the current computer system configuration, and its equivalents. *See, e.g.*, EX-1001, Figs. 26, 51, 20:10–38, 24:61–25:20, 57:9–18, 68:9–69:36, 70:19–35. Pröll discloses each of these requirements as discussed in Sections VIII.A.3.f and VIII.A.3.g for 1[e] and 1[f] below. *See* Houh Decl., ¶78.

f. 1[e]

Pröll discloses or suggests 1[e]. Specifically, Pröll’s “mobile data processing device,” such as a personal computer, has a processor to receive and execute computer instructions. *See* Houh Decl., ¶81. Further, Pröll’s 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°; if so, keyboard 9 is “automatically blocked.” Pröll, [0049]-[0050]. Pröll’s “switch” is a sensor that receives data and sends it to Pröll’s processor, which—based on the results of that data—evaluates the computer’s configuration and adapts its display accordingly. *See* Houh Decl., ¶¶ 79-80. Pröll discloses using its switch to detect a configuration where the halves are rotated less than 180° (e.g., the laptop configuration of Fig. 2) and where 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”) and a configuration where the halves are rotated more than 180° (e.g., the configurations in Figs. 6-8) and 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* Houh Decl., ¶¶ 80-83.

An annotated version of Pröll’s Figure 2, showing its laptop configuration, is reproduced below:



Annotated versions of Pröll's Figures 6-8, showing configurations where the device is rotated more than 180° such that the keyboard is inoperable (*id.*, [0049]-[0050]), are reproduced below.

FIG. 6

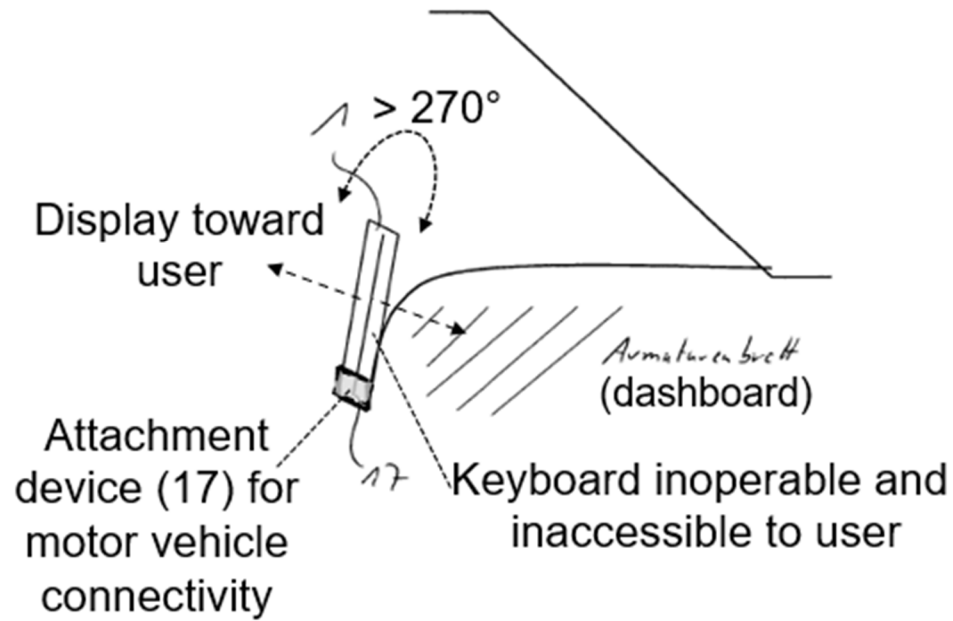
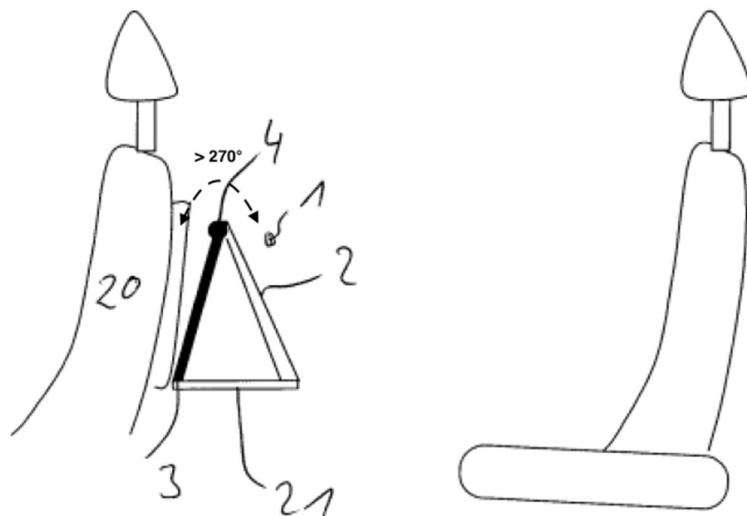


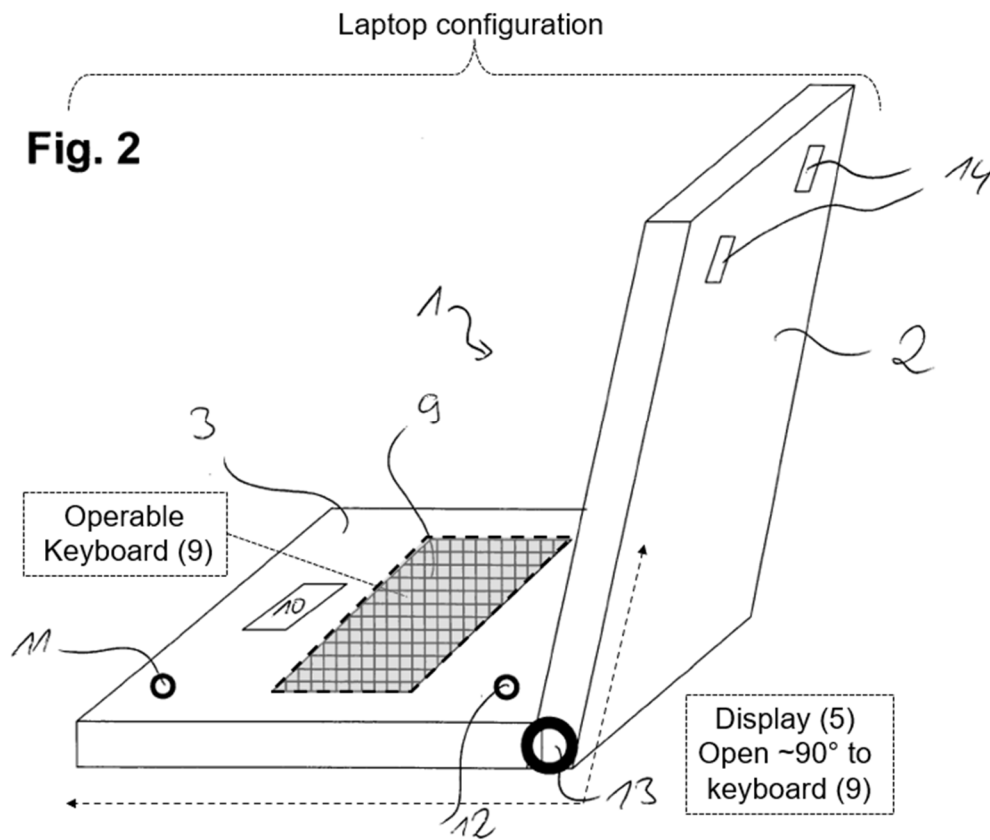
FIG. 7



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 to allow for views that include the reorganization of the icons and windows and to allow Pröll's device to be used in mobile environments. Such a modification would have been well within the programming skills of a POSITA, and would have been desirable to allow for a more user-friendly GUI organization when Pröll's keyboard is blocked (i.e., when Pröll's two halves are rotated by more than 180° relative to each other). Houh Decl., ¶¶84-85.

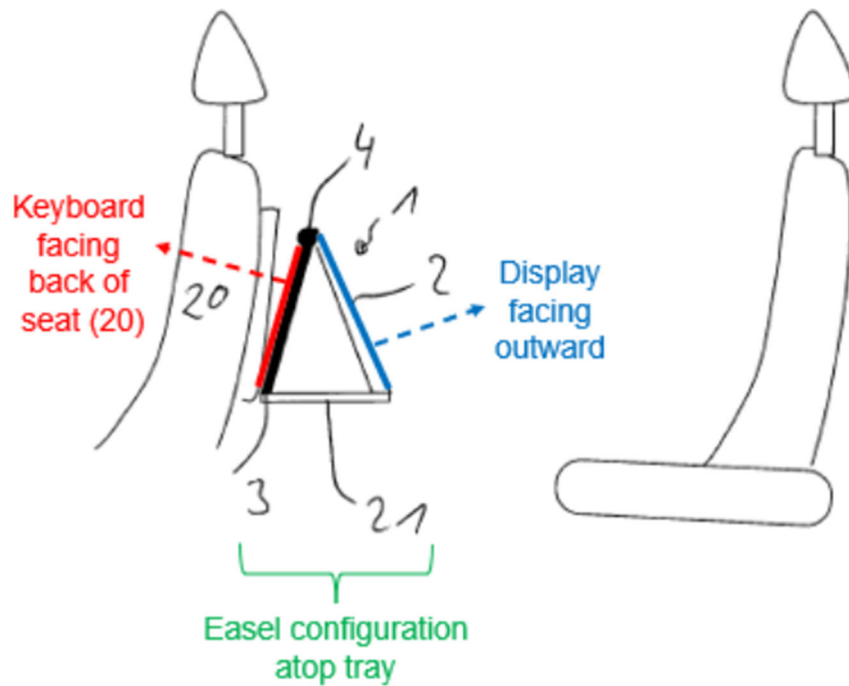
4. Claim 19

Claim 19 depends from claim 1. Houh Decl., ¶¶86-87. Section VIII.A.3 above explains that the Pröll-Martinez combination teaches "the user interface of claim 1." Pröll teaches the additional limitations of claim 19. Specifically, Pröll's Figure 2 (annotated version reproduced below) depicts a "laptop mode where the keyboard is oriented to be accessible to the operator," as recited in claim 19. Pröll, [0036].



In addition, Pröll's Figure 7 (annotated version reproduced below) depicts "an easel mode...where the keyboard is oriented to be inaccessible to the operator."

FIG. 7



5. Claim 20

a. 20[pre]

See Section VIII.A.3.a for 1[pre]. Houh Decl., ¶88.

b. 20[a]

See Section VIII.A.3.b for 1[a]. Houh Decl., ¶89.

c. 20[b]

See Section VIII.A.3.c for 1[b]. Houh Decl., ¶90.

d. 20[c]

See Section VIII.A.3.d for 1[c]. Houh Decl., ¶91.

e. 20[d]

See Section VIII.A.3.e for 1[d]. Houh Decl., ¶92.

f. 20[e]

See Section VIII.A.3.f for 1[e]. In addition, as discussed for claim 19, Pröll's laptop mode (Figure 2) has the keyboard positioned to receive input from an operator of the computer system and, for example, Pröll's easel mode (Figure 7) has the keyboard not positioned to receive input from the operator of the computer system. Houh Decl., ¶¶93, 86-87.

g. 20[f]

See Section VIII.A.3.g for 1[f]. Houh Decl., ¶94.

B. Ground 2: Obviousness over Pröll, Martinez, and Chandhri (Claims 2, 15-18)

1. Chandhri

Chandhri relates to a media player with image-based browsing and addresses “improved methods for browsing through content.” Chandhri, Title, Abstract, [0004]; Houh Decl., ¶62. In particular, Chandhri discloses several card-based as well as menu-driven GUIs. As one example, Figure 10 of Chandhri is reproduced below.

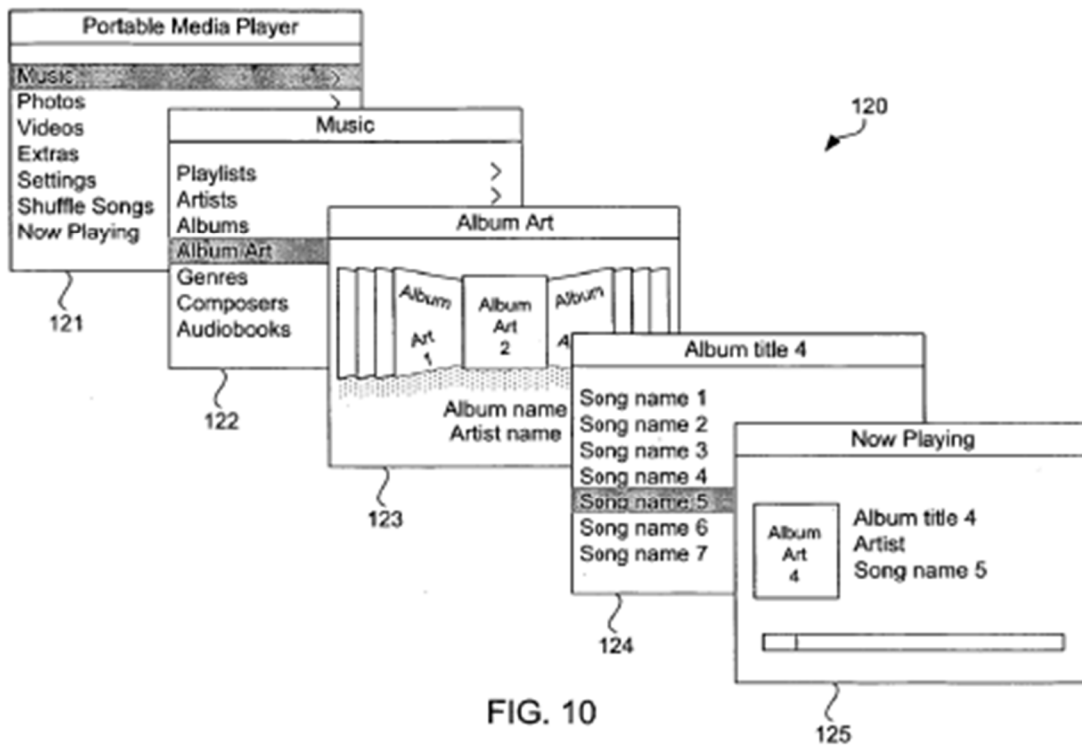


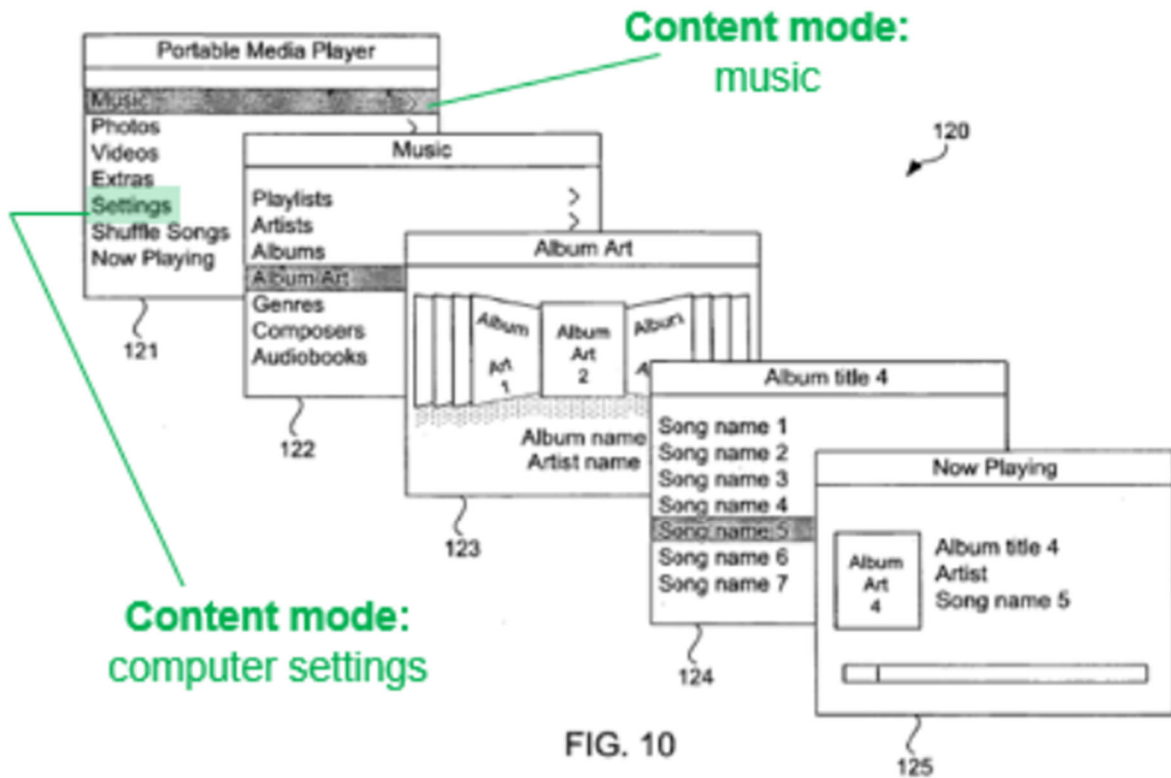
FIG. 10

2. Claim 2

Claim 2 depends from claim 1. Section VIII.A.3 above explains the Pröll-Martinez combination teaches “the user interface of claim 1.” Notably, claim 2 requires the recited “home view” and “channel view” to be among the “plurality of views” in 1[c], but does not require either of those specific views to be selected in response to the detected current computer system configuration, as recited in 1[f]. In addition, the ’715 patent uses the term “content mode” to refer to displaying a certain type of content for viewing by a user. *E.g.*, EX-1001, 3:35-36 (“web content mode is configured to display web based content for proximal viewing by a user”), 3:43-45 (“the media content mode is configured to display media based content for

non-proximal viewing”), 3:63-65 (“connect content mode, wherein the connect content mode is configured to display computer configuration operations for viewing by a user”).

Chandhri teaches the additional limitations of claim 2. Houh Decl., ¶¶95-98. Specifically, main menu 121 of Chandhri’s Figure 10 teaches a “home view configured to organize a plurality of content modes” because it includes a “settings” option (corresponding to the ’715 patent’s connect content mode configured to display computer configuration operations for viewing by a user) and a “music” option (corresponding to the ’715 patent’s media content mode configured to display media based content). Chandhri, [0134], Figure 10 (annotated version reproduced below).

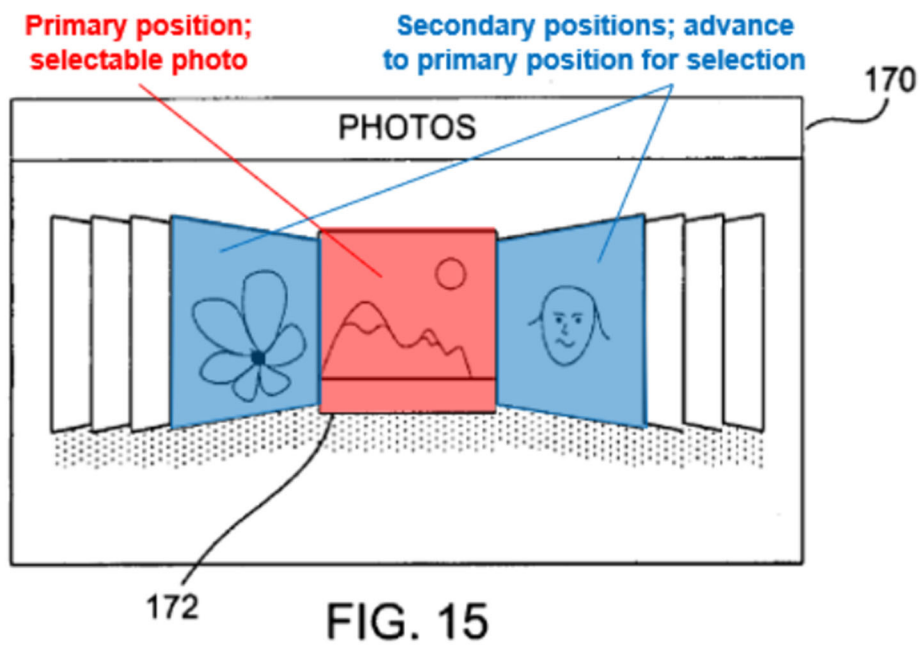
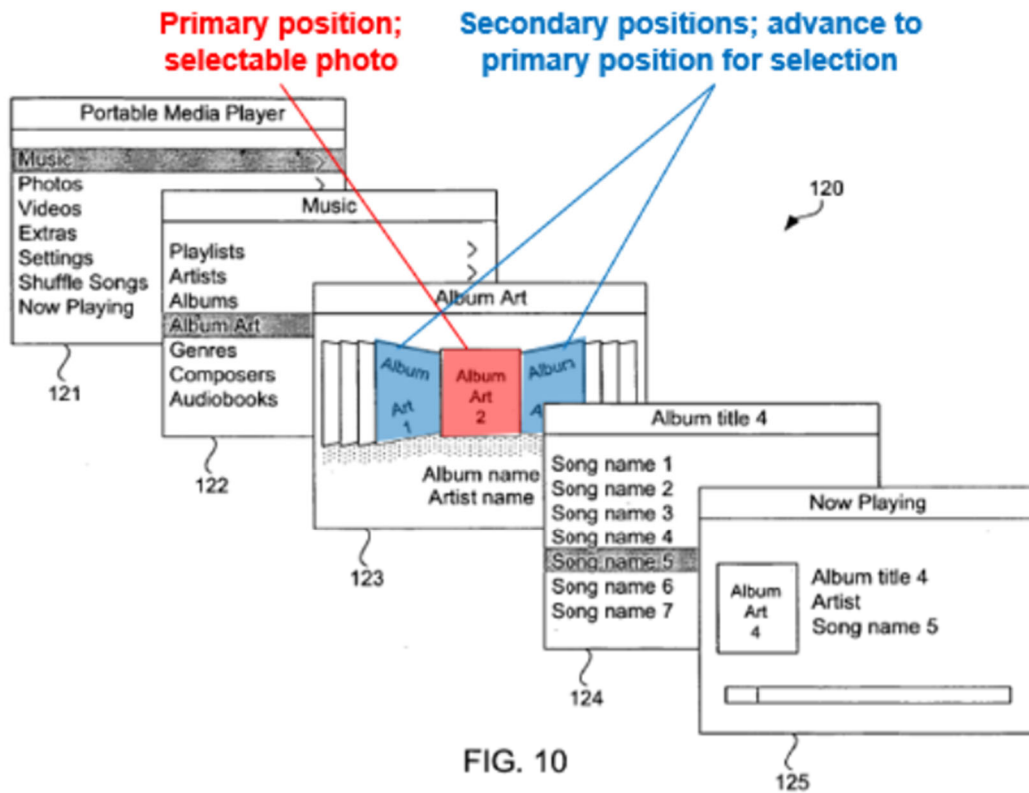


In addition, image-based browser window 123 of Chandhri's Figure 10 teaches a "channel view configured to organize...a single content mode" because it displays a linear sequence of visual representations of one content type selected from a broader, categorical menu of content. *Compare* EX-1001, Figs. 12, 14, 21:12–29 (access channel content by selecting "channel" 172e in Fig. 12), 22:10–26 (Fig. 12 shows selectable channel mode of content), 35:32–44 (Fig. 14 displays left-to-right row of channel cards following user selection) *with* Chandhri, Fig. 10 (122, 123), [0134] ("Album art item is selected in a sub menu 122, which launches an image based browser window 123" with "images related to album art" arranged from left to right).

A POSITA would have been motivated to implement these views from Chandhri in the Pröll-Martinez combination because they were predictable and well-known GUI elements that a POSITA would have understood as user-friendly to browse content on Pröll's device. *See* Houh Decl., ¶¶ 97-98.

3. Claim 15

Claim 15 depends from claim 1. Section VIII.A.3 above explains the Pröll-Martinez combination teaches “the user interface of claim 1.” Similar to claim 2, claim 15 requires the recited “channel view” to be among the “plurality of views” in 1[c], but does not require that specific view to be selected in response to the detected current computer system configuration, as recited in 1[f]. As discussed above for claim 2, Chandhri teaches a “channel view” in, for example, its image-based browsers in Figure 10. Houh Decl., ¶¶99-100. Those views include a “channel selector” (i.e., the ability to select the middle image) “that displays a sequence of visual representations” (i.e., the sequence of the images in the image-based browser). Chandhri, Figures 10, 15 (annotated versions reproduced below), [0134], [0141], [0145].



It would have been obvious to implement this view from Chandhri in the Pröll-Martinez combination for the same reasons as discussed above for claim 2. *See* Houh Decl., ¶¶99-100.

4. Claim 16

Claim 16 depends from claim 15. Section VIII.B.3 above explains the Pröll-Martinez-Chandhri combination teaches “the user interface of claim 15.” Under MPF, this limitation additionally requires the execution component to be a program (or programs) executing on a processor that can (i) receive user input via an input device, and (ii) transition the display to the channel view in response. *See, e.g.*, EX-1001, Figs. 9, 50, 20:62–21:29, 31:49–32:56, 68:9–69:36. Chandhri teaches claim 16’s additional limitations, under MPF or not.

In particular, Chandhri’s Figure 10 depicts transitioning to image-based browser window 123 (“channel view”) in response to a user selecting the album art item in sub menu 122. Chandhri, [0134]. A POSITA would have understood that a user makes such a selection using an “input device integral to or operatively connected with the computer system.” *See* Houh Decl., ¶¶101-02. In order to transition to sub menu 122, a POSITA would have understood that Chandhri uses a program executing on a processor that receives user input via an input device and transitions the display to the channel view in response. *See* Houh Decl., ¶101-02. It would have been obvious to implement this teaching from Chandhri in the Pröll-

Martinez combination for the same reasons as discussed above for claim 2. *See* Houh Decl., ¶¶97-98.

5. Claim 17

a. 17[pre]

See Section VIII.A.3.a for 1[pre]. Houh Decl., ¶103.

b. 17[a]

See Section VIII.A.3.b for 1[a]. Houh Decl., ¶104.

c. 17[b]

See Sections VIII.A.3.c, VIII.A.3.d for 1[b], 1[c]. Houh Decl., ¶105.

d. 17[c]

See Section VIII.A.3.e for 1[d]. As discussed in Section VII.B.2, under MPF, the execution component must be a program (or programs) executing on a processor that can (i) receive data from sensors, (ii) use that received data to determine the current computer system configuration, (iii) use that determination to change to the view corresponding to the current computer system configuration, (iv) receive user input via an input device, and (v) transition the display to the channel view in response. *See, e.g.*, EX-1001, Figs. 9, 50, 20:62–21:29, 31:49–32:56, 68:9–69:36. As discussed further below, Pröll-Martinez-Chandhri discloses this execution component, under MPF or not. Houh Decl., ¶¶106-11.

e. 17[d]

See Section VIII.A.3.f for 1[e]. Houh Decl., ¶¶107-08. Specifically, that Section explains that the identification is performed based on Pröll's switch determining whether first half 2 and second half 3 are rotated more or less than 180° relative to one another (i.e., "based on sensor input indicating a position of the display component").

A POSITA would have understood, and found it obvious, that for Pröll's switch to detect the rotation of the device and adjust the display, the system would use a program executing on a processor that can receive data from Pröll's switch (receive data from sensors), use that data to determine the rotation of the device (and therefore the device's current computer system configuration), and use that determination to adapt Pröll's display (change to the view corresponding to the current system configuration). *See* Houh Decl., ¶108.

f. 17[e]

See Sections VIII.A.3.g, VIII.B.5.e for 1[f], 17[d] above for sensor input. Houh Decl., ¶109. In addition, a POSITA would have understood that Pröll's switch, which automatically detects rotation of the device and adjusts the display, would be implemented by using a program executing on a processor that receives sensor input and selects and transitions to the display to the channel view in response. *See id.*

g. 17[f]

See Section VIII.B.4 for claim 16. Houh Decl., ¶110.

h. 17[g]

See Sections VIII.B.3, VIII.B.4 for claims 15, 16. Houh Decl., ¶111.

6. Claim 18

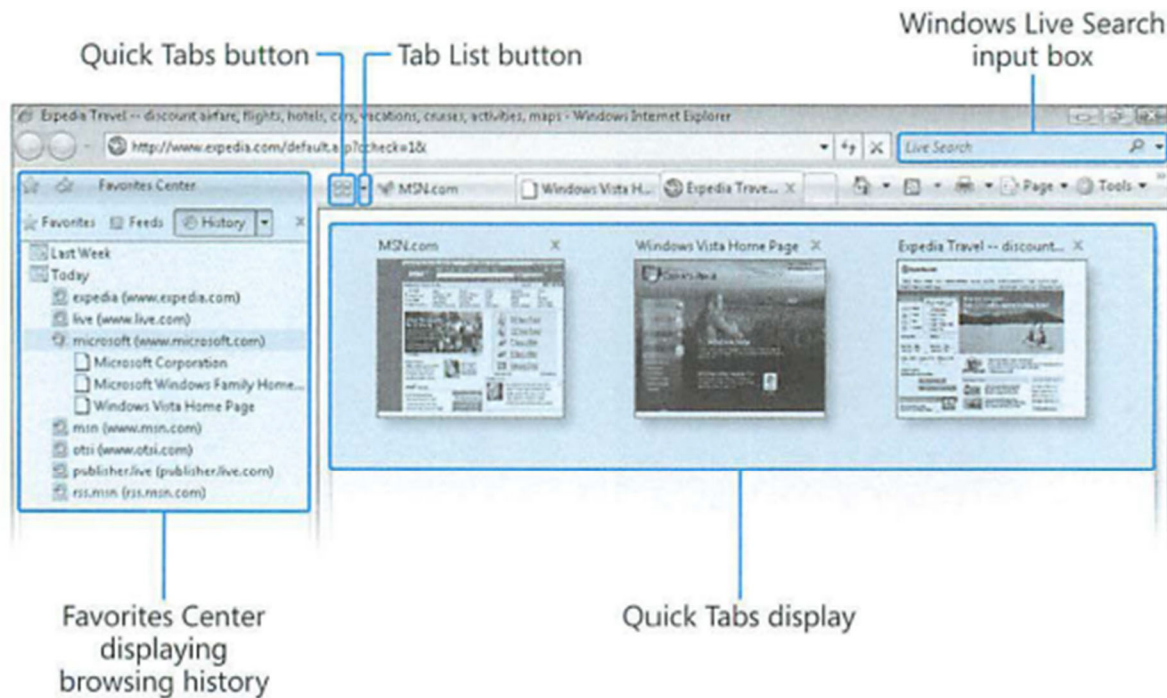
Claim 18 depends from claim 17. Section VIII.B.5 above explains the Pröll-Martinez-Chandhri combination teaches “the user interface of claim 17.” In addition, Chandhri teaches a scroll wheel (Chandhri, [0159]), a touch surface (i.e., “touchpad”) (*id.*, [0081], [0129], [0144], [0146]), and a mouse (*id.*, [0081], [0129]). It would have been obvious to implement these teachings from Chandhri in the Pröll-Martinez combination for the same reasons as discussed above for claim 2. *See* Houh Decl., ¶97-98, 112.

C. Ground 3: Obviousness over Pröll, Martinez, and Preppernau (Claims 3-14)

1. Preppernau

Preppernau is a January 2007 Microsoft publication (*see* EX-1015) detailing step-by-step operating instructions for Windows Vista. Preppernau, Title, xi; Houh Decl., ¶63. 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.⁹ *Id.*



2. Claim 3

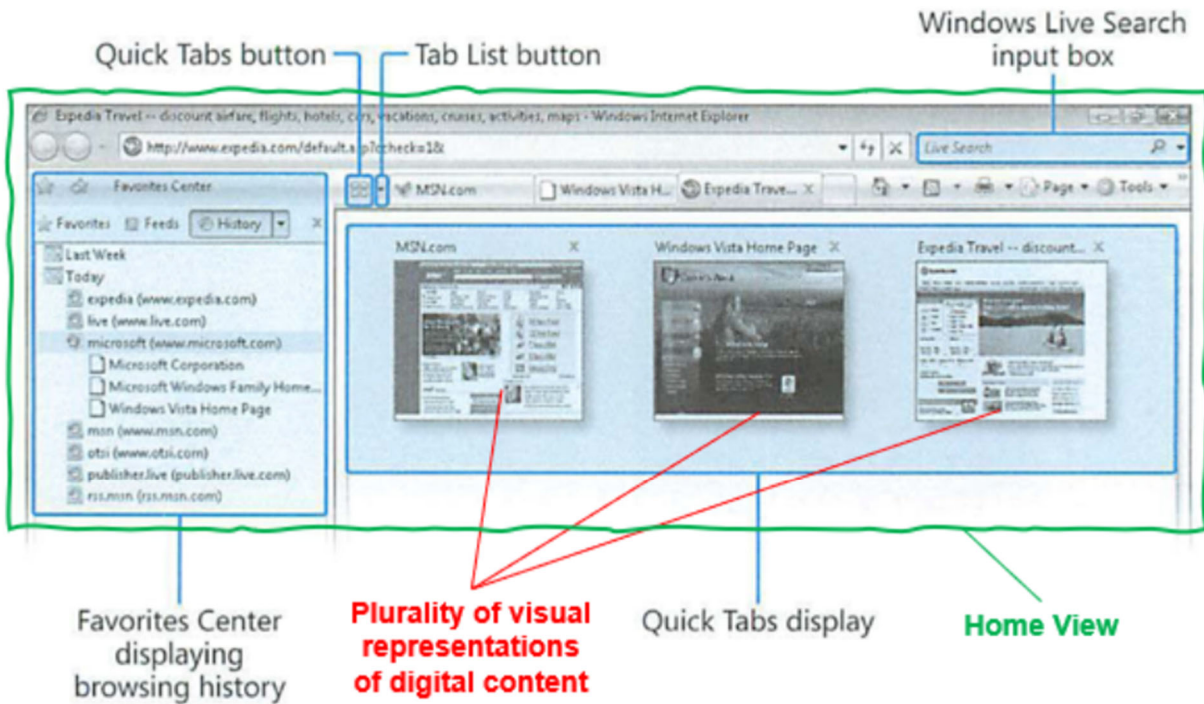
Claim 3 depends from claim 1. Section VIII.A.3 above explains the Pröll-Martinez combination teaches “the user interface of claim 1.” A POSITA would have found the additional limitations of claim 3 obvious based on Preppernau’s teachings. Hough Decl., ¶¶113-14. Specifically, screen saver views were well known at the relevant time as shown in Preppernau. Preppernau, 112–15, 121. Preppernau teaches including a slide show of specific images as the screen saver

⁹ Throughout the Petition, all blue annotations in Preppernau figures are original; Petitioner’s annotations are made in separate color.

view. *Id.*, 113. A POSITA would have been motivated to apply a passive viewing mode, such as a well-known screen saver, to the plurality of views in the Pröll-Martinez combination because, for example, it would have amounted only to applying a known technique (e.g., passive viewing of content) to yield predictable results (e.g., a screen saver that displays selected content for passive viewing). Houh Decl., ¶114.

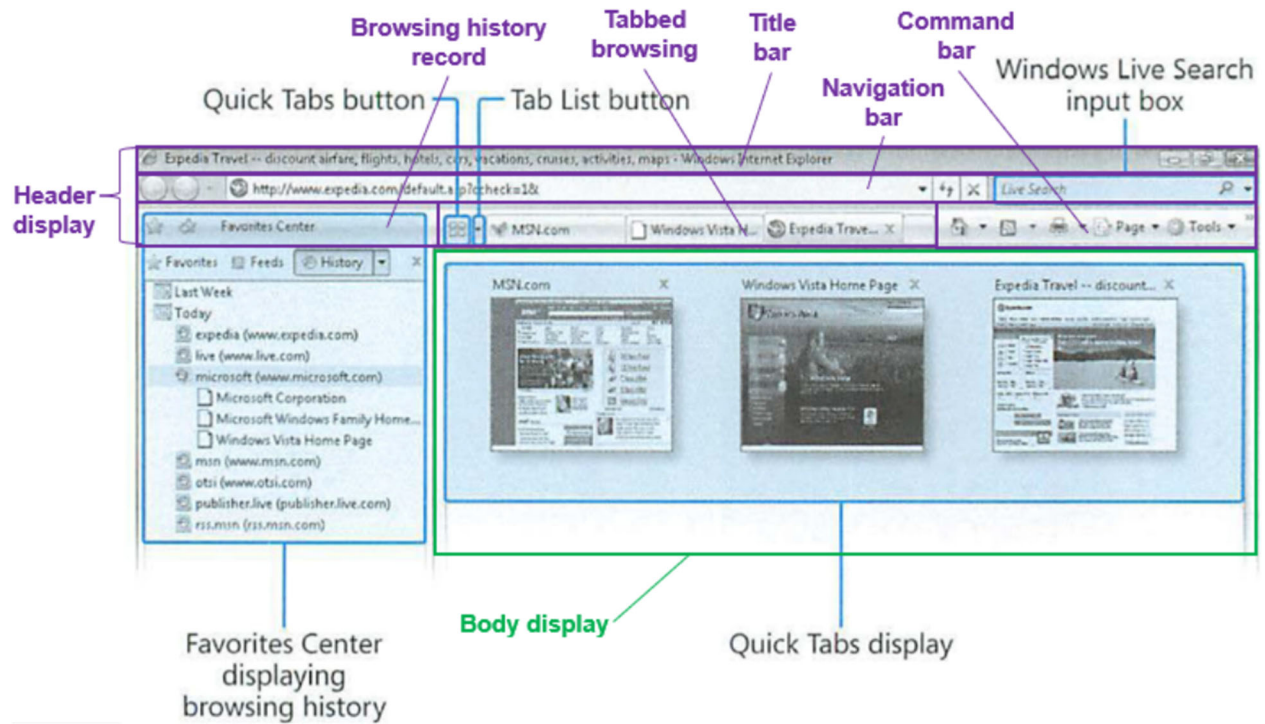
3. Claim 4

Claim 4 depends from claim 1. Section VIII.A.3 above explains that the Pröll-Martinez combination teaches “the user interface of claim 1.” Notably, claim 4 requires a “home view” to be among the “plurality of views” in 1[c], but does not require this specific view to be selected in response to the detected current computer system configuration, as recited in 1[f]. Preppernau teaches the additional limitations of claim 4. Houh Decl., ¶¶ 115-21. Specifically, the Windows Vista operating system user interface includes a **“Quick Tabs display” below tool bars and tools** (“home view”) that arranges current, open web page-linked **thumbnail screenshots** in a grid-type layout (“organizing a plurality of visual representations of digital content”) on a user’s computer screen (“display component”). Preppernau, 182. This is shown in the annotated figure reproduced below.



The '715 patent discloses embodiments with a header display including at least navigation, tool, and title components, and a body display as a tabbed view of multiple webpages. EX-1001, Figs. 3C, 18A–D, 49:1–50:54. Preppernau teaches a similar embodiment. Specifically, in Preppernau, **tools** and **tool bars** spanning an Internet Explorer instance include a title bar, navigation bar, command bar, “Favorites Center,” and browsing tabs (“header display comprises a lateral frame”) which appear at the top of the Quick Tabs display window (“home view”). Preppernau, xxiii, lv, 170–71, 364. When a user selects the Quick Tabs view, multiple web pages are displayed in tabbed format below the navigation bar (“body

display is rendered below the header display”). *Id.*, 171. A figure (annotated) showing the Quick Tabs view is reproduced below.

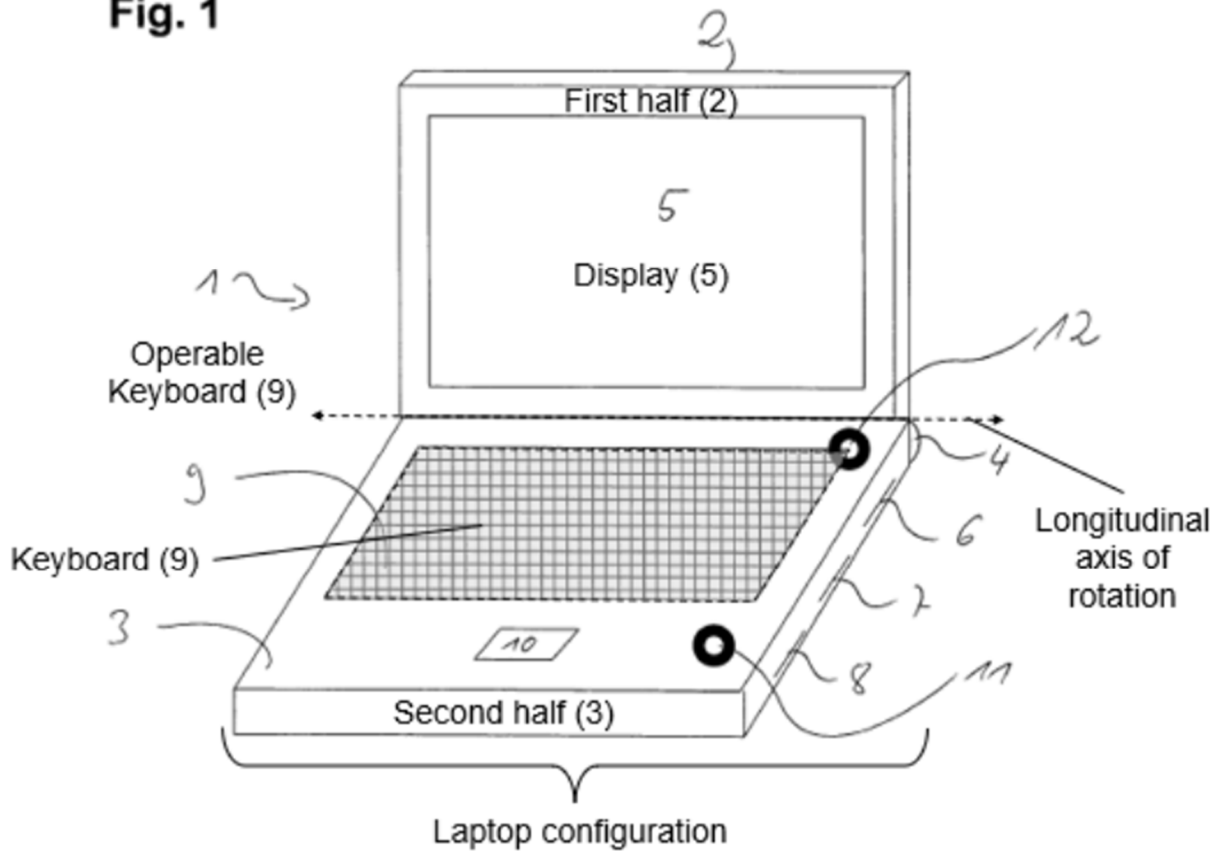


A POSITA would have understood Preppernau’s Internet Explorer tool bars and tools teach a header display with lateral frame in the same way as disclosed by the ’715 patent (above). Houh Decl., ¶119. A POSITA would have been motivated to implement these GUI elements from Preppernau in the Pröll-Martinez combination because they were predictable and well-known and because POSITA would have understood them as user-friendly to browse content on Pröll’s device. Preppernau, 182; Houh Decl., ¶¶116-21.

4. Claim 5

Claim 5 depends from claim 4. Section VIII.A.3 above explains the Pröll-Martinez combination teaches a “computer system” with “display” and “keyboard” in a “computer system configuration.” As explained in Section VIII.C.3 for claim 4 above, the Pröll-Martinez-Preppernau combination teaches the “user interface of claim 4.” Houh Decl., ¶122. Pröll teaches claim 5’s additional limitations. Specifically, Pröll further teaches a computing unit that can pivot (“rotat[e]”) first half 2 with display 5 and second half 3 with keyboard 9 relative to one another using a hinge connection along the joint of those two halves (“longitudinal axis”). Pröll, Abstract, [0033]–[0034]. A figure (annotated) illustrating the relationship of the keyboard, base, display, and rotational axis of the two halves relative to each other is reproduced below.

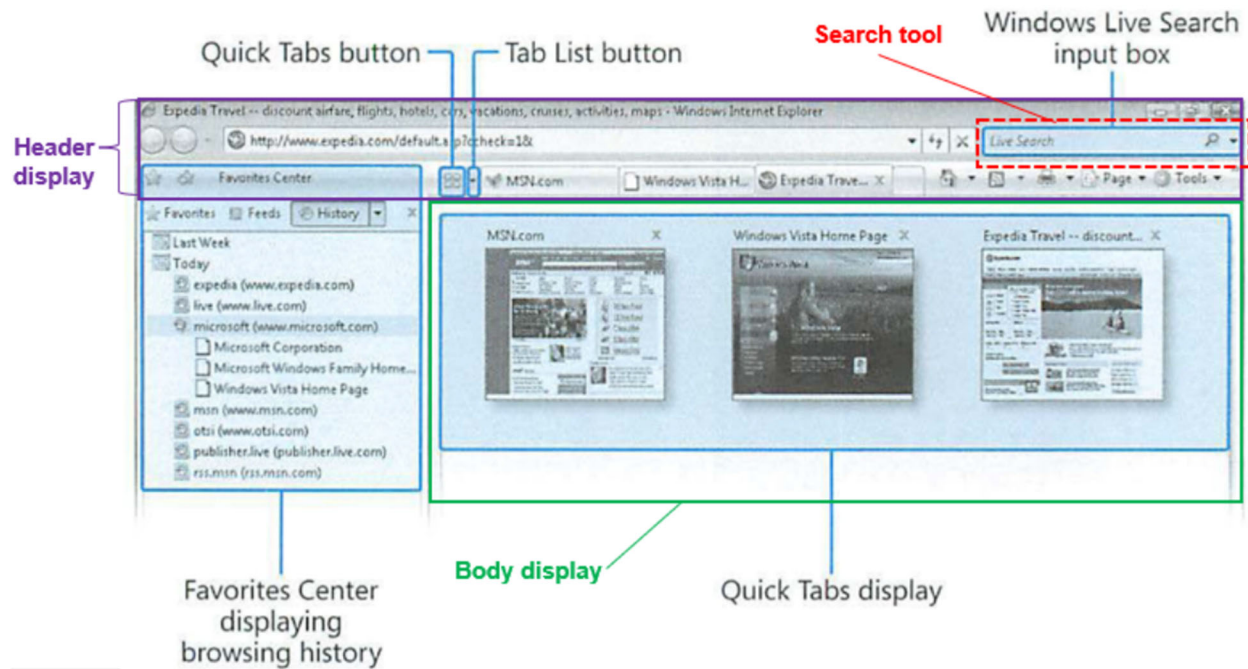
Fig. 1



5. Claim 6

a. 6[a]

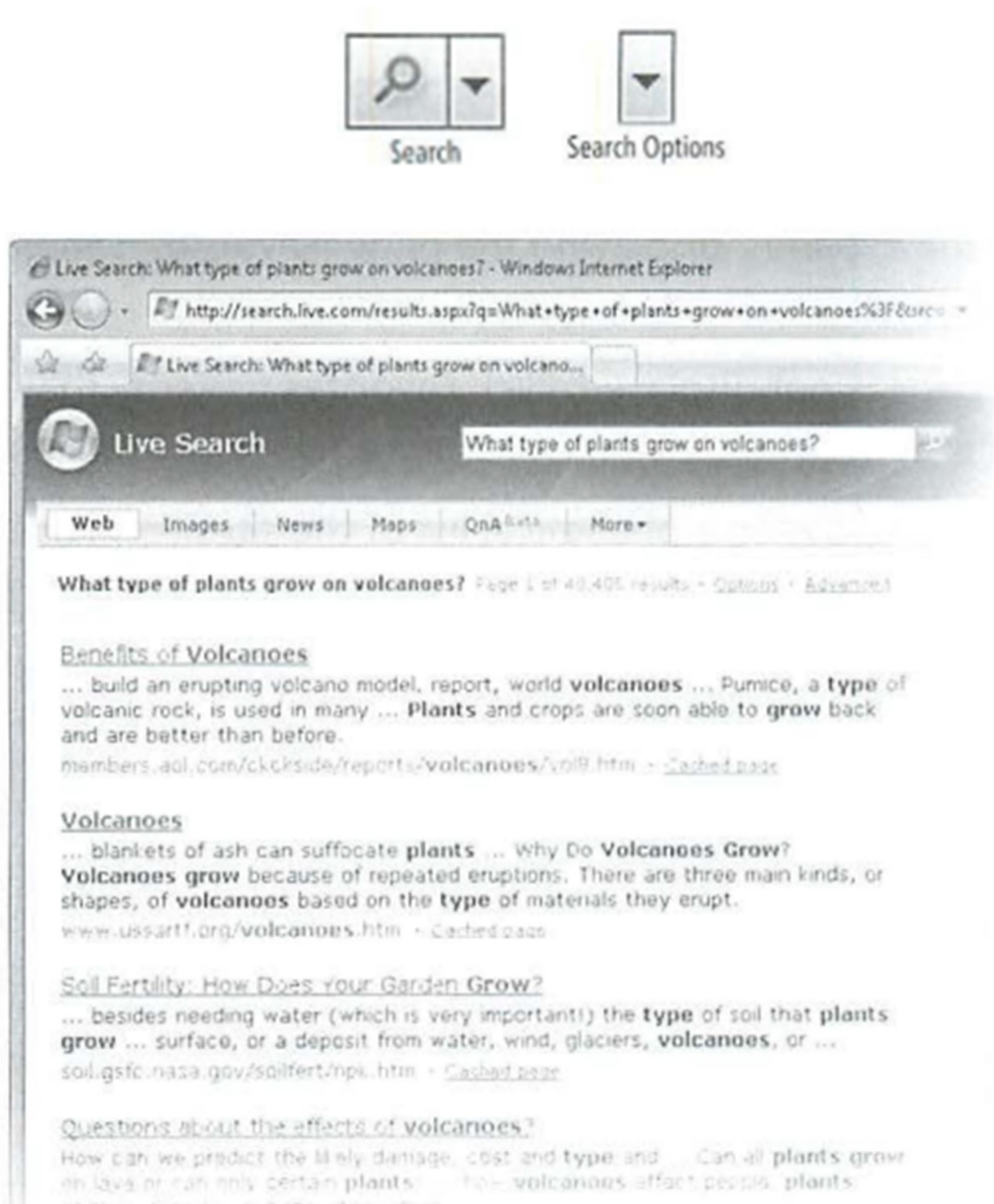
Claim 6 depends from claim 4. Section VIII.C.3 above explains that the Pröll-Martinez-Preppernau combination teaches “the user interface of claim 4.” Preppernau teaches 6[a]’s additional limitations. Preppernau teaches a Windows Live Search input box (“search tool”) configured to allows users to search the internet for web pages associated with textual entries entered by a user (“configured to accept search terms entered by a user”). Preppernau, lv, 182–83; Houh Decl., ¶¶123-24. An example figure (annotated) is reproduced below, and shows the “search tool” in the “header display.”



A POSITA would have been motivated to implement Preppernau's search functionality in the Pröll-Martinez combination for the same reasons described in claim 4. Houh Decl., ¶¶116-21, 124.

b. 6[b]

Preppernau teaches 6[b]'s additional limitations. Houh Decl., ¶¶125-26. Preppernau teaches users "click the Search button" ("execution") to search web pages ("digital content") according to text a user enters into a Windows Live Search input box ("search engine") that returns and displays hyperlinked web content ("results") in the browser window ("navigate to a view of a first visual representation of digital content"). Preppernau, 183. An example of the buttons used to search and respectively- generate search results are reproduced below.



Id. Besides Live Search, the user interface presents users with “two dozen” other search providers (“search engines”) for use. *Id.* In other words, Preppernau

teaches a user clicking the search button (“in response to execution”), the computer system returns and displays hyperlinked web content in its Live Search (“navigate[s] to a view of a first visual representation of digital content, wherein the digital content includes a search engine, and the search engine presents results for the search terms”).

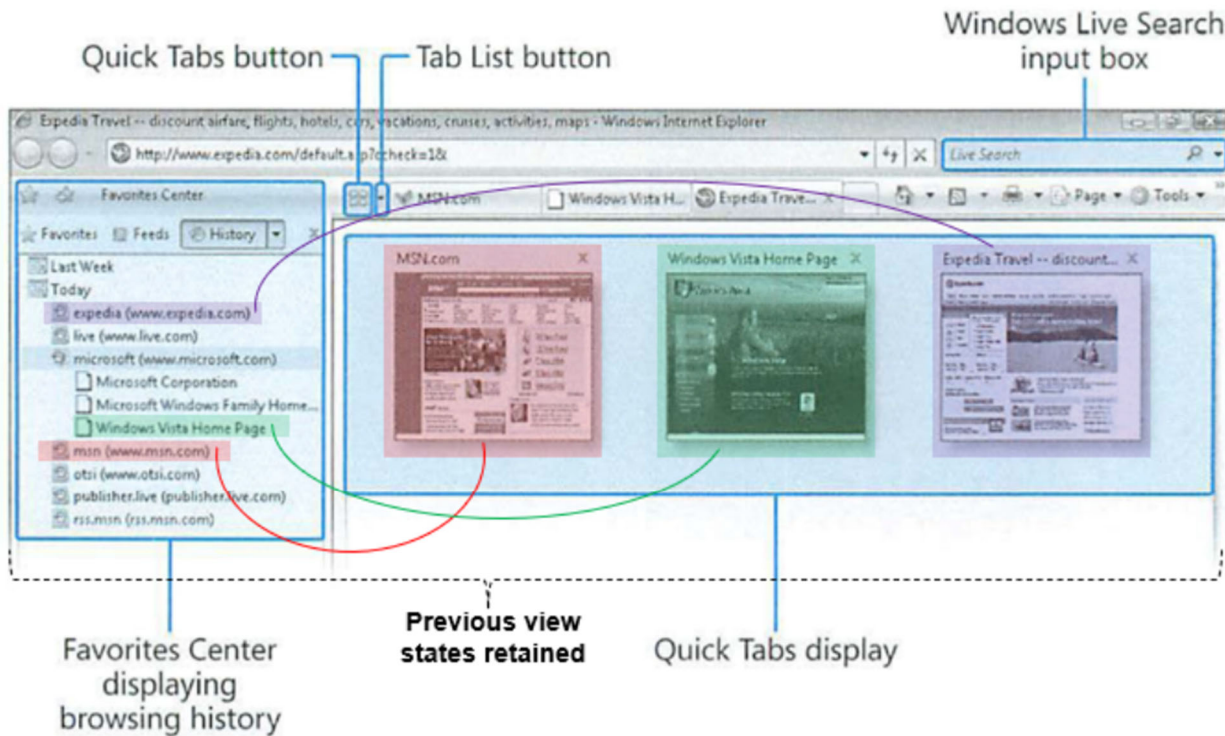
A POSITA would have been motivated to implement Preppernau’s search functionality in the Pröll-Martinez combination for the same reasons as 6[a], above. Houh Decl., ¶¶125-26.

6. Claim 7

Claim 7 depends from claim 1. Section VIII.A.3 above explains the Pröll-Martinez combination teaches “the user interface of claim 1.” Under MPF, this limitation requires a “local or remote storage device.” *See, e.g.*, EX-1001, 16:53-64, 61:6-15, Fig. 51. Pröll’s computing unit further includes a memory (“storage component”), which teaches a “local or remote storage device.” Pröll, [0034].

Preppernau teaches claim 7’s additional limitations. Houh Decl., ¶127-30. The Windows Vista Quick Tabs display includes thumbnails and tabs of previously-opened web pages (“previous view state”). Preppernau, 182. Previous user internet browsing search results are “retain[ed]” in a record “History” lasting 0 to 999 days and can be categorized by at least “Today” and “Last Week.” *Id.*, 182–85. The “Today” results appear as thumbnails in the Quick Tabs display (e.g., “msn,”

“Windows Vista Home Page,” “Expedia”). An example figure (annotated) is reproduced below. *Id.*, 182.



A POSITA would have understood computing systems require memory to retain operating system instructions, including browsing history and Quick Tabs display functions, in the Pröll-Martinez-Preppernau combination. Houh Decl., ¶¶129-30. A POSITA would have been motivated to implement Preppernau’s search history functionality in the Pröll-Martinez combination for the same reasons as claim 4 above. Houh Decl., ¶¶116-21, 130.

7. Claim 8

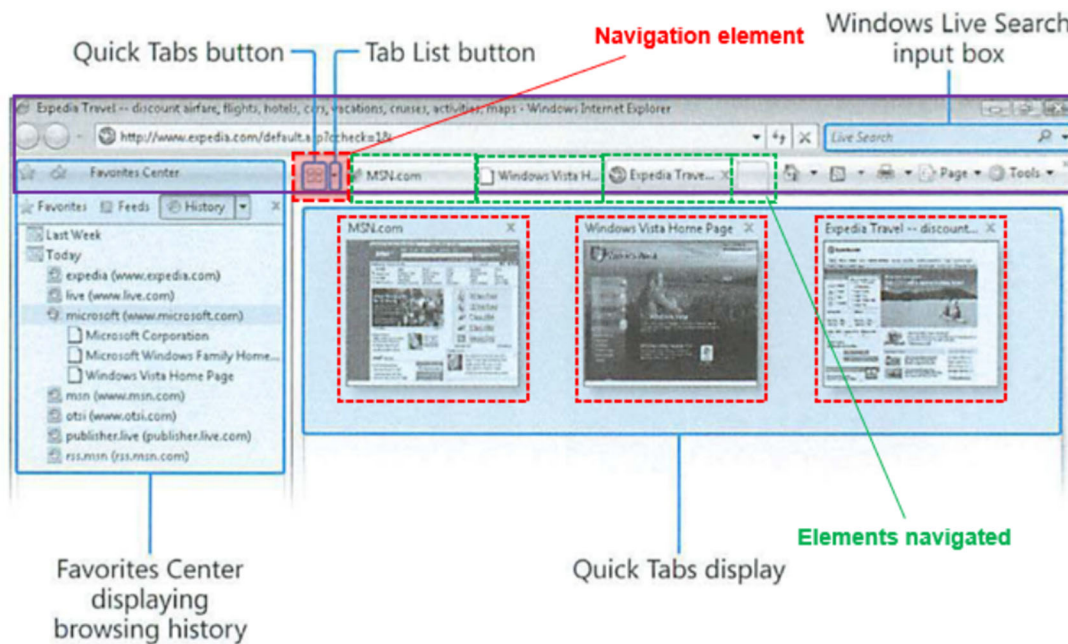
Claim 8 depends from claim 7. Section VIII.A.3.e above explains the Pröll-Martinez combination teaches the “execution component” of claim 1. As described

in Claim 7 above, Preppernau teaches “the user interface of claim 7,” including “retain a previous view state.” Preppernau teaches claim 8’s additional limitations, under MPF or not. Houh Decl., ¶¶131-34. For MPF, this limitation requires the execution component to be a program executing on a processor that can (i) detect execution of a navigation element, and (ii) based on that detection, change to the previous view, and its equivalents. *See*, e.g., EX-1001, Fig. 51, 20:56–61, 21:8–11, 46:9–18, 68:9–34.

Preppernau teaches Windows Internet Explorer 7 includes a tabbed browsing interface that enables a user to open multiple web pages linked to internet sites as tabs that populate a single instance of Internet Explorer to select (“execut[e]”) and switch (“transition”) between previously opened—i.e. viewed—web sites faster and easier. Preppernau, 170–71, 174, 198, 364. To use Preppernau’s interface and corresponding navigation elements, a POSITA would have understood, and found it obvious, that a processor detects execution of a navigation element (e.g., a user clicking on a previously-viewed tab or the Quick Tabs button) and, based on the detection, change its view accordingly. Houh Decl., ¶¶132-33. An example figure showing tab-based switching is reproduced below. Preppernau, 170.



Preppernau's Quick Tabs button launches a Quick Tabs display of representative thumbnails of tabbed websites while maintaining those tabs above the thumbnails displayed. *Id.*, 175, 182. An example figure (annotated) showing user-selected ("execut[ed]") tabs with corresponding thumbnails of previously viewed web sites ("previous view[s]") created by selection of the Quick Tabs button ("navigation element") is reproduced below. *Id.*, 182.



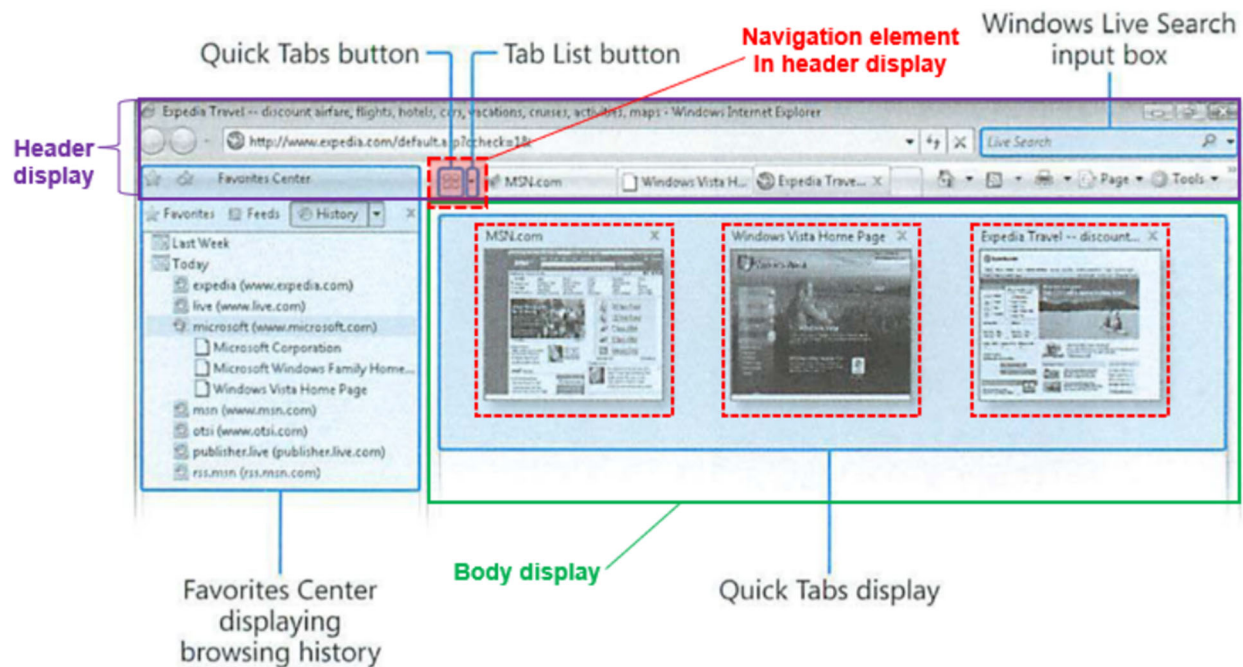
A POSITA would have been motivated to implement Preppernau's tab-based internet browsing in the Pröll-Martinez combination for the same reasons as claim 4 above. Houh Decl., ¶¶116-21, 134.

Thus, claim 8 is unpatentable as obvious based on the Pröll-Martinez-Preppernau combination.

8. Claim 9

Claim 9 depends from claim 7. As described in Sections VIII.C.3, VIII.C.6, VIII.C.7 for claims 4, 7, 8 above, Preppernau teaches a "header display," "the user interface of claim 7," and a "navigation element." Additionally, Preppernau teaches the Quick Tabs button ("navigation element") is located in a header of the Quick

Tabs display. Preppernau, 182. A figure (annotated) showing the Quick Tabs button “displayed in a header display” is reproduced below.



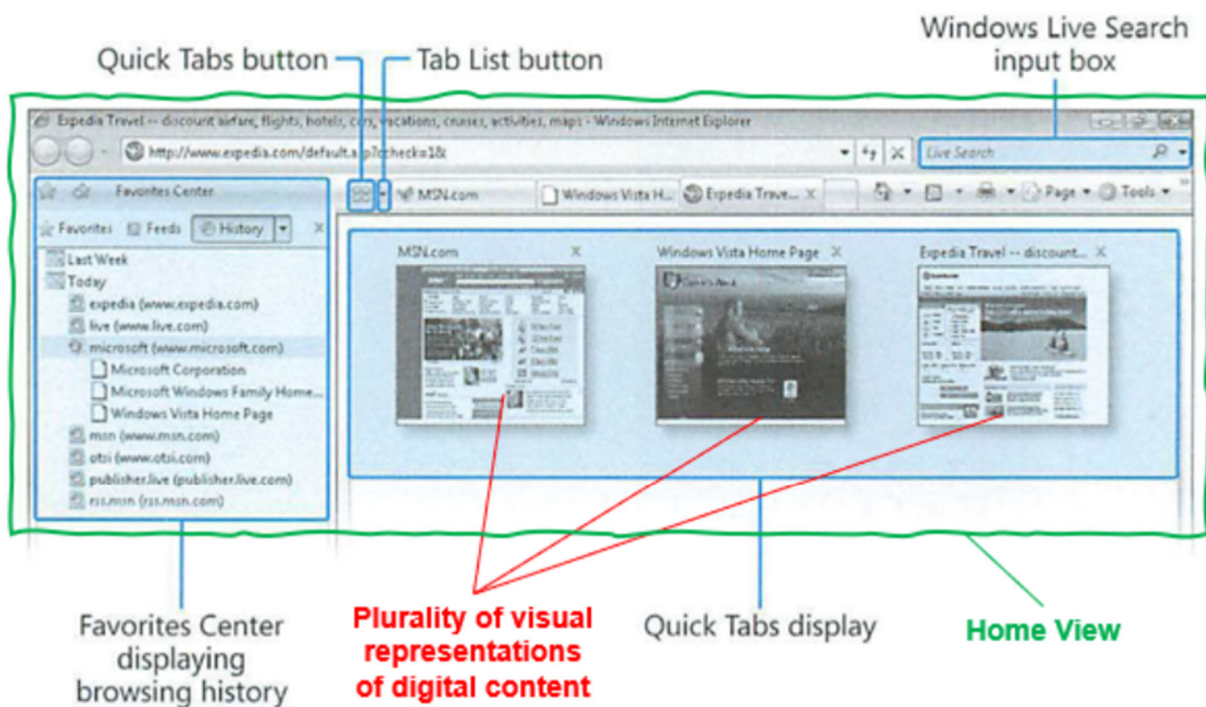
A POSITA would have been motivated to implement Preppernau's tab-based internet browsing in the Pröll-Martinez combination for the same reasons as claim 4 above. Houh Decl., ¶¶116-21, 135-36.

9. Claim 10

a. 10[a]

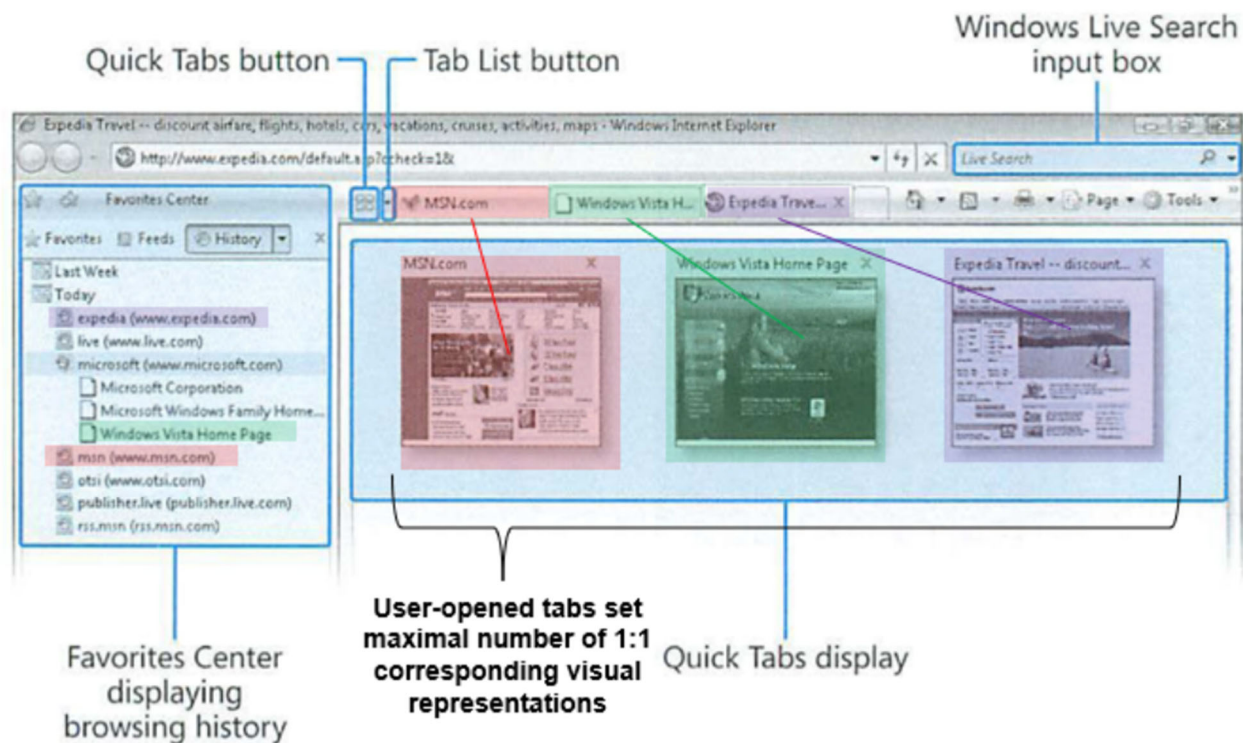
Claim 10 depends from claim 4. Section VIII.C.3 explains the Pröll-Martinez-Preppernau combination teaches “the user interface of claim 4.” In addition, that Section explains Preppernau’s “**Quick Tabs display**” **below tool bars and tools** (“home view”) arranges current, open web page-linked **thumbnail**

screenshots in a grid-type layout (“organizing a plurality of visual representations of digital content”) on a user’s computer screen (“display component”). Preppernau, 182. The annotated figure reproduced below shows that organization of a plurality of visual representations is in the body portion of the home view (i.e., below the header made up of tool bars and tools). Houh Decl., ¶137.



b. 10[b]

Preppernau teaches this limitation. Houh Decl., ¶¶138-40. In Preppernau, quick tabs are displayed that contain screenshot thumbnails of user-opened internet browsing tabs, where the body display further shows one regular, top-listed tab corresponds to each screenshot thumbnail below it as illustrated in the figure (annotated) reproduced below. Preppernau, 182.



A POSITA would have understood that Preppernau teaches a maximal number of visual representations are displayed per browsing tab (“display page”) because the amount of screenshot thumbnails in the Quick Tabs display are limited by the size of the display. Peppernau, 182; Houh Decl., ¶139. Preppernau teaches

that “[w]hen a window is not big enough to show all its contents, vertical and/or horizontal scroll bars appear so that you can move the contents within the window[,]” and a POSITA would have understood that the window size determines the display threshold. Preppernau, xxiii; Houh Decl., ¶139. In addition, the number of thumbnails that can be seen corresponds to the “maximal number.”

A POSITA would have been motivated to implement Preppernau’s tab-based internet browsing with Quick Tabs display in the Pröll-Martinez combination for the same reasons as claim 4 above. Houh Decl., ¶¶116-21, 140.

10. Claim 11

Claim 11 depends from claim 10. Section VIII.C.9 explains the Pröll-Martinez-Preppernau combination teaches “the user interface of claim 10.” Preppernau teaches claim 11’s additional limitations. Houh Decl., ¶¶141-44. As to “an indication of visual representations displayed on adjacent display pages of the home view,” the ’715 Patent explains a “home view” may include multiple pages that may further include a “hint” of “adjacent displays” that is located on the top or bottom of the display screen. EX-1001, 33:6-26, Fig. 2 (reproduced below).

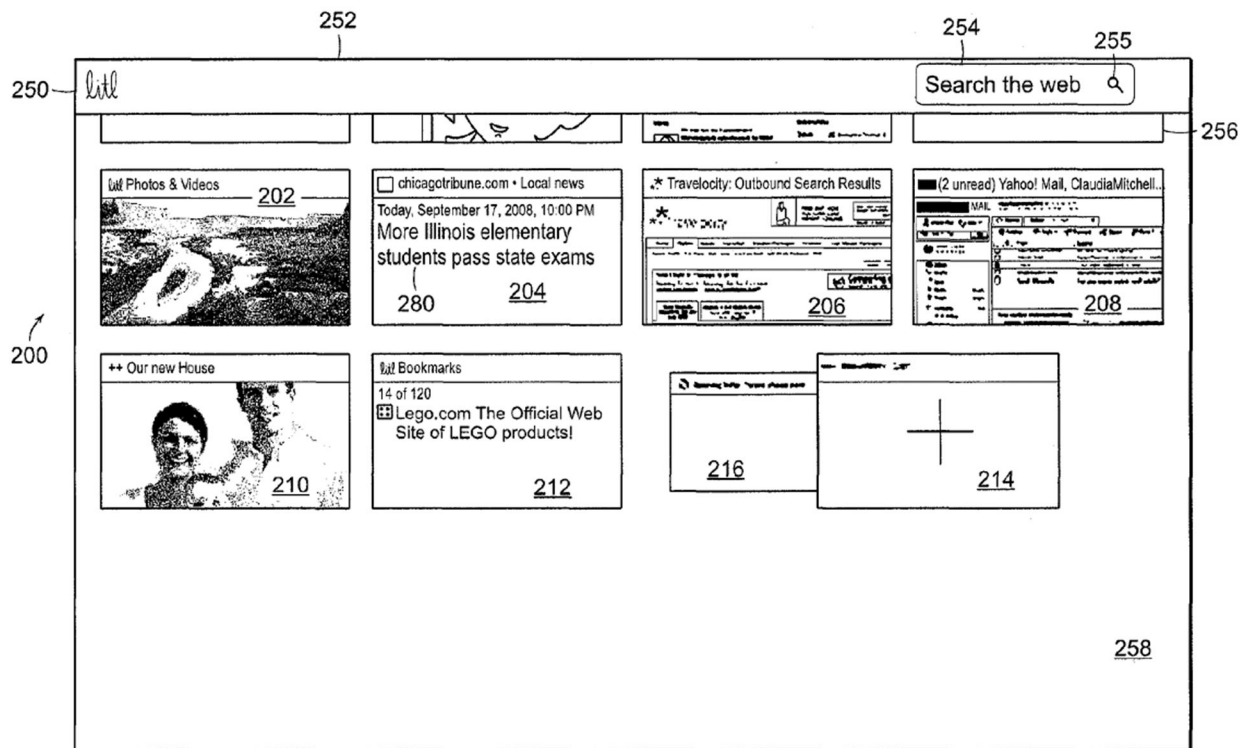


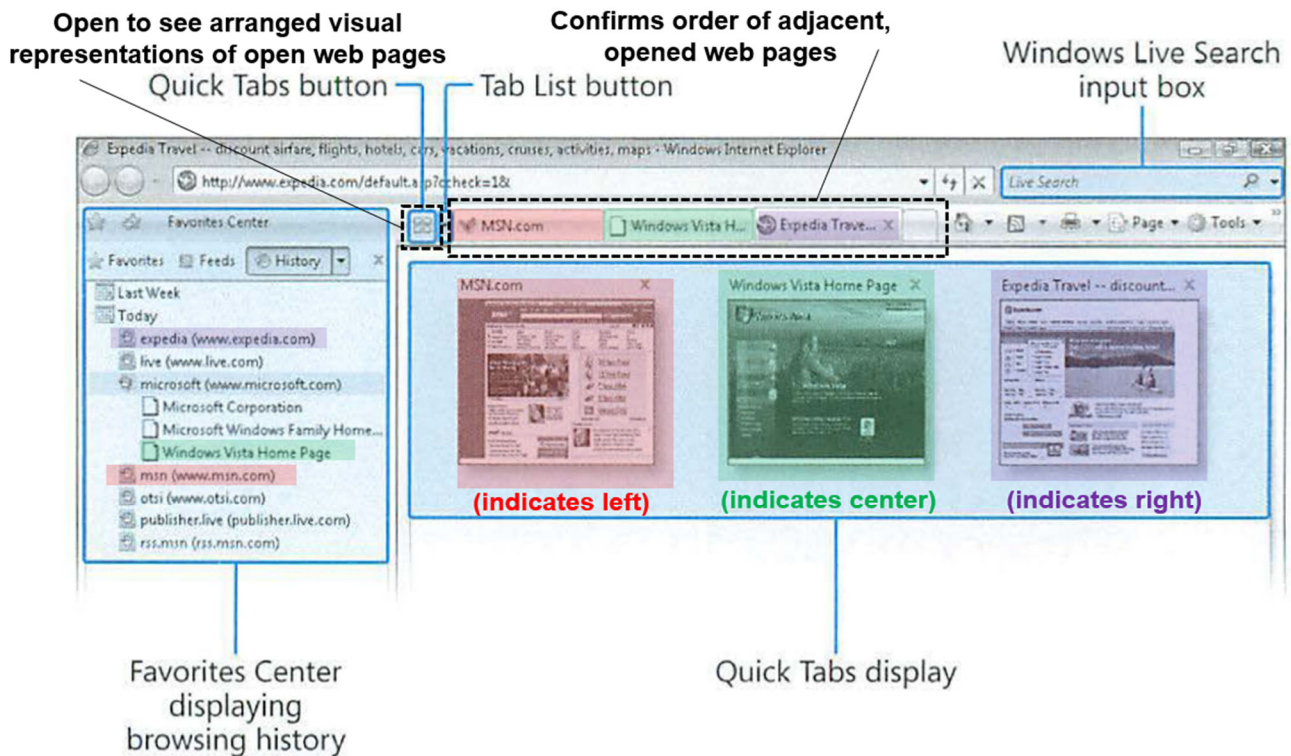
FIG. 2

The above figure shows indication 256 depicts a portion of a “visual representation of customized content.” *Id.*, 29:29-31. A POSITA would have understood that a similar indication is displayed as a user scrolls through the contents of the Quick Tabs display in Preppernau. *See id.*, xxiii; Houh Decl., ¶143. As explained in Section VIII.C.9.b for 10[b], Preppernau teaches that the maximal number of visual representations displayed is determined by the size of the window. Preppernau further teaches that “the vertical scroll bar [] move[s] the contents up and down” Thus, a POSITA would also have understood that when a user scrolls up, portions of the screenshot thumbnails furthest down on the screen begin to disappear as portions of a new row of thumbnails at the top of the screen begin to

appear. Houh Decl., 143. When a user scrolls down, the reverse happens and portions of the topmost thumbnails begin to disappear as portions of a new row of thumbnails at the bottom of the screen begin to appear. *Id.*

The Quick Tabs display (“home view”) implements the same Windows Vista operating system with Internet Explorer 7 tabbed internet browsing. *Id.*, 182. A POSITA would have understood that each thumbnail shown in the Quick Tabs display is a screenshot of an active, open web page in one instance of Internet Explorer 7 because Quick Tabs “displays screenshots of all Web pages currently open.” *Id.*, 182; Houh Decl., ¶¶142-44. Because Internet Explorer 7 uses tabbed browsing, a POSITA would have further understood that each screenshot is therefore an open web page arranged adjacent to the others displayed in Quick Tabs according to an arrangement of 1:1 corresponding browser tabs. Thus, a POSITA would have understood that whenever a user selects the Quick Tabs display (“home view”), an arrangement of screenshots appear (“visual representations displayed”) in an arrangement reflecting that of the actual, open web pages a user opened in a sequence of browser tabs (“adjacent display pages”) in a instance of Internet Explorer 7

browsing. Houh Decl., ¶¶142-44. A figure showing this user selection (annotated) is reproduced below.



Preppernau, 182. Therefore, a POSITA would have understood the arranged row of thumbnails shown in the Quick Tabs display teaches indications of adjacent web pages open in adjacent tabs summarized within a home view display. Houh Decl., ¶¶142-44.

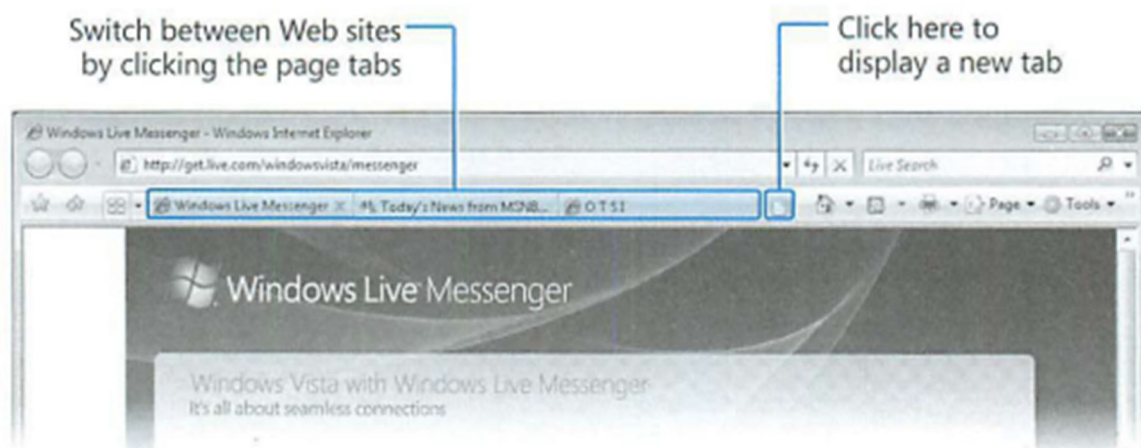
11. Claim 12

a. 12[a]

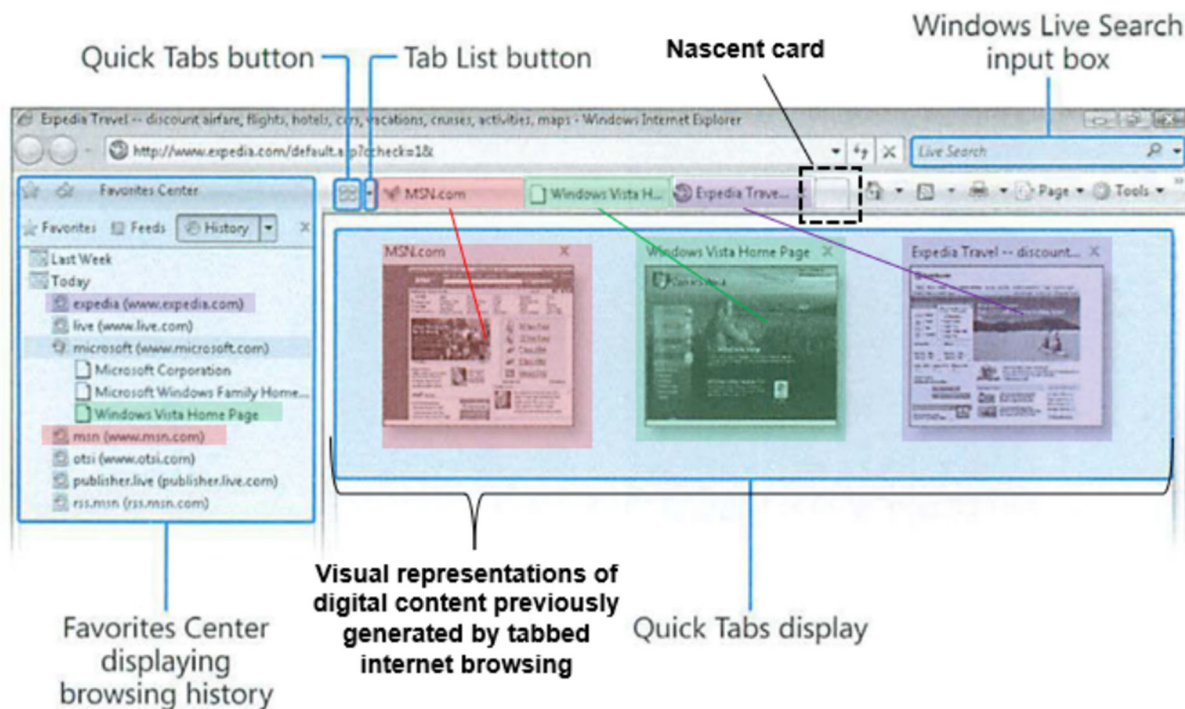
Claim 12 depends from claim 4. Section VIII.C.3 explains the Pröll-Martinez-Preppernau combination teaches the “user interface of claim 4” with a

“home view.” Houh Decl., ¶¶145-49. As to 12[a], the ’715 patent discloses a “nascent card” is “configured to permit generation of additional visual representations of digital content” and is “displayed in the body of the home view.” EX-1001, 5:29–33. A nascent card is “always...available to a user,” i.e., a user cannot remove it or change its displayed position. *Id.*, 40:30–47. It also has a similar format to other cards but lacks its own page view. *Id.*, 53:36–42.

Preppernau teaches 12[a]’s additional limitations. Specifically, Preppernau’s Quick Tabs display includes a row of internet browser tabs arranged above thumbnail screenshots corresponding (1:1) to each internet browser tab content previously opened by a user. Preppernau, 182. These tabs are arranged and operate according to tabbed browsing shown in the figure reproduced below. *Id.*, 172.



The browser tabs include an additional tab at the right-most side (“nascent card”) that does not yet correspond to a generated tab or corresponding thumbnail screenshot of internet content but is used to generate an internet web page-linked browser tab. *Id.*, 169–70. A figure (annotated), showing the nascent card to generate a new tab in the Quick Tabs display, is reproduced below.



Id.

A POSITA would have understood Preppernau’s Internet Explorer 7 “new tab” teaches a nascent card because it is a rectangular-shaped, selectable tab, which can create a web page association after selection, and it is displayed in a fixed, last position in a Quick Tabs display but does not yet have a corresponding web page and is not removable by a user. Houh Decl., ¶ 148. As Dr. Houh explains, a POSITA

would have understood the new browser tab has the same look, feel, and functionality as the “nascent card” the ’715 patent describes. *Id.*

A POSITA would have been motivated to implement Preppernau’s tab-based internet browsing with Quick Tabs display in the Pröll-Martinez combination for the same reasons as claim 4 above. *Id.*, ¶¶116-21, 149.

b. 12[b]

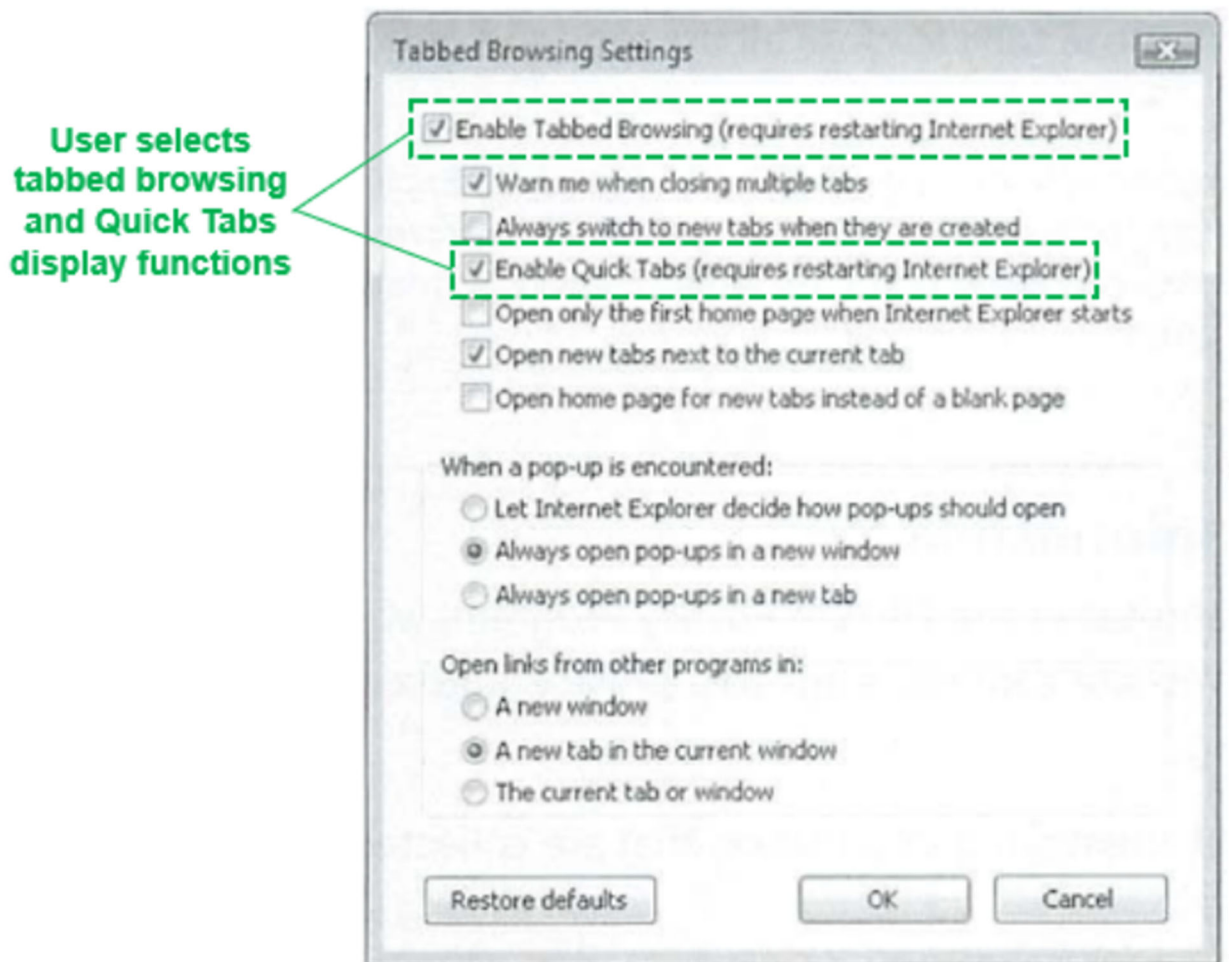
The Pröll-Martinez-Preppernau combination teaches the “nascent card,” as discussed in 12[a] above. Preppernau also teaches 12[b]’s additional limitation. Houh Decl., ¶¶150-52. Specifically, the right-most tab displayed Quick Tabs



display’s header includes functionality to create a new tab linked to internet content. Preppernau, 169–70. A figure (annotated) showing the creation of a new tab is reproduced below. *Id.*

A POSITA would have understood the right-most tab in Preppernau’s Quick Tabs display header is the same as Preppernau uses for general Internet Explorer

tabbed browsing (immediately above) (both use tabbed internet browsing GUI elements). Houh Decl., ¶¶151-52; Preppernau, 170. Furthermore, a specific implementation of this functionality is user-enabled (“configured”) in the Quick Tabs display. *Id.*, 174–75. A figure showing this user selection (annotated) is reproduced below. *Id.*, 175.



Therefore, a POSITA would have understood the right-most tab (“nascent card”) of those tabs displayed in the Quick Tabs display allows users to create (“generate”) additional internet browsing tabs linked to internet web pages (“digital

content”) viewable as thumbnail screenshots in the Quick Tabs display (“visual representations”). Houh Decl., ¶¶ 151-52.

A POSITA would have been motivated to implement Preppernau’s tab-based internet browsing with Quick Tabs display in the Pröll-Martinez combination for the same reasons as claim 4 above. Houh Decl., ¶¶ 116-21, 152.

12. Claim 13

a. 13[a]

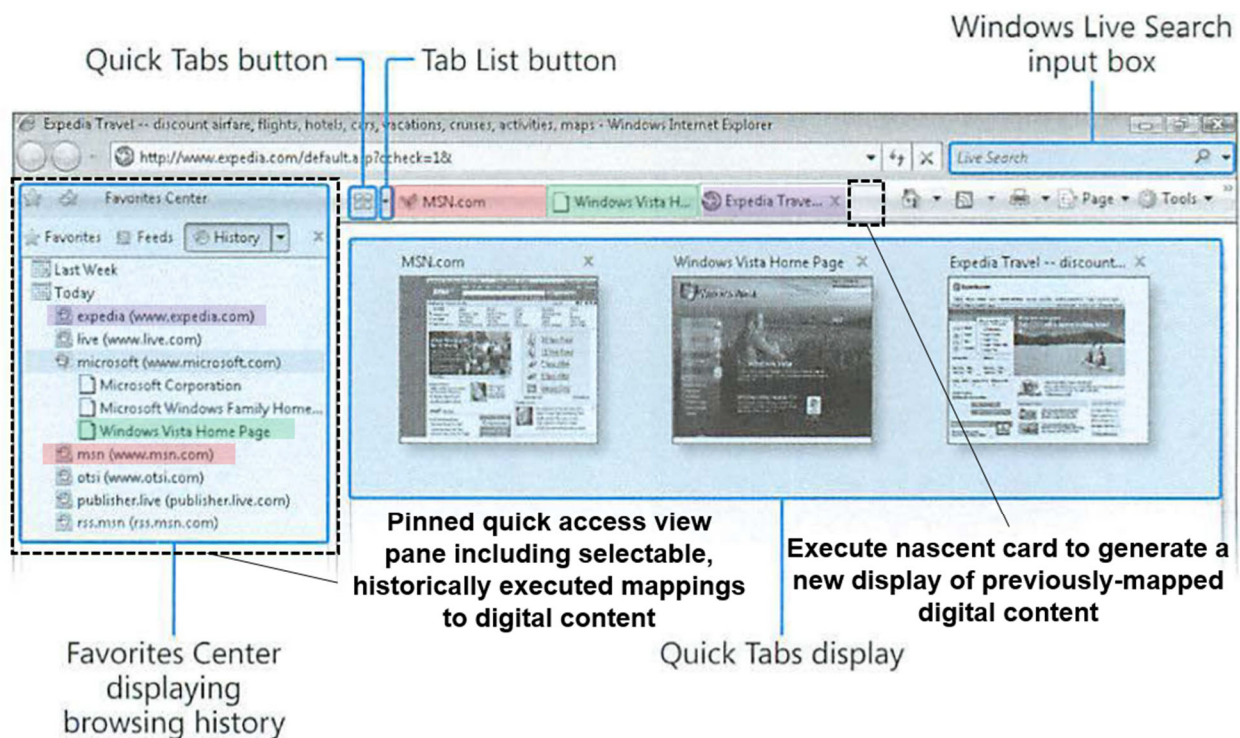
Claim 13 depends from claim 12. Section VIII.C.11 explains the Pröll-Martinez-Preppernau combination teaches “the user interface of claim 12” including a “nascent card [that] is configured to permit generation of additional visual representations of digital content.” Section VIII.B.5.d, VIII.B.5.d above explains the Pröll-Martinez combination teaches a processor-based “execution component” as recited in claim 1 (from which claim 13 indirectly depends). For MPF, this limitation requires a program executing on a processor that can (i) detect execution of a nascent card, (ii) transition the display to the quick access view in response, and (iii) map to, and display, online content in response to a request to display that content from the quick access view, and its equivalents. *See*, e.g., EX-1001, 30:2–4, 30:15–17, 35:6–21, 38:62–39:1, 40:55–65, 41:10–13, 68:9–69:36. The Pröll-Martinez-Preppernau combination teaches this limitation, under MPF or not. Houh Decl., ¶¶ 153-54.

A POSITA would have understood the Pröll-Martinez-Preppernau combination's processor executes software instructions that implement the tabbed internet browsing user interface functionality of the Windows Vista operating system, including as required if the claims are MPF. Preppernau, xxxii; Houh Decl., ¶¶153-54. To permit generation of additional visual representations of digital content, a POSITA would have understood the combination's system uses a program executing on a processor that can "detect execution of a nascent card." *See* Houh Decl., ¶¶ 153-54. And as discussed in further detail below, a POSITA would have further understood, the combination's system uses a program executing on a processor to "transition the display to the quick access view in response" to that detection and "map to, and display, online content in response to a request to display that content from the quick access view." *See id.* A POSITA would have found it obvious to use the Windows Vista operating system in the Pröll-Martinez-Preppernau computer using its processor for the same reasons described in Section VIII.C.3 for claim 4 above. Houh Decl., ¶154.

b. 13[b]

For 13[b], the '715 patent discloses a quick access view in Fig. 5 (500) that includes "content options in order to generating a mapping" that "may be based on frequency of access" including "most frequently visited content." EX-1001, Fig. 5, 30:15–24. Preppernau teaches 13[b]'s additional limitation, under MPF or not.

Houh Decl., ¶¶155-56. Specifically, Preppernau teaches a user may access a Favorites Center (“quick access view”) from a navigable tool bar in an instance of Internet Explorer 7 containing recently-viewed web pages as depicted in the figure (annotated) reproduced below. Preppernau, 182. The Favorites Center can be pinned as a pane in the browser window. *Id.*



Dr. Houh explains the Favorites Center is available to users responsive to opening a new internet browser tab (“response to execution of the nascent card”) because it is pinned as a pane in a browsing window. Houh Decl., ¶156. This allows users to switch to a different, recent web page from an existing one or open a new instance of a recent web page in a new tab altogether to allow users to easily and efficiently

reinstate a web page recently visited (“execute a mapping”) for updated information at that “favorite” page (e.g., “msn.com” to view updated news published at the same web page, or “expedia.com” to review updated travel prices using the same travel-price provider). *Id.*

A POSITA would have been motivated to implement Preppernau’s tab-based internet browsing with the Favorites Center for the same reasons as the Quick Tabs display in the Pröll-Martinez combination as discussed in Section VIII.C.3 for claim 4 above. Houh Decl., ¶¶116-21, 156.

c. 13[c]

Section VIII.C.11.b explains Preppernau teaches a “nascent card...configured to permit generation of additional visual representations of digital content.” Section VIII.C.12.b explains that a POSITA would have understood that by pinning Preppernau’s “Favorites Center” pane to an instance of Internet Explorer 7, a user was enabled to create a new tabbed browsing instance of a previously-visited web page. For 13[c], Preppernau also teaches the “History” of the Favorites Center is the preserved “record of [a user’s] Internet browsing history.” Preppernau, 182. A POSITA would have understood this record is created when a user navigates to web pages (“generating a mapping to online digital content” and “executing the mapping”) and that as a user navigates to the web page, it is also displayed (“displaying a first view of the mapped digital content”). Houh Decl., ¶157-59.

A POSITA would have been motivated to implement Preppernau's tab-based internet browsing with the Favorites Center for the same reasons as the Quick Tabs display in the Pröll-Martinez combination as discussed in Section VIII.C.3 for claim 4 above. Houh Decl., ¶¶116-21, 159.

13. Claim 14

Claim 14 depends from claim 1. Section VIII.A.3 above explains that the Pröll-Martinez combination teaches the "user interface" and "plurality of views" of claim 1. Preppernau teaches claim 14's additional limitations for the same reasons explained in Section VIII.C.12.b for 13[b]. Houh Decl., ¶¶160-61.

A POSITA would have been motivated to implement Preppernau's tab-based internet browsing with Quick Tabs display in the Pröll-Martinez combination as discussed in Section VIII.C.3 for claim 4 above. *Id.*, ¶¶116-21, 161.

D. Ground 4: Obviousness over Pröll and Preppernau (Claims 1, 3-14, 19, 20)

1. Motivation to Combine

Sections VIII.C.3 and VIII.C.2 explains the motivation to combine certain teachings from Preppernau with the Pröll-Martinez combination. This section explains that a POSITA would have been motivated to combine additional Preppernau teachings with Pröll. Specifically, Windows Vista discussed in Preppernau was a popular operating system for computers at the relevant time, and a POSITA would have found it obvious to use that operating system with the Pröll

computer. *See generally* Preppernau; Houh Decl., ¶¶162-64. 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. Both Pröll and Preppernau predate the earliest priority date of the ’715 patent by more than a year.

Preppernau teaches that Windows Vista is suitable for operation on tablet computers, including devices with displays that receive input via a user’s touch or pen. Preppernau, xiv, xxxiii, 142–47 (instructing how to configure Tablet PC options). As Dr. Houh explains, a POSITA would have been motivated to add the Windows Vista operating system from Preppernau to the Pröll device, including because Pröll’s rotatable device would have been considered a “tablet” computer that would have benefited from an operating system that could take advantage of its rotatable screens. Houh Decl., ¶¶162-64. Indeed, Preppernau—similar to Pröll—teaches how to change a Tablet PC’s configuration to facilitate writing with a pen/stylus. Preppernau, 143.

A POSITA would have been further motivated to combine Preppernau with the Pröll device to improve the usability of Pröll’s interface when its keyboard is inoperable. Houh Decl., ¶ 164. Preppernau explains that Windows Vista includes numerous features to make it easier for a user to access files and applications. *See,*

e.g., Preppernau, 40, 57, 62, 70. Preppernau teaches multiple ways to navigate and organize content on a user’s computer, including organizing websites into tabs, displaying currently open websites in a grid, or rearranging icons and windows on the device into various displays. Houh Decl., ¶¶162-64; Preppernau 46-47, 50-51, 182. A POSITA would have been aware of all of these methods of organizing content, and understood that each would have improved the usability of Pröll’s display. Houh Decl., ¶¶162-64.

2. Claim 1

a. 1[pre]

To the extent limiting, Pröll discloses or suggests the preamble under MPF or non-MPF. *See* Section VIII.A.3.a. Houh Decl., ¶165.

b. 1[a]

Pröll discloses or suggests 1[a]. *See* Section VIII.A.3.b. Houh Decl., ¶166.

c. 1[b]

Pröll discloses or suggests 1[b]. *See* Section VIII.A.3.c. Houh Decl., ¶167.

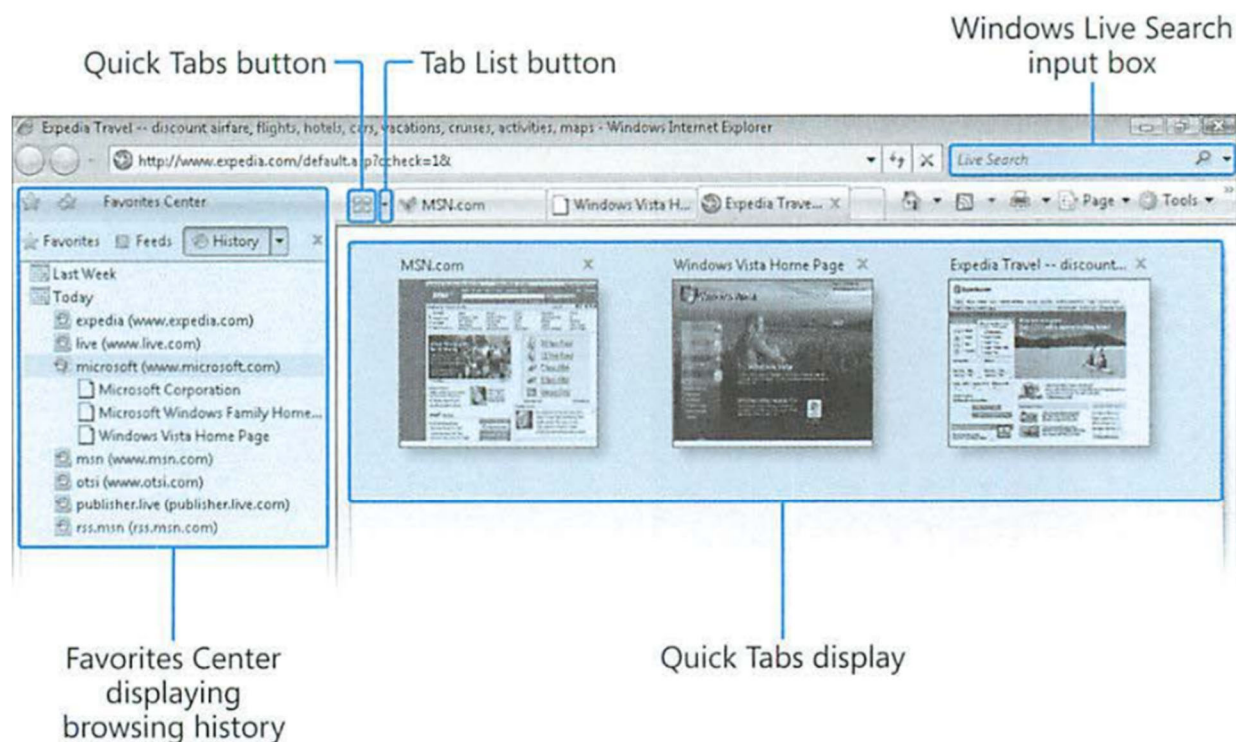
d. 1[c]

The Pröll-Preppernau combination teaches 1[c]. Houh Decl., ¶¶168-72. As discussed above, the Board previously construed a “plurality of views of digital media content” as “referring to a plurality of ways of organizing visual representations of computer content”; this limitation does not encompass “merely

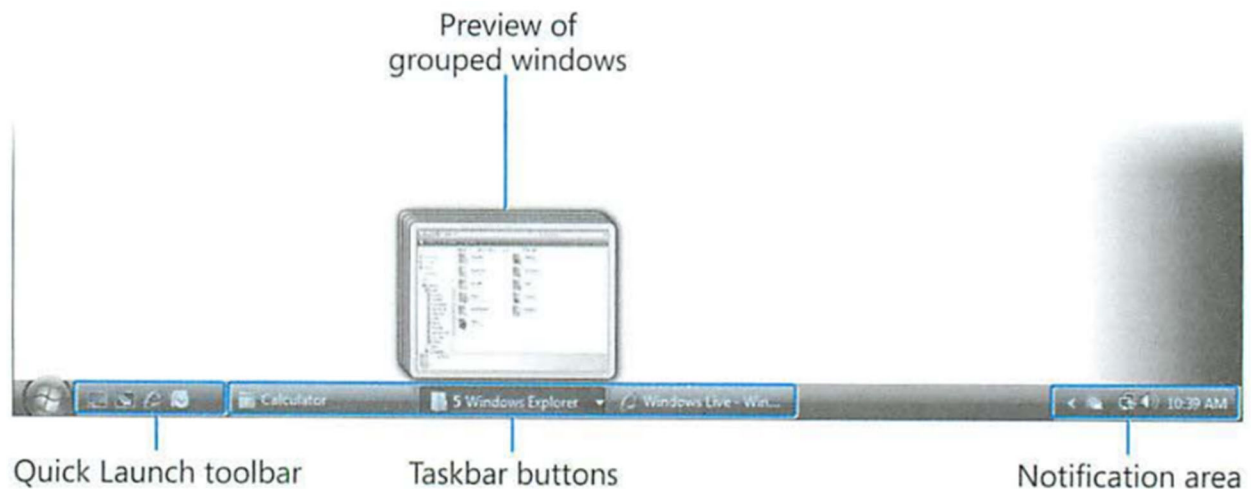
changing the display's orientation" or changing to wholly different content. *See* Section VIII.A.3.d.

As discussed in Section VIII.A.3.d, Pröll's device displays a different computer content view based on its physical configuration (with its two housings rotated more/less than 180°), but Pröll is not explicit about the organization of content on its GUI.

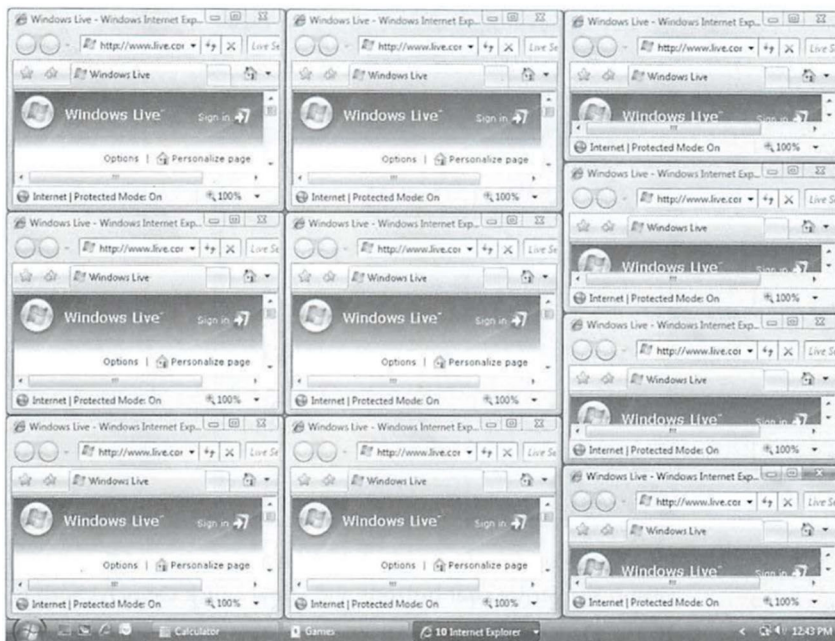
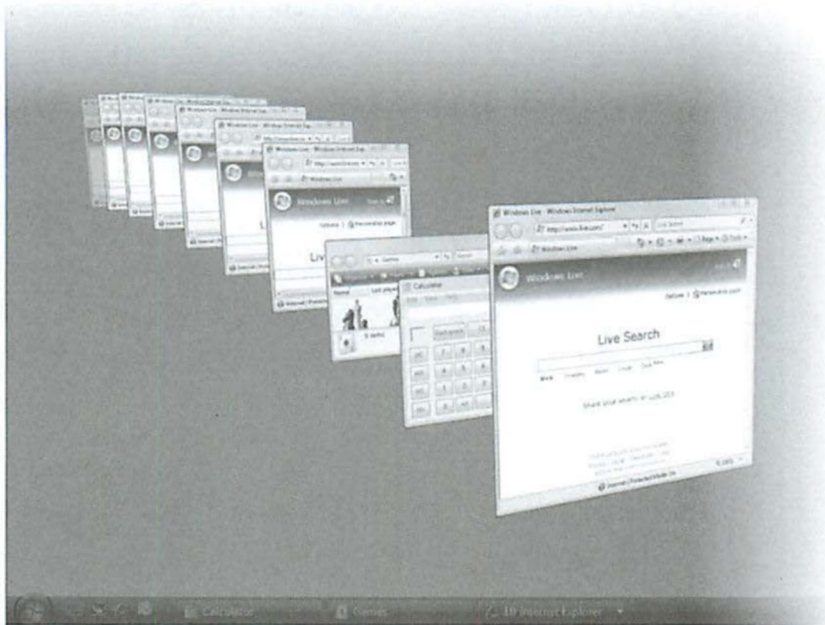
Preppernau teaches multiple ways to navigate and organize content ("plurality of views of a plurality of visual representations of computer content") on a user's computer. For example, Preppernau shows Windows Internet Explorer at that time:



Preppernau, 182. Preppernau's quick tabs feature displays a thumbnail of all web pages users are currently viewing, allowing them to easily select a particular page they may have misplaced. *Id.* Preppernau's "Favorites Center" includes three ways—"Favorites," "Feeds," and "History" tabs—to organize websites a user frequents or follows. *Id.* As can be seen in the above image, digital content is represented in several ways, including by listing URLs, titles of web pages, and thumbnails ("visual representations of computer content"). *Id.*; Houh Decl., ¶¶169-70. And Preppernau's taskbar permits a user to organize groups of windows in various ways, with one example shown below:



Preppernau, 46. 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, shown below:



Id., 50-51. A POSITA would have been motivated to look to Preppernau for ways to display different organizations of content, including to augment Pröll's device when its keyboard is inoperable and when it is being used in a mobile environments. *See* Houh Decl., ¶¶162-64, 168-70, 172.

e. 1[d]

The Pröll-Preppernau combination teaches 1[d], under MPF or not. As explained in Section VIII.D.2.b for 1[a], a POSITA would have understood that Pröll's device includes at least one processor. Further, as explained in Sections VIII.D.2.f, VIII.D.2.g for 1[e], 1[f] below, the Pröll-Preppernau combination teaches the "execution component" (under MPF or not) is "configured to" perform each limitation by executing on the processor. Houh Decl., ¶173.

f. 1[e]

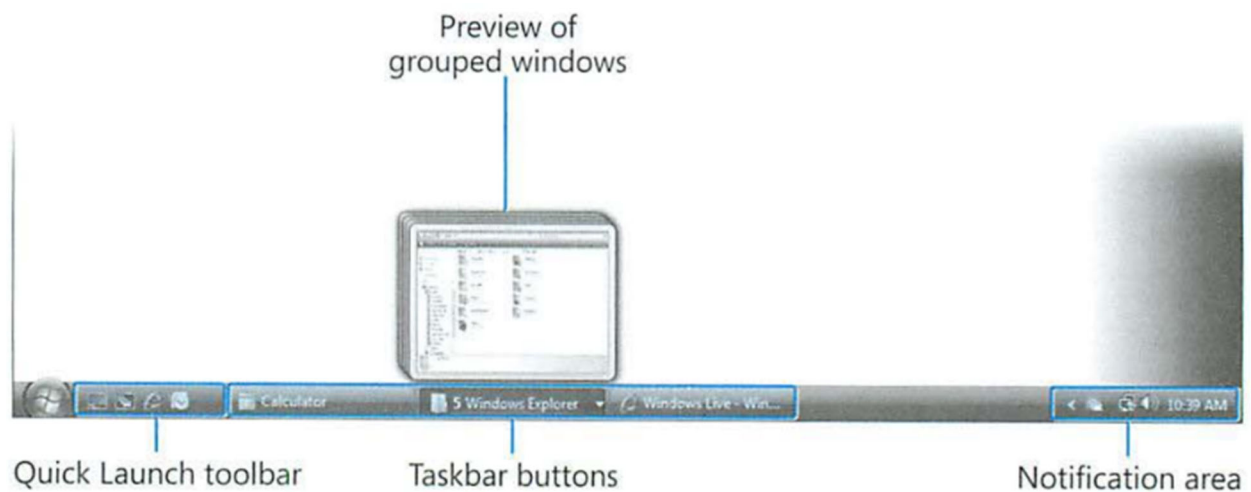
Pröll teaches 1[e], under MPF or not. *See* Section VIII.A.3.f. Houh Decl., ¶174.

g. 1[f]

The Pröll-Preppernau combination teaches 1[f]. Houh Decl., ¶175-77. As discussed above, Pröll's device displays a different computer content view based on its device configuration (with its two housings rotated more/less than 180° with respect to each other), and Preppernau teaches multiple ways to organize content ("plurality of views of a plurality of visual representations of computer content") on a user's computer. *See* Section VIII.D.2.d.

A POSITA would have found it obvious to select one of the plurality of views taught in Preppernau and display that view on Pröll's display component based on the detected configuration of Pröll's device. *See* Houh Decl., ¶¶176-77.

A POSITA would have been motivated to trigger the display of Preppernau's views ("selecting"), including based on Pröll's switch indicating rotation of Pröll's two halves by more/less than 180° with respect to each other. *Id.* For example, Preppernau teaches that its taskbar can organize windows into multiple configurations, which is itself a "view" that is selected, as shown below:



Preppernau, 46. Preppernau teaches that a user can also 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" ("transition the display component to the selected one of the plurality of views"). *Id.*, 47. A POSITA would have been motivated to combine Pröll and Preppernau to predictably improve the usability of Pröll's system by displaying different views

that reorganize the icons and windows, including based on the configuration of the laptop device. *See* Houh Decl., ¶¶172, 177.

3. Claim 3

Claim 3 depends from claim 1. Section VIII.D.3 explains the Pröll-Preppernau combination teaches “the user interface of claim 1.” Section VIII.C.2 explains claim 3’s additional limitations would have been obvious in light of Preppernau’s teachings. A POSITA would have been motivated to combine these teachings for the reasons discussed in Sections VIII.D.1, VIII.D.2.d. Houh Decl. ¶178.

4. Claim 4

Claim 4 depends from claim 1. Section VIII.D.2 explains the Pröll-Preppernau combination teaches “the user interface of claim 1.” Section VIII.C.3 explains Preppernau teaches claim 4’s additional limitations. A POSITA would have been motivated to combine these teachings for the reasons discussed in Sections VIII.D.1, VIII.D.2.d. Houh Decl. ¶179.

5. Claim 5

Claim 5 depends from claim 4. Section VIII.D.2 explains the Pröll-Preppernau combination computer system teaches a “computer system” with “display” and “keyboard” in a “configuration.” Section VIII.C.3 explains how Pröll-Preppernau teaches the “user interface of claim 4.” Pröll teaches claim 5’s additional

limitations. *See* Section VIII.C.4. A POSITA would have been motivated to combine these teachings for the reasons discussed in Sections VIII.D.1 and VIII.D.2.d. Houh Decl. ¶ 180.

6. Claim 6

a. 6[a]

Claim 6 depends from claim 4. Section VIII.D.4 explains the Pröll-Preppernau combination teaches “the user interface of claim 4.” Preppernau teaches 6[a]’s additional limitations. *See* Section VIII.C.5.a. A POSITA would have been motivated to combine these teachings for the reasons discussed in Sections VIII.D.1 and VIII.D.2.d. Houh Decl. ¶ 181.

b. 6[b]

Preppernau teaches 6[b]’s additional limitations. *See* Section VIII.C.5.b. A POSITA would have been motivated to combine these teachings for the reasons discussed in Sections VIII.D.1, VIII.D.2.d. Houh Decl. ¶ 182.

7. Claim 7

Claim 7 depends from claim 1. Section VIII.D.2 above explains that the Pröll-Preppernau combination teaches “the user interface of claim 1.” Section VIII.C.6 explains Pröll teaches claim 7’s corresponding structure if MPF, Preppernau teaches claim 7’s additional limitations, and a POSITA would have been motivated to combine those teachings. Houh Decl. ¶ 183.

8. Claim 8

Claim 8 depends from claim 7. Section VIII.D.2.e explains that the Pröll-Preppernau combination teaches the “execution component” of claim 1. Section VIII.D.7 explains Preppernau teaches “the user interface of claim 7” and “retain a previous views state.” Section VIII.C.7 explains Preppernau teaches claim 8’s additional limitations, under MPF or not, as well, as well as the motivation to combine those teachings with Pröll. Houh Decl. ¶ 184.

9. Claim 9

Claim 9 depends from claim 7. Section VIII.D.4 for claim 4 explains Preppernau teaches a “header display.” Section VIII.D.7 for claim 7 explains Preppernau teaches “the user interface of claim 7.” Section VIII.D.8 for claim 8 explains that Preppernau teaches a “navigation element,” and Section VIII.C.8 explains that navigation element is displayed in the header display. Those sections also explain the motivation to combine the references relied upon teachings. Houh Decl. ¶185.

10. Claim 10

a. 10[a]

Claim 10 depends from claim 4. Section VIII.D.4 explains that Pröll-Preppernau teaches “the user interface of claim 4.” Section VIII.C.9.a explains

Preppernau teaches 10[a]’s additional limitations, as well as the motivation to combine. Houh Decl. ¶186.

b. 10[b]

Section VIII.C.9.b explains Preppernau teaches 10[b]’s additional limitations, as well as the motivation to combine. Houh Decl. ¶187.

11. Claim 11

Claim 11 depends from claim 10. Section VIII.D.10 explains the Pröll-Preppernau combination teaches “the user interface of claim 10.” Section VIII.C.10 explains Preppernau teaches claim 11’s additional limitations, as well as the motivation to combine. Houh Decl. ¶188.

12. Claim 12

a. 12[a]

Claim 12 depends from claim 4. Section VIII.D.4 explains the Pröll-Preppernau combination teaches the “user interface of claim 4” with a “home view.” Section VIII.C.11.a explains Preppernau teaches 12[a]’s additional limitations, as well as the motivation to combine. Houh Decl. ¶189.

b. 12[b]

Section VIII.C.11.b explains Preppernau teaches 12[b]’s additional limitations, as well as the motivation to combine. Houh Decl. ¶190.

13. Claim 13

a. 13[a]

Claim 13 depends from claim 12. Section VIII.D.12 explains the Pröll-Preppernau combination teaches “the user interface of claim 12” including a “nascent card [that] is configured to permit generation of additional visual representations of digital content.” Section VIII.D.2.e explains that combination teaches a processor-based “execution component” as recited in claim 1 (from which claim 13 indirectly depends). The Pröll-Preppernau combination teaches this limitation, under MPF or not. *See* Houh Decl., ¶¶191-92.

A POSITA would have understood the Pröll-Preppernau combination’s processor executes software instructions that implement the tabbed internet browsing user interface functionality of the Windows Vista operating system, including as required if the claims are MPF. Preppernau, xxxii; Houh Decl., ¶¶191-92. To permit generation of additional visual representations of digital content, a POSITA would have understood the combination’s system uses a program executing on a processor that can “detect execution of a nascent card.” *See* Houh Decl., ¶¶191-92. And as discussed in further detail below, a POSITA would have further understood the combination’s system uses a program executing on a processor to “transition the display to the quick access view in response” to that detection and “map to, and display, online content in response to a request to display that content

from the quick access view.” *See* Houh Decl., ¶¶191-92. A POSITA would have found it obvious to use the Windows Vista operating system in the Pröll-Preppernau computer using its processor for the same reasons described in Section VIII.D.4 for claim 4.

b. 13[b]

Section VIII.C.12.b explain Preppernau teaches 13[b]’s additional limitations. A POSITA would have found it obvious to combine Preppernau’s teachings for the same reasons described in Section VIII.D.4 for claim 4. Houh Decl. ¶ 193.

c. 13[c]

Section VIII.C.12.b explains Preppernau teaches 13[c]’s additional limitations. A POSITA would have found it obvious to combine Preppernau’s teachings for the same reasons described in Section VIII.D.4 for claim 4. Houh Decl. ¶ 194.

14. Claim 14

Claim 14 depends from claim 1. Section VIII.D.2 explains the Pröll-Preppernau combination teaches the “user interface” and “plurality of views” of claim 1. Section VIII.C.13 explains Preppernau teaches the additional limitations of claim 14. A POSITA would have found it obvious to combine Preppernau’s teachings for the same reasons described in Section VIII.D.4 for claim 4. Houh Decl. ¶ 195.

15. Claim 19

Claim 19 depends from claim 1. The Pröll-Preppernau combination renders obvious claim 1 (*see* Section VIII.D.2), and Pröll teaches claim 19's additional limitations (*see* Section VIII.A.4). A POSITA would have been motivated to combine those teachings with Preppernau for the same reasons discussed above in Section VIII.D.4 for claim 4. Houh Decl. ¶ 196.

16. Claim 20

a. 20[pre]

See Section VIII.D.2.a for 1[pre]. Houh Decl. ¶197.

b. 20[a]

See Section VIII.D.2.b for 1[a]. Houh Decl. ¶198.

c. 20[b]

See Section VIII.D.2.c for 1[b]. Houh Decl. ¶199.

d. 20[c]

See Section VIII.D.2.d for 1[c]. Houh Decl. ¶200.

e. 20[d]

See Section VIII.D.2.e for 1[d]. Houh Decl. ¶201.

f. 20[e]

See Section VIII.D.2.f for 1[e]. In addition, as discussed for claim 19, Pröll's laptop mode (Figure 2) has the keyboard positioned to receive input from an operator of the computer system and Pröll's easel mode (Figure 7) has the keyboard not

positioned to receive input from the operator of the computer system. Houh Decl., ¶¶86-87. A POSITA would have found it obvious to combine Preppernau's teachings for the same reasons described in Section VIII.D.4 for claim 4. Houh Decl. ¶202.

g. 20[f]

See Section VIII.D.2.g for 1[f]. Houh Decl. ¶203.

E. Ground 5: Obviousness over Pröll, Preppernau, and Chandhri (Claims 2, 15-18)

1. Claim 2

Claim 2 depends from claim 1. Section VIII.D.2 explains the Pröll-Preppernau combination teaches “the user interface of claim 1,” and Section VIII.B.2 explains Chandhri teaches the additional limitations of claim 2. A POSITA would have been motivated to implement Chandhri's teachings in the Pröll-Preppernau combination for the same reasons discussed in Section VIII.B.2. Houh Decl., ¶¶204-05.

2. Claim 15

Claim 15 depends from claim 1. Section VIII.D.2 above explains the Pröll-Preppernau combination teaches “the user interface of claim 1,” and Section VIII.B.3 explains Chandhri teaches the additional limitations of claim 15. It would have been obvious to implement this view from Chandhri in the Pröll-Preppernau

combination for the same reasons as discussed above for claim 2. *See* Houh Decl., ¶206, 205.

3. Claim 16

Claim 16 depends from claim 15. Section VIII.E.2 above explains the Pröll-Preppernau-Chandhri combination teaches “the user interface of claim 15,” and Section VIII.B.4 explains Chandhri teaches the additional limitations of claim 16, under MPF or not. It would have been obvious to implement this teaching from Chandhri in the Pröll-Preppernau combination for the same reasons as discussed above for claim 2. *See* Houh Decl., ¶207, 205.

4. Claim 17

a. 17[pre]

See Section VIII.D.2.a for 1[pre]. Houh Decl. ¶208.

b. 17[a]

See Section VIII.D.2.b for 1[a]. Houh Decl. ¶209.

c. 17[b]

See Sections VIII.D.2.c, VIII.D.2.d for 1[b], 1[c]. Houh Decl. ¶210.

d. 17[c]

See Section VIII.D.2.e for 1[d]. Houh Decl. ¶211.

e. 17[d]

See Section VIII.B.5.e for 17[d]. Houh Decl. ¶212.

f. 17[e]

See Section VIII.B.5.f for 17[e]. Houh Decl. ¶213.

g. 17[f]

See Section VIII.B.4 for claim 16. Houh Decl. ¶214.

h. 17[g]

See Sections VIII.E.2, VIII.E.3 for claims 15 and 16. Houh Decl. ¶215.

5. Claim 18

Claim 18 depends from claim 17. Section VIII.E.4 above explains that the Pröll-Preppernau-Chandhri combination teaches “the user interface of claim 17,” and Section VIII.B.6 explains Chandhri teaches the additional limitations of claim 18. It would have been obvious to implement these teachings from Chandhri in the Pröll-Preppernau combination for the same reasons as discussed above for claim 2. *See* Houh Decl., ¶ 216, 205.

IX. CONCLUSION

Inter Partes Review of the Challenged Claims is respectfully requested.

X. Mandatory Notices

A. Real Party in Interest

Petitioners identify themselves as real parties in interest.

B. Related Matters

To the best of Petitioner’s knowledge, the ’715 patent has been involved in the following district court litigation:

- *LiTL LLC v. HP Inc.*, 1-23-cv-00120 (D. Del. Feb. 01, 2023)
- *LiTL LLC v. Dell Technologies Inc. et al.*, 1-23-cv-00121 (D. Del. Feb. 01, 2023)
- *LiTL LLC v. ASUSTeK Computer Inc. et al.*, 1-23-cv-00122 (DDE) (D. Del. Feb. 1, 2023)
- *LiTL LLC v. Lenovo (United States), Inc. et al.*, 1-20-cv-00689 (D. Del. May 22, 2020)
- *Lenovo (United States) Inc. v. LiTL LLC*, IPR2021-00786 (Petition filed May 4, 2021).
- *Ex parte* Reexamination 90/014,958 (Feb. 16, 2022).

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Date: January 30, 2024

CERTIFICATE OF WORD COUNT UNDER 37 CFR §42.24(d)

Pursuant to 37 C.F.R. §42.24(a), Petitioner hereby certifies that portions of the above-captioned Petition for *Inter Partes* Review of U.S. Patent 9,880,715, in accordance with and reliance on the word count provided by the word-processing system used to prepare this Petition, that the number of words in this paper is 13,992. Pursuant to 37 C.F.R. §42.24(a), this word count is in compliance and excludes the table of contents, table of authorities, mandatory notices under §42.8, certificate of service, certificate of word count, appendix of exhibits, and any claim listing. This word count was prepared using Microsoft Word.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that true copies of the Petition for *Inter Partes* Review of U.S. Patent No. 9,880,715 and supporting materials (Exhibits and Power of Attorney) were served via overnight delivery on the Patent Owner at the correspondence address of record as listed on PAIR:

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A courtesy copy was also sent via electronic mail to Patent Owner's litigation counsel listed below:

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