

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FACEBOOK, INC. AND INSTAGRAM, LLC,
Petitioner,

v.

SEARCH AND SOCIAL MEDIA PARTNERS, LLC,
Patent Owner.

Case IPR2018-01620
Patent 8,620,828 B1

Before SCOTT A. DANIELS, BARBARA A. PARVIS, and
JASON W. MELVIN, *Administrative Patent Judges*.

DANIELS, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

A. Background

Facebook, Inc. and Instagram, LLC (“Facebook” or “Petitioner”) filed a Petition to institute an *inter partes* review of claims 1, 11, 18, and 27 of U.S. Patent No. 8,620,828 B1 (“the ’828 patent”). Paper 2 (“Pet.”). Search and Social Media Partners, LLC (“SSMP” or “Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). We instituted trial on all challenged claims. Paper 8 (“Dec. on Inst.”). SSMP timely filed a Response. Paper 17 (“PO Resp.”). Facebook filed a Reply. Paper 21 (“Pet. Reply”). SSMP filed a Sur-Reply. Paper 24 (“PO Sur-Reply”). We have jurisdiction under 35 U.S.C. § 6(b).

In addition, SSMP filed a contingent Motion to Amend. Paper 18 (“Mot. to Amend”). Facebook opposed. Paper 23 (“Opp. Mot. to Amend”). SSMP replied. Paper 25 (“Reply Opp. Mot. to Amend”).

We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a). Having reviewed the parties’ arguments and the supporting evidence, we find that Facebook has demonstrated by a preponderance of the evidence that each of challenged claims—i.e., claims 1, 11, 18, and 27 of the ’828 patent—is unpatentable. 35 U.S.C. § 316(e). We also determine that Facebook has carried its burden showing that SSMP’s proposed substitute claims are not patentable over the prior art of record, and, thus, we deny SSMP’s motion to amend.

B. Additional Proceedings

Facebook and SSMP state that the ’828 patent, and related U.S. Patent No. 8,719,176 (“the ’176 patent”), are at issue in *Search and Social Media Partners, LLC v. Facebook, Inc.*, No. 1:17-cv-01120-LPS-CJB (D. Del.) in the District of Delaware. Pet. 1; Prelim. Resp. 1. Facebook also

states that the district court lawsuit is currently stayed, and no claim construction orders have issued. Pet. 1.

Facebook has also filed a Petition for *inter partes* review of the '176 patent, IPR2018-01622.¹

C. The '828 Patent

The '828 patent (Ex. 1001), titled “Social Networking System, Method and Device,” describes a social network through use of computers and the Internet “in which one user subscribes to a newsfeed or ticker related to another user.” Ex. 1001, Abst. The '828 patent explains, for example, that in “a disclosed embodiment, users share URLs and post user-generated content, and other users view, comment on, or indicate that they like or dislike such posts.” *Id.*

The '828 patent is a voluminous work with 130 figures and 56 columns of written description directed to various e-commerce transactions and interactions such as auctions, as well as social networking and content searching on the internet. *Id.* at 1:38–41, 2:30–33. The very first sentence of the Detailed Description, fittingly, explains that in “the following detailed description, the disclosed invention is a subtle and complex one, including both technical innovations and broad syntheses.” *Id.* at 12:52–54. There are various implementations of a social networking system described in the '828 patent, including a “headline” ticker, i.e., “iTicker,” to keep members subscribed to a particular social group updated on matters and information of interest to that particular group. *Id.* at 30:59–31:26.

¹ Both the '828 and '176 patent are divisionals of U.S. Patent Application No. 10/888,781, now Pat. No. 7,599,938.

Figure 53 of the '828 patent is reproduced below and describes the process for users to both create, and view, for instance headlines in “iTicker.”

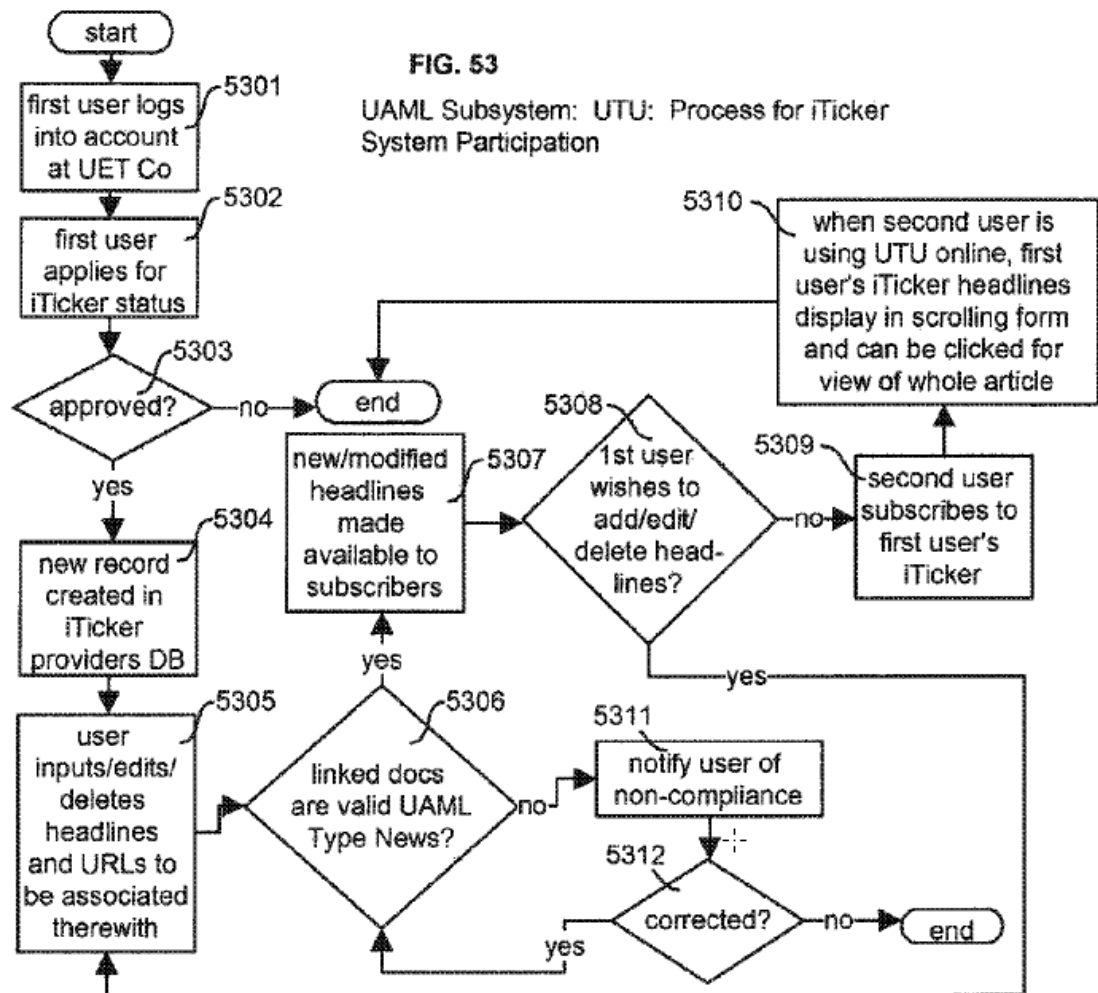


Figure 53, above, illustrates one embodiment of the '828 patent, in flow-chart form, and how the headlines are input and updated by a first user, (steps 5305, 5308), and how a second user subscribes to an “iTicker” presenting scrolling headlines, (step 5309). For example, the first user applies for iTicker provider status (step 5302) and if approved (step 5303), a new record is created in the iTicker provider’s database (step 5304). The first user is permitted to enter, delete, update, and edit headlines and URLs

in the record of the iTicker provider database (steps 5305, 5308). *Id.* at 31:36–48. The ’828 patent explains that the iTicker process and methodology works well for providing information to certain groups, such as “to provide headlines for alumni of a particular school.” *Id.* at 31:6.

D. Illustrative Claims

The challenged claims are the independent claims of the ’828 patent, specifically, 1, 11, 18, and 27. Claim 1, reproduced below, illustrates the claimed subject matter, annotating in italics, the limitation, “a real-time news ticker:”

1. A system for use in a social network environment comprising:

a first computer system accessible via a first computer network, said first computer system comprising a data processor and a memory;

a first user account record stored in said memory, said first user account record being associated with a first social group, wherein said first social group is one of a multitude of different social groups within said social network environment and wherein each social group has an associated respective real-time news ticker;

a real-time news ticker of said first social group, said real-time news ticker of said first social group comprising a plurality of real-time news items pertaining to said first social group; and

a second user account record, said second user account record comprising a first subscription to said real-time news ticker of said first social group, said first user account record being different from said second user account record, wherein:

an association between said first user account record and said first social group is verified as a condition for said first user account record being permitted to distribute news items through said real-time news ticker of said first social group.

Ex. 1001, 51:60–52:17 (emphasis added).

E. The Alleged Grounds of Unpatentability

Facebook contends that the challenged claims are unpatentable on the following specific grounds.²

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1, 18, and 27	103	Bezos ³ , Bezos '850 ⁴ , and Pasquali ⁵
11	103	Bezos, Bezos '850, Pasquali, Shuster ⁶ , and Simon ⁷

F. The Level of Ordinary Skill in the Art

Factors pertinent to a determination of the level of ordinary skill in the art include: “(1) educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology, and (6) educational level of workers active in the field.” *Envtl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 696–697 (Fed. Cir. 1983) (citing *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1381–82 (Fed. Cir. 1983)). Not all such factors may be present in every case, and one or more of these or other factors may predominate in a particular case. *Id.* Moreover, these factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art. *Daiichi Sankyo Co. Ltd, Inc. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007).

² Facebook supports its challenge with the declaration of Sandeep Chatterjee, Ph.D. (Ex. 1002), and SSMP responds with a declaration from Glenn Weadock (Ex. 2009). *See infra*.

³ Ex. 1003, U.S. Patent No. 7,433,832 B1 (Oct. 7, 2008) (“Bezos”).

⁴ Ex. 1005, U.S. Patent No. 6,963,850 B1 (Nov. 8, 2005) (“Bezos '850”).

⁵ Ex. 1004, U.S. Patent No. 6,272,493 B1 (Aug. 7, 2001) (“Pasquali”).

⁶ Ex. 1006, U.S. Patent No. 7,752,251 B1 (July 6, 2010) (“Shuster”).

⁷ Ex. 1007, U.S. Patent No. 7,200,599 B2 (April 3, 2007) (“Simon”).

In determining a level of ordinary skill, we also may look to the prior art, which may reflect an appropriate skill level. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). Additionally, the Supreme Court informs us that “[a] person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR Int’l v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

We determined in our Institution Decision that the level of ordinary skill in the art as proposed by both parties was not in conflict and, as proposed by Facebook, that a person of ordinary skill in the art

would have possessed a B.S. in Electrical/Computer Engineering or Computer Science (or related subjects), plus two years of related technical experience with design and development of distributed computing systems which could have included, for example, implementing systems for communicating over Local Area Networks (LANs) and Wide Area Networks (WANs) such as the Internet.

Inst. Dec. 9–10 (citing Pet. 4; Ex. 1002 ¶¶ 14–16). Alternatively, we also determined, as SSMP proposes, that a person having ordinary skill in the art

would have had at least a Bachelor of Science degree in computer science or software engineering or a Bachelor of Science degree in a technical field requiring computer science or software engineering courses, as well as two to four years of experience designing, writing, or implementing web-based applications such as Web servers and browsers.

Id. at 10 (citing Ex. 2009 ¶ 14). Although the parties dispute to some extent the state-of-the-art regarding web-design and technology limitations as of 2003, neither party takes issue with our inclusion of both proposals as acceptable articulations of the level of ordinary skill in the art. *See generally* PO Resp. 3–9 (SSMP argues that internet bandwidth limitations effected web design in 2003), *see also* Reply 17–21 (Facebook counters that “[s]lower transmission speeds did not hamper [real-time delivery].”). For

example, both proposals provide a level of education including a Bachelor of Science in computer science, electrical engineering or a related technical degree and at least 2 years of experience in related fields of computer networking and computer applications development.

On the complete record now before us, our review of the parties' arguments and evidence, as well as the asserted prior art, we maintain our inclusion of both proposals as consistent with the asserted level of ordinary skill in the art. Accordingly, we accept both parties' descriptions of the level of ordinary skill in the art as applied to the arguments and evidence in this proceeding.

II. CLAIM CONSTRUCTION

A. Legal Standard

In this *inter partes* review, claim terms in an unexpired patent are interpreted according to their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b) (2017); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard).⁸

Claim terms are given their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). If the specification

⁸ On October 11, 2018, the USPTO revised its rules to harmonize the Board's claim construction standard with that used in federal district court. Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (to be codified at 37 C.F.R. pt. 42). This rule change, however, applies to petitions filed on or after November 13, 2018, and therefore does not apply to this proceeding. *Id.*

“reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess[,] . . . the inventor’s lexicography governs.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (citing *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)). We apply this standard to the claims of the ’828 patent.

B. Real-time news ticker

To provide the clearest analysis for this phrase as a whole, we address the construction in two parts, “real-time,” and “news ticker.”

Real-time

We determined in our Institution Decision that “that the term ‘real-time’ refers to “the ability to provide current or up-to-date information.” Inst. Dec. 8 (citing Ex. 1001, 31:11–14, Fig. 52; Pet. 7). We also determined, based on SSMP’s arguments in its Preliminary Response, that “‘real-time’ ‘pertains to the timing of the information that is to be made available to other users via the claimed newsfeed or ticker when such users are online.’” *Id.* (citing Prelim. Resp. 17). Under either construction we found that Facebook had shown a reasonable likelihood that the challenged claims were unpatentable. *Id.* at 8–9.

In its Response, SSMP argues that we did not expressly determine “the scope of ‘*realtime news tickers*,’” and should do so now. PO Resp. 11–12 (citing Inst. Dec. 8–9). SSMP contends that Facebooks proposed “current or up-to-date information” interpretation is not accurate because

[t]he claimed *real-time news tickers*, in contrast, relate to the timing of the information in a social networking environment at least between the end user that is uploading the information for publication and the newsfeed/ticker service provider.

Id. at 12. SSMP also argues that in context of the '828 patent Specification and claims “the term ‘real-time’ refers to the *timing* that the information is made available for distribution to subscribers, not the freshness of the information, as Petitioner suggest[s].” *Id.*

We point out for our claim construction and subsequent analyses, that an “end user” as SSMP refers to, is generally understood to be a content originator.⁹ PO Resp. 13. In other words, an “end user” can be the person or entity selecting and uploading to a service provider’s servers, the specific news or content that is to be distributed to subscribers. *See* PO Resp. 12 (SSMP explaining that “real-time news tickers” relates to “the timing of the information in a social networking environment at least between the end user that is uploading the information for publication and the newsfeed/ ticker service provider.”). In addition, we note that a “subscriber,” for example in an auction where a second user, i.e. a “subscriber,” inputs information such as a new high bid in the auction, could also be understood as an “end user,” or a “user” providing the latest bid information to a group of subscribers. *See* Ex. 1001 24:5–8. (“If the listing is a UAML auction and the second user wishes to bid, the second user requests the UET Company site page associated with the given listing, reviews the information therein, and submits his or her bid.”).

Turning back to “real-time,” SSMP shows us that one dictionary definition for “real-time” is “an ‘[i]mmediate response by a computer.’” PO Resp. 16 (citing Ex. 2008). SSMP argues that “timing” means “updates to the newsfeeds or tickers are made available for dissemination to subscribers

⁹ SSMP also at times refers to the “end user” as “news provider” (PO Resp. 13), a “content provider” and “end user content provider” (PO Resp. 14).

as soon as content provider updates (i.e., new headlines and/or articles) are reflected in the content database.” *Id.* at 14. When questioned more closely on this subject during oral argument, SSMP’s counsel explained that “real-time” means, “there’s an immediacy. There’s no delay. There’s nothing that has to -- that holds up the process of the data being transmitted from one place to another.” Tr. 42:13–16. SSMP’s counsel also asserted at oral argument that where the ’828 patent describes an internet auction embodiment, “real-time” is understood “in the sense that Patent Owner needs it, meaning immediately, the way the dictionary describes, without delay.” Tr. 44:8–10.

Our reading of the ’828 patent indicates that “real-time” is consistent with Facebook’s interpretation—namely, that “real-time” means “the ability to provide current or up-to-date information” between an end user and a subscriber, or even between one subscriber and another subscriber. This is borne out by a plain reading of the auction embodiment in the ’828 patent which describes a dynamically changing image where “[a] UAML-enabled Internet auction listing displays real-time information, such as the current high bid, even though the web page itself is static.” Ex. 1001, 14:12–14. In the auction embodiment, where subscribers submit bids for an auction item, the express example of displayed “real-time information” is “the current high bid.” *Id.* Also, where the ’828 patent discusses retrieving the “current high bid field” from the database record in the auction listings database, the Specification explains that “[a]fter a higher bid has been submitted (time 2), the value of the current high bid field changes and a new image 1814 is created and replaces the old image 1813.” *Id.* at 20:57–60. Also, for the “iTicker” embodiment, the ’828 patent states “iTicker provider inputs headlines and URLs to be associated with these headlines into the iTicker

provider record **5305**, *which can be maintained and updated as often as the iTicker provider wishes* so as to keep the content fresh.” *Id.* at 31:11–14 (emphasis added). Thus, the descriptions for these embodiments in the ’828 patent relate most explicitly, not to data transmission speed or immediacy, but to the repeated chronology of providing, and then updating an old bid, news, or information, with a new more current bid, news, or information. *See id.* at 20:64–67 (The ’828 patent describes regarding Figure 17, “each image 1702 serving as a variable *real-time* indicator is hosted on the UET Company’s servers 1703. This image file is overwritten with a new image at the same file location each time the information it portrays changes.” (Emphasis added)).

SSMP’s counsel articulated during oral argument that, “in an auction system in which people are responding to bids, you know, and they’re trying to outbid each other, the bids would presumably have to be delivered in real-time . . . meaning immediately, the way the dictionary describes, without delay.” Tr. 44:6–10. SSMP does not, however, provide any persuasive evidence, or really any way of ascertaining a specific time value for the term “real-time.” Adverbs such as “immediately,” “instantaneously,” or the idiom, “without delay” are not found in the Specification and provide no discernable boundaries to the term “real-time.” *See, e.g.*, Tr. 48:17–18 (SSMP’s counsel argued that even with a syntax check, information delivery in the ’828 patent “is something that is essentially instantaneous.”). Also, the Federal Circuit warns us against placing too much reliance on extrinsic source like dictionaries. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (“We have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms.”).

Without a persuasive contextual tie between the Specification of the '828 patent and the dictionary definition we decline to put indefinite constraints on the word “time,” or “timing,” such as “immediate” that are found neither in the Specification nor the claims. Nonetheless, as discussed below (*see infra* III.B.4.c), we determine that Facebook also has demonstrated by a preponderance of the evidence that the challenged claims would have been obvious over the combination of Bezos and Pasquali under SSMP’s proposed construction, i.e., that the meaning of “real-time” includes an “[i]mmediate response by a computer.” Ex. 2008.

We determine that the description of the iTicker embodiment in Figure 53 of the '828 patent relied upon by SSMP is consistent with Facebook’s proposed construction and at least encompasses that construction. To the extent SSMP relies on another portion of the '828 patent Specification describing “instant messenger software,” (PO Resp. 15 (citing Ex. 1001, 26:27–30), that portion relates to a real-time connection, rather than providing real-time information. Accordingly, we determine that Petitioner’s proposal, i.e., that “real-time,” “simply refers to the ability to provide current or up-to-date information” is the broadest reasonable interpretation of “real-time.” Pet. 7 (citing Ex. 1002 ¶ 79).

News ticker

Despite asking us to interpret the entire phrase “real-time news ticker,” SSMP does not provide a construction for the term “news ticker,” or “ticker.” For example, SSMP refers in its claim construction “to subscriber newsfeeds or tickers,” and similarly, “newsfeeds and tickers,” and also “the claimed ticker,” without any further interpretation. PO Resp. 13–17. The claimed “news ticker,” is apparently an amalgamation of “newsfeeds” and “ticker”, and neither of these terms is explicitly defined in the Specification

of the '828 patent. *See* Ex. 1001, 31:8–14 (describing a content input in the iTicker embodiment as “headlines”).

We do not find it necessary to further construe the claim, or “news ticker,” in this proceeding because in either event, and as discussed in further detail below, the prior art, specifically, Pasquali, discloses presentation of information in a window with scrolling functionality and, consistent with the description of scrolling news headlines in the iTicker embodiment of the '828 patent, Pasquali also teaches that content can include “updated stock tickers.” *See* Ex. 1004, 9:7–20 (“Scrolls controls 126 are provided when content extends beyond the vertical size of content display section 122 and may be used in a conventional manner.”), *and see id.* at 3:34–40 (Pasquali teaches “a single unframed web browser content manifestation environment which can display dynamic content such as live video, updated stock tickers, motion video, etc.”). Accordingly, we need not make further determinations regarding an express construction for “news ticker.” *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (noting that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’”) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

To be clear, for purposes of this Decision, we determine that “real-time news ticker,” “simply refers to the ability to provide current or up-to-date information” in a news ticker.

III. ANALYSIS

We turn now to Facebook’s asserted grounds of unpatentability and SSMP’s arguments and evidence to determine whether Facebook has met its burden with respect to claims 1, 11, 18, and 27 under 35 U.S.C. § 316(e).

A. The Legal Constructs of Obviousness

Section 103(a) forbids issuance of a patent when “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) when available, evidence such as commercial success, long-felt but unsolved needs, and failure of others. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *see KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.”). The Court in *Graham* explained that these factual inquiries promote “uniformity and definiteness,” for “[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context.” *Graham*, 383 U.S. at 18.

The Supreme Court made clear that we apply “an expansive and flexible approach” to the question of obviousness. *KSR*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious is determined by whether the improvement is more than the predictable use of prior art elements according to their established functions. *Id.* at 417. To reach this conclusion, however, it is not enough to show merely that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc.*, 655

F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires that a person of ordinary skill at the time of the invention “would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention.” *Id.*

Besides the requirement of a reason to modify the reference, we must keep in mind that “[w]hat matters in the § 103 nonobviousness determination is whether a person of ordinary skill in the art, having all of the teachings of the references before him, is able to produce the structure defined by the claim.” *Orthopedic Equipment Co., Inc. v. U.S.*, 702 F.2d 1005, 1013 (Fed. Cir. 1983). And, as a factfinder, we also must be aware “of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR*, 550 U.S. at 421. This does not deny us, however, “recourse to common sense” or to that which the prior art teaches. *Id.*

Against this general background, we consider the references, other evidence, and arguments on which the parties rely.

B. Claims 1, 18, and 27 - Alleged obviousness over Bezos, Bezos ’850, and Pasquali

Facebook asserts that claims 1, 18, and 27 would have been obvious over Bezos, Bezos ’850, and Pasquali. Pet. 28–53. Facebook has established by a preponderance of the evidence that claims 1, 18, and 27 would have been obvious for the reasons explained below.

1. Bezos

Bezos is assigned to Amazon.com, Inc., and describes various features of internet purchasing, shopping, and browsing activities that may be familiar to users of Amazon, including users sharing information related to transactions, for example purchase data, product evaluations and reviews,

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and also user's rating other user's reviews to facilitate determination of which product and user reviews are the most useful. *See* Ex. 1003, 1:59–63, 2:56–57 (Bezos describes that “[c]ustomers reading the reviews can rate individual reviews based on their perceived usefulness.”). Figure 3A of Bezos is reproduced below.

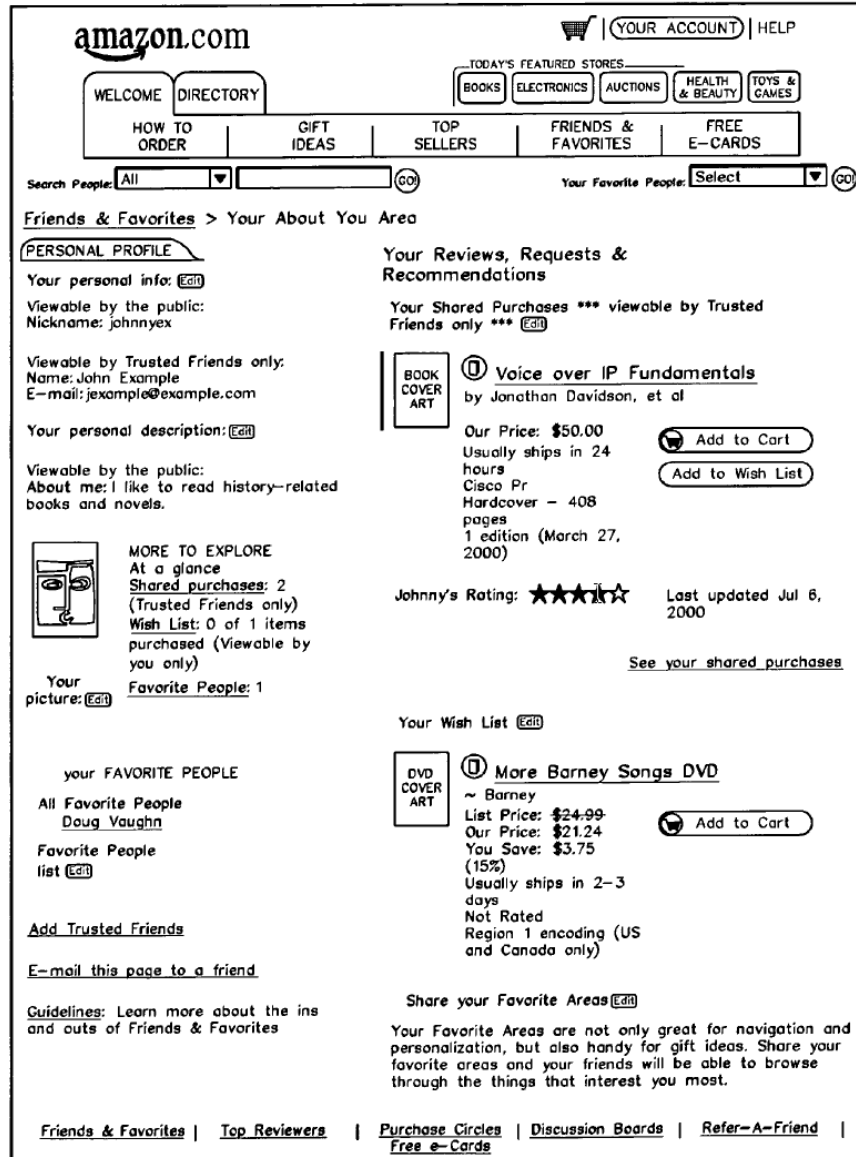


FIG. 3A

Figure 3A of Bezos, above, illustrates a personal profile page for user, John Example, including associated groups such as “Favorite People, and

“Trusted Friends.” Among other information about John, John’s profile page includes reviews of certain products, i.e., “Shared Purchases,” that are “viewable by Trusted Friends only,” as well as a “Wish List” that John keeps private. *Id.* at 17:29–55. John’s profile page includes a “Friends and Favorites” tab that, when opened, is shown for example in Figure 3B reproduced below.

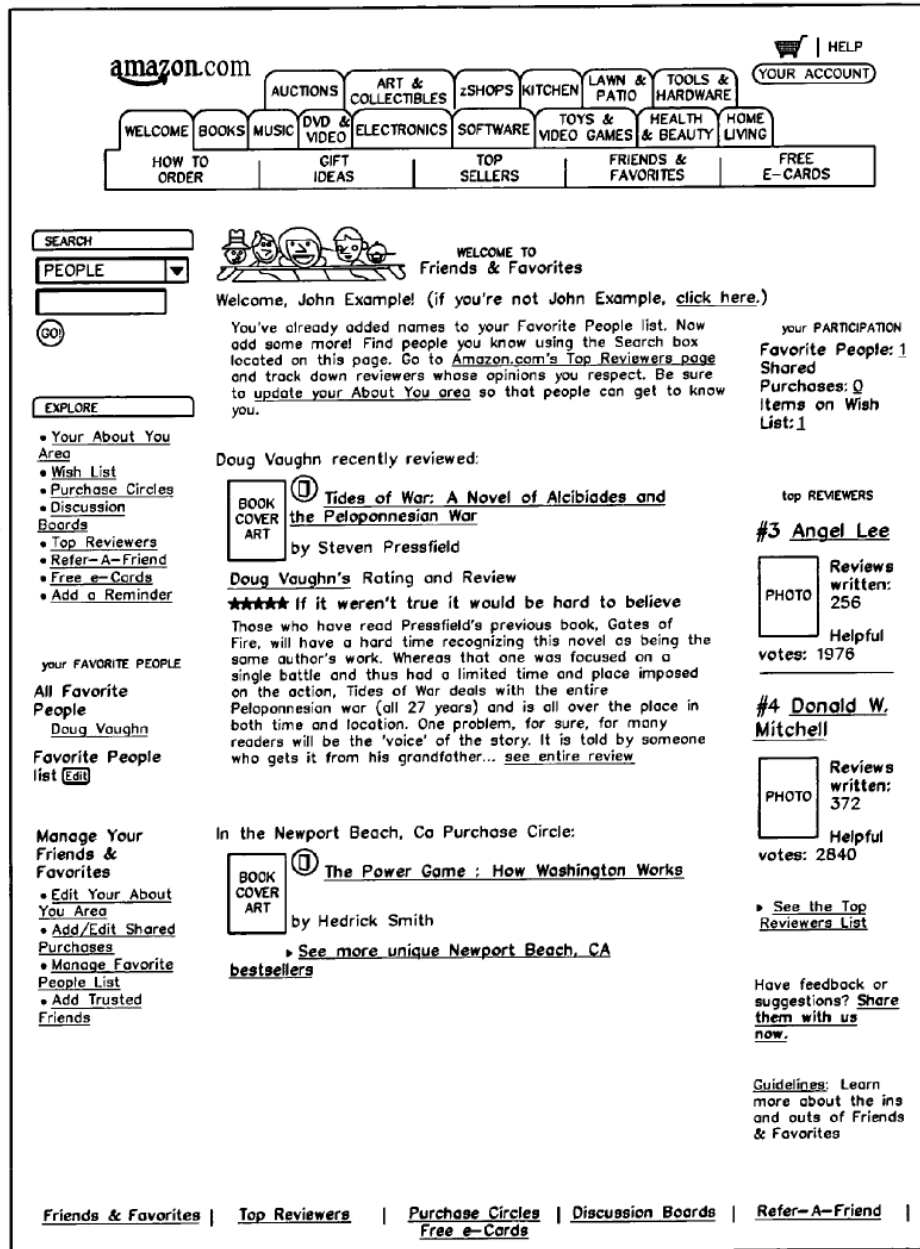


FIG. 3B

Figure 3B of Bezos, above, illustrates for example a customizable “Friends and Favorites” page including, *inter alia*, reviews by one of John Example’s “Favorite People,” e.g., Doug Vaughn. *Id.* at 17:56–57. Also displayed on this page are “Top Reviewers,” e.g., Angel Lee and Donald W. Mitchel,

including the number of “Helpful” votes each has accrued as well as the total of reviews each has written. *Id.* at 17:61–65.

2. *Bezos ’850*

Bezos ’850 is also assigned to Amazon.com, Inc., and is incorporated by reference into the above discussed Bezos reference. *See* Ex. 1003, 15:66–16:3. Bezos ’850 describes other aspects of e-commerce functionality, for instance sharing purchasing information among users, where “[a] Web based system provides informational services for assisting customers in selecting products or other types of items from an electronic catalog of a merchant.” Ex. 1005, Abst. Figure 1 from Bezos ’850 is reproduced below.

amazon.com

Community Interests-Signup

Hello, Erin Indianer.

Tell us about the communities you belong to, and we will periodically tell you about what others in your communities are buying: (hold down 'CTRL' to select more than one):

College/University: American University

Local community groups: Aberdeen Rotary Club

Local outdoors clubs: Cascade Bicycle Club

Professional Organizations: American Medical Association

[Click here](#) to add a community to the list or to create a private community

☐ Check this box if you would like to know the names and e-mail addresses of others in your communities that have recently purchased the item you are looking at. By selecting this option, you authorize Amazon.com to send your name and e-mail address to other community members. [Click Here](#) to limit your participation to specific communities and/or product categories

☐ Check this box if you would like to receive e-mail notifications of hot sellers in your communities. [Click Here](#) to limit your participation to specific communities and/or product categories

☐ Check this box if you would like to receive an e-mail notification whenever a member of one of your communities purchases a product, and to allow others in your communities to monitor your purchases (participating communities only). [Click Here](#) to limit your participation to specific communities and/or product categories

Submit

FIG. 1

Figure 1 from Bezos '850 illustrates a Community Interests web page where a user can list various groups, (groups can be private, public, implicit, or explicit, for example), or organizations that the user belongs to.¹⁰ *Id.* at 4:66–5:13. On the Community Interests web page the user may select, for

¹⁰ Bezos '850 explains that “‘explicit membership Communities’ [are those] that users actively join, and ‘implicit membership communities’ [are those] that are computed or otherwise identified from information known about the user.” Ex. 1005, 5:4–7.

example, check-box 38 if the user desires to receive notification when another user in one of their groups and organizations purchases a product. *See id.* at 7:26–28 (Bezos ’850 explains that “[p]rivate communities may be useful, for example, When a closed group of users Wishes to privately share information about its purchases.”).

3. *Pasquali*

Pasquali teaches a web browser software application that includes providing dynamic window object(s) within a browser content screen for providing information and content in the window object that can be updated without refreshing the content screen display. Ex. 1004, Abst. Pasquali states that

[t]he window object(s) generated within the content manifestation environment may be updated and loaded with content received via the electronic data network without requiring the content manifestation environment to be refreshed (e.g., without requiring screen refresh operations), and *in realtime* without requiring user intervention such as via hyper-link traversal.

Id. (emphasis added). Figure 2A of Pasquali is reproduced below.

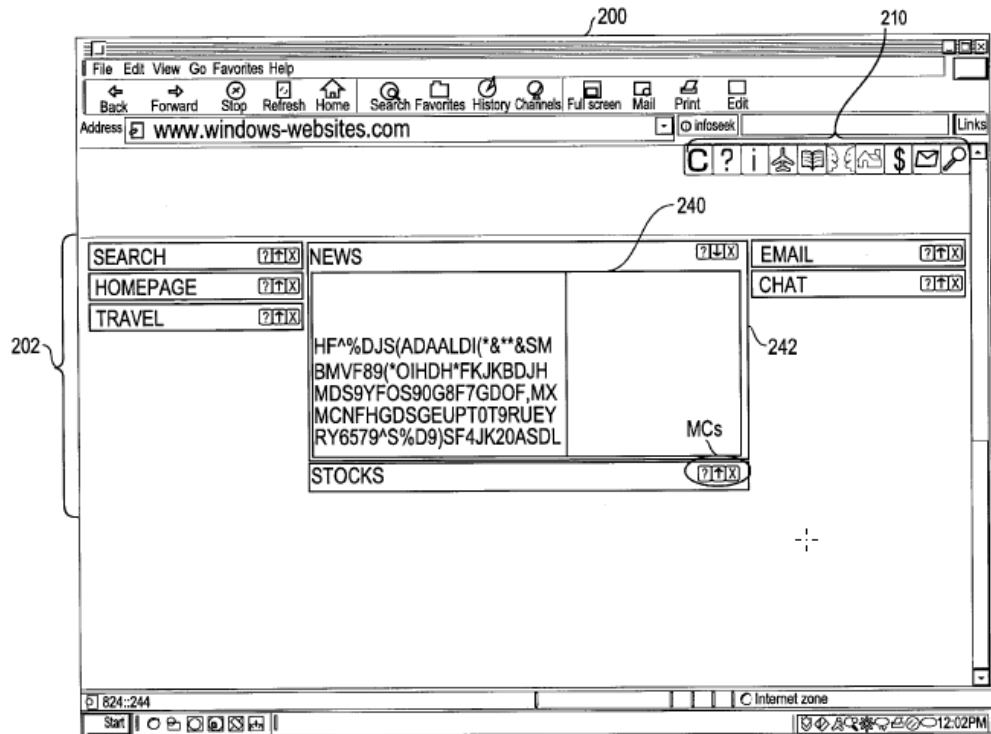


FIG. 2A

Figure 2A of Pasquali illustrates a web browser screen display including tiled window objects denoted as “NEWS” and “STOCKS.” *Id.* at 4:63–67. Pasquali describes that in the display “static content like or similar to Straight HTML content (e.g., text, graphics, etc.) may be manifested, while dynamic content such as from a content feed (e.g., a news feed, a stock ticker feed, etc.) may also be displayed and/or manifested.” *Id.* at 8:61–64.

Pasquali explains that, in general, web browser content displays “are not capable of providing truly controllable windows within a single unframed web browser content manifestation environment which can display dynamic content such as live video, updated stock tickers, motion video, etc.” *Id.* at 3:36–40. The improvement, Pasquali describes, is that “window object(s) generated within the content manifestation environment may be updated and loaded with content in real-time and without user intervention (e.g., such as user clicks on hyper-links, etc.).” *Id.* at 4:35–38.

4. *Analysis—Claim 1*

a. *Facebook’s Arguments*

Facebook argues that Bezos discloses a computer system that is connected to a computer network, i.e., the Internet, for use in a social network environment. Pet. 16–19. Facebook asserts that a social network environment is generally understood by those of ordinary skill in the art to mean “a group of individuals or entities and the connections or relationships between them.” Pet. 16 (citing Ex. 1002 ¶ 54). By way of example, Facebook points to the “Personal Purchase Circle” community described by Bezos, where subscribed customers share purchase and product review information, as an example of a social network environment. *Id.* at 18.

Facebook argues further that Bezos’s computer system includes a data processor and a memory as called for in claim 1 because Bezos describes “various databases for storing information, such as a customer account database **880** and review database **878**.” *Id.* at 19. Facebook’s declarant, Dr. Chatterjee, explains that where Bezos describes that its functions are performed by executable code on computers and servers, “[a] person of ordinary skill would have understood that a general purpose computer or server would include a processor and a memory for running executable code.” Ex. 1002 ¶ 59.

Facebook argues that Bezos and Bezos ’850 disclose “a first user account record” because Bezos, for instance, stores customer specific information in a “customer account database **880**.” Pet. 20–22 (citing Ex. 1003, 20:29–35; Ex. 1005, 11:1–17). Dr. Chatterjee also testifies that it was “fundamental to the operation of known database technologies, that information items about . . . a particular entity (such as a particular customer) could be stored within a ‘record.’” Ex. 1002 ¶ 66. In addition,

the “first user account record,” being associated with various social groups, including “a first social group” as recited in claim 1, is disclosed by Bezos’s “Community Purchase Circles” Facebook argues. Pet. 24–27 (citing Ex. 1003, 15:56, 15:59–16:3, Fig. 3B; Ex. 1005, 3:1–8, 6:40–43). Bezos ’850 also describes various membership “communities,” e.g., clubs, schools, professions, that the user can join. *Id.* at 28 (citing Ex. 1005, 2:20–24, 6:64 7:1, Fig. 1).

Next, Facebook argues that at least Bezos ’850 teaches automatic, and thus current “real-time” notification of community purchase circles members when, for example, one member makes a product purchase, or a current high-bid is placed at an auction. *Id.* at 29–30 (citing Ex. 1005, 3:25–30, 6:41–44, 15:51–61). Facebook argues that current, updated, “real-time” purchase information described by Bezos ’850 falls within the appropriate meaning of “real-time” as properly construed, and in accordance with the specification of the ’828 patent. *Id.* at 31 (citing Ex. 1001, 20:33–21:3, 14:11–14). Facebook argues that even if “real-time” is construed to require immediate delivery, as SSMP’s construction essentially asserts, Bezos ’850’s delivery of an email purchase notification “whenever a member of one of your communities purchases a product” satisfies the “immediacy” delivery timing requirement of even SSMP’s proposed claim construction. *Id.* (emphasis omitted)(citing Ex. 1005, Fig. 1 (check box 38)).

Facebook acknowledges that Bezos ’850’s “Purchase Notification,” may not disclose expressly “a real-time news ticker” as called for in claim 1. *Id.* at 29. Facebook turns to Pasquali for teaching a window object within a web page providing a “NEWS” ticker which “may be updated and loaded with content in real-time and without user-intervention.” *Id.* at 32 (emphasis omitted) (citing Ex. 1004, 4:35–42, Fig. 5B). Pasquali states that the

dynamic content of the window object includes “e.g., a news fee[d], a stock ticker feed, etc.” Ex. 1004, 8:64.

Facebook argues further that Bezos and Bezos ’850 disclose a social networking environment with multiple user accounts, including “a second user account” different from the “first user account” as recited in claim 1. Pet. 36–37 (citing Ex. 1003, 14:50–51; Ex. 1005, 11:1–2, 14–17). Based on the combination of Bezos ’850 and Pasquali’s newsfeed and stock ticker, and with respect to the second user account, Facebook contends that “Bezos 850 further discloses that each user can **subscribe** to that ticker by signing up for purchase notifications for a community that they have joined.” Pet. 37 (citing Ex. 1005, 7:36–42, Figs. 1, 10). In this way, according to Facebook, “[t]he user can thus selectively choose to subscribe (or not subscribe) to purchase notifications on a community-by-community basis.” *Id.* at 38.

Facebook argues that the last claim requirement for verification of “an association between said first user account record and said first social group” is met by Bezos ’850 in two different ways. *Id.* at 39. First, Bezos ’850 teaches membership verification occurring between users and the group using “any authentication information required to join the community.” Ex. 1005, 11:27–28. Second, Facebook argues that the described e-commerce system in “Bezos 850 performs the claimed **verification** when determining which communities will receive notifications about a user’s purchase.” Pet. 41. Dr. Chatterjee notes that the claim language does not exclude “verification being part of the internal processing of the computers system.” Ex. 1002 ¶ 100. Therefore, Dr. Chatterjee explains, that “by checking a user’s profile to determine the communities of which a user is a member,

before distributing any purchase notifications, Bezos 850 provides another way in which the claimed verified association is disclosed.” *Id.*

b. SSMP’s Arguments

In its Patent Owner Response, SSMP’s primary argument is that Facebook has failed to show that Bezos, Bezos ’850, and Pasquali teach the “real-time news ticker” limitation as properly construed and recited in each of claims 1, 11, 18, and 27. PO Resp. 18. SSMP argues specifically that “*Bezos, Bezos 850, and Pasquali* are silent as to whether the end users communicate information in real-time or otherwise to the service provider.” *Id.* at 18–19. SSMP also argues that Facebook’s asserted reasons and motivation to combine the asserted prior art references is conclusory and not adequately supported by evidence. *Id.* at 20–27. SSMP contends that Pasquali is not analogous art and that the combination of Bezos, Bezos ’850 and Pasquali is the result of hindsight analysis based on the ’828 patent. SSMP also argues that Facebook has not shown a reasonable expectation of success and that the state of the art at the time of the ’828 patent filing teaches away from such a combination. *Id.* at 27–37. We address SSMP’s arguments in greater detail in our analyses below.

c. Whether Bezos, Bezos ’850, and Pasquali teach or disclose “a real-time news ticker” as properly construed

SSMP’s main argument with respect to the specific teachings of the prior art is based on an incorrect claim construction. PO Resp. 18. SSMP argues that the references do not disclose or teach “a ‘real-time news ticker’ in which information from the end user in a social networking environment that uploads content (e.g., URL and associated words or phrases) for publication is communicated in real-time to the service provider servers for

distribution to other users, e.g., subscribers, to respective news tickers.” *Id.* SSMP contends, specifically, that “*Bezos*, *Bezos 850*, and *Pasquali* are silent as to whether the end users communicate information in real-time or otherwise to the service provider.” *Id.* at 19. For the reasons *supra*, this is not the proper claim construction.

In our claim construction we determined that “real-time news ticker” means “the ability to provide current or up-to-date information” in a news ticker. Section II.B.

Our review of *Bezos ’850* is consistent with Facebook’s assertion that *Bezos ’850* “discloses a ‘**Purchase Notification**’ service in which a user can receive a personalized Web page listing purchases by other community members.” Pet. 29. *Bezos ’850* explains that “[t]he popular product and purchase event notifications are preferably sent by email (to community members that have not yet purchased the product), but may alternatively be communicated using a personalized Web page or other method.” Ex. 1005, 3:25–29. In addition, *Bezos ’850* describes that the purchase notification occurs in a chronological and stepwise process, for example when one user, a content provider, makes a purchase, other users such as subscribers and consumers, are subsequently notified. *Id.* at 15:51–67. Referring to Figure 10, *Bezos ’850* states that

whenever a user completes the check-out process to purchase one or more products. In step **180**, the user’s profile is checked to identify any base communities in which the user participates in the Purchase Notification service. For each such community, all other participating members are identified in step **182**. In step **184**, a notification message is generated which includes a description of the purchased product(s) and the name of the common community.

Id. at 15:53–57. *Bezos*’s Figure 10 is reproduced below.

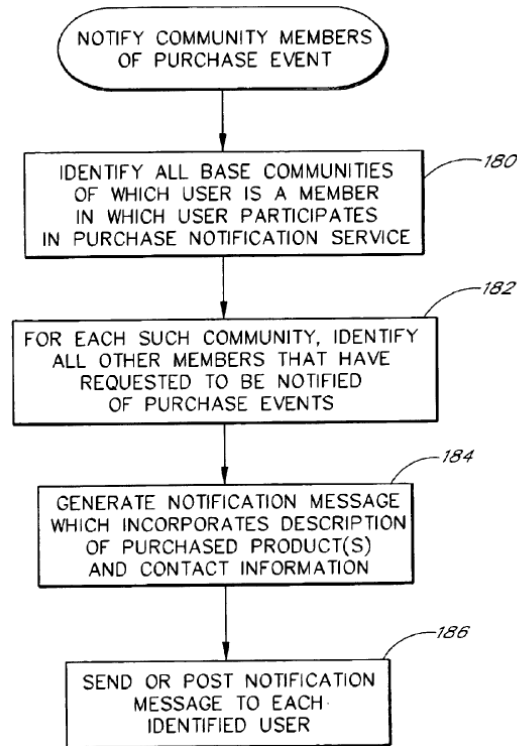


FIG. 10

Figure 10 of Bezos '850, above, illustrates a flow path of the purchase notification process that sends a notification message (step 186), including information and a description of the product purchased by an end user, to certain members of a community group following the end user community members purchase event. The illustrated process in Figure 10 shows a chronological relationship between an item purchase event, identification of communities (step 180), identifying members who have requested notification in the identified communities, (step 182), generating the notification message, (step 184), and sending that new and current purchase information to the identified members, (step 186). We determine that Bezos '850's described methodology for communicating recent and current purchase information from a purchaser to the other subscribers in the group

and community encompasses “the ability to provide current or up-to-date information.” What is missing from Bezos ’850, as acknowledged by Facebook’s declarant, Dr. Chatterjee, is reference to, or description of specifically a “ticker.” Ex. 1002 ¶ 82.

We are persuaded, however, that Pasquali discloses that dynamic window functionality in an otherwise static web page can include content and display of “news tickers.” *See* Ex. 1004, 3:37–40 (Pasquali describes “a single unframed web browser content manifestation environment which can display dynamic content such as live video, *updated stock tickers*, motion Video, etc.” (Emphasis added)). Pasquali explains that within window module 118 “[f]or example, static content like or similar to straight HTML content (e.g., text, graphics, etc.) may be manifested, while dynamic content such as from a content feed (e.g., a news fee[d], a stock ticker feed, etc.) may also be displayed.” *Id.* at 8:61–65. Nowhere in its claim construction does SSMP dispute that securities and stock information can be reasonably considered “news.” PO Resp. 10–17. Also, to the extent that “real-time” means “immediately,” or “without delay,” as SSMP contends, Pasquali explains that “[t]he window object(s) generated within the content manifestation environment *may be updated and loaded with content in real-time* and without user-intervention.” Ex. 1004, 4:35–38 (emphasis added).¹¹

¹¹ Also, contrary to Patent Owner’s arguments (PO Resp. 18–19; PO Sur-Reply 3, 15), the disclosure of Pasquali teaches the use of real-time transmission of information from a user content provider via I/O systems 110 through server system SVR 102, to a client-side display. Ex. 1004, 4:2–8, 7:59–67, Fig. 1A–B. For instance, Pasquali states “[c]ontent streams and data such as news feeds, stock information, which may be provided by third party providers are input via I/O systems 110 and processed within SVR

Our review of Pasquali is therefore most consistent with Facebook’s declarant, Dr. Chatterjee, who testifies that as compared to known web pages that needed to be refreshed, “with the system of Pasquali, ‘[t]he window object(s) generated within the content manifestation environment may be updated and loaded with content in real-time and without user-intervention.’” Ex. 1002 ¶ 90 (citing Ex. 1004, 4:35–42).

Therefore, before turning to the question of whether Pasquali can be properly combined with Bezos and Bezos ’850, we determine that Bezos ’850 and Pasquali disclose a “real-time news ticker” as properly construed, and even applying an “immediacy” restriction to the temporal nature of the information dissemination.

d. Whether Bezos, Bezos ’850, and Pasquali would have been combined by a person of ordinary skill in the art to achieve the invention claimed in the ’828 patent

With respect to the motivation of a person of ordinary skill in the art to combine Bezos, Bezos ’850, and Pasquali, we address first SSMP’s assertions that Pasquali is not analogous art.

Analogous art

SSMP argues that Pasquali is not analogous prior art pertinent to the social networking and dynamically updated user-distributed information system developed by the inventor of the ’828 patent. PO Resp. 20–21. SSMP contends that the ’828 patent is directed to an invention facilitating the distribution of static content such as news headlines and associated

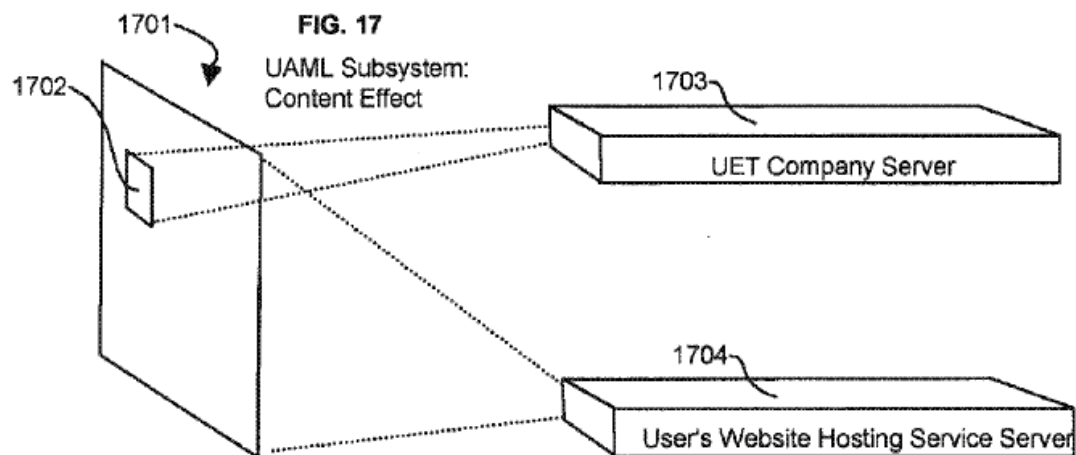
system 102 to provide web side content to users located on the client side shown within system 100.” *Id.*, and see Ex. 2009 ¶ 26 (Mr. Weadock testifying “Pasquali discusses providing a window for dynamically presenting information from a content feed, such as a stock ticker”).

URL’s “easily and directly to subscribers ‘without requiring each individual [content] provider to build and distribute’ its own software.” *Id.* at 20 (citing Ex. 1001, 5:39–59, 30:59–67; claim 11). SSMP argues that the invention in the ’828 patent is specifically shown in Figure 53 as “a real-time newsfeed or ticker, which functionally ‘enable[s] easy, direct interaction between the [ticker] user and virtually any [content] provider.’” *Id.* (citing Ex. 1001, 5:60–63). Pasquali is non-analogous according to SSMP, because it creates a dynamic window, essentially a data streaming content delivery sub-window for displaying “live video, updated stock tickers, motion video, etc.,” within a generally static browser screen or window displaying HTML content. *Id.* at 20–21 (citing Ex. 1004, 3:34–40). Thus, SSMP asserts, “*Pasquali*’s dynamic display window does not provide a solution applicable to static content, only content in the form of a data stream.” *Id.* at 21.

Facebook responds to SSMP’s data stream argument, asserting to the contrary that Pasquali expressly discusses display of both dynamic and static content. Reply 16 (citing Ex. 1004, 8:57–65). Facebook argues that “Pasquali places no restrictions on the type of content that can be manifested in the window module **118**, and explicitly states that it can accommodate **static** content.” *Id.* SSMP counters in their Sur-Reply that “*Pasquali* does not provide static content in its dynamic window, but rather in a window that is not dynamically updated.” Sur-Reply 17 (citing Ex. 1004, 8:46–65, 10:17–32).

The parties’ arguments are directed to the fairly narrow issue of the difference between “static” and “dynamic” data and windows. To determine whether Pasquali is an analogous reference, we take a step back to address the relevant invention of the ’828 patent and the pertinent teachings and disclosure in Pasquali.

Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *In re Clay*, 966 F.2d 656, 658-59 (Fed. Cir. 1992). The '828 is broadly drawn to various aspects of electronic commerce services such as internet advertising and auctions, as well as information search services. Ex. 1001, Abst. The '828 patent discloses a particular embodiment for the internet auction functionality that includes an image file that "is overwritten with a new image at the same file location each time the information it portrays changes." *Id.* at 20:66–21:3. The '828 patent explains that "[w]hile the web page is static, the image files serve as dynamically changing indicators by virtue of the process depicted in FIG. 18A, producing the effect depicted in FIG. 17." *Id.* at 20:33–36. We reproduce Figure 17 below.



“As shown in FIG. 17, the static web page 1701 is hosted on the users website host servers 1704, while each image 1702 serving as a variable real-time indicator is hosted on the UET Company’s servers 1703.” *Id.* at 20:62–66. Pasquali similarly addresses the concept of presenting changing, i.e. dynamically changing information, e.g., “news” or “stocks” as a dynamic window module sub-component of a static webpage. *See* Ex. 1004, 9:52–53 (Referring to Figure 2A, Pasquali explains that “screen image 200 is that of a WWW browser client screen and . . . window modules 202 arranged in table fashion.”).

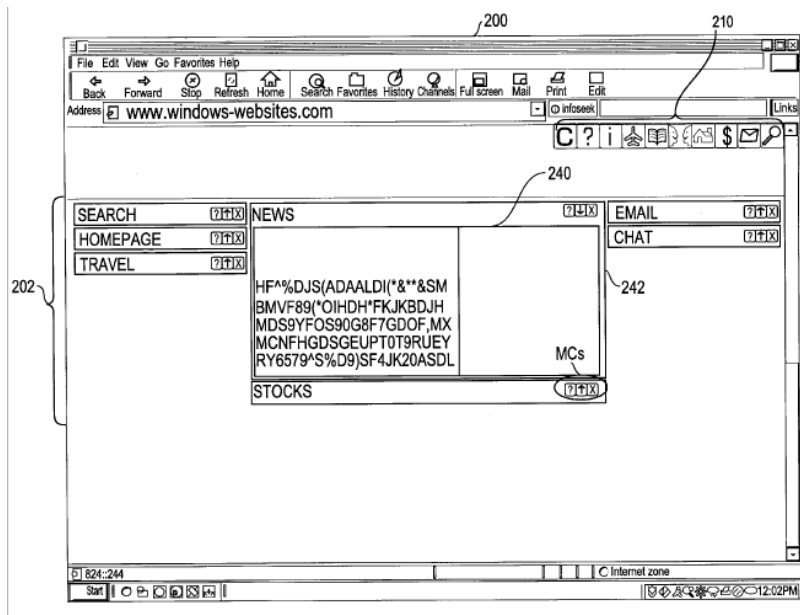


FIG. 2A

According to Pasquali, within the browser window, the window modules display content including “a dynamic news feed display window.” *Id.* at 10:25.

Both the '828 patent and Pasquali are directed to internet and web browser services and more specifically browser structures and functionality pertaining to the distribution and receipt of information between providers and subscribers. Ex. 1001, 1:35–55; Ex. 1004, Abst. In addition to being broadly related as browser and internet related inventions, we determine that

Pasquali's window modules 202 displayed in a static web-browser page image 200 providing changing and updated information (both static and dynamic) to a subscriber is a similar endeavor, and in the same field as the '828 patent which provides a web-browser window structure that supplies updated information such as changing auction bids in dynamic content screen 1702 in the context of static web-browser client screen 1701. Overall, both Pasquali and the '828 patent explain that given such a dynamic window module structure, new and updated information can be displayed even as the static hosting browser client page remains static. *Compare, e.g.,* Ex. 1004, 8:46–56, *with* Ex. 1001, 20:33–34, 61–62.

Even if Pasquali and the '828 patent could be considered *not* to be in the same field of endeavor, we determine that Pasquali's solution of presenting dynamic updated information in a window module within a static website would have been considered by one of ordinary skill in the art attempting to present new and updated information, e.g., auction bids, to a subscriber within a static web browser window. *See In re Clay*, 966 F.2d at 659. (“If a reference disclosure has the same purpose as the claimed invention, the reference relates to the same problem, and that fact supports use of that reference in an obviousness rejection.”).

SSMP's “static” versus “dynamic” arguments are somewhat misdirected mostly towards nomenclature of the type of content and information, rather than the functionality of updating and disseminating static or dynamic information. PO Resp. 20–21. In any event, we find Facebook's argument and evidence more persuasive that Pasquali did in fact consider the delivery of both dynamic and static content, and updating that content, via a dedicated dynamic window module. With respect to the issue of static or dynamic content, Pasquali's Figure 1D, showing window module

118 for dynamically displaying content within a web browser window content manifestation environment (“CME”), Pasquali expressly states that

[c]ontent such as that received via an electronic data network, from a local hard disk, etc., may be displayed within content display section 122 of module 118. *Any type of content may be manifested within module 118.* For example, static content like or similar to Straight HTML content (e.g., text, graphics, etc.) may be manifested, while dynamic content such as from a content feed (e.g., a news feed, a stock ticker feed, etc.) may also be displayed and/or manifested.

Ex. 1004, 8:57–65 (emphasis added). SSMP’s citation to the paragraph preceding this, and argument that static content in module 118 is not dynamically updated, essentially because it is not a data stream, is not persuasive for at least two reasons. First the preceding paragraph relied upon by SSMP simply explains that operation of the MC’s in module 118 do not affect, i.e., “refresh,” the entire web-browser CME in which module 118 is displayed. *See id.* at 8:46–56 (“The operation of any of the MCs 124 shown within control section 120 need not have a global effect on the entirety of the CME in which module 118 is displayed.”). SSMP does not explain in any persuasive technical detail how or why the MC operation of module 118 is pertinent to updating the specific static or dynamic content of module 118. Second, we give credit to Dr. Chatterjee’s testimony that relies on the express teachings of Pasquali, and whose testimony is unrebutted on this point in this proceeding. Dr. Chatterjee points out that Pasquali expressly states “that ‘[t]he window object(s) generated within the content manifestation environment may be updated and loaded with content in real-time and without user-intervention (e.g., such as user clicks on hyperlinks, etc.).” Ex. 1002 ¶¶ 40, 84. Dr. Chatterjee points out that Pasquali also explicitly states ““any type of content may be manifested within module

118.” *Id.* ¶ 83. In his Reply Declaration, Dr. Chatterjee reiterates his persuasive testimony that Pasquali “discloses the ability of the window module to display static as well as dynamic information, and as such, would have been appropriate for showing the product purchase and review updates in Bezos and Bezos 850.” Ex. 1014 ¶ 33.

We determine that Facebook has shown that Pasquali is reasonably pertinent to the problem of disseminating new and updated information to a subscriber using a static web browser window and that an inventor at the time of the filing of the ’828 patent considering this problem would have been motivated to consider Pasquali as analogous prior art in determining a solution to provide a dynamic window module within a static browser window.

Hindsight

In the developing field of internet commerce and data, at the time of filing of the ’828 patent, it could be that seemingly minor differences may produce a nonobvious advance. *See Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285, 1298 (Fed. Cir. 2012); *see also Unigene Labs., Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360–61 (Fed. Cir. 2011) (providing that the inquiry under § 103 is not whether the claimed invention is “sufficiently simple to appear obvious to judges after the discovery is finally made”). “The emphasis on nonobviousness is one of inquiry, not quality” of the advance. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The reason this inquiry is important is because “[j]udicial hindsight must be avoided.” *Orexo AB v. Actavis Elizabeth LLC*, 903 F.3d 1265, 1271 (Fed. Cir. 2018); *see also KSR*, 550 U.S. at 421 (“A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning.”). Against this background, and

in light of SSMP's arguments, we address the parties' arguments and evidence with respect to the combination of *Bezos*, *Bezos '850* and *Pasquali*.

SSMP argues that the combination of *Bezos*, *Bezos '850*, and *Pasquali* is based on hindsight "because the demands for the static information published by *Bezos* and *Bezos 850* in HTML Web Pages (static product reviews, product review ratings, and community purchase information) lack the relative urgency as compared to the dynamic information published by *Pasquali* in its dynamic window (streaming news/stock quotes)." PO Resp. 27–28. SSMP argues that without such urgency "there is no need for dynamic updates of relatively infrequent product reviews, product review ratings, and product purchases per *Bezos* and *Bezos 850*." *Id.* at 29 (citing Ex. 2009 ¶¶ 29). SSMP asserts that a person of ordinary skill in the art had no reason to look to *Pasquali* for faster updating and dynamic windows because "consumers could visit the *Bezos* product review pages no more than once per day and most instances still get the same information as with the proposed combination of the *Bezos* references and *Pasquali*." *Id.* at 30.

According to SSMP, "information regarding product reviews and the community purchase of those products that are the subjects of *Bezos* and *Bezos 850*, are static and there is no reason to implement "dynamic windows" as taught by *Pasquali* for static information." *Id.* at 28–29. SSMP also argues that the state of the art in 2003 and low, at the time of filing of the '828 patent would have discouraged a person from dynamic presentation of information. *Id.* at 31, and see *id.* at 8 ("Discussing the state of the art in 2003, SSMP contends that "[b]ack then, the demand for the instant access to other's information to which we have become accustomed was nonexistent.").

It is true, with regards to hindsight that we must be on guard against “read[ing] into the prior art the teachings of the invention in issue.” *Graham*, 383 U.S., at 36. And, in this way our inquiry in this instance resolves into whether the claimed invention includes something new and novel that is not found in the prior art, and to ensure that we have not presupposed such novelty in the combination and teachings of the prior art. We do not find SSMP’s hindsight argument persuasive, for one thing because it reasserts the ambiguous component of speed, now in terms of frequency, and resorts to attorney argument unsupported by expert testimony or persuasive evidence that frequency of submitted reviews would deter an ordinary artisan from presenting information in a dynamic window at the time of filing of the ’828 patent. *See* PO Resp. 31 (SSMP arguing that “[e]ven if community purchase information was more frequent than product reviews, which there is no evidence of, there is no evidence that consumers would want such information more than once per day.”).

Our inquiry finds Facebook’s arguments and evidence more compelling that speed and higher frequency of updating content and information were desired in 2003 and that “the technology landscape as of July 2003 would have accommodated the real-time delivery of news items and information as taught by Bezos and Bezos ’850, and would not have discouraged a skilled artisan from adapting Bezos/Bezos 850 to include the news ticker of Pasquali.” Reply 19 (citing Ex. 1014 ¶¶ 26–28, 31). Dr. Chatterjee testifies that the problem “was well-known at the time that web page displays generally did not update themselves automatically in the browser, and thus, users frequently had to “refresh” their web browsers to get to the most updated content for a particular web page.” Ex. 1002 ¶ 90 (citing Ex. 1004, 2:14–23). Dr. Chatterjee’s testimony is supported by the

Background of the Invention section, for example in Pasquali. Pasquali was filed in 1999, and expressly recognized at that time “web browser tools and applications remain relatively crude in terms of their native ability to present only static and exhaustive amounts of text and content in a single content review window or environment (e.g., within a single web browser screen).” Ex. 1004, 2:31–34. Pasquali points out that even in 1999 to address this problem “developers have begun to provide (serve) web content mixed with Java (and Java progeny) type code to enhance content review.” *Id.* at 2:44–46. Pasquali points to examples at mynetscape.com that used “pseudo-windows” within a web browser that acted like “channels” to display content feeds “[f]or example, a ‘Stocks’ channel (pseudo-window) may be perused for information related to certain securities markets and a headline news channel (pseudo-window) may be perused for news story highlight.” *Id.* at 3:7–10.

We are persuaded by Dr. Chatterjee’s testimony and supporting evidence in Pasquali that at least several years prior to the filing of the ’828 patent the problems of refreshing, updating and providing timely (even dynamic) internet content were known and that solutions to the problem were being developed by those of ordinary skill in the art such as Netscape developers. *Id.* at 2:24– 3:51. Indeed, Pasquali squarely noted the problem of “static” vs. “dynamic” content noting that in Netscape’s pseudo windows “that content that is drawn within a pseudo window is static and does not change after rendering by a web browser.” *Id.* at 3:23–25. According to Pasquali, the known pseudo windows “are not capable of providing truly controllable windows within a single unframed web browser content manifestation environment which can display dynamic content such as live

video, updated stock tickers, motion video, etc.” *Id.* at 3:36–40. Pasquali explains in its Summary of the Invention section that:

The window object(s) generated within the content manifestation environment may be updated and loaded with content in real-time and without user-intervention (e.g., such as user clicks on hyper-links, etc.) received via the electronic data network without requiring the content manifestation environment to be refreshed (e.g., without requiring Screen refresh operations).

Id. at 4:36–33. Given Dr. Chatterjee’s un rebutted testimony as well as the express teachings in Pasquali, we find that one of ordinary skill in the art at the time of the filing of the ’828 patent would have been aware of the problems relating to static content delivery and browser window refreshing on internet applications and would have been looking for solutions to provide “real-time” content such as “stock tickers” as expressly described in Pasquali. *Id.* at 3:36–40; 4:36–33. In other words, the recognition and idea of presenting and displaying updated static information in a ticker-type format, and in real-time, did not originate with the inventors of the ’828 patent but was well known to those of ordinary skill in the art at least by 1999 as shown by Pasquali. SSMP’s reliance mainly on the disclosure of Bezos and Bezos ’850 with respect to hindsight are misplaced. PO Resp. 28–29. Obviousness is not determined from the perspective of the inventors or authors of a prior art reference. Rather, obviousness is determined from the perspective of a hypothetical person having ordinary skill in the art. It is only that hypothetical person who is presumed to be aware of all pertinent prior art. *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985). We determine that the combination of Bezos, Bezos ’850 and Pasquali is not premised simply on hindsight because those of ordinary skill in the art at the time of the filing of the ’828 patent understood such

content delivery problems and as shown by Pasquali, were actively searching for potential solutions.

Teaching Away

SSMP also argues that the state of the art teaches away from the combination of Bezos, Bezos '850 and Pasquali. PO Resp. 36–37. SSMP argues that, despite news tickers being known, “publishing material online more frequently than in print was contrary to the financial needs of the news industry at the time, and therefore teaches away from the claimed invention.” *Id.* at 37 (citing Ex. 2022).

Ex. 2022 is an abstract of a research article titled: “The effect of a magazine’s free digital content on its print circulation: Cannibalization or complementarity?” The abstract states for example that “[o]n average, a magazine’s print circulation declines about 3–4% when it offers a website.” Ex. 2022. We find this evidence to be of little evidentiary value for one thing because it is narrowly directed to a specific industry and companies that produce printed magazines in addition to online content. *Id.* In addition, SSMP does not provide any tie either contextually or using expert testimony between the financial concerns *of publishers* of printed versus online magazine publishing and the level of ordinary skill in the art as it relates to the overall motivations and prior art teachings to develop applications delivering more robust online news content to users. *See* PO Resp. 37 (SSMP argues that “publishers did not provide such real-time news online.”). Moreover, SSMP does not explain with any particularity why this research article, apparently published in 2007, (although it uses data from 1996–2001), is relevant to the state of the art in 2003. In other words, SSMP does not explain sufficiently how conclusions drawn in 2007, even though

derived from data in 1996–2001 timeframe, would have discouraged a person of ordinary skill in the art, as we have determined in this proceeding, from combining Pasquali, Bezos and Bezos ’850 in 2003, four years prior to the research article publication.

Reasonable Expectation of Success

SSMP argues that there is not sufficient evidence of a reasonable expectation of success as to the combination of Bezos, Bezos ’850 and Pasquali, because Facebook has made “an incorrect assumption that simply adding the scrolling window therein satisfies the claimed real-time ticker limitations because there is no requirement that the information be scrolled or scrolling. PO Resp. 36 (citing Pet. 52 n.6; Ex. 1002 ¶ 89; Ex. 2036, 105:18–107:23).

We appreciate that Dr. Chatterjee was not entirely clear in his deposition as to whether Pasquali’s “scrolling” windows in Pasquali satisfied the “ticker” requirement in the claims of the ’828 patent. *See* Ex. 2036 (When asked if a browser scroll bar was synonymous with the word “ticker”, Dr. Chatterjee responded “[w]ell, I just [referred] to them as scroll bars so I refer to them as scroll bars.”). Ex. 2036, 107:13–14. SSMP’s reliance on this apparent equivocation is not persuasive because SSMP does not advance a claim construction that requires a “real-time new ticker” to be “scrolling,” nor does our claim construction require such a limitation. *See supra* Section II.B.

It is however Dr. Chatterjee’s un rebutted testimony that “a person of ordinary skill in the art would have recognized that Pasquali’s methods for improving the display of the content in web pages would be readily applicable to Bezos 850 and would have had a reasonable expectation that the combination would be successful.” Ex. 1002 ¶ 89. Dr. Chatterjee

explains persuasively that “Pasquali describe[s] analogous, web-based systems in which content is displayed in web pages using existing technology and techniques. Pasquali, in fact, discloses example source code for implementing the news feed/ticker.” Ex. 1002 ¶ 89 (citing Ex. 1004, 12–57).

We are not apprised of persuasive evidence by SSMP that Dr. Chatterjee’s testimony is unsupported or without merit. Although SSMP contends that we should discount Dr. Chatterjee’s testimony, SSMP does not present evidence in the form of contradictory expert or declarant testimony that implementing such window module technology for display of dynamic content was beyond the level of skill of a person having a degree in computer science or software engineering or experience in a technical field requiring computer science or software engineering. *See* PO Resp. 36 (Mainly attorney argument stating that “Petitioners have not provided evidence of a reasonable expectation of success in the proposed combination taking into account the true scope of the disclosures and that of the claims at issue.”). We note that SSMP’s declarant, Mr. Weadock, does not speak to, nor directly rebut Dr. Chatterjee’s position on the issue of expectation of success. *See* Ex. 2009 ¶ 25 (Mr. Weadock testifies, mainly, that one of ordinary skill in the art “would not combine the dynamic display aspects that Pasquali expressly applies to information streams with Bezos’ static, non-streaming content distribution systems.”).

Moreover, Dr. Chatterjee was consistent in his testimony and reasons supporting the combination of Bezos, Bezos ’850 and Pasquali. When asked in his deposition for instance if he had considered the practical matter of combining Bezos and Pasquali along with the limited internet bandwidth at the time of the ’828 patent filing. Dr. Chatterjee explained that

[y]ou would be wasting a lot of network bandwidth by refreshing, and one of ordinary skill would understand that. Whereas simply in the combination of Bezos and Pasquali, where just the relevant new reviews from your friend circle or your trusted friends or from your community personal purchase circle, they would show up. You're making much more prudent and cost effective use of your limited network bandwidth, and one of ordinary skill would understand that and that would be another motivation to combine the two references together.

Ex. 2036, 99:3–14. Dr. Chatterjee's unrebutted testimony here also goes directly towards the next issue, the motivations and reasons a person of ordinary skill in the art would combine Pasquali and Bezos '850. *See* PO Resp. 24 (SSMP argues that "adding real-time elements as per *Pasquali* to a Web page would add complexity and increase bandwidth usage.").

Motivation to Combine

SSMP contends that Facebook's motivation and reasons to combine Bezos '850 and Pasquali "are merely conclusory and fail to explain why one skilled in the art *would* combine such disparate disclosures." PO Resp. 23. SSMP makes several specific arguments with respect to motivation to combine. First, SSMP argues that "adding real-time elements as per *Pasquali* to a Web page would add complexity and increase bandwidth usage." *Id.* at 24. SSMP asserts that adding Pasquali's data stream functionality would have "easily overwhelm[ed] the then burdened low-bandwidth dial-up connections." *Id.* Second, SSMP argues that "refreshing" content is not a concern for the low frequency of product reviews and purchase information such as in the Bezos' references which are "presented in non-streaming, HTML form for download by end users as Web pages." *Id.* at 25. Third, SSMP argues that static content such as product and purchase reviews in Bezos '850 are not compatible with

Pasquali's dynamic browser window and contends that Facebook has not sufficiently explained "how the *Bezos* references' non-streaming, static HTML content could be reproduced in a window specifically adapted, as *Pasquali* discusses." *Id.* at 26.

Replying to the issue of bandwidth, Dr. Chatterjee acknowledges in his reply declaration that the dial-up connections and 56K connection speeds available in 2003 certainly had difficulty due to "the increased reliance on rich content such as graphical images, sounds, and in some cases video." Ex. 1014 ¶ 28. According to Dr. Chatterjee, however, providing real-time information in the form of text, for example, "could have been conveyed nearly instantaneously using network speeds common in July 2003." *Id.* ¶ 29. Dr. Chatterjee also testifies that SSMP and Mr. Weadock's argument regarding the issue of "refreshing" and low frequency of product reviews is misplaced because it "ignores the fact that *Bezos* and *Bezos* 850 do not focus on updates relating to individual books or products *generally* – they notify users about activities of people in common social groups, or the activities of favorite people." *Id.* ¶ 16 (citing Ex. 2009 ¶ 28(a)). Dr. Chatterjee explains that

[a] person of ordinary skill in the art would have understood that, in light of the enormous number of available products, a sufficiently large number of product purchases or reviews could occur within the various communities or favorite people groups the user has joined or created, to make the real-time ticker of *Pasquali* beneficial.

Id. ¶ 18.

As to the question of *how* *Pasquali* and *Bezos* '850 would have been combined, the Petition articulated certain reasons and motivation to combine *Bezos* '850 and *Pasquali*. Pet. 33–36 (citing Ex. 1002 ¶¶ 85–93; Ex. 1004,

2:14–23, 3:64–4:2, 4:35–42, 8:57–61). The Petition cites to Dr. Chatterjee’s testimony explaining that the combination entails, the “Web page of Bezos ’850 in which the purchase notifications of community members were presented in a window module of Pasquali (and thus presenting a dynamic scrolling display that was continuously updated in real-time).” Ex. 1002 ¶ 88. To accomplish this result, Dr. Chatterjee explains that besides both Bezos ’850 and Pasquali using existing technology and techniques that are readily combinable based on the level of ordinary skill art, “Pasquali, in fact, discloses example source code for implementing the news feed/ticker.” *Id.* ¶ 89 (citing Ex. 1004, cols. 12–57). Dr. Chatterjee points out also that Pasquali itself provides express reasons to use a dynamic window module in an existing web page, namely “by providing a true windowing environment within the constraints of the Internet’s infrastructure will allow content providers (e.g., web site operators) to incorporate the present invention to further enrich their sites and enhance the web usage experience.” *Id.* ¶ 91 (citing Ex. 1004, 3:64–4:2). Also, Dr. Chatterjee testifies that “[a] person of ordinary skill in the art would have regarded Pasquali’s window module [a]s a ‘bolt-on’ tool that could potentially improve just about any website.” *Id.*

We determine that Facebook has shown sufficiently that the limitations of claim 1 would have been obvious over Bezos ’850 and Pasquali, as we see no reason why the proposed modification which provides additional functionality to internet web page content is more than the predictable use of prior art elements according to their established structures and functions. Although Mr. Weadock disagrees with Dr. Chatterjee’s reasoning, Mr. Weadock presents no testimony or evidence contradicting the assertion that one of ordinary skill in the art would have been able to structurally and functionally incorporate Pasquali’s dynamic

window module with Bezos '850's static webpage. On this record, Facebook's explanations constitute articulated reasoning with rational underpinnings to justify the legal conclusion of obviousness.

Based on the evidence of record we determine that Facebook and Dr. Chatterjee have shown sufficiently that a person of ordinary skill in the art would have been motivated and also would have known how to successfully implement the newsfeed/ticker source code disclosed by Pasquali to disseminate and display product reviews within the web browser functionality and structure taught in Bezos '850.

e. Secondary Considerations

SSMP presents certain arguments that are most germane to secondary considerations, and which we address below in the context of our obviousness determination. *See Leo Pharm. Products, Ltd. v. Rea*, 726 F.3d 1346, 1358 (Fed. Cir. 2013) (“Objective indicia of nonobviousness play a critical role in the obviousness analysis. They are ‘not just a cumulative or confirmatory part of the obviousness calculus but constitute[] independent evidence of nonobviousness.’”) (quoting *Ortho–McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1365 (Fed. Cir. 2008)). These considerations “are crucial in avoiding the trap of hindsight[,]” *Leo Pharm. Products*, 726 F.3d at 1358, and “may be the most probative and cogent evidence in the record[,]” *Apple Inc. v. Int'l Trade Comm'n*, 725 F.3d 1356, 1366 (Fed. Cir. 2013) (internal quotation marks and citations omitted).

Failure of the News Industry to implement a “news ticker”

SSMP argues that the combination of Bezos '850 and Pasquali would not have been attempted or realized by a person of ordinary skill in the art because there was no desire for a “real-time news ticker” in the news industry. PO Resp. 37–38. SSMP contends that “[t]he New York Times

had already been publishing reviews for decades. [] It also had a full-fledged electronic publication: nytimes.com.” *Id.* (citing Ex. 2020). SSMP argues that “the *Times* did not even attempt any such development—not even in pre-Internet form and not even with publisher supplied rather than user-generated content, let alone per the claimed invention.” *Id.* at 38. Further, SSMP argues that Amazon’s failed “Spark” launched in 2017, shows the failure of industry “to implement anything like the claimed invention.” SSMP argues that “[a] ten-year delay, particularly from Amazon as the assignee of *Bezos*, undermines the plausibility of any assertion that a “reviews ticker” was obvious or even worth trying at the relevant date.” *Id.* at 40.

These arguments are not persuasive. First, SSMP’s arguments are not supported by expert testimony or persuasive evidence linking the marketability of real-time news feeds or tickers to the development and implementation of news feeds and dynamic content across a reasonably complete spectrum of news, commerce, and other business applications on the Internet in 2003. Second, SSMP’s argument confines the term “news” to simply book reviews published by the New York Times and extrapolates from this in the context of the marketing and publication strategy of a single media entity, and without any evidentiary support, that a person of ordinary skill in the art would not have desired dynamically updated content of any kind. *Id.* at 38–39. Our claim construction does not limit “news” to book reviews, nor does our determination of the relevant technical skills and background of an ordinary artisan include being a publisher or marketing director of a newspaper or magazine. Third, SSMP has presented no evidence or testimony to support its conclusion that Amazon’s “Spark” failed because “there is little demand for dynamically reported product

reviews today and even less demand in 2003.” *Id.* at 40 (citing Ex. 2028, 3, 8). The support for this argument is simply a citation to Ex. 2028, an internet article titled: A Statistical Analysis of 1.2 Million Amazon Reviews. *Id.* Neither SSMP’s citations nor our review of the information in the article appear relevant to the question of why “Spark” failed, or that “Spark” failed because consumers did not want dynamically presented information. Ex. 2028, 3, 8. To the extent this article might be relevant, SSMP has not explained with any particularity why information relating to Amazon’s “growth of product reviews since 2003” makes this article, or Amazon’s product review data itself, relevant to assertions of failure of the news industry to implement dynamically presented book reviews. PO Resp. 39–40.

Facebook’s admissions of non-obviousness

SSMP argues that Facebook has admitted that its social networking application called, “News Feed,” launched in 2006, was “‘ground breaking’ and a ‘game changer.’” PO Resp. 40 (citing Ex. 2030, 3). SSMP contends that Facebook’s admissions show no one had been able to implement, or even contemplated, a dynamic ticker or newsfeed on the internet until 2006. *Id.* at 41 (citing Ex. 2035, 2).

Exhibit 2030 is an internet opinion article from February 2010, by Sharon Gaudin on www.computerworld.com, explaining that “Facebook [] this week received a patent for streaming social network news feed technology, raising questions over how the company will wield this new power.” Ex. 2030, 1. On its face, this internet opinion article does not appear to have originated with Facebook or a related entity. The opinion article quotes a statement from a Facebook spokesperson that “[t]he launch of News Feed in 2006 was a pivotal moment in Facebook’s history and

changed the way millions of people consumed and discovered information on the site.” This statement, however, is explicitly cabined within the context of the Facebook site and social media platform, and does not provide persuasive evidence as to the use and implementation of dynamic newsfeeds across the internet as a whole.

Exhibit 2035 is a 2016 article from Forbes.com, by Kathleen Chaykowski, that includes an alleged statement by Facebook CEO Mark Zuckerberg during an online media presentation that “[a]t the time, nothing like [News Feed] existed in the world. It has not only changed the way people think about and use Facebook today, but in a lot of ways it changed the whole industry.” *Id.* We consider this statement in context of a Facebook media presentation by Mr. Zuckerberg to some extent as puffery, because it was a promotion of Facebook services on “Facebook Live” video and, that this evidence involves self-praise, rather than industry praise. *Bayer Healthcare Pharms., Inc. v. Watson Pharms.*, 713 F.3d 1369, 1377 (Fed. Cir. 2013) (explaining that bare journal citations and self-referential commendation fall short of demonstrating industry praise). Neither the article itself, nor SSMP, explains whether these comments are related to internet news feeds in general, which clearly existed prior to Facebook’s “News Feed,” or whether the comments pertain to the specific functionality of “News Feed” which apparently presents personalized articles and information to subscribers based on an algorithm. *See* Ex. 2035 4 (The Forbes article states that Facebook “said it uses an algorithm to show each user about 200 posts per day out of several thousand available articles, status updates, photos and videos.”).

Overall, we do not accord much weight to this evidence of alleged admissions by Facebook because both exhibits are directed to the apparent

marketing success, even drawbacks, of the “News Feed” application itself and are not clearly directed to the more fundamental concept of providing real-time dynamic content and news to subscribers in a browser window. Also, this argument is not supported by expert testimony or other persuasive evidence linking the apparent marketing success and implementation of Facebook’s “News Feed” as based simply on an underlying technological innovation related to providing real-time dynamic content to subscribers within a browser window.

5. Analysis—Claims 18 and 27

Different from claim 1, independent claims 18 and 27 are method claims directed to “[a] social network method,” whereas claim 1 recites “[a] system for use in a social network environment.” Ex. 1001, 51:60, 54:37, 56:1. These independent claims each include the same limitation of a “real-time news ticker.” *Id.* at 52:4, 53:40, 56:18.

In its Response, SSMP does not dispute Facebook’s analyses mapping the prior art onto claims 18 and 27, with the exception of a “real-time new ticker.” Also, SSMP’s arguments in its Response do not differentiate between these independent claims, but focus directly on this same limitation found in each of claims 1, 18, and 27. *See* PO Resp. 18–41. We find Facebook’s analyses persuasive as to the elements and asserted prior art combination of Bezos, Bezos ’850 and Pasquali for claims 18 and 27. Pet. 42–59. We also determine, for the same reasons as discussed above relative to claim 1, that for claims 18 and 27, the limitation of a “real-time news ticker” is rendered obvious over the combination of Bezos, Bezos ’850 and Pasquali.

6. Conclusion as to obviousness for claims 1, 18, and 27

Having considered each of the pertinent *Graham* factors individually, we now weigh them collectively. The level of ordinary skill in the art along with the scope and content of the prior art, as well as the differences between the prior art and claims 1, 18, and 27 weigh in favor of Facebook's contention that claim 1 would have been obvious. True, Bezos and Bezos '850 do not specifically disclose the element of a "news ticker." Yet, Facebook has shown persuasively that a person of ordinary skill in the art would have considered the teachings in Pasquali and would have understood the concepts and software mechanisms, both structurally and functionally, for disseminating via the internet static and dynamic information between end users and subscribers. As discussed above, we credit Dr. Chatterjee's reasons and technical explanations of the prior art which showed persuasively that one of ordinary skill in the art would have been motivated to use a dynamic window within a generally static webpage to facilitate the dissemination and presentation of real-time information (both static and dynamic content) to a subscriber within the meaning of claim 1 and our claim construction. To the extent we give any credit to SSMP's arguments relating to secondary considerations, we find it outweighed by the first three *Graham* factors.

On the whole, we determine that the first three *Graham* factors weigh in favor of obviousness. We find that Facebook has demonstrated, by a preponderance of the evidence, that a person having ordinary skill in the art would have been motivated to improve a user's experience interacting with a webpage and to provide more timely updates and information, and would have considered the teachings in Pasquali which provide a dynamic window which can be added to a generally static page in order to present new and

more relevant information without the subscribers intervention. Facebook and Dr. Chatterjee provide the requisite reasoning, supported by rational underpinnings, for the combination of Bezos, Bezos '850, and Pasquali based on the level of ordinary skill in the art. *See KSR Int'l Co.*, 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)) (“[O]bviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”). Accordingly, we conclude that Facebook has demonstrated by a preponderance of the evidence that claims 1, 18, and 27 would have been obvious in view of Bezos, Bezos '850 and Pasquali.

C. Claim 11- Alleged obviousness over Bezos, Bezos '850, Pasquali, Simon, and Shuster

Facebook asserts that claim 11 would have been obvious over Bezos, Bezos '850, Pasquali, Shuster and Simon. Pet. 60–69. Facebook has established by a preponderance of the evidence that claim 11 would have been obvious for the reasons explained below.

1. Simon

Simon relates to problems arising from malicious, or otherwise undesired user input, e.g., human, computing software, etc., into a computer system, where the input has not been validated or checked from a security standpoint. Ex. 1007, Abst. Simon states that these problems can be addressed by validating and filtering user input, including input URL's. *Id.* at 13:30–47.

Simon describes “a technology for facilitating the automated generation of input-validation software filters.” *Id.* at 9:25–26. Simon

specifically discloses an embodiment of such an input-validation filter that includes validation of a URL, and that initially

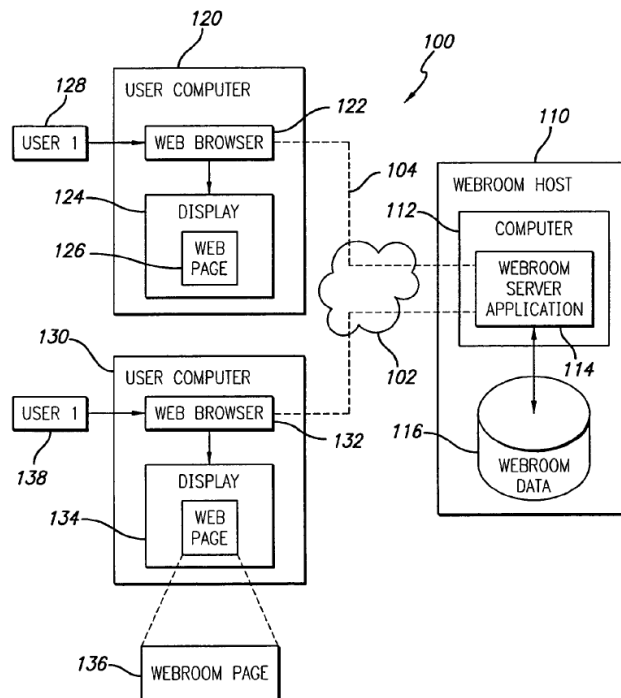
obtains the URL string. The (URL) string is then parsed into an array of parameters, according to the parameter boundary descriptions, . . . [e]ach of the parameters is tested to make sure it satisfies the assumptions, outlined in the description representations and implemented in the instructions. The output of the instructions specifies which assumptions (if any) have been violated.

Id. at 13:44–47.

2. Shuster

Shuster is directed to a system for hosting information exchange groups called “Webrooms” on the internet which facilitate the topical organization and self-evolving nature of exchanging and updating of information in the Webroom. Ex. 1006, Abst., 2:15–21. Shuster’s Figure 1A is reproduced below.

FIG. 1A



Shuster's Figure 1A, above, depicts Webroom Host 110 and Webroom Servier 114 connected via the internet 102 to various user computers 123, 130, for displaying Webroom page 136 and permitting users to interact with a particular group. *Id.* at 2:15–21, 5:45–50, 7:53–56.

3. Analysis—Claim 11

Independent claim 11 is similar to claims 1, 18, and 27 discussed above, but different where it recites “a plurality of real-time news *items*” in addition to “a real-time news *ticker*.” Independent claim 11 includes the additional limitations of a “first real-time news item comprising a first URL or a first link to said first URL,” and that “a security comparison check is performed of said first URL such that said first URL is verified to satisfy a first criterion for inclusion in said plurality of real-time news items.” Ex. 1001, 53:40–60.

We have reviewed Facebook's mapping of common, and certain additional elements, between claims 1, 11, 18, and 27 to Bezos, Bezos '850, and Pasquali in the Petition, and determine that a detailed review here is not necessary where Facebook has shown sufficiently where each limitation of claim 11 is taught by the underlying applied combination of references. Pet. 60–64. For example, Facebook points to the community interest group in Bezos '850 being a college, i.e., “American University” to satisfy the stated limitation in claim 11 of a “first social group selected from [] a group pertaining to a first academic institution.” *Id.* at 63–64 (citing Ex. 1003, 15:59–64, Ex. 1005, 2:20–25, Fig. 1). Another example, Facebook argues that from the previous prior art combination relating to claims 1, 18, and 27, Bezos' product review qualifies as “a real-time news item,” in that “[a] review in Bezos qualifies as “**news**” because it records recent events and activities,” and because “Bezos further states that a review is provided on the

customized review page ‘when’ or ‘whenever’ one of the ‘favorite people’ writes a review.” *Id.* at 50. SSMP does not dispute Facebook’s interpretation of “news item” in this regard. *See* PO Resp. 42 (SSMP argues that the further combination of Shuster and Simon with Bezos, Bezos ’850, and Pasquali is based on hindsight and “fall[s] short of the reasons necessary to show why one skilled in the art *would* combine the references.”).

Overall, SSMP does not explicitly challenge Facebook’s assertions that the elements of claim 11 are found in Bezos, Bezos ’850, Pasquali, Simon, and Shuster individually, but mainly argues that the further combination of Shuster and Simon is improper. PO Resp. 41–42. Our review of the prior art is consistent generally with Facebook’s comparison of the prior art disclosure as compared to the elements of claim 11. Thus, we discuss below particular limitations not found in the previously discussed claims 1, 18, and 27, and whether the further combination of Simon and Shuster with Bezos, Bezos ’850, and Pasquali is supported by a preponderance of the evidence.

For the additional limitations in claim 11 relating to a URL and its validation, Facebook relies on the combination of Bezos, Bezos ’850, Pasquali, Shuster, and Simon. Pet. 60–69. Specifically, Facebook argues that where Bezos may not expressly disclose that a real-time news item may contain a URL, “Shuster states that a post may include an ‘outside’ or ‘external’ reference, such as a ‘link’ to a Web page.” *Id.* at 65 (citing Ex. 1005, 10:39–50). Relying on Dr. Chatterjee’s testimony, Facebook argues that “[a] person of ordinary skill in the art would have understood, and found it obvious, that the term “link” as used in Shuster refers to a URL. *Id.* at 65–66 (citing Ex. 1002 ¶ 166). For the limitation where “a security comparison check is performed of said first URL,” Facebook argues that “Simon

explains that the use of unvalidated user input in a computer system can cause numerous problems, including computer crashes and unintentional execution of malicious programs.” Pet. 67–68 (citing Ex. 1007, 1:65–2:14, 2:58–63, 3:16–25).

SSMP argues that Facebook has not shown sufficiently that a person of ordinary skill in the art *would* have been motivated to combine Simon and Schuster with Bezos. PO Resp. 41–42. SSMP argues that Dr. Chatterjee failed to focus on the “the knowledge of one skilled in the art at the *time of the invention* as compared to today’s knowledge.” *Id.* at 42. SSMP argues that allowing a URL, such as disclosed by Shuster, in a product review is the antithesis of Bezos because “driving potential customers *away* from Amazon’s own ecommerce site does not at all appear to be the purpose of the *Bezos* references, a reality that further, highlights the counter-intuitive, hindsight reconstruction practiced by Petitioners and their expert.” *Id.* Also, SSMP argues that but-for the combination of Bezos and Shuster, Simon would not be offered to solve the security issues that result from the input of such link away from the Bezos web page. *Id.* at 43.

Facebook argues that Shuster’s Webroom page that is available to defined groups of subscribers is conceptually and technologically similar, and therefore analogous, to Bezos’ text-based web pages providing product reviews and purchase information also to particular subscriber groups and communities. Pet. 65 (citing Ex. 1002 ¶ 168). Noting that Bezos ranks the number of “useful” votes a review receives, Facebook reasons that “[i]ncluding a URL in a product review in Bezos would have furthered the goal of providing useful feedback about a product by efficiently providing a link to additional information on the web that a reader could optionally review.” *Id.* at 66 (citing Ex. 1003, 2:56–3:11, 10:26–35). Dr. Chatterjee

testifies that “including URLs in content distributed via the Web was fundamental and elementary knowledge to persons of ordinary skill in the art. No person of ordinary skill in the art would have regarded including a URL with a web content item as anything new or non-obvious by July 2003.” Ex. 1002 ¶ 167. Dr. Chatterjee’s testimony as to the level of skill in the art in this regard is unrebutted. *See* PO Resp 42 (SSMP asserts only by way of attorney argument that Dr. Chatterjee “evidence[s] an inability to separate the knowledge of one skilled in the art at the *time of the invention* as compared to today’s knowledge.”). We also find Facebook’s reasoning and evidence more persuasive than a speculative company-specific business model, i.e., that a URL would drive business away from a host web page, which SSMP asserts would have dissuaded a person of ordinary skill in the art from including a URL in a review. PO Resp. 42. Even if there are valid proprietary commercial reasons a particular business model based on Bezos and Bezos ’850 might be deterred from including external links, this does not outweigh the persuasive reasoning, teachings in the prior art, and Dr. Chatterjee’s testimony that a person of ordinary skill in the art in 2003 would have considered and known to provide additional functionality and information for subscribers on a particular topic by including a URL to such additional information in a review or other type of text content in a communication. *See Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 889 (Fed. Cir. 1984) (one of ordinary skill is not compelled to blindly follow the teaching of one prior art reference over the other without the exercise of independent judgment).

We also find Facebook’s reasons and the prior art disclosures and teachings persuasive as to a reason to further combine Bezos, Shuster, and Simon. Pet. 68–69. Dr. Chatterjee testifies that commensurate with level of

ordinary skill and knowledge in the art, Simon describes the necessity of checking user input such as URL's for security issues to avoid problems "including computer crashes and unintentional execution of malicious programs," where "[t]hese problems can cost time and money and hurt the reputation of the affected company." Ex. 1002 ¶ 176 (citing Ex. 1007, 1:65–2:14, 2:58–63, 3:16–25, 25:35–45). Dr. Chatterjee's testimony as to the reason and supporting evidence to combine Shuster and Simon is un rebutted, in that given such well-known security concerns with respect to user input, "a person of ordinary skill in the art would have appreciated the applicability of Simon's teachings to the Bezos and Shuster systems." *Id.* ¶ 175.

We do not find the addition of Shuster and to Bezos, Bezos '850 and Pasquali to be an inordinate number of references, as the reliance on a large number of references does not, without more, weigh against the obviousness of the claimed invention. *See In re Gorman*, 933 F.2d 982 (Fed. Cir. 1991) (Court affirmed a rejection of a detailed claim to a candy sucker shaped like a thumb on a stick based on thirteen prior art references.). Based on the evidence of record we determine that Facebook has shown by a preponderance of the evidence that the limitations of claim 11 would have been obvious over Bezos, Bezos '850, Pasquali, Shuster and Simon, as it is clear from the standpoint of a person of ordinary skill in the art and the prior art that adding a URL and validating that URL for known security problems that can compromise a computer system, was a known and predictable use of prior art elements according to their established structures and functions.

Having considered each of the pertinent *Graham* factors individually, and having weighed them collectively we determine that the level of ordinary skill in the art along with the scope and content of the prior art, as

well as the differences between the prior art and claim 11 weigh in favor of Facebook's contention that claim 11 would have been obvious.

D. Motion to Amend

Because we determine that the original claims are unpatentable, we consider SSMP's contingent motion to amend, Facebook's opposition and SSMP's reply. Papers 18, 23, 25.

SSMP proposes substitute independent claims 31–34, which they contend “do not enlarge the scope of the original claims or introduce new subject matter.” Mot. to Amend 2. SSMP states with respect to certain new limitations in the substitute independent claims, that (1) “the combination of *Bezos*, *Bezos 850*, *Pasquali*, *Shuster*, and *Simon* do not disclose any details with regard to connections between the party that is providing the information (the first user account) and the ticker provider (the first computer system),” and (2) also “do not disclose software that when in use on the client device (the third computer system) transmits usage information to the ticker provider (the first computer system).” *Id.* at 23–24.

Exemplary substitute claim 31 is reproduced below, with the new limitations at paragraph (f) emphasized:

Substitute Claim 31. A system for use in a social network environment comprising:

(a) a first computer system accessible via a first computer network, said first computer system comprising a data processor and a memory;

(b) a first user account record stored in said memory, said first user account record being associated with a first social group, wherein said first social group is one of a multitude of different social groups within said social network environment and wherein each social group has an associated respective real-time news ticker;

(c) a real-time news ticker of said first social group, said real-time news ticker of said first social group comprising a plurality of real-time news items pertaining to said first social group; and

(d) a second user account record, said second user account record comprising a first subscription to said real-time news ticker of said first social group, said first user account record being different from said second user account record, wherein:

(e) an association between said first user account record and said first social group is verified as a condition for said first user account record being permitted to distribute news items through said real-time news ticker of said first social group, and wherein:

(f) the first computer system is configured for establishing a first live data connection between said first computer system and a second computer system associated with said first user account record, when the second computer system is logged into said first user account record, for distributing real-time news items to subscribers of said first social group, and a second live data connection between said first computer system and a third computer system associated with said second user account record, when the third computer system is logged into said second user account record and when first software on the third computer system associated with said second user account record is in use, said at least one of said real-time news items comprises at least user-submitted text and a user-submitted URL, and wherein the first software is configured to transmit usage information to the first computer system by way of said second live data connection.

Mot. to Amend 4–5.

Facebook opposes the Motion to Amend arguing that the substitute claims 31–34 lack written description support, are not patent eligible, and would have been obvious, and that substitute claim 33 is indefinite. Opp.

Mot. to Amend 2–23.

1. Applicable Law

In an *inter partes* review, amended claims are not added to a patent as of right, but rather must be proposed as a part of a motion to amend.

35 U.S.C. § 316(d). The Board must assess the patentability of proposed substitute claims “without placing the burden of persuasion on the patent owner.” *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290, 1328 (Fed. Cir. 2017) (en banc); see “Guidance on Motions to Amend in view of *Aqua Products*” (Nov. 21, 2017) (https://www.uspto.gov/sites/default/files/documents/guidance_on_motions_to_amend_11_2017.pdf) (“Guidance”). Subsequent to the issuance of *Aqua Products* and the Board’s Guidance, the Federal Circuit issued a decision in *Bosch Automotive Service Solutions, LLC v. Matal*, 878 F.3d 1027 (Fed. Cir. 2017) (“*Bosch*”), as well as a follow-up Order amending that decision on rehearing. See *Bosch Auto. Serv. Sols., LLC v. Iancu*, Order on Petition for Panel Rehearing, No. 2015-1928 (Fed. Cir. Mar. 15, 2018).

In accordance with *Aqua Products*, the Board’s Memorandum, and *Bosch*, Patent Owner does not bear the burden of persuasion to demonstrate the patentability of the substitute claims presented in the motion to amend. Rather, ordinarily, “the petitioner bears the burden of proving that the proposed amended claims are unpatentable by a preponderance of the evidence.” *Bosch*, 878 F.3d at 1040 (as amended on rehearing); see *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 at 3–4 (PTAB Feb. 25, 2019) (precedential). The Board itself also may justify any finding of unpatentability by reference to evidence of record in the proceeding. *Id.* (citing *Aqua Products*, 872 F.3d at 1311 (O’Malley, J.)). Thus, the Board determines whether substitute claims are unpatentable by a preponderance of

the evidence based on the entirety of the record, including any opposition made by the Petitioner.

Also, Patent Owner's proposed substitute claims must meet the statutory requirements of 35 U.S.C. § 316(d) and the procedural requirements of 37 C.F.R. § 42.121. *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 (PTAB Feb. 25, 2019) (precedential).

Accordingly, Patent Owner must demonstrate: (1) the amendment proposes a reasonable number of substitute claims; (2) the proposed claims are supported in the original disclosure (and any earlier filed disclosure for which the benefit of filing date is sought); (3) the amendment responds to a ground of unpatentability involved in the trial; and (4) the amendment does not seek to enlarge the scope of the claims of the patent or introduce new subject matter. *See* 35 U.S.C. § 316(d); 37 C.F.R. § 42.121.

1. Statutory Requirements

Under the broadest reasonable interpretation we are not persuaded by Facebook's arguments regarding indefiniteness and lack of written description. Opp. Mot. to Amend. 2–11. Instead, we determine that SSMP has demonstrated that proposed substitute claims meet all the statutory and regulatory requirements set forth in 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121. However, based on the arguments and evidence presented during trial, Facebook has demonstrated by a preponderance of the evidence that the proposed substitute claims are unpatentable.

2. Obviousness of the Substitute Claims

Because we have already discussed the elements that the original and substitute claims have in common (*see* Section III.B.–C.), we focus our analysis on the new elements of the substitute claims as shown highlighted above in paragraph (f). The new elements in each substitute claim are

substantially similar, and therefore we discuss below the new elements in substitute claim 31, as the primary example.

In our view, none of the additional limitations renders the proposed substitute claims novel or non-obvious over the prior art of record. Instead, as argued by Facebook in its Opposition, we determine that each of the new limitations is taught in the prior art as disclosed by Bezos, Bezos 850, Pasquali, Shuster, Simon, Amstein and the level of knowledge and skill of a person of ordinary skill in the art.

3. Claim 31

Facebook argues that certain of the limitations in paragraph (f) are unpatentable over the same prior art as the original claims—namely, Bezos, Bezos '850, Pasquali, and Shuster. *Id.* at 11–18. Facebook argues that the remaining limitations would have been obvious based on these same previous references in combination with Amstein and the level of ordinary skill in the art as shown by RFC 1738 (Ex. 1019), and Hypertext Transport Protocol (HTTP) (Ex. 1018 ¶¶ 63, 65).

- a. the first computer system is configured for establishing a first live data connection between said first computer system and a second computer system associated with said first user account record, when the second computer system is logged into said first user account record*

Beginning with the limitation that connects the “first computer system,” and “a second computer system,” via “a first live data connection,” we are not persuaded that these elements render the claim patentable. *See* Mot. to Amend 16, 23–24; Opp. Mot. to Amend. 11–13. The newly recited “second computer system” is simply a computer system used by the first user who has an account enabling that user to “distribute news items through

said real-time news ticker,” as earlier recited in claim 31. *See* Ex. 1001, 31:10–13 (The ’828 patent describes that after logging to their account and being authenticated “the iTicker provider inputs headlines and URLs to be associated with these headlines into the iTicker provider record **5305**.”). Bezos for example in Figure 8 discloses users, i.e. “customers”, each user having a personal computer, e.g., either computer 852 or 854, that allows them to submit product reviews for distribution to the group after authentication. Ex. 1003, 19:42–45, Fig. 8; Ex. 1018 ¶ 42.

SSMP contends that “*Bezos, Bezos 850, Pasquali, Shuster, and Simon* do not disclose any details with regard to the “first live data connection” between “the party that is providing the information (the first user account) and the ticker provider (the first computer system).” Mot. to Amend, 23. We note SSMP provides no specific definition or construction of a “live data connection.” *Id.*

Bezos, however, reasonably discloses the first computer system as Web site 850 being the server system hosting the website and related databases. Ex. 1003, 19:42–45, Fig. 8. Bezos also discloses that the server hosting Web site 850, and the customers’ personal computer systems are in communication and connected via the internet. *Id.* at 19:37–59, Fig. 8. Dr. Chatterjee testifies that the customers’ computers linked to the server system hosting Web site 850 through the internet would have been understood by those of ordinary skill in the art as establishing “a ‘**live data connection**’ to the “first computer system” (e.g. the computer system supporting web site **850**).” Ex. 1018 ¶ 43. Dr. Chatterjee explains that

when a user purchases a product or submits a review using that system, there must exist a **live data connection** with the Amazon web site **850** (the “first computer system”). Without such a connection, it would not be possible for the “**second computer**

system” to complete the purchase process with the Amazon web site or submit a product review.

Id. ¶ 45 (citing Ex. 1005, 15:51–54; Ex. 1003, Fig. 9A, 9:11–14, 9:27–31, 20:29–35). Given Bezos’ description and illustrations of existing internet connections and because customers use a personal computer, e.g. the claimed “second computer system,” which must be communicating and authenticated and logged into an established account, i.e., “the first user account,” in order to access the Amazon Web site 850, we find Facebook’s arguments and evidence, including the uncontested testimony of Dr. Chatterjee, persuasive that at least Bezos and Bezos ’850 disclose these elements of substitute claim 31 including “a first live data connection.” Ex. 1003, 9:27–32, 20:18–35.

b. for distributing real-time news items to subscribers of said first social group,

The limitation of “distributing real-time news items” to a group of subscribers recited within the context of the new limitations is basically a reiteration of the “real-time news items pertaining to said first social group” limitation previously recited in substitute claim 31. We have already determined with respect to claim 1, that “real-time news items pertaining to said first social group” is disclosed at least by Bezos ’850 as information, e.g. a purchase notification, being timely distributed to a group or community of users. *See supra* Section III.B.4.c (“Our review of Bezos ’850 is consistent with Facebooks assertions, for example that Bezos ’850 ‘discloses a **‘Purchase Notification’** service in which a user can receive a personalized Web page listing purchases by other community members. Pet. 29. Bezos ’850 explains that ‘[t]he popular product and purchase event notifications are preferably sent by email (to community members that have

not yet purchased the product), but may alternatively be communicated using a personalized Web page or other method.” Ex. 1005, 3:25–29.”).

c. and a second live data connection between said first computer system and a third computer system associated with said second user account record when the third computer system is logged into said second user account record

For the same and similar reasons as described above with respect to Bezos’s “first computer system,” which hosts Web site 850, and the customer’s “second computer system,” we determine that Bezos also discloses “a second live data connection between said first computer system and a third computer system associated with said second user account record.” As shown in Bezos’s Figure 8, the claimed “third computer system” is disclosed by the other “customer” computer, e.g. personal computer 852 or 854. And, as discussed above, this “third computer system” is also connected via the internet and directly communicating with the first computer system and server which hosts Web site 850.¹² As persuasively explained by Dr. Chatterjee, upon a customer using the “third computer system” and authenticating and logging in to a “second user account,” this online internet connection would have been understood by those of ordinary skill in the art as establishing a “second live data connection” to the “first computer system,” (e.g. the computer system supporting web site **850**.)” Ex. 1018 ¶¶ 43–45.

¹² Although SSMP does not expressly explain that a “live data connection” is the same as a “real-time” connection, Facebook points out that U.S. Patent No. 7,082,407 to Jeffrey P. Bezos, (Ex. 1017), which was filed the same day as Bezos ’850, discloses that it was known for users “to engage in real-time chat and instant messaging.” Opp. Mot. to Amend 16 (citing Ex. 1017, 3:1–8, 5:59–6:1, 9:41–50; Ex. 1018 ¶ 53.)

- d. and when first software on the third computer system associated with said second user account record is in use, said at least one of said real-time news items comprises at least user-submitted text and a user-submitted URL,*

This limitation initially requires using “first software” on the customer “third computer system,” and is disclosed in Bezos in which such “first software” is disclosed at least by web browser 862 and email app 856, for example, shown and described as located on customer computer 852. Opp. Mot. to Amend 14 (citing Ex. 1003, 19:46–5; Ex. 1004, 11:5–7), Figure 8. As explained above in our analysis of claim 11, Facebook’s arguments and evidence are persuasive that news items in the form of “text” and including “a user-submitted URL” would have been obvious in view of Bezos, Bezos ’850, Pasquali, and Shuster. *See supra* Section III.C.3. (We determined with respect to claim 11 “that where Bezos may not expressly disclose that a real-time news item may contain a URL, ‘Shuster states that a post may include an ‘outside’ or ‘external’ reference, such as a ‘link’ to a Web page.’”).¹³

- e. and wherein the first software is configured to transmit usage information to the first computer system by way of said second live data connection.*

As discussed above, Facebook argues persuasively that the claimed “‘first software’ in these new limitations takes the form of the web browsing software on the second user’s computer (the ‘third computer system’).”

¹³ Facebook also argues persuasively that in addition to Shuster, a person of ordinary skill in the art would have been aware of “a famous December 1994 technical publication . . . RFC 1738 which discloses that URLs are designed to be transmitted with other types of text, such as email and news messages.” Opp. Mot. to Amend. 18 (citing Ex. 1019).

Opp. Mot. to Amend. 20. Facebook argues that “usage information” is not recited, defined, or anywhere explained in the specification of the ’828 patent, nor construed in SSMP’s Motion to Amend. Opp. Mot. to Amend. 6–7. Facebook argues that “usage information” would have been understood by a person of ordinary skill in the art, in the context of the ’828 patent, to “encompass[] a Uniform Resource Locator (URL) of a web page currently being browsed by the user.” *Id.* at 7. Facebook points to SSMP’s reliance in their Motion to Amend on a particular embodiment of the ’828 patent, which according to Facebook, evidences such “usage information” as a URL sent from the third computer system to the first computer server system to retrieve and obtain access to browse the web page associated with the URL. *Id.*

SSMP does not explicitly state which portions of the ’828 patent specification support the limitation of “usage information.” *See* Mot. to Amend. 16–17 (Block quoting various disclosure of the ’828 patent.). SSMP does explain that “[t]he ‘usage information’ claim amendment encompasses, but is not limited to the transmission the URL of a web page being browsed by a user (claims 31-34).” Reply Opp. Mot. to Amend 3. Although Facebook contends that there is not sufficient written description for this limitation, the parties are in relative agreement that the transmission of a URL from the “third computer system” to the “first computer “system” meets the new limitation of “usage information.” *Id.*

Facebook argues that “basic HTTP mechanisms required that the web browser send the URL of the requested web page to a server, in order to retrieve that page.” Opp. Mot. to Amend 20 (citing Ex. 1018 ¶¶ 63, 65). In addition, Facebook argues that U.S. Patent No. 5,793,966 to Peter R. Amstein (“Amstein,” Ex. 1020) “confirms that, in order to receive a web

page from a remote server, the browser software transmits an HTTP GET request to the server, the request including the URL of the requested web page.” *Id.* at 21. Facebook argues that Amstein is analogous computer systems art and the described HTTP technology is “directly applicable” to the internet and web-based structures and functions described by Bezos, Bezos 850 and Pasquali. *Id.* (citing Ex. 1018 ¶ 65). Facebook reasons that persons of ordinary skill in the art “would have appreciated that the HTTP GET technique disclosed in Amstein enjoyed a high degree of industry acceptance and thus would have been motivated to use it to obtain compatibility with existing browsers and servers.” *Id.* (citing Ex. 1018 ¶ 66). Dr. Chatterjee testifies that “as of July 2003 (and continuing today), [HTTP GET] represents a standardized way for a client computer to retrieve a web page from a remote server.” Ex. 1018 ¶ 66. Dr. Chatterjee’s testimony is unrebutted on this point, and consistent with the Background of Amstein’s disclosure, particularly Amstein’s Figures 1 and 2 detailing the HTTP GET process. *See* Ex. 1020 7:5–13 (Amstein describing that Figure shows “[t]he browser then sends an HTTP GET request to the Web server in step 14, giving the URL of the desired document. The browser then waits for a response from the Web server in step 16.”).

We find Facebook and Dr. Chatterjee’s evidence and arguments persuasive that one of ordinary skill in the art would have known of, and been motivated to use the standard HTTP GET process to transmit a URL as “usage information” from the customer computer’s browser to the first computer system via the “second live data connection.”

f. Proposed substitute claims 32–34

Substitute independent claim 32 is intended to replace original claim 11 and adds the same new limitations in its paragraph (h), as discussed

above for claim 31 and paragraph (f). Mot to Amend. 6. We find for the same reasons as discussed above with respect to original claim 11, and paragraph (f) of proposed substitute claim 31, that substitute claim 32 is not patentable over the combination of Bezos, Bezos '850, Pasquali, Simon, Shuster, Amstein and the level of knowledge and skill of a person of ordinary skill in the art.

Substitute independent claim 33 is intended to replace original method claim 18 and adds the same and similar limitations (in the form of the step of “establishing a first live data connection”), as in proposed substitute claims 31 and 32. *Id.* at 7. We find for the same reasons as discussed above with respect to original claim 18, and respective paragraphs (f) and (h) of proposed substitute claims 31 and 32, that substitute claim 33 is not patentable over the combination of Bezos, Bezos '850, Pasquali, Simon, Shuster, Amstein and the level of knowledge and skill of a person of ordinary skill in the art.

Substitute claim 34 is intended to replace original method claim 27 and adds similar new limitations as discussed above, but slightly different in that the roles of the previously discussed “first computer system” and “second computer system,” are reversed, and hence requires that “first software on the third computer system” transmit “usage information” all the way back to the “first computer system,” i.e., the initial content provider. Mot. to Amend. 21–22. In other words, “usage information” is transmitted from one user to the original content provider (user), not simply between a user and the server. *Id.*; Opp. Mot. to Amend. 22–23.

Dr. Chatterjee explains that a person of ordinary skill in the art understood that from instant messaging and other user-type communications such as online chat known prior to the time of filing of the '828 patent, “that

the claimed “usage information” could be sent all the way back to the first consumer computer system.” Ex. 1018 ¶ 72. We appreciate that the specifically combined references Bezos, Bezos ’850, Pasquali, Simon, Shuster, and Amstein might not disclose explicitly the complete pathway of “usage information” all the way back to a content provider user, i.e., the “first computer system” in substitute claim 34. However, as discussed above, we find Dr. Chatterjee’s testimony persuasive that a person of ordinary skill in the art understood the structure and function of internet communications and instant messaging enabling “live data connections” between users. *See supra* Section III.D.2.a. Dr. Chatterjee’s testimony on this point is unrebutted and we find it reasonable based on the level of ordinary skill in the art and the known internet communication techniques and technology at the time, “that the user of the ‘third computer system’ might want to send a URL of an interesting web page to the first user using the techniques in Bezos 407.” Ex. 1018 ¶ 73 (citing Ex. 1019).

g. Conclusion

In sum, we are persuaded that Facebook has carried its burden in showing that SSMP’s amendments do not overcome the obvious nature of the combination of Bezos, Bezos ’850, Pasquali, Simon, Shuster, Amstein and the level of knowledge and skill of a person of ordinary skill in the art. As such, we deny SSMP’s contingent motion to amend. Additionally,

Patent Owner's Motion to Amend is denied.¹⁴ We summarize our conclusions in the tables below.¹⁵

IV. SUMMARY

Petitioner has proved by a preponderance of the evidence that claims 1, 18, and 27 would have been obvious over Bezos, Bezos '850, and Pasquali, and that claim 11 would have been obvious over Bezos, Bezos '850, Pasquali, Shuster and Simon.

¹⁴ We do not reach Facebook's assertions of subject matter ineligibility under § 101 because we find the claims and proposed substitute claims unpatentable as obvious under § 103. *See* Opp. Mot. to Amend 23 (Facebook noting that "[t]he district court presiding over the concurrent litigation issued an extensively detailed order finding claims of the '828 patent invalid because they are directed to an abstract idea under *Alice Corp. Pty Ltd. v. CLS Bank Int'l*, 573 U.S. 208 (2014).") (citing Ex. 1021); PO Reply Opp. Mot. to Amend 8–10.

¹⁵ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1, 18, 27	103	Bezos, Bezos '850, and Pasquali	1, 18, and 27	
11	103	Bezos, Bezos '850, Pasquali, Shuster and Simon	11	
Overall Outcome	103	Bezos, Bezos '850, Pasquali, Shuster and Simon	1, 11, 18, 27	

Motion to Amend Outcome	Claim(s)
Original Claims Cancelled by Amendment	1, 11, 18, and 27
Substitute Claims Proposed in the Amendment	31–34
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	31–34
Substitute Claims: Not Reached	

V. ORDER

For the reasons given, it is

ORDERED, based on a preponderance of the evidence that claims 1, 11, 18, and 27 are unpatentable;

FURTHER ORDERED that SSMP's Contingent Motion to Amend (Paper 18) is *denied*; and

FURTHER ORDERED that, because this is a Final Written Decision, any party to the proceeding seeking judicial review of this Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2018-01620
Patent 8,620,828 B1

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