

Summary of verbatim (or nearly verbatim) matches between the ‘541 Petition to Meta’s Petition in the Meta-MDT-IPRs (Ex.2034)

	Petition in the ‘541 IPR by Petitioners	Meta’s Petition in the Meta-MDT- IPRs
1	A person of ordinary skill in the art (“POSITA”) would have had a bachelor’s degree in electrical engineering, computer science, or similar field, with two years of experience in developing and implementing network-based computer systems that interact with mobile devices, such as systems for storing and retrieving information over the Internet or communicating using the Web using wireless mobile devices. 541 IPR Petition, p.5	A person of ordinary skill would have possessed a bachelor’s degree in electrical engineering, computer science, or similar field, with two years of experience in developing and implementing network-based computer systems that interact with mobile devices, such as systems for storing and retrieving information over the Internet or communicating using the Web using wireless mobile devices. (EX1002, ¶¶14-18.) Ex.2034, pp.5-6
2	The challenged claims attempt to lay claim to techniques for allowing users to share information over the Internet with other users via mobile devices. But these techniques were well-known before the ’348 patent. All grounds rely on Neibauer (EX-1003), which describes features of Yahoo!. (EX-1002, ¶43.) Neibauer describes a feature called Yahoo! Clubs that allows users to create web-based communities for users to share information through photo sharing and other features. (EX-1002, ¶¶44-50; Neibauer, pp.477-480.) Neibauer also discloses the ability to access Yahoo! services via mobile devices. (EX-1002, ¶55; Neibauer, pp.166-174.) Neibauer renders obvious the majority of the claim limitations and was relied upon	The challenged claims attempt to lay claim to techniques for allowing users to share information over the Internet with other users via mobile devices. But these techniques were well-known before the ’348 patent. All grounds rely on Neibauer (EX1003), which describes features of the popular Yahoo! website and service. (EX1002, ¶¶48-50.) Neibauer discloses a feature called Yahoo! Clubs that allows users to create web-based communities for users to share information through photo sharing and other features. (EX1002, ¶¶51-52, 114-115; Neibauer, pp.477-480.) Neibauer also discloses the ability to access Yahoo! services via mobile devices such as cell phones. (EX1002, ¶¶56, 103; Neibauer, pp.166-174.) Neibauer is a strong reference that

by the PTO in a reexamination that rejected all claims of an earlier patent in the same family as the '348 patent. (EX-1024, 4.) All grounds also cite to Cheng (EX-1005), which additionally demonstrates it would have been obvious to provide the Yahoo! Clubs features from Neibauer to users via mobile devices. (EX-1002, ¶¶59, 72.) Cheng describes a proxy server that can convert any existing (non-mobile) webpage for use on a mobile device. (EX-1002, ¶¶62-66.) Cheng was also cited in the earlier reexamination mentioned above. (EX-1024, 04.) Ausems (EX-1006) is cited for the unremarkable proposition that a mobile device can obtain image data from a digital camera. (EX-1002, ¶¶70-71.) Ground 2 cites to Squibbs (EX-1011) for location-based features of certain dependent claims. Ground 3 cites to McElfresh (EX-1014) for the data feed limitations certain dependent claims. Grounds 4-6 are substantially similar to Grounds 1-3, but add Harvey (EX-1010), solely to account for a potential construction of “<i>web-based shared information channel</i>” proposed by Meta in the MDT-Meta-Litigation. If the Board chooses not to adopt that construction here, it need not consider these additional grounds. 541 IPR Petition, pp.7-8	discloses and renders obvious the majority of the claim limitations and, as observed in Part III.C above, was relied upon by the PTO in rejecting all claims of an patent in the same family. All grounds also cite to Cheng (EX1005), which provides an additional basis for showing that it would have been obvious to provide the Yahoo! Clubs features from Neibauer to users via mobile devices. (EX1002, ¶¶59-60.) Cheng describes a proxy server that can convert any existing (non-mobile) webpage for use on a mobile device. (EX1002, ¶¶61-65, 102-103.) As noted in Part III.C above, Cheng was also cited in the successful earlier reexamination of a patent in the same family. Ausems (EX1006) is cited for the unremarkable proposition that a mobile device can obtain image data from a digital camera. (EX1002, ¶¶68-70.) Ground 2 cites to Squibbs (EX1011) for location-based features of certain dependent claims. Ground 3 cites to McElfresh (EX1014) for the data feed limitations certain dependent claims. Grounds 3-6 are substantially similar to Grounds 1-3, but add Harvey (EX1010), solely to account for a potential construction of “web-based shared information channel” proposed by Petitioner in the pending litigation. If the Board chooses not to adopt that construction here, it need not consider these additional grounds.
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3	VI. Ground 1: Claims 1-3, 6-9, 12-14, and 17-18 Are Obvious Over Neibauer in View of Cheng and Ausems. A. Independent Claim 1 Neibauer discloses features of a Yahoo! service known as Yahoo! Clubs. (Neibauer, pp.473-483.) Neibauer explains that “[a] <i>club</i> is a group of Yahoo! members who share a common interest. Each club has its own message board, chat room, as well as places to share photographs, news, addresses, and links.” (Neubauer, p.473 (<i>italics in original</i>)). Yahoo! members could also create their own clubs. (Neibauer, pp.480-82.) An exemplary club created by a member is shown in Figure 21-13: [image omitted] (Neibauer, p.483, Fig. 21-13.) 541 IPR Petition, pp.9-10	C. Ground 1: Claims 1-3, 6-9, 12-14, and 17-18 Are Obvious Over Neibauer In View Of Ausems and Cheng. 1. Independent Claim 1 As detailed below, Neibauer discloses features of a Yahoo! service known as Yahoo! Clubs. (Neibauer, pp.473-483.) Neibauer explains that “[a] <i>club</i> is a group of Yahoo! members who share a common interest. Each club has its own message board, chat room, as well as places to share photographs, news, addresses, and links.” (Neubauer, p.473 (<i>italics in original</i>)). Yahoo! members could also create their own clubs, as described in detail for limitation 1 [a]. (Neibauer, pp.480-82.) An exemplary club created by a member is shown in Figure 21-13: [image omitted] (Neibauer, p.483, Fig. 21-13.) Ex.2034, pp.11-12
4	To the extent the preamble is limiting, Neibauer discloses “[a]n <i>apparatus</i>.” It would have been obvious based on Neibauer alone, or in combination with Cheng, to make the clubs features of Neibauer (including the club photo sharing feature) available to club members via mobile devices. The claimed “<i>apparatus</i>” includes one or more servers that operate to make these features available to mobile devices	The preamble of claim 1 recites “[a]n apparatus comprising ...” As detailed below, it would have been obvious based on Neibauer alone, or in combination with Cheng, to make the clubs features of Neibauer (including the club photo sharing feature) available to club members via mobile devices. The claimed “apparatus,” as explained in detail below, includes one or more servers that operate to make these

	and that carry out the functions in claim 1. 541 IPR Petition, p.10	features available to mobile devices and that carry out the functions in claim 1. Ex.2034, p.12
5	It would have been obvious that the claimed apparatus includes at least one “<i>processing element</i>,” such as at least one server to carry out the clubs functions in Neibauer. A processor coupled to a memory is also a basic component that any server would need in order to function. (EX-1002, ¶¶101-02.) It would also have been obvious that the claimed apparatus would have included a “<i>network interface</i>,” a basic component a server needs in order to communicate over a network such as the Internet. (EX-1002, ¶114; Neibauer, p.473 (“Access Yahoo! clubs by clicking Clubs on the Yahoo! home page or by going directly to http://clubs.yahoo.com to open the page shown in Figure 21-6.”), p.64 (“http:// This is the prefix for the standard type of Internet Web site. The letters stand for Hypertext Transfer Protocol.”) (bold in original), p.22 (“Each Yahoo! member gets 3MB of mail space on the Yahoo! server to store messages.”).) These components are also separately disclosed in Cheng. Limitation [1B] further states that the “<i>network interface</i>” is configured to communicate “<i>with a plurality of mobile devices over at least one network</i>.” It would have been obvious that the processing element would have been able to communicate with mobile devices over a network such as the	It would have been obvious that the claimed apparatus would have included at least one “processing element,” such as at least one server to carry out the clubs functions in Neibauer. A claimed processor coupled to a memory is also a basic component that any server would need in order to function. (EX1002, ¶109.) It would also have been obvious that the claimed apparatus would have included a “network interface,” a basic component a server needs in order to communicate over a network such as the Internet. (EX1002, ¶113; Neibauer, p.473 (“Access Yahoo! clubs by clicking Clubs on the Yahoo! home page or by going directly to http://clubs.yahoo.com to open the page shown in Figure 21-6.”), p.64 (“http:// This is the prefix for the standard type of Internet Web site. The letters stand for Hypertext Transfer Protocol.”) (bold in original), p.22 (“Each Yahoo! member gets 3MB of mail space on the Yahoo! server to store messages.”).) These components are also separately and expressly disclosed in Cheng, discussed below. Limitation 1 [b] further states that the “network interface” is configured to communicate “with a plurality of mobile devices over at least one network.” It would have been obvious that the processing element would have been able to communicate with mobile devices over a network such as the

	Internet. The '348 patent itself expressly defines a "mobile device" as including, among other things, a laptop computer. (EX-1001, 4:45-55.) It was well-known that conventional laptop computers provided the same functionality as desktop computers and could run web browser software and visit web pages on the Internet. (EX-1002, ¶104.) It therefore would have been obvious that the Yahoo! website, including the club photo sharing feature discussed above, would have been accessible to a user of a mobile device such as a laptop computer. (<i>Id.</i>) 541 IPR Petition, pp.10-11	Internet. The '348 patent itself expressly defines a "mobile device" as including, among other things, a laptop computer. ('348, 4:45-55.) It was well-known that conventional laptop computers provided the same functionality as desktop computers and could run web browser software and visit web pages on the Internet. (EX1002, ¶112.) It therefore would have been obvious that the Yahoo! website, including the club photo sharing feature discussed above, would have been accessible to a user of a mobile device such as a laptop computer. (<i>Id.</i>) Ex.2034, pp.13-14
6	Neibauer itself discloses services such as "Yahoo! Mobile" and "Yahoo! To Go" that enable content from Yahoo! services to be provided to handheld devices such as pagers, cell phones, web phones, and personal digital assistants (PDAs). (Neibauer, pp.166-174.) "Yahoo! To Go lets you receive Yahoo! information on your mobile device." (Neibauer, p.167.) For example, one option referred to as "Yahoo! On Your PDA" allowed users of browser-enabled PDAs to select particular Yahoo! content that would accessible from their PDA. (Neibauer, pp.171-174.) Although Neibauer does not expressly disclose that the Yahoo! Clubs feature was available on handhelds, it would have been obvious over Neibauer alone to allow user-created clubs to be accessed by handheld devices disclosed elsewhere in Neibauer. (EX-1002, ¶79.) This	Neibauer also discloses services such as "Yahoo! Mobile" and "Yahoo! To Go" that enabled content from Yahoo! services to be provided to mobile devices such as pagers, cell phones, web phones, and personal digital assistants (PDAs). (Neibauer, pp.166-174.) "Yahoo! To Go lets you receive Yahoo! information on your mobile device." (Neibauer, p.167.) For example, one option referred to as "Yahoo! On Your PDA" allowed users of browser-enabled PDAs to select particular Yahoo! content that would accessible from their PDA. (Neibauer, pp.171-174.) Although Neibauer does not expressly disclose that Yahoo! Clubs was one of the Yahoo! features that could be made accessible via mobile devices, it would have been obvious to the extend mobile device functionality in Neibauer to cover that feature, in order to allow user-created clubs to be accessed by users via mobile devices.

would have been viewed as a logical (and obvious) extension to the existing features described in Neibauer. (<i>Id.</i>) Additionally, Cheng relies on an already-known technology known as “proxy servers,” which were commonly used to provide security and interoperability between devices. (EX-1002, ¶65.) Cheng relies on this proxy server concept to convert non-mobile webpages into a format accessible by mobile devices. Figure 1 illustrates one embodiment: [image omitted] Figure 1 above shows an origin web server 102 that contains original web page 104. (Cheng, 3:36-37.) “The web page 104 is typically an HTML file with references to any component .wav, .mov, and/or Joint Photographic Experts Group (JPEG) files, which together comprise the web page 104.” (Cheng, 4:10-13.) “It is envisioned that each instance of web content 104 each have associated therewith a URL.” (Cheng, 3:56-57.) Web page 104 could have been any web page in HTML format reachable via the Internet, such as any web page from the Yahoo! website as described in Neibauer. (EX-1002, ¶¶63, 74.) Figure 1 further shows a mobile device 108 connected to proxy server 110, optionally through gateway 109. (Cheng, 3:33-36.) “Mobile devices 108 generally come in a variety of different	This would have been viewed as a logical (and obvious) extension to the existing mobile features described in Neibauer. (EX1002, ¶104.) Communicating with a plurality of “mobile devices” would also have been obvious over Neibauer and in further view of Cheng (EX1005). Cheng relies on an already-established technology known as “proxy servers,” which were commonly used to provide security and interoperability between devices. (EX1002, ¶63.) Cheng relies on this proxy server concept to convert non-mobile webpages into a format accessible by mobile devices. Figure 1 illustrates one embodiment: [image omitted] (Cheng, Fig. 1 (color annotation added).) The right side of Figure 1 above shows an origin web server 102 that contains original web page 104. (Cheng, 3:36-37.) “The web page 104 is typically an HTML file with references to any component .wav, .mov, and/or Joint Photographic Experts Group (JPEG) files, which together comprise the web page 104.” (Cheng, 4:10-13.) “It is envisioned that each instance of web content 104 each have associated therewith a URL.” (Cheng, 3:56-57.) Web page 104 in Cheng could have been any web page in HTML format reachable via the Internet, such as any web page from the Yahoo! website as described in Neibauer. (EX1002, ¶96.)
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sizes and have a variety of different screen interfaces... [T]he present invention provides the ability to uniquely tailor web page 104 content for specific mobile devices 108.” (Cheng, 5:11-15.) Cheng explains that, in one example, mobile device 108 could be a mobile device with a Palm operating system that includes a web browser. (Cheng, 5:17-23, 2:8-15.) The middle of Figure 1 shows proxy server 110—Cheng’s key feature. Proxy server 110 “‘sits’ between the clients (e.g., the mobile device(s) 108) and the origin web server(s) 102 that provide Web content 104.” (Cheng, 3:31-33.) Proxy server 110 “obtains the code (e.g., HTML) of the user requested web page 104, and modifies it at the proxy server 110 (once obtained),” which can include “reformatting and/or converting an entire web site or request specific Web content that is needed from the origin web server 102.” (Cheng, 3:41-48.) Proxy server 110 can also store a device profile for mobile device 108 based on the device and web browser types. (Cheng, 5:20-23.) The general operation of proxy server 110 in Cheng is straightforward. As shown in Figure 1, mobile device 108 can issue a request 106 for an original web page 104 using standard HyperText Transport Protocol (HTTP), as was well-known in the art, with the request 106 being received by proxy server 110. (Cheng, Fig. 1, 2:19-21,	The left shows a mobile device 108 connected to proxy server 110, optionally through gateway 109. (Cheng, 3:33-36.) “Mobile devices 108 generally come in a variety of different sizes and have a variety of different screen interfaces... [T]he present invention provides the ability to uniquely tailor web page 104 content for specific mobile devices 108.” (Cheng, 5:11-15.) Cheng explains that, in one example, mobile device 108 could be a mobile device with a Palm operating system that includes a web browser. (Cheng, 5:17-23, 2:8-15.) The middle of Figure 1 shows proxy server 110 – the key feature of Cheng here. Proxy server 110 “‘sits’ between the clients (e.g., the mobile device(s) 108) and the origin web server(s) 102 that provide Web content 104.” (Cheng, 3:31-33.) Cheng explains that proxy server 110 “obtains the code (e.g., HTML) of the user requested web page 104, and modifies it at the proxy server 110 (once obtained),” which can include “reformatting and/or converting an entire web site or request specific Web content that is needed from the origin web server 102.” (Cheng, 3:41-48.) Proxy server 110 can also store a device profile for mobile device 108 based on the device and web browser types. (Cheng, 5:20-23.) The general operation of proxy server 110 in Cheng is straightforward. As shown in Figure 1, mobile device 108
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	3:58-67, 7:65-8:2; EX-1002, ¶¶67.) “Upon determining that the requested page 104 resides at the server 102, the proxy server 110 makes a request 112 for the page. As shown, the proxy server 110 and the server 102 are connected via a network 114 such as the Internet.” (Cheng, 3:65-4:2; <i>see also id.</i>, 2:21-24.) Proxy server 110 then converts and/or reformats original web page 104 into reformatted web page 122, which is transmitted to mobile device 108. (Cheng, 2:24-29, 5:46-49, 4:56-60.) “The designated HTML content of the retrieved web page 104 is extracted, subsequently and/or converted, and transmitted as a reformatted web page 122 to the mobile device 108.” (Cheng, 5:46-49; <i>see also id.</i>, 3:22-26.) 541 IPR Petition, pp.13-16	can issue a request 106 for an original web page 104 using standard HyperText Transport Protocol (HTTP), as was well-known in the art, with the request 106 being received by proxy server 110. (Cheng, Fig. 1, 2:19-21, 3:58-67, 7:65-8:2; EX1002, ¶¶65, 99.) “Upon determining that the requested page 104 resides at the server 102, the proxy server 110 makes a request 112 for the page. As shown, the proxy server 110 and the server 102 are connected via a network 114 such as the Internet.” (Cheng, 3:65-4:2; <i>see also id.</i>, 2:21-24.) Proxy server 110 then converts and/or reformats original web page 104 into reformatted web page 122 (shown in Figure 1), which is transmitted to mobile device 108. (Cheng, <i>e.g.</i>, 2:24-29, 5:46-49, 4:56-60.) “The designated HTML content of the retrieved web page 104 is extracted, subsequently and/or converted, and transmitted as a reformatted web page 122 to the mobile device 108.” (Cheng, 5:46-49; <i>see also id.</i>, 3:22-26.) Ex.2034, pp.14-17
7	The proposed combination would have been straightforward as Cheng provides “bolt-on” functionality, with the proxy server capable of converting and reformatting any existing HTML-based web page into a format suitable for display on a mobile device. (EX-1002, ¶¶74; Cheng, <i>e.g.</i>, 2:30-32 (“The [reformatting] may be done for at least one of groups of devices, individual devices, web site-specific conversions,	The proposed combination of Neibauer and Cheng would have been exceedingly straightforward as Cheng provides “bolt-on” functionality, with the proxy server capable of converting and reformatting any existing HTML-based web page into a format suitable for display on a mobile device. (EX1002, ¶¶102, 106-107; Cheng, <i>e.g.</i>, 2:30-32 (“The [reformatting] may be done for at least one of groups of devices, individual

	or for all web sites.”).) It would have been obvious that proxy server 110 could have been operated by the same or a different entity from the operator of the origin web server 102. (EX-1002, ¶¶74-75.) In any case, combining Neibauer and Cheng would not have required changing the underlying functionality in Neibauer, further motivating the combination as discussed below. (EX-1002, ¶76.) 541 IPR Petition, p.18	devices, web site-specific conversions, or for all web sites.”).) It would have been obvious that proxy server 110, under the proposed combination, could have been operated by the same or a different entity from the operator of the origin web server 102. (EX1002, ¶102.) The proposed combination would not have required changing the underlying functionality in Neibauer – a feature that provides a further motivation to combine as discussed below. (EX1002, ¶¶102, 106-107.) Ex.2034, p.20
8	Neibauer is in the same field as the ’348 patent—network-based communication systems for managing information content—and would have been reasonably pertinent to problems facing the inventors. (EX-1002, ¶77.) Cheng is also in the same field and would have been reasonably pertinent to several problems facing the inventors, including making web-based information content available on mobile devices. (<i>Id.</i>) 541 IPR Petition, p.18	Neibauer is an analogous reference in the same field of network-based communication systems for managing information content and would have been reasonably pertinent to problems facing the inventors. (EX1002, ¶103.) Cheng is also an analogous reference and would have been reasonably pertinent to several problems facing the inventors, including making web-based information content available on mobile devices. (<i>Id.</i>) Ex.2034, p.18
9	Cheng further explains “users of wireless devices now demand that businesses deliver web content for viewing on desktop, or mobile/portable (e.g., handheld) devices.” (Cheng, 1:18-22.) The ’348 patent itself admits “[o]ne of the most rapidly expanding aspects of wireless networking involves the accessing of information content over wireless networks via web-enabled mobile devices,” such as	Cheng explains that “users of wireless devices now demand that businesses deliver web content for viewing on desktop, or mobile/portable (e.g., handheld) devices.” (Cheng, 1:18-22.) The ’348 patent itself admits that “[o]ne of the most rapidly expanding aspects of wireless networking involves the accessing of information content over wireless networks via web-enabled mobile devices,” such as “mobile

	“mobile telephones, personal digital assistants (PDAs), palmtop computers, etc.” (EX-1001, 1:35-39.) Market forces would thus have motivated a POSITA to combine Neibauer with Cheng in order to provide the club functionalities to users of mobile devices. (EX-1002, ¶¶82-83.) Cheng further motivates the combination, explaining the proxy server conversion method provides a “create-once, deliver anywhere approach” that eliminates the need to build and maintain separate web pages for different types of mobile devices and browsers. (Cheng, 2:8-19.) This would have provided a clear technological advantage by obviating the need to generate multiple different mobile versions of club-related pages. (EX-1002, ¶85.) Furthermore, Cheng’s proxy server techniques were well-known and deployed for the very purpose of converting web page content into formats suitable for mobile devices. (EX-1002, ¶¶86-87.) A POSITA would also have had a reasonable expectation of success as Cheng relies on known and industry-standard technologies. (EX-1002, ¶¶88-89.) 541 IPR Petition, pp.19-20	telephones, personal digital assistants (PDAs), palmtop computers, etc.” (’348, 1:35-39.) Market forces would thus have motivated a skilled artisan to combine Neibauer with Cheng in order to provide the club functionalities to users of mobile devices. (EX1002, ¶105.) Cheng provides a further express motivation to combine by explaining that the proxy server conversion method provides a “create-once, deliver anywhere approach” that eliminates the need to build and maintain separate web pages for different types of mobile devices and browsers. (Cheng, 2:8-19.) This would have provided a clear technological advantage by obviating the need to generate multiple different mobile versions of club-related pages, thus simplifying the implementation. (EX1002, ¶106.) As a further motivation to combine, the proxy server techniques in Cheng were already well-known and already deployed for the very purpose of converting web page content into formats suitable for mobile devices. (EX1002, ¶107.) A skilled artisan would also have had a reasonable expectation of success as Cheng relies on known and industry-standard technologies. (EX1002, ¶108.) Ex.2034, pp.21-22
10	Mapping the claimed “<i>processing element</i>” to origin web server 102 and proxy server 110 is consistent with the ’348 patent, which makes clear that a processing element or server can itself comprise multiple servers. (EX-1001,	Petitioner notes that mapping the claimed “processing element” to origin web server 102 and proxy server 110 is consistent with the ’348 patent, which makes clear that a processing element or server can itself comprise multiple

9:21-24 (“Each of the servers 33, 35, 37 and 39 [of processing elements 30] may comprise one or more of the servers 16 or other elements shown in FIG. 1A, or suitable portions or combinations thereof.”); EX-1002, ¶102.) Even if the claim required that the “<i>processing element</i>” be contained within a single physical server (it does not), it would have been obvious to combine proxy server 110 and origin server 102 into a single server. (EX-1002, ¶103.) Cheng explains that the computer system implementing the proxy server can “be replaced by, or combined with, any suitable processing system operative in accordance with the principles of the present invention...” (Cheng, 23:20-25.) A POSITA would have been familiar with well-known techniques for consolidating tasks within a single server when needed. (EX-1002, ¶103.) For example, a POSITA would have been motivated to combine these servers to improve performance of the overall system, as this would have eliminated the step of (and network overhead associated with) origin server 102 having to send the original web page 104 to proxy server 110. (<i>Id.</i>) With respect to the “<i>network interface</i>,” Cheng discloses a communications port as part of proxy server 110 that facilitates communication over a network such as the Internet. (EX-1002, ¶114; Cheng,	servers. (’348, 9:21-24 (“Each of the servers 33, 35, 37 and 39 [of processing elements 30] may comprise one or more of the servers 16 or other elements shown in FIG. 1A, or suitable portions or combinations thereof.”).) And even if the claim required that the “processing element” be contained within a single physical server (it does not), it would have been obvious to combine proxy server 110 and origin server 102 into a single server. (EX1002, ¶111.) This implementation is disclosed by Cheng itself, which explains that the computer system implementing the proxy server can “be replaced by, or combined with, any suitable processing system operative in accordance with the principles of the present invention...” (Cheng, 23:20-25.)¹ This would have been obvious and trivial, as ordinarily skilled artisans would have been familiar with well-known techniques for consolidating tasks within a single server when needed. (EX1002, ¶111.) For example, a skilled artisan would have been motivated to combine these servers to improve performance of the overall system, as this would have eliminated the step (and network overhead associated with) origin server 102 having to send the original web page 104 to proxy server 110 over the Internet. (<i>Id.</i>) With respect to the claimed “network interface,” Cheng discloses a communications port as part of proxy server 110 that facilitates communication over a network such as the Internet.
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	23:44-51 (“Communications with external devices... occur utilizing communication port 1516...”); Neibauer, p.4 (explaining that Yahoo! members need access to an Internet connection).) Alternatively, the “<i>network interface</i>” is also disclosed by Cheng’s gateway 109, which would have been part of the “<i>processing element</i>” and would have provided an interface between mobile devices and proxy server 110. (Cheng, 3:33-36 (“If necessary, a gateway 109 may optionally be provided that interfaces between, for example, the mobile device 108 and the proxy server 110.”); EX-1002, ¶115.) 541 IPR Petition, pp.20-21	(EX1002, ¶161; Cheng, 23:44-51 (“Communications with external devices... occur utilizing communication port 1516...”); Neibauer, p.4 (explaining that Yahoo! members need access to an Internet connection).) Alternatively, the “network interface” is also disclosed by gateway 109 in Cheng, which in this scenario would have been part of the claimed “processing apparatus” and would have provided an interface between mobile devices and proxy server 110. (Cheng, 3:33-36 (“If necessary, a gateway 109 may optionally be provided that interfaces between, for example, the mobile device 108 and the proxy server 110.”).) Ex.2034, pp.18-20
11	Neibauer discloses a photo sharing feature that allows a club member to select a photo to upload and share with club members. (Neibauer, p.477.) As explained in Neibauer: [block quote omitted] (Neibauer, pp.477-478; <i>see also</i> pp.477-478 (showing clickable “Add Photo” option available on album pages).) Neibauer, alone and in combination with Cheng, therefore renders obvious the processing element being configured “<i>to receive first device-captured data from a first one of the mobile devices via the network interface.</i>” (EX-1002, ¶120.) It would	As noted in the preamble, Neibauer discloses a photo sharing feature that allows a club member to select a photo to upload and share with club members. (Neibauer, p.477.) As explained in Neibauer: [block quote omitted] (Neibauer, pp.477-478; <i>see also</i> pp.477-478 (showing clickable “Add Photo” option available on album pages).) Neibauer, alone and in combination with Cheng, therefore renders obvious the processing element being configured “to receive first device-captured data from a first one of the mobile devices via the network interface,” by allowing the user to upload a photo over the

have been obvious that the photo would have been “<i>first device-captured data</i>,” such as a digital photograph. (EX-1002, ¶120; Neibauer, p.478, Fig. 21-10 (showing exemplary club photo album).) The photo would have been received by the server from the mobile device, and more specifically under the combination of Neibauer and Cheng, by the proxy server 110 and origin web server 102. The photo would also have been received “<i>via the network interface</i>,” as explained in [1B], because that interface would have facilitated communications between the mobile device and the processing element over the Internet. (Cheng, 3:67-4:2 (“As shown [in Figure 1], the proxy server 110 and the server 102 are connected via a network 114 such as the Internet.”).) Claim 1 merely recites that device-captured data be received “<i>from a first one of the mobile devices</i>,” which does not expressly require that the data have been captured using a camera of the mobile device itself. To the extent the claim is interpreted to impose such a requirement, it would have been obvious for the photo uploaded by a club member to have been captured by the mobile device itself, as portable communications devices prior to June 2002 included digital cameras that allowed devices to capture, store, and transmit digital images. (EX-1002, ¶121.)	Internet using its mobile device. It would have been obvious that the photo would have been “first device-captured data,” such as a digital photograph. (EX1002, ¶117; Neibauer, p.478, Fig. 21-10 (showing exemplary club photo album listing photos of Denise Richards and Famke Janssen).) The photo would have been received by the server from the mobile device, and more specifically under the proposed combination with Cheng, by the proxy server 110 and origin web server 102. The photo would also have been received “via the network interface,” as explained in 1[b], because that interface would have facilitated communications between the mobile device and the processing element over the Internet. (Cheng, 3:67-4:2 (“As shown [in Figure 1], the proxy server 110 and the server 102 are connected via a network 114 such as the Internet.”).) Petitioner observes that claim 1 merely recites that device-captured data be received “from a first one of the mobile devices,” which does not appear to require that the data actually have been captured using the mobile device itself (such as with a built-in camera). Nevertheless, to the extent the claim were interpreted to impose such a requirement, it would have been obvious that the photo uploaded by a club member to have been captured by the mobile device itself. This is because portable communications devices prior to June 2002 included digital cameras
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Should PO contend incorporation of digital cameras into mobile devices was not well-known as of June 2002, Ausems discloses a mobile device that incorporated a digital camera for recording, storing, and transmitting digital images. Ausems explains that “[t]he popularity and use of Personal Digital Assistants (PDAs) and wireless telephones has increased in recent years.... Increasingly, wireless telephones are being combined with PDAs in order to perform more advanced functions, such as transmitting, receiving and displaying text messages.” (Ausems, 1:12-30.) Ausems discloses one such mobile device combining the functionality of a PDA with a wireless telephone. (Ausems, 3:5-8.) This PDA telephone device 100 includes, among other things, a touchscreen display. (Ausems, <i>e.g.</i>, 1:57-58, 4:30-39, 6:9-14.) PDA telephone 100 in Ausems can also run a conventional mobile operating system such as Microsoft Windows CE or Palm, and the operating system “may include a web browser in order to facilitate Internet access for a PDA telephone 100.” (Ausems, 7:64-8:5.) The device also includes digital camera 190 for recording and storing images, which can be transmitted. (Ausems, <i>e.g.</i>, 2:5-6 (“[T]he device also includes [a] digital camera for recording images....”), 5:17-22 (“Camera 190 records video images and stores them within. Additionally, video images	that allowed devices to capture, store, and transmit digital images. (EX1002, ¶118.) In the event Patent Owner argues that incorporation of digital cameras into mobile devices was not known as of June 2002, Petitioner has also cited Ausems (EX1006) to show an example of a mobile communications device that, among other things, incorporated a digital camera for recording, storing, and transmitting digital images. Ausems explains that, as of its February 1999 filing date, wireless telephones and handheld Personal Digital Assistants (PDAs) had become popular. (Ausems, 1:12-19.) Ausems further explains that “[i]ncreasingly, wireless telephones are being combined with PDAs in order to perform more advanced functions, such as transmitting, receiving and displaying text messages.” (Ausems, 1:27-30.) Ausems discloses a portable mobile device that combines the functionality of a PDA with a wireless telephone. (Ausems, 3:5-8.) PDA telephone device 100 includes, among other things, a touchscreen display. (Ausems, <i>e.g.</i>, 1:57-58, 4:30-39, 6:9-14.) The PDA telephone 100 can also run a mobile operating system such as Microsoft Windows CE or Palm, and “may include a web browser in order to facilitate Internet access for a PDA telephone 100.” (Ausems, 7:64-8:5.) The device also includes a digital camera 190 for recording and storing images, which can be transmitted. (Ausems, <i>e.g.</i>, 2:5-6, 5:17-18 (“Camera 190 records
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	recorded by camera 190 may also be transmitted from PDA telephone 100 in real time during a telephone call (thus allowing for video conferencing).”) Asems thus discloses a mobile device that includes a camera for capturing image media. (EX-1002, ¶121.) 541 IPR Petition, pp.22-25	video images and stores them within. Additionally, video images recorded by camera 190 may also be transmitted from PDA telephone 100 in real time during a telephone call (thus allowing for video conferencing).”), 2:5-6 (“[T]he device also includes [a] digital camera for recording images....”).) Asems thus discloses a mobile device that includes a camera for capturing image data. Ex.2034, pp.22-25
12	Motivation to Combine Neibauer, Cheng, and Asems: It would have been obvious to combine Neibauer and Cheng with Asems, predictably resulting the system under the proposed combination, further adapted such that the photo uploaded by the club member to the club photo sharing feature would have comprised “<i>device-captured data</i>,” i.e., a photo captured by a digital camera incorporated into the mobile device. (EX-1002, ¶92.) For example, under the combination with Asems, the club member would have obtained image data using a digital camera of the mobile device, which would have been transmitted for upload to the club for sharing with other club members using Neibauer’s photo sharing features. (EX-1002, ¶¶92; Neibauer, 477-478.) Asems is in the same field as the ’348 patent of wireless and mobile communications and would have been reasonably pertinent to problems facing the inventor including how to capture media data using a mobile device and	<i>Rationale and Motivation to Combine (Neibauer and Cheng with Asems):</i> It would have been obvious to combine Neibauer and Cheng with Asems, predictably resulting the system under the proposed combination, further adapted such that the processing element would have received a photo captured by the mobile device itself, to the extent limitation 1[c][1] is interpreted to impose such a requirement. (EX1002, ¶122.) For example, the club member would have obtained image data using a digital camera of its mobile device, which would have been uploaded to the processing element for sharing with others using the club photo sharing feature. (Neibauer, pp.477-478.) Asems is an analogous reference in the same field of wireless and mobile communications, and would have been reasonably pertinent to problems facing the inventor including how to capture data using a mobile device and share that data with other users. (EX1002, ¶123.) An ordinarily skilled artisan would have been motivated to combine, as the ability

	share that data with other users. (EX-1002, ¶93.) A POSITA would have been motivated to combine Neibauer, Cheng, and Ausems, as the ability to share media data captured by the mobile device would have expanded the universe of image data that the club member could share with other members. (EX-1002, ¶94.) The club member would no longer be restricted to sharing preexisting images; instead, she could capture a variety of images (via the digital camera in her mobile device) and share them with other club members. (<i>Id.</i>) A POSITA would have had a reasonable expectation of success. (EX-1002, ¶95.) As Ausems confirms, mobile devices with digital cameras and the ability to transmit images captured by digital cameras were already known. (<i>Id.</i>) 541 IPR Petition, pp.25-26	to share media data captured by the mobile device would have expanded the universe of image data that the club member could share with others. (EX1002, ¶124.) This is because the club member would not be restricted to sharing preexisting images obtained from third parties (that others may have already seen); the member could instead capture a potentially infinite number and variety of its own images (via the digital camera in its mobile device) and share them with other club members. (<i>Id.</i>) A skilled artisan would also have had a reasonable expectation of success, as mobile communications devices with digital cameras and the ability to transmit captured images were known. (EX1002, ¶125.) Ex.2034, pp.25-26
13	This limitation merely repeats the function of [1D], but for a “<i>second one of the mobile devices.</i>” The same analysis above applies here because, under the proposed combination, a second club member could have used its second mobile device to upload a different photo to a group album using the same technique described above for limitation [1D]. (Neibauer, e.g., p.477 (“Any member can place a photo in a group album...”).) Cheng confirms that multiple mobile devices can be used with his proxy server techniques. (Cheng, e.g., 5:11-12, 5:26-29.) This	This limitation merely repeats the function as 1[c][1], but for a “second one of the mobile devices.” The same analysis above applies here because, under the proposed combination, a second club member could have used its second mobile device to upload a different photo to a group album using the same technique described above for limitation 1[c][1]. (Neibauer, e.g., p.477 (“Any member can place a photo in a group album...”).) Cheng confirms that multiple mobile devices can be used with his proxy server techniques. (Cheng, e.g., 5:11-12, 5:26-29.) This would have

	would have allowed both the first and second mobile devices to use and add photos to the club photo sharing feature described in Neibauer. (EX-1002, ¶122.) 541 IPR Petition, pp.26-27	allowed both the first and second mobile devices to use and add photos to the club photo sharing feature described in Neibauer. (EX1002, ¶126.) Ex.2034, pp.26-27
14	Under the proposed combination, photos uploaded by club members would have been integrated into the club photo sharing feature (“<i>a web-based shared information channel</i>”). Neibauer discloses a user interface for allowing club members to select a photo album and view the photos within the selected album. First, with respect to selection of an album: [image omitted] (Neubauer, p.477.) The interface above lists a number of available photo albums. “Click an album name to see a list of the photographs stored there, as shown in Figure 21-10.” (Neibauer, p.477.) [image omitted] (Neibauer, p.478, Fig. 21-10.) Figure 21-10 above shows a partial list of photographs stored in the selected album. “For each photo you will see the title, contributor’s name, the photo’s size, and the date it was posted. Click a photo to see the photo on your screen.” (Neibauer, p.477.) Although the example in Figure 2110 shows provided received from one contributor	Under the proposed combination, photos uploaded by club members would have been integrated into the club photo sharing feature (“a web-based shared information channel”), as described below. The club photo sharing feature provides a user interface for allowing members to select a photo album and view the photos within that album. First, with respect to selection of an album: [image omitted] (Neubauer, p.477.) The interface above lists a number of available photo albums. “Click an album name to see a list of the photographs stored there, as shown in Figure 21-10.” (Neibauer, p.477.) [image omitted] (Neibauer, p.478, Fig. 21-10.) Figure 21-10 above shows a partial list of photographs stored in the selected album. “For each photo you will see the title, contributor’s name, the photo’s size, and the date it was posted. Click a photo to see the photo on your screen.” (Neibauer, p.477.) Although the example in Figure 21-10 shows provided received from one contributor (blueraja3), as

	(blueraja3), as noted, any member can post a photo that will be accessible through a group album. (Neibauer, p.477 (“Any member can place a photo in a group album....”).) It therefore would have been obvious that when two club members upload photos to a particular club photo album, pursuant to limitations [1D]-[1E], that photo album would have included and listed the photos provided by both members. (EX-1002, ¶127.) The combination therefore renders obvious <i>“integrat[ing] the first and second device-captured data into a web-based shared information channel,”</i> because the photos provided by the first and second users to a photo album would have been incorporated into the club photo sharing feature within the album. 541 IPR Petition, pp.27-29	noted, any member can post a photo that will be accessible through a group album. (Neibauer, p.477 (“Any member can place a photo in a group album....”).) It therefore would have been obvious that when two club members upload photos to a particular club photo album, pursuant to limitation 1[c][1]-[c][2], that photo album would have included and listed the photos provided by both members. (EX1002, ¶128.) The proposed combination therefore renders obvious “integrat[ing] the first and second devicecaptured data into a web-based shared information channel,” because the photos provided by the first and second users to a photo album would have been incorporated into the club photo sharing feature within the album. Ex.2034, pp.27-29
15	The club photo sharing feature is also <i>“controllably accessible to first and second users of the respective first and second mobile devices via respective personalized content applications of the first and second mobile devices,”</i> because the two club members would have accessed the club photo sharing feature over the Internet via their mobile devices. (EX-1002, ¶128.) The web browsers on the mobile devices also comprise <i>“personalized content applications.”</i> This is consistent with the plain and ordinary meaning of “application,” which simply refers to a software program for carrying out a particular task. (EX-1002, ¶128; <i>Microsoft Computer Dictionary</i> (5th	The club photo sharing feature is also “controllably accessible to first and second users of the respective first and second mobile devices via respective personalized content applications of the first and second mobile devices,” because the two club members would have accessed the club photo sharing feature over the Internet via their mobile devices. (EX1002, ¶132.) The web browsers on the mobile devices also comprise “personalized content applications.” This is consistent with the plain and ordinary meaning of “application” in this context, which simply refers to a software program for carrying out a particular task. (EX1002, ¶132; <i>Microsoft Computer Dictionary</i>

ed. 2002) (EX-1021), p.31 (“application <i>n.</i> A program designed to assist in the performance of a specific task, such as word processing, accounting, or inventory management.”) (bold and italics in original).) Under the proposed combination, each club member would have used the web browsers on their mobile device to post personalized content using the club photo album feature. (EX-1002, ¶129; Neibauer, p.477-479.) For example, each club member can create their own “personal photo album,” where the member can add photos to share with other members. (Neibauer, p.477.) Neibauer discloses numerous other club features that enable a member to create and view personalized content, including personalized messages using the private message board. (Neibauer, p.483, Fig. 2113 (showing personalized “Welcome” message posted by club founder).) A club member can also engage in online chat with other club members. (Neibauer, p.479.) These features are “<i>controllably accessible</i>” to the first and second users through the club home page, as shown below: [image omitted] (Neibauer, p.475, Fig. 21-8.) The features of the club can be controllably accessed by users from the links shown under “Our Pages” on the left side of	(5th ed. 2002) (EX1021), p.31 (“application <i>n.</i> A program designed to assist in the performance of a specific task, such as word processing, accounting, or inventory management.”) (bold and italics in original).) Under the proposed combination, each club member would have used the web browsers on their mobile device to post personalized content using the club photo album feature. (Neibauer, p.477-479.) For example, each club member can create their own “personal photo album,” where the member can add photos to share with other members. (Neibauer, p.477.) Neibauer discloses numerous other club features that enable a member to create and view personalized content, including personalized messages using the private message board. (Neibauer, p.483, Fig. 21-13 (showing personalized “Welcome” message posted by club founder).) A club member can also engage in online chat with other club members. (Neibauer, p.479.) These features are “controllably accessible” to the first and second users through the club home page, as shown below: [image omitted] (Neibauer, p.475, Fig. 21-8.) The features of the club can be controllably accessed by users from the links shown under “Our Pages” on the left side of the club home page as shown in Figure 21-8. Including the photo sharing feature (“Photos”). (Neibauer, pp.477-480.) By allowing the user to access personalized
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the club home page as shown in Figure 21-8. Including the photo sharing feature (“Photos”). (Neibauer, pp.477-480.) By allowing the user to access personalized content, under the proposed combination, each the web browser application on each mobile device “<i>comprises a personalized content application.</i>” This is consistent with the ’348 patent, which discloses use of a browser on the mobile device to access content on a mobile website. (EX-1001, 13:21-24 (“The mobile site home page 400 may be accessed, for example, by entering a corresponding URL of the mobile site into a browser at one of the mobile devices 15.”), 18:59-63 (“Also, the system provides a platform for the development of a wide variety of personalized content applications for users of mobile devices....”).) As a separate theory for the “<i>personalized content application</i>,” Neibauer discloses the ability of a user to customize their own Yahoo! home page using Yahoo! Companion, a toolbar added to the web browser window. (Neibauer, pp.56.) This feature allows the user to personalize and customize aspects of the content of the user’s My Yahoo! home page as viewed by the browser. (Neibauer, pp.66-74.) This provides another way in which the web browser would have comprised a “<i>personalized content application</i>.” In either case, the web browser applications on the mobile devices would have been applications	content, under the proposed combination, each the web browser application on each mobile device “comprises a personalized content application.” This is consistent with the ’348 patent, which discloses use of a browser on the mobile device to access content on a mobile website. (’348, 13:21-24 (“The mobile site home page 400 may be accessed, for example, by entering a corresponding URL of the mobile site into a browser at one of the mobile devices 15.”), 18:59-63 (“Also, the system provides a platform for the development of a wide variety of personalized content applications for users of mobile devices....”).) As a separate and independent theory for the claimed personalized content application, Neibauer discloses the ability of a user to customize their own Yahoo! home page using Yahoo! Companion, a toolbar added to the web browser window. (Neibauer, pp.56.) This feature allows the user, among other things, to personalize and customize aspects the content of the user’s My Yahoo! home page as viewed by the browser. (Neibauer, pp.66-74.) This provides another way in which the web browser, under the proposed combination, would have comprised a “personalized content application.” In either case, the web browser applications on the mobile devices would have been applications that allowed club members to access personalized content through the features described above. (EX1002, ¶133.)
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	that allowed club members to access personalized content through the features described above. (EX-1002, ¶132.)	Ex.2034, pp.30-32
	541 IPR Petition, pp.29-32	
16	These constructions are also satisfied by the proposed combination because, as discussed above, Neibauer discloses a web-based user interface for creating a club that provides a virtual location at a content management website, i.e., the portions of the Yahoo! website for club creation and management that allow a club founder to create and manage content for the club. (EX-1002, ¶¶134-35; Neibauer, pp.480-82.) It would have been obvious the content management site in Neibauer would have further allowed the club founder to add user-authored content to the club. (Neibauer, pp.480-482 (describing how to create clubs and add content such as club name and photo); EX-1002, ¶135) This content would also have been made available on a “mobile web site, or a portion thereof,” i.e., the club webpages delivered to mobile devices, under Neibauer alone or in view of Cheng. (EX-1002, ¶135.) Petitioners have also provided separate Grounds 4-6 below, adding the Harvey reference (EX-1010) to address Meta’s proposed construction of “<i>application-based information channel</i>,” in the event it is adopted for purposes of this IPR and the prior art for Ground 1 is somehow found insufficient on this point.	These constructions are also satisfied by the proposed combination because, as discussed above, Neibauer discloses a web-based user interface for creating a club that provides a virtual location at a content management website, i.e., the portions of the Yahoo! website for club creation and management that allow a club founder to create and manage content for the club. (Neibauer, pp.480-82.) It would have been obvious that the content management site in Neibauer would have further allowed the club founder to add user-authored content to the club. (Neibauer, pp.480-482 (describing how to create clubs and add content such as club name and photo); EX1002, ¶131.) This content would also have been made available on a “<i>mobile web site, or a portion thereof</i>,” i.e., the club webpages delivered to mobile devices, under Neibauer alone or in view of Cheng. Petitioner has also provided separate Grounds 4-6 below, which add Harvey (EX1010), to address Petitioner’s proposed construction of application-based information channel, in the event it is adopted for purposes of this IPR and the prior art for Ground 1 is somehow found insufficient on this point. Ex.2034, p.34

	541 IPR Petition, pp.33-34	
17	It would have been obvious that the first or second device-captured data would have comprised “<i>video data</i>,” under at least two different theories. First, it would have been obvious for a club member to upload an image file in GIF (Graphics Interchange Format), which was the <i>de facto</i> image standard for images on the Web. (EX-1002, ¶137.) It was well-known that GIF files were not limited to a single image – a GIF could contain a number of image frames for display sequentially to create videos or animations. (EX-1002, ¶137 (quoting EX-1018, pp.235-236 (“[N]o format has come close to gaining the popularity and widespread acceptance of GIFs. This acceptance is due to the ease of creating GIFs... and to the fact that animated GIFs are supported in most browsers without the hassle of installing extra plugins.”).) It therefore would have been obvious for the first or second “<i>device-captured data</i>” of claim 1 to have comprised “<i>video data</i>,” which is nothing more than a collection of individual (still) images played in sequence. (EX-1002, ¶137.) Cheng expressly discloses the ability to provide, to mobile devices, GIF images on web pages. (Cheng, 4:10-16.) The ’348 patent does not place limits on the type, format, or length of “<i>video data</i>” that can be provided, and contains only a single brief reference to video. (EX-1001, 17:35-37; EX-1002, ¶138.)	It would have been obvious that the first or second device-captured data would have comprised “video data,” under at least two different theories. First, it would have been obvious for a club member to upload an image file in GIF (Graphics Interchange Format), which was the <i>de facto</i> image standard for images on the Web. (EX1002, ¶135.) It was well-known that GIF files were not limited to a single image – a GIF could contain a number of image frames for display sequentially to create videos or animations. (EX1002, ¶135 (quoting EX1008, pp.235-236 (“[N]o format has come close to gaining the popularity and widespread acceptance of GIFs. This acceptance is due to the ease of creating GIFs... and to the fact that animated GIFs are supported in most browsers without the hassle of installing extra plugins.”).) It therefore would have been obvious for the first or second “device-captured data” of claim 1 to have comprised “video data,” which is nothing more than a collection of individual (still) images played in sequence. (EX1002, ¶135.) Cheng expressly discloses the ability to provide, to mobile devices, GIF images on web pages. (Cheng, 4:10-16.) The ’348 patent does not place limits on the type, format, or length of “video data” that can be provided, and contains only a single brief reference to video. (’348, 17:35-37; EX1002, ¶136.)

	Under a second theory, Ausems discloses a mobile device that includes video capture capabilities. (Ausems, 3:15-22 (“PDA telephone 100 may be equipped with optional enhanced feature sets, including...video conferencing/video capture capabilities....”), 5:17-22 (“Camera 190 records video images and stores them within. PDA telephone 100. Additionally, video images recorded by camera 190 may also be transmitted from PDA telephone 100 in real time during a telephone call (thus allowing for video conferencing).”).) It therefore would have been obvious, under either theory, to implement the proposed combination such that the first or second “<i>device-captured data</i>” of claim 1 would have comprised “<i>video data</i>,” predictably resulting in the club photo sharing feature further providing the ability to upload and share video data. A POSITA would have been motivated to implement this capability because video data may be more compelling and interesting to some users when compared to single (still) image data. (EX-1002, ¶140.) 541 IPR Petition, pp.34-36	Under a second theory, Ausems discloses a mobile device that includes video capture capabilities. (Ausems, 3:15-22 (“PDA telephone 100 may be equipped with optional enhanced feature sets, including... video conferencing/video capture capabilities....”), 5:17-22 (“Camera 190 records video images and stores them within. PDA telephone 100. Additionally, video images recorded by camera 190 may also be transmitted from PDA telephone 100 in real time during a telephone call (thus allowing for video conferencing).”).) It therefore would have been obvious, under either theory, to implement the proposed combination such that the first or second “device-captured data” of claim 1 would have comprised “video data,” predictably resulting in the club photo sharing feature further providing the ability to upload and share video data. An ordinarily skilled artisan would have been motivated to implement this capability because video data may be more compelling and interesting to some users when compared to single (still) image data. (EX1002, ¶138.) Ex.2034, pp.35-36
18	Cheng and Ausems both confirm that the mobile devices would have comprised at least “<i>a mobile telephone</i>.” (Cheng, 5:30-35; Ausems, e.g., 3:5-8 (“FIGS 1a-1d illustrate PDA telephone 100 that provides the combined functionality of a Personal Digital Assistant (PDA) and a wireless	Cheng and Ausems both confirm that the mobile devices would have comprised at least “a mobile telephone.” (Cheng, 5:30-35; Ausems, e.g., 3:5-8 (“FIGS 1a-1d illustrate PDA telephone 100 that provides the combined functionality of a Personal Digital Assistant (PDA) and a wireless telephone....”).) Ausems further

	telephone....”).) Ausems further confirms that each mobile device could have been “a <i>GPS-based navigational device</i>.” (Ausems, 5:38-47; EX-1002, 141.) 541 IPR Petition, p.36	confirms that each mobile device could have been “a GPS-based navigational device.” (Ausems, 5:38-47.) Ex.2034, pp.36-37
19	The “<i>web server</i>” for claim 7 corresponds to the combination of origin server 102 (which provides the functions of Neibauer) and proxy server 110 (which makes those functions available to mobile devices), as discussed for limitations [1A]-[1B] above These two servers collectively provide a “<i>web server</i>” that makes the web pages available to club members who access the photo sharing feature using mobile devices. (EX-1002, ¶142.) As fully explained for limitation [1A], the ’348 patent allows a server to comprise more than one server. (EX-1001, 9:21-24; EX-1002, ¶¶102, 142.) The claimed “<i>web server</i>” would have included the claimed processing element and network interface as described for limitations [1A]-[1B], and would have been accessible to the first and second mobile devices over the Internet via the network interface, as explained for claim 1. (EX-1002, ¶¶114, 142.) As also explained for limitation [1A] it would also have been obvious to combine origin server 102 and proxy server 110, to the extent the claim requires a single server. (EX-1002, ¶¶103, 142.) Under this alternative theory, therefore, the “<i>web server</i>” would also have included the	The “web server” for claim 7 corresponds to the combination of origin server 102 (which provides the functions of Neibauer) and proxy server 110 (which makes those functions available to mobile devices), as discussed for limitations 1[a]-[b] above These two servers collectively provide a “web server” that makes the web pages available to club members who access the photo sharing feature using mobile devices. (EX1002, ¶140.) As fully explained for limitation 1[a], the ’348 patent allows a server to comprise more than one server. (’348, 9:21-24; EX1002, ¶110, 140.) The claimed “web server” would have included the claimed processing element and network interface as described for limitations 1[b]-[b], and would have been accessible to the first and second mobile devices over the Internet via the network interface, as explained for claim 1. (EX1002, ¶140.) As also explained for limitation 1[a] it would also have been obvious to combine origin server 102 and proxy server 110, to the extent the claim requires a single server. (EX1002, ¶¶111, 140.) Under this alternative theory, therefore, the “web server” would also have included the claimed processing element and network interface. (EX1002, ¶140.)

	claimed processing element and network interface. (EX-1002, ¶142.) 541 IPR Petition, pp.36-37	Ex.2034, p.37
20	As explained for claim 1, the club photo sharing feature (“<i>the web-based shared information channel</i>”) allows club members who upload photos to also enter a message via their web browsers, such as a name and textual description of their photos. (Neibauer, p. 478, ¶3 (“Enter a name and description of the photo.”).) This message would have been entered, under the proposed combination with Cheng, using the mobile web browser (“<i>the personalized content application of its corresponding mobile device</i>”), as described for limitation [1F]. This message is then integrated with the photo data as shown in the photo album view: [image omitted] (Neibauer, p.478, Fig. 21-10.) Figure 21-10 shows a partial list of photographs stored in an album. For each photo (“<i>device-captured data</i>”), the textual name and description (“<i>message</i>”) entered by the uploading club member is displayed along with a link to the photo itself. (Neibauer, p.477.) For example, the first photo posted above is named “Denise Richards” and described as “Stunning Blue Bikini.” As a result, each photo in an album integrates the device-captured data and textual message data into a “<i>persistent version of a given set of</i>	As explained for claim 1, the club photo sharing feature (“the web-based shared information channel”) allows club members who upload photos to also enter a message via their web browsers, such as a name and textual description of their photos. (Neibauer, p. 478, ¶3 (“Enter a name and description of the photo.”).) This message would have been entered, under the proposed combination with Cheng, using the mobile web browser (“the personalized content application of its corresponding mobile device”), as described for limitation 1[c][3]. This message is then integrated with the photo data as shown in the photo album view: [image omitted] (Neibauer, p.478, Fig. 21-10.) Figure 21-10 shows a partial list of photographs stored in an album. For each photo (“device-captured data”), the textual name and description (“message”) entered by the uploading club member is displayed along with a link to the photo itself. (Neibauer, p.477.) For example, the first photo posted above is named “Denise Richards” and described as “Stunning Blue Bikini.” As a result, each photo in an album integrates the device-captured data and textual message data into a “persistent version of a given set of shared information content of the web-based shared information

	<i>shared information content of the web-based shared information channel,”</i> because both the photo and textual name and description are accessible to users via the club photo sharing feature. A person of ordinary skill in the art would have appreciated that the integration of the message and photo is “<i>persistent</i>” because the two pieces of information are stored in association with each other and viewable together by both the first and second users through the user interface as described in Neibauer. (EX-1002, ¶144.) The “<i>persistent version</i>” is thus also accessible to the first and second users via their mobile devices and personalized content applications. (<i>Id.</i>) 541 IPR Petition, pp.37-40	channel,” because both the photo and textual name and description are accessible to users via the club photo sharing feature. A person of ordinary skill in the art would have appreciated that the integration of the message and photo is “persistent” because the two pieces of information are stored in association with each other and viewable together by both the first and second users through the user interface as described in Neibauer. (EX1002, ¶141.) The “persistent version” is thus also accessible to the first and second users via their mobile devices and personalized content applications. (<i>Id.</i>) Ex.2034, pp.38-40
21	It would also have been obvious that the message of claim 8 would have been delivered to one or more of the mobile devices “<i>over a wireless network.</i>” (EX-1002, ¶145.) For example, Neibauer discloses in connection with the Yahoo! Mobile service that a mobile PDA could have included a “GSM Phone” modem. (Neibauer, p.171, ¶5.) GSM, which stands for Global System for Mobile Communication, was a dominant wireless (cellular) mobile network in widespread use in the United States the early 2000s. (EX-1002, ¶145.) Cheng similarly discloses wireless network device connectivity. (Cheng, <i>e.g.</i>, 2:4-7, 5:33 (“a cellular telephone”), 23:44-51 (“... wireless communication (e.g., radio frequency (RF), and the like)”)).	It would also have been obvious that the message of claim 8 would have been delivered to one or more of the mobile devices “over a wireless network.” (EX1002, ¶142.) For example, Neibauer discloses in connection with the Yahoo! Mobile service that a mobile PDA could have included a “GSM Phone” modem. (Neibauer, p.171, ¶5.) GSM, which stands for Global System for Mobile Communication, was a dominant wireless (cellular) mobile network in widespread use in the United States the early 2000s. (EX1002, ¶146.) Cheng similarly discloses wireless network device connectivity. (Cheng, <i>e.g.</i>, 2:4-7, 5:33 (“a cellular telephone”), 23:44-51 (“... wireless communication (e.g., radio frequency (RF), and the like)”)). It therefore would have been obvious that

	It therefore would have been obvious that the message would have been delivered to mobile devices over a wireless network, such as a known cellular communications network (like GSM). (EX-1002, ¶145.) A POSITA would have been motivated to allow mobile devices to provide content over a wireless network to take advantage of the growing popularity of mobile and wireless computing. (EX-1002, ¶¶81, 145.) 541 IPR Petition, pp.40-41	the message would have been delivered to mobile devices over a wireless network, such as a known cellular communications network (like GSM). (EX1002, ¶142.) A skilled artisan would have been motivated to allow mobile devices to provide content over a wireless network to take advantage of the growing popularity of mobile and wireless computing. (EX1002, ¶¶142, 105.) Ex.2034, pp.40-41
22	This claim is obvious for the same reasons as claim 1. First, the proposed combination renders obvious “[a] <i>network-based communication system comprising a plurality of servers configured to communicate over said at least one network,</i>”⁵ which would have included (under the proposed combination with Cheng) one or more origin servers 102 that contain web page content, along with at least proxy server 110, that communicate over the Internet. (Cheng, 3:49-53 (“In general, embodiments of the present invention contemplate that architecture 100 comprises one or more servers 102 having web content (in the form of at least one web page 104), a proxy server 110, at least one mobile device 108, and at least one network 114.”).) Claim 12 continues by reciting that “<i>a given one of the servers compris[es] the apparatus of claim 1.</i>” It would have been obvious that “<i>a given one of the servers</i>” would have corresponded to proxy server 110 in Cheng along with	This claim is obvious for the same reasons as claim 1. First, the proposed combination renders obvious “[a] network-based communication system comprising a plurality of servers configured to communicate over said at least one network,”² which would have included (under the proposed combination with Cheng) one or more origin servers 102 that contain web page content, along with at least proxy server 110, that communicate over the Internet. (Cheng, 3:49-53 (“In general, embodiments of the present invention contemplate that architecture 100 comprises one or more servers 102 having web content (in the form of at least one web page 104), a proxy server 110, at least one mobile device 108, and at least one network 114.”).) Claim 12 continues by reciting that “a given one of the servers compris[es] the apparatus of claim 1.” It would have been obvious that “a given one of the servers” would have corresponded to proxy server 110 in Cheng along with

	origin server 102, as noted, because the '348 patent makes clear that a given server can comprise multiple servers. (EX-1001, 9:21-24.) But to the extent the claim were interpreted to require a single server, as explained previously, it would have been obvious to combine proxy server 110 with origin server 102 to form a combined server for performing the functions of claim 9. (EX-1002, ¶¶146-47.) 541 IPR Petition, pp.41-42	origin server 102, as noted, because the '348 patent makes clear that a given server can comprise multiple servers. ('348, 9:21-24.) But to the extent the claim were interpreted to require a single server, as explained previously, it would have been obvious to combine proxy server 110 with origin server 102 to form a combined server for performing the functions of claim 9. (EX1002, ¶¶144, 111.) Ex.2034, pp.41-42
23	As explained for claim 8, the club photo sharing feature allows the first and second users to enter “<i>a message</i>” using the web browsers in their mobile devices, which would have been received and delivered to other users (for example, by viewing the photo album with accompanying textual messages as shown in Neibauer Figure 21-10) via their mobile devices. Each message is thus integrated with its respective photo, as recited in the claim and fully described for claim 8. (EX-1002, ¶¶126-27, 151.) 541 IPR Petition, p.43	As explained for claim 8, the club photo sharing feature allows the first and second users to enter “a message” using the web browsers in their mobile devices, which would have been received and delivered to other users (for example, by viewing the photo album with accompanying textual messages as shown in Neibauer Figure 21-10) via their mobile devices. Each message is thus integrated with its respective photo, as recited in the claim and fully described for claim 8. (EX1002, ¶¶148, 141.) Ex.2034, p.43
24	As explained for limitation [1A], the proposed combination discloses and renders obvious “<i>a processing element</i>” as claimed. (EX-1002, ¶¶101-02, 152-154.) It would also have been obvious that the functionalities from Neibauer, Cheng, and Ausems relied upon for claim 1 would have been carried out and implemented by software	As explained for limitation 1[a], the proposed combination discloses and renders obvious “a processing element” as claimed. (EX1002, ¶¶149, 109-111.) It would also have been obvious that the functionalities from Neibauer, Cheng, and Ausems relied upon for claim 1 would have been carried out and implemented by software comprising code that is executed by the processing

	comprising code that is executed by the processing element and stored in the at least one “<i>non-transitory computer-readable storage medium</i>,” such as a hard disk drive. (EX-1002, ¶153; Cheng, <i>e.g.</i>, 23:64-24:4 (explaining that instructions may be stored in random access memory or hard disk storage until required by the computer system).) 541 IPR Petition, p.44	element and stored in the at least one “non-transitory computer-readable storage medium,” such as a hard disk drive. (EX1002, ¶150; Cheng, <i>e.g.</i>, 23:64-24:4 (explaining that instructions may be stored in random access memory or hard disk storage until required by the computer system).) Ex.2034, pp.43-44
25	VII. Ground 2: Claims 4-5 Are Obvious Over Neibauer In View Of Ausems and Cheng, in Further View of Squibbs. These dependent claims, which generally relate to obtaining and using location information, would have been obvious over the prior art for Ground 1, in further view of Squibbs (EX-1011). Squibbs describes a technique of recording and displaying data (such as photos) along with the location where the photo was taken. (Squibbs, Abstract.) Squibbs explains that digital cameras that included Global Positioning System (GPS) receivers were known in the art, as were systems that could display the location where the photo was taken on an electronic map. (Squibbs, ¶¶0003-0004.) Squibbs discloses a photo album system that allows a user to capture and record digital images, which can be associated with the physical location	D. Ground 2: Claims 4-5 Are Obvious Over Neibauer In View Of Ausems and Cheng, in Further View of Squibbs. These dependent claims, which generally relate to obtaining and using location information, would have been obvious over the prior art for Ground 1, in further view of Squibbs (EX1011). Squibbs describes a technique of recording and displaying data (such as photos) along with the location where the photo was taken. Squibbs explains that digital cameras that included Global Positioning System (GPS) receivers were known in the art, as were systems that could display the location where the photo was taken on an electronic map. (Squibbs, ¶¶0003-0004.) Squibbs discloses a photo album system that allows a user to record digital images, which can be associated with the location where they were taken. An overview of the system is shown in Figure 3:

where they were taken. An overview of the system is shown in Figure 3: [image omitted] Squibbs, Fig. 3 As further explained in Squibbs, with reference to Figure 3: [block quote omitted] (Squibbs, ¶0031.) Album program 50 allows the user to “catalogue, manage, and view their photos through a map-based interface, the photos being represented on a displayed map by a marker indicating the location where they were taken.” (Squibbs, ¶0032.) It comprises “five main operating modes 51 to 55,” as shown. (Squibbs, ¶0033.) For example, Load Mode 52 allows the user to download data from camera 3, and Catalog Mode 53 allows the user to manage newly loaded photos using a map-based display, and Map View Mode 54 allows the user to browse the photo album and select photos for viewing. (Squibbs, ¶¶0033, 0035-0036.) Figure 6 shows a display generated by the album program in Catalog Mode 53 (Squibbs, ¶0064): [image omitted] (Squibbs, Fig. 6.)	[image omitted] (Squibbs, Fig. 3.) As further explained in Squibbs, with reference to Figure 3: [block quote omitted] (Squibbs, ¶0031.) Album program 50 allows the user to “catalogue, manage, and view their photos through a map-based interface, the photos being represented on a displayed map by a marker indicating the location where they were taken.” (Squibbs, ¶0032.) It comprises “five main operating modes 51 to 55,” as shown. (Squibbs, ¶0033.) For example, Load Mode 52 allows the user to download data from camera 3, and Catalog Mode 53 allows the user to manage newly loaded photos using a map-based display, and Map View Mode 54 allows the user to browse the photo album and select photos for viewing. (Squibbs, ¶¶0033, 0035-0036.) Figure 6 shows a display generated by the album program in Catalog Mode 53 (Squibbs, ¶0064): [image omitted] (Squibbs, Fig. 6.) Figure 6 shows a central map area 61 which “is sufficient to encompass the locations registered for the newly loaded batch of photos.” (Squibbs, ¶0064.) “A thumbnail 63 of each new photo is
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Figure 6 shows a central map area 61 which “is sufficient to encompass the locations registered for the newly loaded batch of photos.” (Squibbs, ¶0064.) “A thumbnail 63 of each new photo is shown in one or other of the margin areas 62A, B and a lead line 65 connects each thumbnail 63 to a corresponding marker 64 showing on the map the location where the photo was taken.” (Squibbs, ¶0064.) Figure 6 also shows an upper control bar with, from left-to-right, Show Photo Control 66 for displaying the photo corresponding to a selected thumbnail 63, Group Control 68 for creating groups and assigning a photo to one or more groups, and Edit Photo Details Control 67 for displaying and editing the details of a selected thumbnail. (Squibbs, ¶¶0065-0068.) Figure 7 shows a display generated by the album program in Map View 54 (Squibbs, ¶0074): [image omitted] Squibbs, Fig. 7 The Map View mode in Figure 7 allows a user to browse the album. (Squibbs, ¶0074.) Squibbs explains that “[t]he starting map displayed in the Map View Mode is, for example, a world map or a map encompassing the locations of all the photos recorded in the album; alternatively, the map displayed could be the same map as being used in the Catalogue Mode	shown in one or other of the margin areas 62A, B and a lead line 65 connects each thumbnail 63 to a corresponding marker 64 showing on the map the location where the photo was taken.” (Squibbs, ¶0064.) Figure 6 also shows an upper control bar with, from left-to-right, Show Photo Control 66 for displaying the photo corresponding to a selected thumbnail 63, Group Control 68 for creating groups and assigning a photo to one or more groups, and Edit Photo Details Control 67 for displaying and editing the details of a selected thumbnail. (Squibbs, ¶¶0065-0068.) Figure 7 shows a display generated by the album program in Map View 54 (Squibbs, ¶0074): [image omitted] (Squibbs, Fig. 7.) The Map View mode in Figure 7 allows a user to browse the album after it has finished editing the photo metadata and assigning the photos to groups. (Squibbs, ¶0074.) Squibbs explains that “[t]he starting map displayed in the Map View Mode is, for example, a world map or a map encompassing the locations of all the photos recorded in the album; alternatively, the map displayed could be the same map as being used in the Catalogue Mode before transiting to the Map View Mode.” (Squibbs, ¶0075.) Figure 7 shows photos represented “either as thumbnails 81, individual photo icons 80, group icons (see current-
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	before transiting to the Map View Mode.” (Squibbs, ¶0075.) Figure 7 shows photos represented “either as thumbnails 81, individual photo icons 80, group icons (see current-abode group icon 85), or concentration icons (see icon 82).” (Squibbs, ¶0075.) Squibbs also discloses (in Figure 8) the ability to display a full-size image of a photo selected from the Map View Mode. (Squibbs, ¶0091, Fig. 8.) Squibbs discloses a number of ways in which a photo can be associated with location data. In the example in Figure 3, the digital camera itself has a built-in GPS receiver. In another embodiment of Figure 11, a digital camera 90 transmits the photo image data to a cell phone 20, which in turn uploads the image data over a cellular connection to service system 40 for storage on network store 43. (Squibbs, ¶0101, Fig. 11 (showing transfer 105); <i>see also id.</i>, ¶0031 (noting that the photo store can be “external”).) The cell phone, when uploading photo image data, also transmits location information. (Squibbs, ¶0101.) Squibbs explains that the cell phone can determine location information in a number of ways, including from “a location server of the mobile radio infrastructure,” or using “a GPS system built into the cell phone.” (Squibbs, ¶0098; <i>see also id.</i>, ¶0101.) 541 IPR Petition, pp.45-50	abode group icon 85), or concentration icons (see icon 82).” (Squibbs, ¶0075.) Squibbs also discloses (in Figure 8) the ability to display a full-size image of a photo selected from the Map View Mode. (Squibbs, ¶0091, Fig. 8.) Squibbs discloses a number of ways in which a photo can be associated with location data. In the example in Figure 3, the digital camera itself has a built-in GPS receiver. In another embodiment of Figure 11, a digital camera 90 transmits the photo image data to a cell phone 20, which in turn uploads the image data over a cellular connection to service system 40 for storage on network store 43. (Squibbs, ¶0101, Fig. 11 (showing transfer 105); <i>see also id.</i>, ¶0031 (noting that the photo store can be “external”).) The cell phone, when uploading photo image data, also transmits location information. (Squibbs, ¶0101.) Squibbs explains that the cell phone can determine location information in a number of ways, including from “a location server of the mobile radio infrastructure,” or using “a GPS system built into the cell phone.” (Squibbs, ¶0098; <i>see also id.</i>, ¶0101.) Ex.2034, pp.44-49
26	Motivation to Combine Ground 1 Prior Art with Squibbs: It would have	<i>Rationale and Motivation to Combine (Ground 1 Prior Art with Squibbs):</i> It

been obvious to combine the prior art for Ground 1 with Squibbs, predictably resulting in the club photo sharing feature further adapted such that the mobile device transmits not just the photo being uploaded, but also geographic location information where the photo was captured. (EX-1002, ¶167.) For claim 4, therefore, the device-captured data of claim 1 would also have included “<i>device-captured location coordinates</i>” of the photo. (Squibbs, Fig. 4 (showing “LOCATION COORD” field for photo), ¶0049 (referring to “the coordinates provided by the location data”).)6 For claim 5, the device-captured data would for the same reasons have included “<i>at least one of device-captured image data... associated with a capture location-identifying information.</i>” Although not required by claims 4-5, it would also have been obvious to adapt the club photo sharing feature to display location information associated with photos uploaded by club members, for example, via a map-based user interface similar to the one described in Figures 6-7 of Squibbs discussed above. (EX-1002, ¶168.) Under the proposed combination, therefore, the club photo sharing feature would have been further adapted to display location information (for example on an electronic map), in association with the photos. This would also have been seen as a natural extension of map features	would have been obvious to combine the prior art for Ground 1 with Squibbs, predictably resulting in the club photo sharing feature further adapted such that the mobile device transmits not just the photo being uploaded, but geographic location information where the photo was captured. (EX1002, ¶161.) For claim 4, therefore, the device-captured data of claim 1 would have included, in addition to the photo being uploaded, “device-captured location coordinates.” (Squibbs, Fig. 4 (showing “LOCATION COORD” field for photo), ¶0049 (referring to “the coordinates provided by the location data”).)3 For claim 5, the device-captured data would for the same reasons have included “at least one of device-captured image data... associated with a capture location-identifying information.” Although not required by claims 4-5, it would also have been obvious to adapt the club photo sharing feature to display location information associated with photos uploaded by club members, for example, via a map-based user interface similar to the one described in Figures 6-7 of Squibbs discussed above. (EX1002, ¶161.) Under the proposed combination, therefore, the club photo sharing feature would have been further adapted to display location information (for example on an electronic map), in association with the photos. This would also have been seen as a natural extension of map features already disclosed in Neibauer, as discussed below. (EX1004, ¶163.) Squibbs is an
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already disclosed in Neibauer, as discussed below. (EX-1002, ¶172.) Squibbs is an analogous reference in the same field as the '348 patent and would have been reasonably pertinent to problems facing the patent inventors, including how to obtain location information and incorporate it into a mobile information channel. (EX-1002, ¶169.) A POSITA would have been motivated to combine in order to improve the user experience of club members who use the photo sharing feature. (EX-1002, ¶170.) The ability to associate a location with a digital photo would have provided a clear benefit by improving the classification and enjoyment of uploaded photos. Squibbs explains that classification of photos “has long been a problem due to the effort involved in maintaining any organisation of the photos.” (Squibbs, ¶0002.) Geographic location would have provided a clear way to classify digital photos, allowing club members to better understand the context behind the photo and identify objects in it. (EX-1002, ¶171.) Neibauer provides a further suggestion to combine with Squibbs by disclosing a Yahoo! Maps feature that allows users to request and view electronic maps. (Neibauer, pp.222-224.) Neibauer further describes how a user can annotate a map to identify objects of interest on the map, such as the user’s house and the location of an	analogous reference in the same field as the '348 patent and would have been reasonably pertinent to problems facing the patent inventors, including how to obtain location information and incorporate it into a mobile information channel. (EX1002, ¶162.) An ordinarily skilled artisan would have been motivated to combine in order to improve the user experience of club members who use the photo sharing feature. (EX1002, ¶163.) The ability to associate a location with a digital photo would have provided a clear benefit by improving the classification and enjoyment of uploaded photos. Squibbs explains that classification of photos “has long been a problem due to the effort involved in maintaining any organisation of the photos.” (Squibbs, ¶0002.) Geographic location would have provided a clear way to classify digital photos, allowing club members to better understand the context behind the photo and identify objects in the photo. (EX1002, ¶163.) Neibauer provides a further suggestion to combine with Squibbs by disclosing a Yahoo! Maps feature that allows users to request and view electronic maps. (Neibauer, pp.222-224.) Neibauer further describes how a user can annotate a map to identify objects of interest on the map, such as the user’s house and the location of an upcoming event. (Neibauer, pp.226-228, Fig. 10-5 (showing “My House” and “The picnic is here”).) The annotation described in Neibauer is
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	upcoming event. (Neibauer, pp.226-228, Fig. 10-5 (showing “My House” and “The picnic is here”).) The annotation described in Neibauer is similar to the functionality in Squibbs, and in any case, the fact that Neibauer already discloses the ability to display electronic maps – and suggests annotating those maps to show location of objects and events within the map – confirms that Neibauer and Squibbs are naturally combinable and that a POSITA would have been motivated to do so. (EX-1002, ¶172.) A POSITA would also have had a reasonable expectation of success, as Squibbs relies on existing technologies and could have been implemented using conventional techniques. (EX-1002, ¶172.) 541 IPR Petition, pp.51-53	similar to the functionality in Squibbs, and in any case, the fact that Neibauer already discloses the ability to display electronic maps – and suggests annotating those maps to show location of objects and events within the map – confirms that Neibauer and Squibbs are naturally combinable and that a skilled artisan would have been motivated to do so. (EX1002, ¶163.) A skilled artisan would also have had a reasonable expectation of success, as Squibbs relies on existing technologies and could have been implemented using conventional techniques. (EX1002, ¶164.) Ex.2034, pp.49-52
27	VIII. Ground 3: Claims 10-11, 15-16, 19-20 Are Obvious Over Neibauer In View Of Ausems and Cheng, in Further View of McElfresh. Dependent claims 10-11, 15-16, and 19-20 are substantially similar. Claims 10, 15, and 19 recite the ability to identify and periodically obtain data from “<i>at least one data feed,</i>” which is integrated into “<i>a given set of shared information content of the web-based shared information channel,</i>” accessible to the first and second users via their respective mobile devices and personalized content applications. Dependent claims 11, 16, and 20 further state that the “<i>data obtained</i>	E. Ground 3: Claims 10-11, 15-16, 19-20 Are Obvious Over Neibauer In View Of Ausems and Cheng, in Further View of McElfresh. Dependent claims 10-11, 15-16, and 19-20 are substantially similar, with the only material differences being their claim dependencies. Claims 10, 15, and 19 recite the ability to identify and periodically obtain data from “at least one data feed,” which is integrated into “a given set of shared information content of the web-based shared information channel,” accessible to the first and second users via their respective mobile devices and personalized content applications.

<i>from the given identified data feed comprises at least one advertisement.”</i> These claims are obvious over the prior art for Ground 1 in view of McElfresh (EX-1014). McElfresh describes a technique for integrating advertisements into a webpage. Figure 1, below, shows “a generalized block diagram layout of a prior art webpage 10. This page contains a web page title block 12, and a web page content block 14. A sequence of ad sites 16-20 are shown which receive and display ads configured to fit in these spots.” (McElfresh, 5:19-31.) McElfresh explains that ads in the prior art were typically placed on the page based on advertisers’ preferred page location, or randomly. (McElfresh, 5:33-38.) [image omitted] McElfresh purports to disclose an improved technique in which a website can issue a request for ads for inclusion on a webpage, and the ads provided will be selected and ranked in a way that increases the likelihood of click-throughs and maximizes advertising revenue. (McElfresh, 5:20-28.) Figure 3A shows a block diagram of the system or network 100 for optimizing ad placement: [image omitted] (McElfresh, Fig. 3(a), 6:15-18.) Although Figure 3A above shows a	Dependent claims 11, 16, and 20 further state that the “data obtained from the given identified data feed comprises at least one advertisement.” These claims are obvious over the prior art for Ground 1 in view of McElfresh (EX1014). McElfresh describes a technique for integrating advertisements into a webpage. Figure 1 shows a prior art technique for arranging ads: [image omitted] (McElfresh, Fig. 1.) Figure 1 shows “a generalized block diagram layout of a prior art webpage 10. This page contains a web page title block 12, and a web page content block 14. A sequence of ad sites 16-20 are shown which receive and display ads configured to fit in these spots.” (McElfresh, 5:19-31.) McElfresh explains that ads in the prior art were typically placed on the page based on advertisers’ preferred page location, or randomly. (McElfresh, 5:33-38.) McElfresh purports to disclose an improved technique in which a website can issue a request for ads for inclusion on a webpage, and the ads provided will be selected and ranked in a way that increases the likelihood of click-throughs and maximizes advertising revenue. (McElfresh, 5:20-28.) Figure 3A shows a block diagram of the system or network 100 for optimizing ad placement: [image omitted]
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number of components, the most relevant aspects for our purposes are Rad Server 112, website 104, and user 102. McElfresh explains that “when a site wants to show a page, it contacts an ad server component 112, shown at the center of the network 100 in FIG.3(a). This device might also be referred to as a relational server component, and is hence referred to as the Rad Server.” (McElfresh, 6:36-40.) Figure 3(a) also discloses “an ad/content placement database 118... for storing a plurality of ads, which might be used for possible display.” (McElfresh, 6:57-60.) The ad server or Rad Server 112 “performs the overall function of gathering the necessary information regarding a particular ad (or set of ads) and the particular user and generating a set of ads which have been optimized for placement on a webpage,” based on (among other things) calculated click-through-percentage rates. (McElfresh, 6:42-48.) After the ads have been selected, “the Rad Server 112 delivers a set of ads for display to the user which have been optimized for increased click-throughs, and/or increased revenue generation for the webpage provider.” (McElfresh, 8:10-14.) In another embodiment, “[i]f an advertiser wishes to purchase the right to an entire section of the website or webpage, the ads can simply be placed there without having to compete	(McElfresh, Fig. 3(a) (highlighting added), 6:15-18.) Although Figure 3A above shows a number of components, the most relevant aspects for our purposes are Rad Server 112, website 104, and user 102. McElfresh explains that “when a site wants to show a page, it contacts an ad server component 112, shown at the center of the network 100 in FIG.3(a). This device might also be referred to as a relational server component, and is hence referred to as the Rad Server.” (McElfresh, 6:36-40.) Figure 3(a) also discloses “an ad/content placement database 118... for storing a plurality of ads, which might be used for possible display.” (McElfresh, 6:57-60.) The ad server or Rad Server 112 “performs the overall function of gathering the necessary information regarding a particular ad (or set of ads) and the particular user and generating a set of ads which have been optimized for placement on a webpage,” based on (among other things) calculated click-through-percentage rates. (McElfresh, 6:42-48.) After the ads have been selected, “the Rad Server 112 delivers a set of ads for display to the user which have been optimized for increased click-throughs, and/or increased revenue generation for the webpage provider.” (McElfresh, 8:10-14.) In another embodiment, “[i]f an advertiser wishes to purchase the right to an entire section of the website or
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	their way into that position on the page.” (McElfresh, 12:50-54.) 541 IPR Petition, pp.53-56	webpage, the ads can simply be placed there without having to compete their way into that position on the page.” (McElfresh, 12:50-54.) Ex.2034, pp.52-55
28	Motivation to Combine Ground 1 Prior Art with McElfresh: It would have been obvious to combine the prior art for Ground 1 with McElfresh, predictably resulting in the further ability to integrate a number of ads onto the webpage of the club photo sharing feature. (EX-1002, ¶183.) For example, claims 10, 15 and 19 recite the steps or functions of identifying “<i>at least one data feed,</i>” and periodically obtaining data “<i>from a given such identified data feed.</i>” Under the combination with McElfresh, the “<i>data feed</i>” would have corresponded to a feed containing a plurality of advertisements that would have been available for display on the club photo sharing feature, obtained by from Rad Server 112 as described in McElfresh. More specifically, the web server providing the club photo sharing feature described in Neibauer (“<i>web-based shared information channel</i>”) would have periodically obtained ad data from this feed, for example, when webpages of the club sharing photo sharing feature are being prepared for delivery to a user. (McElfresh, 6:36-48, 8:9-10 (“Referring again to FIG. 3(a), the website 104 requests ads from the Rad Server 112 as shown by dataflow 160.”).)	<i>Rationale and Motivation to Combine (Ground 1 Prior Art with McElfresh):</i> It would have been obvious to combine the prior art for Ground 1 with McElfresh, predictably resulting in the further ability to integrate a number of ads onto the webpage of the club photo sharing feature. (EX1002, ¶171.) For example, claim 10, 15 and 19 recite the steps or functions of identifying “at least one data feed,” and periodically obtaining data “from a given such identified data feed.” Under the proposed combination, the “data feed” would have corresponded to a feed containing a plurality of advertisements that would have been available for display on the club photo sharing feature, obtained by from Rad Server 112 as described in McElfresh. More specifically, the web server providing the club photo sharing feature described in Neibauer (“web-based shared information channel”) would have periodically obtained ad data from this feed, for example, when webpages of the club sharing photo sharing feature are being prepared for delivery to a user. (McElfresh, 6:36-48, 8:9-10 (“Referring again to FIG. 3(a), the website 104 requests ads from the Rad Server 112 as shown by dataflow 160.”).)

The '348 patent does not define "<i>data feed</i>," and the term does not appear in the written description. The term "<i>feed</i>" appears only in one sentence referring to RSS and XML feeds. (EX-1001, 9:52-55.) In the pending litigation, Patent Owner argues that "<i>data feed</i>" is not limited to XML or RSS feeds and simply means a "<i>provision of information</i>," to the extent a construction is required. (EX-1025, at 3.) McElfresh satisfies this construction by providing advertising information. Petitioners, for their part, has argued in the pending litigation that "<i>data feed</i>" should be limited to the two examples in the written description, <i>i.e.</i>, an XML or RSS feed. (<i>Id.</i>) The claimed data feed would be obvious even if it were limited in this fashion, because it would have been obvious to provide the advertisements from Rad Server 112 of McElfresh to the website in XML format, which was a well-known industry standard for exchange of information between computers in web-based systems. (EX-1002, ¶¶186.) A POSITA would have been motivated to use XML to take advantage of a growing and popular XML industry standard which was specifically designed for electronic data interchange between various systems. (EX-1002, ¶187.) Claims 10, 15, and 19 further state that the information obtained from the data feed is integrated "<i>with the first and</i>	The '348 patent does not define "data feed," and the term does not appear in the written description. The term "feed" appears only in one sentence referring to RSS and XML feeds. ('348, 9:52-55.) In the pending litigation, Patent Owner argues that "data feed" is not limited to XML or RSS feeds and simply means a "<i>provision of information</i>," to the extent a construction is required. (EX1025, at 3.) McElfresh satisfies this construction by providing advertising information. Petitioner, for its part, has argued in the pending litigation that "data feed" should be limited to the two examples in the written description, <i>i.e.</i>, an XML or RSS feed. (<i>Id.</i>) The claimed data feed would be obvious even if it were limited in this fashion, because it would have been obvious to provide the advertisements from Rad Server 112 of McElfresh to the website in XML format, which was a well-known industry standard for exchange of information between computers in web-based systems. (EX1002, ¶¶174-175.) An ordinarily skilled artisan would have been motivated to use XML to take advantage of a growing and popular XML industry standard which was specifically designed for electronic data interchange between various systems. (EX1002, ¶175.) Claims 10, 15, and 19 further state that the information obtained from the data feed is integrated "with the first and second device-captured data into a persistent version of a given set of
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<i>second device-captured data into a persistent version of a given set of shared information content of the web-based shared information channel so as to be accessible with the first and second device-captured data to the first and second users of the respective first and second mobile devices via the respective personalized content applications of the first and second mobile devices.”</i> This would have occurred, under the proposed combination, by integrating the received advertisements into the webpages for the club photo sharing feature, for example, by showing the ads on the photo album webpages in Neibauer, which would have been accessible to club members via their mobile devices. (EX-1002, ¶188.) For example, as explained for claim 1, the first and second device-captured data is integrated into a photo album as shown in the photo album view shown in Figure 21-10 of Neibauer: [image omitted] (Neibauer, p.478, Fig. 21-10.) Figure 21-10 as noted above shows a partial list of photographs stored in an album. Under the proposed combination, the information on this webpage would have been integrated with advertisements obtained from the claimed “<i>data feed</i>” under the combination with McElfresh. Below is a mock-up, based on the combination of Figure 1 of McElfresh and Figure	shared information content of the web-based shared information channel so as to be accessible with the first and second device-captured data to the first and second users of the respective first and second mobile devices via the respective personalized content applications of the first and second mobile devices.” This would have occurred, under the proposed combination, by integrating the received advertisements into the webpages for the club photo sharing feature, for example, by showing the ads on the photo album webpages in Neibauer, which would have been accessible to club members via their mobile devices. (EX1002, ¶176.) For example, as explained for claim 1, the first and second device-captured data is integrated into a photo album as shown in the photo album view shown in Figure 21-10 of Neibauer: [image omitted] (Neibauer, p.478, Fig. 21-10.) Figure 21-10 as noted above shows a partial list of photographs stored in an album. Under the proposed combination, the information on this webpage would have been integrated with advertisements obtained from the claimed “data feed” under the combination with McElfresh. Petitioner’s expert created the following mock-up, based on the combination of Figure 1 of McElfresh and Figure 21-10 of Neibauer to illustrate one exemplary and obvious user interface in which this
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21-10 of Neibauer to illustrate one exemplary and obvious user interface in which this combination would have been implemented: [image omitted] (EX-1002, ¶¶189-90.) This hypothetical is entirely consistent with Neibauer, which for its part shows an exemplary club page with an advertisement placed on it: [image omitted] (Neibauer, p.475, Fig. 21-8 (red box added).) Under the proposed combination, therefore, advertisement information obtained from the “<i>data feed</i>” would have been integrated “<i>with the first and second device-captured data</i>,” <i>i.e.</i>, the photo data provided by the first and second users as explained in claim 1, “<i>into a persistent version of a given set of shared information content of the web-based shared information channel</i>,” <i>i.e.</i>, a persistent set of data that includes the photo data for the photo album provided by the users and the obtained advertisements, which would have been accessible to and shared with club members. (EX-1002, ¶191.) It would also have been obvious for this set of shared information to be “<i>persistent</i>,” as McElfresh discloses that its dynamic advertising algorithms can be overridden such that an advertiser can simply “purchase the	combination would have been implemented: [image omitted] (EX1002, ¶177.) This hypothetical is entirely consistent with Neibauer, which for its part shows an exemplary club page with an advertisement placed on it: [image omitted] (Neibauer, p.475, Fig. 21-8 (red box added).) Under the proposed combination, therefore, advertisement information obtained from the “data feed” would have been integrated “with the first and second device-captured data,” <i>i.e.</i>, the photo data provided by the first and second users as explained in claim 1, “into a persistent version of a given set of shared information content of the web-based shared information channel,” <i>i.e.</i>, a persistent set of data that includes the photo data for the photo album provided by the users and the obtained advertisements, which would have been accessible to and shared with club members. (EX1002, ¶179.) It would also have been obvious for this set of shared information to be “persistent,” as McElfresh discloses that its dynamic advertising algorithms can be overridden such that an advertiser can simply “purchase the right to an entire section of the website or webpage,” such that “the ads can simply be placed there without having to compete their way into that
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right to an entire section of the website or webpage,” such that “the ads can simply be placed there without having to compete their way into that position on the page.” (McElfresh, 12:50-54.) This would have allowed, for example, a set of advertisements to be placed consistently on a particular page, such as the photo sharing page in Neibauer. It therefore would have been obvious that the ads, along with the photo data for the photo album, would have been persistent and accessible to both the first and second users through their respective mobile devices and personalized content applications, under the proposed combination. And finally, claims 11, 16, and 20 recite that <i>“the data obtained from the given identified data feed comprises at least one advertisement,”</i> which would have been the case as described above. (EX-1002, ¶191.) McElfresh is an analogous reference in the same field as the ’348 patent of network-based communication systems, that discloses similar functionality for managing information content accessible through the Internet. (EX-1002, ¶192.) McElfresh would also have been reasonably pertinent to problems facing the inventors including how to incorporate advertisements. (<i>Id.</i>) A POSITA would have been motivated to combine in order to earn increased revenue. (EX-1002, ¶193.) As noted above, Neibauer itself discloses the	position on the page.” (McElfresh, 12:50-54.) This would have allowed, for example, a set of advertisements to be placed consistently on a particular page, such as the photo sharing page in Neibauer. It therefore would have been obvious that the ads, along with the photo data for the photo album, would have been persistent and accessible to both the first and second users through their respective mobile devices and personalized content applications, under the proposed combination. And finally, claims 11, 16, and 20 recite that “the data obtained from the given identified data feed comprises at least one advertisement,” which would have been the case as described above. (EX1002, ¶179.) McElfresh is an analogous reference in the same field as the ’348 patent of network-based communication systems, that discloses similar functionality for managing information content accessible through the Internet. (EX1002, ¶180.) McElfresh would also have been reasonably pertinent to problems facing the inventors including how to incorporate advertisements. (<i>Id.</i>) An ordinarily skilled artisan would have been motivated to combine in order to earn increased revenue. (EX1002, ¶181.) As noted above, Neibauer itself discloses the ability to place advertisements on club pages. (Neibauer, p.475, Fig. 21-8.) The techniques of McElfresh would have provided a clear improvement to Neibauer by allowing the photo sharing
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	ability to place advertisements on club pages. (Neibauer, p.475, Fig. 21-8.) The techniques of McElfresh would have provided a clear improvement to Neibauer by allowing the photo sharing webpage to display multiple advertisements on a single page, from multiple advertisers, further increasing the potential revenue obtainable by the displaying website. (EX-1002, ¶193.) As McElfresh explains, “the generation of revenue from a website is proving to be increasingly important, as there are costs inherent in creating, providing, and maintaining a website.” (McElfresh, 1:30-34.) “Moreover, as Internet traffic continues to increase, the opportunities for the generation of revenue in association with those contacted sites tends to increase.” (McElfresh, 1:34-36.) Under the combination with McElfresh, the proposed combination would have beneficially been enabled to deliver more advertisements per page, thus resulting in greater revenue generation for the website operator. (EX-1002, ¶193.) A POSITA would also have had a reasonable expectation of success, as the techniques of McElfresh involved nothing more than basic web and network communications techniques. (EX-1002, ¶194.) 541 IPR Petition, pp.56-63	webpage to display multiple advertisements on a single page, from multiple advertisers, further increasing the potential revenue obtainable by the displaying website. (EX1002, ¶181.) As McElfresh explains, “the generation of revenue from a website is proving to be increasingly important, as there are costs inherent in creating, providing, and maintaining a website.” (McElfresh, 1:30-34.) “Moreover, as Internet traffic continues to increase, the opportunities for the generation of revenue in association with those contacted sites tends to increase.” (McElfresh, 1:34-36.) Under the combination with McElfresh, the proposed combine would have beneficially been enabled to deliver more advertisements per page, thus resulting in greater revenue generation for the website operator. (EX1002, ¶181.) An ordinarily skilled artisan would also have had a reasonable expectation of success, as the techniques of McElfresh involved nothing more than basic web and network communications techniques. (EX1002, ¶182.) Ex.2034, pp.55-62
29	Harvey discloses techniques for creating on-line communities, which are similar to the web-based clubs disclosed in Neibauer. (Harvey, 4:24-43; EX-1002, ¶198.) Harvey teaches	Harvey discloses techniques for allowing users to create on-line communities in which users can communicate and share information, which are similar to the web-based clubs disclosed in Neibauer.

the ability of a community creator to author content for a community before the community is created. (EX-1002, ¶199.) Harvey explains that “[t]he community creating module permits the creator to create a community, and designate applications and content presented in the community by a user interface.” (Harvey, 4:28-30.) A user can access creating module 165 in order to create a new community. (Harvey, 7:49-56, 8:49-50.) “At step 202, a creator provides community identification information,” such as a community name. (Harvey, 7:58-61.) “At step 210,” Harvey explains, “a configuration editor is presented to a creator. A configuration editor may allow a user to build a community, designate content and application objects, subscribe to subscription objects, and add other information associated with the community.” (Harvey, 8:63-67; <i>see also id.</i>, 9:41-47.) Later, “[a]t step 230, a creator may launch a community.” (Harvey, 12:67-13:1.) Harvey therefore discloses adding content before the community is created. (EX-1002, ¶199.) Users access the community “through browser access to an appropriate website.” (Harvey, 29:59-62.) 541 IPR Petition, pp.64-65	(Harvey, 4:24-43.) The key feature of Harvey here is the ability of a community creator to author content for a community before the community is created and launched. As noted, Harvey explains that “[t]he community creating module permits the creator to create a community, and designate applications and content presented in the community by a user interface.” (Harvey, 4:28-30.) More specifically, a user can access a creating module 165 in order to create a new community, which may include web-based community creation. (Harvey, 7:49-56, 8:49-50.) “At step 202, a creator provides community identification information,” such as a community name. (Harvey, 7:58-61.) “At step 210,” Harvey explains, “a configuration editor is presented to a creator. A configuration editor may allow a user to build a community, designate content and application objects, subscribe to subscription objects, and add other information associated with the community.” (Harvey, 8:63-67; <i>see also id.</i>, 9:41-47.) Later, “[a]t step 230, a creator may launch a community.” (Harvey, 12:67-13:1.) Harvey therefore discloses the ability to add content to a community using the community-creation tool, before the community is created. A user can establish a connection with a community, among other ways, “through browser access to an appropriate website.” (Harvey, 29:59-62.) Ex.2034, pp.63-64
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30	Motivation to Combine with Harvey: It would have been obvious to combine the prior art cited for Grounds 1-3 with Harvey, predictably resulting in the <i>further</i> ability to allow the club founder to add content to one or more mobile information channels, before the club is created and launched. (EX-1002, ¶¶200.) This would have satisfied Petitioner’s proposed construction of “<i>web-based shared information channel</i>” as “a virtual location at the content management site at which user-authored content may be added for transmission to the mobile web site.” Under the proposed combination, the “<i>content management site</i>” would have included a web-based interface for allowing the founder to create and manage a club disclosed in Neibauer, which would have further permitted the club founder to add content for the club via the mobile information channels, such as initial club messages, initial photos with textual descriptions, and so forth. This information would have been made available for transmission to “<i>the mobile website</i>,” i.e., the club site as delivered to mobile users. (EX-1002, ¶¶201.) Harvey is an analogous reference and would have been reasonably pertinent to problems facing the inventors. (EX-1002, ¶202.) A POSITA would have been motivated to combine in order to provide club founders with better customizability allowing them to use the club-creation interface to populate mobile information channels with initial	<i>Rationale and Motivation to Combine (with Harvey):</i> It would have been obvious to combine the prior art cited for Grounds 1-3 with Harvey, predictably resulting in the <i>further</i> ability to allow the club founder to add content to one or more mobile information channels, before the club is created and launched. This would have satisfied Petitioner’s proposed construction of “web-based shared information channel” as “<i>a virtual location at the content management site at which user-authored content may be added for transmission to the mobile web site.</i>” Under the proposed combination, therefore, the “<i>content management site</i>” would have included a web-based interface for allowing the founder to create and manage a club disclosed in Neibauer, which would have further permitted the club founder to add content for the club via the mobile information channels, such as initial club messages, initial photos with textual descriptions, and so forth. This information would have been made available for transmission to “<i>the mobile website</i>,” i.e., the club site as delivered to mobile users. (EX1002, ¶¶186-187.) Harvey is an analogous reference and would have been reasonably pertinent to problems facing the inventors. (EX1002, ¶188.) A skilled artisan would have been motivated to combine in order to provide club founders with greater customizability for clubs by allowing them to use the club-creation interface to populate mobile information channels
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content, <i>before</i> the club is launched. (EX-1002, ¶203.) This would have avoided “blank” clubs devoid of content, because the club would be populated with some initial content before launch, which creates a more engaging club experience. (<i>Id.</i>) A POSITA also would have had a reasonable expectation of success and could have implemented the combination using conventional techniques. (EX-1002, ¶204.) 541 IPR Petition, pp.65-66	with initial content, <i>before</i> the club is made available to other members. (EX1002, ¶189.) This would have allowed the club founder to ensure that other club members would not experience a “blank” club devoid of content, because the club founder would have populated mobile information channels (such as the club message board) with some initial content, thus providing a more engaging club experience for other members, featuring content available from the moment of the club’s creation. (<i>Id.</i>) A skilled artisan would also have had a reasonable expectation of success and could have implemented the combination using conventional techniques. (EX1002, ¶190.) Ex.2034, pp.64-66
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