

Summary of verbatim (or nearly verbatim) matches between the 00544 petition to the Houh Declaration Ex.1003

	‘544 Petition	Houh Decl. (Ex. 1003)
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. Additional education might compensate for less experience and vice versa.¹ (EX-1003, ¶¶31-32.) 544 Petition, p. 4	In my opinion, a POSITA would have 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. A person could also have qualified as a POSITA with some combination of (1) more formal education (such as a master’s of science degree) and less technical experience, or (2) less formal education and more technical or professional experience. Ex. 1003, ¶ 32
2	Meta agreed to PO’s construction in the MDT-Meta-Litigation of “a computer program-based medium for transferring information” for the purpose of the Meta-MDT-IPR. (EX-1011, 6.) PO however proposed a different construction for the term in the Meta-MDT-IPR (“a component of a mobile site configured to permit a wide variety of mobile devices to send and receive content over a wireless network”). Notably, PO’s Meta-MDT-IPR construction differs from the construction it proposed for the same term in the <i>Meta Platforms, Inc. v.</i>	I understand that Meta agreed to PO’s construction in the MDT-Meta-Litigation of “a computer program-based medium for transferring information” for the purpose of the Meta-MDT-IPR. (<i>See</i> EX-1011, 6.) PO however proposed a different construction for the term in the Meta-MDT-IPR. (<i>Compare</i> EX-1009, 2, <i>with</i> EX-1010, 21.) I note the construction that MDT proposes in the Meta-MDT-IPR differs from the construction it proposed for the same term in the <i>Meta Platforms, Inc. v. Mobile Data Techs. LLC</i>, IPR2024-

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	<i>Mobile Data Techs. LLC</i>, IPR2024-00248. PO did not explain why it is advocating for two different constructions of the identical phrase. 544 Petition, pp. 6-7	00248. PO did not explain or justify why it is advocating for two different constructions of the identical phrase. Ex. 1003, ¶ 42
3	While the term “wireless network” was not explicitly identified in the Meta-MDT-IPR for construction, the parties nevertheless appear to dispute its meaning. (<i>Compare</i> EX-1010, 31 (“wireless network 12 ... is separate from Internet 14”), <i>with</i> EX-1011, 9 (“a network that allows a device to communicate wirelessly over a network”).) Meta contends PO applies the construction, “wireless network separate from the Internet,” in its arguments. (EX-1011, 9.) Meta further contends the term should be construed as “a network that allows a device to communicate wirelessly over a network.” (EX-1011, 9.) Regardless, Petitioners’ grounds disclose the term under both interpretations. 544 Petition, p. 7	While the term was not explicitly identified in the Meta-MDT-IPR for construction, the parties appear to dispute the meaning in their arguments. (<i>Compare</i> EX-1010, 31 (“wireless network 12 ... is separate from Internet 14.”), <i>with</i> EX-1011, 9 (“a network that allows a device to communicate wirelessly over a network.”).) Meta contends that PO applies the above construction in its arguments. (EX-1011, 9.) Meta further contends that the term should be construed as “a network that allows a device to communicate wirelessly over a network.” (EX-1011, 9 (internal citations omitted).) Ex. 1003, ¶ 44
4	Randall’s extensible database “contains information from or relating to many different entities” and “is organised into information fields which an entity can complete or have completed.” (EX-1005, 8:26-28.) The database is structured so its information “can be readily shared with other entities: the database in effect represents a web page containing information specific to that entity.” (EX-1005, 8:29-31.)	The “database contains information from or relating to many different entities” and “is organised into information fields which an entity can complete or have completed.” (Randall, 8:26-28.) “Information is placed onto the database by an entity so that it can be readily shared with other entities: the database in effect represents a web page containing information specific to that entity.” (Randall, 8:29-31.)

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	544 Petition, pp. 9-10	Ex. 1003, ¶ 67
5	A POSITA would have been motivated to combine Forsyth's teachings regarding use of group objects and additional features and functions to enhance the Forums service taught by Randall which uses Randall's network infrastructure with extensible database. (EX-1003, ¶¶75-81.) 544 Petition, p. 12	A POSITA would have been motivated to combine Forsyth's teachings regarding the use of group objects and additional features and functions to enhance the Forums service taught by Randall. The resulting combination, utilizing Randall's Forums network infrastructure, provides a Forums service having a client-based program and a server-based program, which utilizes Randall's extensible database. Ex. 1003, ¶
6	Randall and Forsyth are also reasonably pertinent to problems addressed by the '578 patent, namely "overcom[ing] one or more of the drawbacks of" conventional techniques for content sharing for mobile devices. (<i>See, e.g.</i> EX-1001, 2:3-6; EX-1003, ¶76.) 544 Petition, p. 13	Randall and Forsyth are also reasonably pertinent to problems addressed by the '578 patent, namely "overcom[ing] one or more of the drawbacks of" conventional techniques for content sharing for mobile devices. (<i>See, e.g.</i> EX-1001, 1:42-2:6.) Ex. 1003, ¶ 76
7	A POSITA would have been motivated to make the above combination because Forsyth explicitly motivates the combination. (EX-1003, ¶¶77-81.) Forsyth stresses the benefits of group objects noting its "invention is founded on the insight of providing an object which defines solely the identities of members of a group." (EX-1006, 2:24-27.) As such, "a group created in one application (e.g. for text based instant messaging) can immediately be used in other	A POSITA would have been motivated to make the above combination because Forsyth explicitly motivates the combination. Forsyth stresses the benefits of group objects noting that its "invention is founded on the insight of providing an object which defines solely the identities of members of a group" and "as such, it is application (and hence also content) independent." (Forsyth, 2:24-27.) "This means that a group created in one application (e.g. for text

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	applications (e.g. a diary/agenda application could use that same group as the recipient list for an invitation to a meeting).” (EX-1006, 2:27-37.) 544 Petition, p. 13	based instant messaging) can immediately be used in other applications (e.g. a diary/agenda application could use that same group as the recipient list for an invitation to a meeting).” (Forsyth, 2:27-32.) Ex. 1003, ¶ 77
8	Finally, the combination is nothing more than the application of a known technique (Forsyth’s group objects, features and functions) to a known method/product (Randall’s Forums service implemented with extensible database infrastructure) which was ready for further improvement. (EX-1003, ¶80.) A POSITA would have had a reasonable expectation of success in the combination and the results of the combination would have been predictable because both references are directed to the same service, Forums; are based on devices using Symbian OS; and use features and functionality associated with Symbian. (EX-1003, ¶81.) The Symbian operating system was well-known and Symbian offered many technical developer resources prior to the earliest possible priority date of the ’578 patent. (See, e.g., EX-1017; EX-1012, EX-1016, EX-1018.) 544 Petition, p. 15	Finally, the combination is nothing more than the application of a known technique (Forsyth’s group objects, features and functions) to a known method/product (Randall’s Forums service implemented with extensible database infrastructure) which was ready for further improvement. A POSITA would have had a reasonable expectation of success in the combination and the results of the combination would have been predictable because both references are directed to the same service, Forums, are based on devices using the Symbian OS and use features and functionality associated with Symbian. The Symbian operating system was well-known and Symbian offered many technical developer resources prior to the earliest possible priority date of the ’578 patent. (See, e.g., EX-1017; Allin, 4-6, 229-31; Jipping, 11-14.) Ex. 1003, ¶¶ 80-81
9	Should PO contend “<i>memory</i>” of the “<i>processing element</i>” must store instructions executed by the processor,	Should PO contend “<i>memory</i>” of the “<i>processing element</i>” must store

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	such memory would have been obvious, if not inherent in Randall and Forsyth which both teach software running on the server. (§V.F.) Because the software/applications executing on a processor are stored in memory and also access information stored in memory, a POSITA would have understood Randall and Forsyth further disclose or suggest the “<i>processor [is] coupled to a memory.</i>” (EX-1003, ¶88.) 544 Petition, pp. 18-19	instructions executed by the processor, such memory would have been obvious, if not inherent in Randall and Forsyth which both teach software running on the server. Because the software/applications executing on a processor are stored in memory and also access information stored in memory, a POSITA would have understood Randall and Forsyth further disclose or suggest the “<i>processor [is] coupled to a memory.</i>” Ex. 1003, ¶ 88
10	Each individual Forum (and its supporting network infrastructure) is “computer program-based medium for transferring information”, meeting PO’s MDT-Meta-Litigation construction and Meta’s Meta-MDT-IPR construction. (EX-1003, ¶99.) A Forum is also a “component of a mobile site [Forums running on the server] configured to permit a wide variety of mobile devices to send and receive content over a wireless network”, meeting PO’s Meta-MDT-IPR construction. (<i>Id.</i>) 544 Petition, pp. 20-21	Each individual Forum (and its supporting network infrastructure) is a “a computer program-based medium for transferring information”, meeting PO’s MDT-Meta-Litigation construction and Meta’s Meta-MDT-IPR construction. A Forum is also a “component of a mobile site [Forums running on the server] configured to permit a wide variety of mobile devices to send and receive content over a wireless network”, meeting PO’s Meta-MDT-IPR construction. The combination of Randall and Forsyth therefore discloses “<i>application-based information channel.</i>” Ex. 1003, ¶ 99
11	For example, Forsyth describes an exemplary Forum (Scenario 4) where “[p]eople post MP3s of the kind of music played at each club.” (Forsyth, 9:21-22.) While not explicit, a POSITA would have understood the	Forsyth further describes an exemplary Forum (Scenario 4) where “[p]eople post MP3s of the kind of music played at each club.” (Forsyth, 9:21-22.) While not explicit, a POSITA would have understood the shared track/MP3

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	shared track/MP3 (music file) is captured in some manner on the user’s device, either by recording or via data transfer from another device, so that it can be uploaded to the server. (EX-1003, ¶¶118-120.) 544 Petition, p. 25	(music file) is captured in some manner on the user’s device, either by recording or via data transfer from another device, so that it can be uploaded to the server. Ex. 1003, ¶ 118
12	As described below, through the wireless network interface, the mobile device sends protocol messages to the server containing new Forums content messages to be posted to the Forum (<i>see, e.g.,</i> Forsyth, 6:1-22) and messages associated with uploading, storing, and managing content in the user’s profile (<i>see, e.g.,</i> Randall, 66:1-70:16.) And, when GSM-WAP is used for the network interface, the server provides webpages for display to the user via a browser or local Forums application running on the mobile device to, e.g., create a Forum and manage the user’s profile. (EX-1003, ¶127.) Thus, the interface to the wireless network “<i>permit[s] designation of at least one content item, via a mobile device, for insertion into an application-based information channel.</i>” (EX-1003, ¶¶267-72.) 544 Petition, pp. 27-28	Through the wireless network communication interface, the mobile device sends protocol messages to the server containing new Forums content messages to be posted to the Forum via the Forum server (<i>See, e.g.,</i> Forsyth, 6:1-14) and messages associated with uploading, storing, and managing content in the user’s profile (<i>See, e.g.,</i> Randall, 8:26-28.) I describe each of these further below. And, as I described in §IV.A.1.a, when GSM-WAP is used for the network interface, the server provides webpage for display to the user via a browser or local Forums application running on the mobile device for both creating a Forum and managing the user’s profile. Thus, the interface to the wireless network “<i>permit[s] designation of at least one content item, via a mobile device, for insertion into an application-based information channel.</i>” Ex. 1003, ¶ 127
13	Within Forums, a user has the ability to create an individual Forum opened to members of a specified group (Private Forum) or to all (Public	Within Forums, a user has the ability to create an individual Forum open to members of a specified group (a Private Forum) or to the public (a

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	Forum). (EX-1006, Appendix 1, 13:60-18:18; EX-1005, 24:13-17.) 544 Petition, p. 28	Public Forum). (Forsyth, Appendix 1, 13:60-18:18; Randall, 24:13-17.) Ex. 1003, ¶ 129
14	To create a Forum, a user interface is provided permitting the user to name the Forum, designate members, and designate initial content for the Forum. This is illustrated by Forsyth’s “group-based text messaging” Scenario. In this example, the “New Forum” user interface is displayed to the user. (Forsyth, Figure 4 (below).) Through this user interface, the user designates participants, Forum name, and initial content (e.g., text “Jamie Oliver is a culinary god!!”). (Forsyth, 5:50-67.) 544 Petition, p. 28	To create a Forum, the Forums service displays a user interface permitting the user to name the Forum, designate members, and designate initial content for the Forum. This is illustrated by Forsyth’s “group-based text messaging” (Scenario 1). In this example, the “New Forum” user interface is displayed to the user as shown in Figure 4 (below). Through this user interface, the user “has to select whom he wishes to invite.” (Forsyth, 5:50-51.) The user interface also permits the user to name the Forum (“Naked Chef”) and post initial content (text – “Jamie Oliver is a culinary god!!”). (Forsyth, 5:64-67.) Ex. 1003, ¶ 130
15	Although Scenario 1 describes the initial Forums message content as text only, both Randall and Forsyth describe sharing other types of content in a Forum as discussed below. (EX-1003, ¶132.) Thus, the New Forum user interface “<i>permit[s] designation of at least one content item, via a mobile device, for insertion into an application-based information channel [newly created Forum].</i>” (EX-1003, ¶¶128-132.) Randall and Forsyth both disclose or suggest to a POSITA the user interfaces displayed on the mobile	Although Scenario 1 describes the initial Forums message content as text only, both Randall and Forsyth describe sharing other types of content including photos/images, music/audio files, graphics, documents, data, etc. in a Forum, as I discuss in more detail below. Thus, this New Forum user interface “<i>permit[s] designation of at least one content item, via a mobile device, for insertion into an application-based information channel [newly created Forum].</i>” Randall and Forsyth both disclose, or at a minimum suggest, to a POSITA

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	device are provided by the Forums server. (EX-1003, ¶¶133-138.) As described by Randall, Forums “acts in effect like a fully personalized web portal” (Randall, 13:22-24.) Forums establishes “web portals” (websites) for users of wireless devices through the use of “standard data transports such as WAP or http for data access” to the server. (Randall, 45:14-15.) 544 Petition, pp. 29-30	that the Forums user interfaces displayed on the mobile device are provided by the Forums server. As described by Randall, the Symbian Forums infrastructure, illustrated in Randall’s Figure 4, “acts in effect like a fully personalized web portal, yet with the information links not consolidated in one general area, but instead distributed to the domains in which they are most likely to be relevant to a user.” (Randall, 13:22-24.) Forums establishes “web portals” (websites) for users of wireless devices through the use of “standard data transports such as WAP or http for data access” to the server (Randall, 45:14-15) and through the use of Randall’s ADS naming scheme which uses web server addresses. Ex. 1003, ¶¶ 132-133
16	Randall’s ADS naming convention further underscores that Forums are designed to be mobile websites. In Randall, a “wireless information device (as well as web browsers) can access an entity’s database by sending to the server an unchanging pointer or key (an ‘ADS Number’) which is unique to that entity.” (Randall, 9:13-15.) Randall’s ADS number is “an address on a web server—for example www.indirect.com/Alice” which “is in effect a pointer to entity specific data held on the web server”. (Randall, 64:25-28.) 544 Petition, p. 30	Randall’s naming convention further underscores that Forums are designed to be mobile websites. Randall teaches that a “wireless information device (as well as web browsers) can access an entity’s database by sending to the server an unchanging pointer or key (an ‘ADS Number’) which is unique to that entity.” (Randall, 9:13-15.) Randall’s “ADS numbers are typically constructed using text strings and can be though[t] of as defining a namespace.” (Randall, 9:17-18.) The ADS number “in one implementation [is] an address on a web server—for example www.indirect.com/Alice.” (Randall, 64:25-26.)

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		Ex. 1003, ¶ 135
17	Indeed, Forsyth confirms an individual Forum “<i>is accessible via a mobile website</i>”, explaining “Forums facilitates the situation where, to a degree, the other members of a group are ‘always there’ for a user” including “ensuring other interfaces—e.g., via the Web and PCs, and possibly via normal phones—are available.” (EX-1006, 11:23-31.) 544 Petition, p. 30	Forsyth confirms that Forums user interfaces are provided by the server via, e.g., webpages, explaining “Forums facilitates the situation where, to a degree, the other members of a group are ‘always there’ for a user” including “ensuring other interfaces—e.g., via the Web and PCs, and possibly via normal phones—are available.” (Forsyth, 11:23-31.) Ex. 1003, ¶ 137
18	Although Randall illustrates the database as a standalone server, a POSITA would have understood and been motivated to implement database functionality on the Forums server both for ease of maintenance, and to reduce equipment costs. (EX-1003, ¶141.) 544 Petition, p. 33	Although Randall illustrates the database as a standalone server, a POSITA would have understood and been motivated to implement database functionality on the Forums server both for ease of maintenance, and to reduce equipment costs. Ex. 1003, ¶ 141
19	By associating stored content with a group (e.g., Forum), the user designates the content item “<i>for insertion</i>” into the Forum. As Randall explains, after a group is designated as having access rights, the information is provided when a group member “contacts the server” or the information “will be pushed to” a member’s device “if technology allows.” (EX-1005, 68:28-30; <i>see also</i> EX-1006, 7:34-38; EX-1003, ¶147.) 544 Petition, p. 35	When a user associates stored content with a group (e.g, Forum), the user identifies the Forum into which the content is designated “<i>for insertion.</i>” As Randall explains, after a group or individual is designated as having access rights, the information can be provided when the individual or a member of the group “contacts the server” or the information “will be pushed to” member’s devices “if technology allows.” (Randall, 68:28-30.)

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		Ex. 1003, ¶ 147
20	For example, through the Forum Reply user interface displayed in Figure 9 (below), a user can enter content and designate that content “for insertion” into the Forum by clicking on “reply.” (Forsyth, 6:54-55.) A new message is then “posted to the Forum” when the mobile device sends the Forums message to the server. (<i>See</i> §V.B.3-4.) As discussed above, the Forum Reply user interface displayed to the user is provided by the server, e.g., via a webpage downloaded by the server. (EX-1003, ¶151.) 544 Petition, p. 36	For example, through the Forum Reply user interface displayed in Figure 9 (below), a user can enter content and designate that content “for insertion” into the Forum by clicking on “reply.” (Forsyth, 6:54-55.) A new message is then “posted to the Forum” when the mobile device sends the Forums message to the server. As I discussed above, the user interface displayed to the user is provided by the server, e.g., via a webpage downloaded by the server and converted by the mobile device for display to the user. Ex. 1003, ¶ 151
21	Both Randall and Forsyth disclose content captured at the mobile device is to be inserted into a Forum either via a Forums message posted to a Forum or via designation via content management. (EX-1003, ¶¶152-155.) 544 Petition, p. 37	Both Randall and Forsyth disclose that content captured at the mobile device is to be inserted into a Forum either via a Forums message posted to the Forum or via designation via content management. Ex. 1003, ¶ 152
22	For example, Forsyth describes several examples of Forums where users post “photos” including “Discussion of Photos” (Scenario 2) and “Digital Memento from a User’s Birthday” (Scenario 4). For example, in Scenario 2 after the group is created and an initial photo shared, “[s]ome people post their own photos back.” (Forsyth, 7:41-42.) And in Scenario 4, Forum members “post MP3s of the kind of music played at each club, and links to the club’s pages” (Forsyth, 9:21-24),	Captured Photo: Forsyth describes several examples of Forums where users post “photos” including “Discussion of Photos” (Scenario 2) and “Digital Memento from a User’s Birthday” (Scenario 4). For example, in Scenario 2 after the group is created and an initial photo shared, “[s]ome people post their own photos back.” (Forsyth, 7:41-42.) And in Scenario 4, Forum members “post MP3s of the kind of music played at each club, and links to the club’s pages” (Forsyth,

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	“photos” (Forsyth, 9:29), and even “the bar bill” (Forsyth, 9:30). 544 Petition, p. 37	9:21-24), “photos” (Forsyth, 9:29), and even “the bar bill” (Forsyth, 9:30). Ex. 1003, ¶ 153
23	The scenarios and examples provided by Forsyth and Randall demonstrate a “<i>messaging action</i>” initiated by the user—e.g., posting/sending a message containing captured content to the Forum. For example, in Forsyth’s Scenario 1, when the “Naked Chef” Forum is created, the user sends an initial message to the message server. (<i>See</i> EX-1006, 6:1-9.) Subsequent responses “are of the form that the new message is sent to the server.” (EX-1006, 6:18-22.) 544 Petition, p. 38	The scenarios and examples provided by Randall and Forsyth demonstrate a “<i>messaging action</i>” initiated by the user—e.g., the posting/sending of a message containing captured content to the Forum. For example, in the “group based text messaging” (Scenario 1) of Forsyth, when the “Naked Chef” Forum is created, the mobile device sends an initial message to the message server including the initial Forums message with its content (e.g., text, image, audio file, etc) entered via the user interface. (<i>See</i> Forsyth, 6:1-9.) Subsequent responses “are of the form that the new message is sent to the server.” (Forsyth, 6:18-22.) Ex. 1003, ¶ 161
24	The content and the information associated with a wireless networking functionality are provided to the server and integrated as an entry in a Forum (“<i>application-based information channel</i>”). Forums achieves this integration of content and information in part through use of a single communication object associated with a Forum. (Forsyth, 4:19-26, 7:6-8.) 544 Petition, p. 40	The content and the information associated with a wireless networking functionality are provided to the server and inserted into Forum. Forums achieves this integration of content and information in part through use of a single communication object associated with a Forum. (Forsyth, 4:19-20; see also 4:20-26, 7:6-8.) Ex. 1003, ¶ 170
25	When new messages are sent to the server, the server “forwards the increment to all the people on the	When new messages are sent to the server, the server “forwards the increment to all the people on the

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	current (server-maintained) address list.” (Forsyth, 6:1-22.) As discussed above, the sender name and Forum name are included in the Forums message encapsulated in the protocol message. (Forsyth, 6:36-40.) The server integrates this “<i>information associated with at least one networking functionality</i>” (e.g., sender/poster identity, Forum name, date/time) with the “<i>content item</i>” (e.g., photo/image, music/audio file, graphic, and/or text, etc.) “<i>to generate</i>” a “<i>integrated content item</i>” (entry) and inserts this “<i>integrated content item</i>” into the message/communication object for the Forum. (EX-1003, ¶¶170-72) The generation of the “<i>integrated content item</i>” is illustrated through the user interface displayed to the user containing the messages/discussions posted/published to the Forum. (Forsyth, Figure 7 (below).) Through this user interface, “the user is shown the messages posted to that Forum.” (Forsyth, 6:38-40.) “Messages appear in date order, i.e. newest messages appear at the bottom.” (Forsyth, 6:40-42.) As shown, captured content (message; “No way!”) and at least a portion of the determined information (poster identity (e.g., Lucy) and date/time (Jan 8th 10:30 am)) is presented as a single “<i>integrated content item</i>” (entry) and as shown, “<i>integrated content items</i>” are	current (server-maintained) address list.” (Forsyth, 6:1-22.) As discussed above, the sender name and Forum name are included in the Forums message encapsulated in the protocol message. (Forsyth, 6:36-40.) The server integrates the “<i>information associated with at least one networking functionality</i>” (e.g., sender/poster identity, Forum name, date/time) with the “<i>content item</i>” (e.g., photo/image, music/audio file, graphic, and/or text, etc.) “<i>to generate</i>” a “<i>integrated content item</i>” (entry) and inserts this “<i>integrated content item</i>” (entry) into the message/communication object for the Forum. The generation of the “<i>integrated content item</i>” is illustrated through the user interface displayed to the user containing the messages/discussions posted/published to the Forum. (Forsyth, Figure 7 (below).) Through this user interface, “the user is shown the messages posted to that Forum.” (Forsyth, 6:38-40.) “Messages appear in date order, i.e. newest messages appear at the bottom.” (Forsyth, 6:40-42.) As shown, captured content (message; “No way!”) and at least a portion of the determined information (poster identity (e.g., Lucy) and date/time (Jan 8th 10:30 am)) is presented as a single “<i>integrated content item</i>” and as shown, “<i>integrated content items</i>” are separated on the screen.

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	separated on the screen. (EX-1003, ¶172.) 544 Petition, pp. 40-41	Ex. 1003, ¶¶ 171-172
26	In Forums, the server “handle[s] all aspects of storing and forwarding messages to the intended recipients.” (Forsyth, 3:20-22.) For example, in the group based messaging Scenario, the Forums server “forwards a copy of the [initial Forums] message to each of the people on the address list.” (Forsyth, 6:9-14.) And, when new messages are sent to the server, the server “forwards the increment to all the people on the current (server-maintained) address list.” (Forsyth, 6:1-22.) Thus, the server “<i>insert[s] the at least one integrated content item into the application-based information channel [individual Forum].</i>” Forums provides a user interface that displays the messages/discussions posted/published to a Forum and through this interface “<i>share[s] access to a plurality of content items including the at least one integrated content item.</i>” (EX-1003, ¶176.) Forsyth’s Figure 7 (below) is an example of this user interface (Naked Chef) associated with the Naked Chef Forum. The user interface presented to the Forum members that displays posted messages is “<i>a second interface</i>” provided by the Forum (“<i>the application-based information channel</i>”). (EX-1003, ¶176.)	A Symbian Forums server “handle[s] all aspects of storing and forwarding messages to the intended recipients.” (Forsyth, 3:20-22.) For example, in the group based messaging Scenario, Forsyth describes that the Forums server “forwards a copy of the [initial Forums] message to each of the people on the address list, along with an abstracted version of the address list.” (Forsyth, 6:9-14.) And, when new messages are sent to the server for posting/publishing within the Forum, the server “forwards the increment to all the people on the current (server-maintained) address list.” (Forsyth, 6:1-22.) Thus, the server “<i>insert[s] the at least one integrated content item into the application-based information channel [individual Forum].</i>” Forums provides a user interface within each Forum that displays the messages/discussions posted/published to the Forum (“<i>application-based information channel</i>”) and through this interface “<i>share[s] access to a plurality of content items including the at least one integrated content item.</i>” Forsyth’s Figure 7, depicted again below, is an example of this user interface associated with the Naked Chef Forum. The user interface presented to the Forum members to display posted messages is “<i>a second</i>

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	[image omitted] Forums—Forsyth, Figure 7 As discussed in §V.B.2.b.(3) the Randall-Forsyth combination teaches or suggests these user interface pages are provided from the server e.g., via a website downloaded. Because a Forum has multiple members, the user interface (e.g., webpage) is provided to each Forum member. Thus, the Randall-Forsyth combination discloses or suggests “<i>the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.</i>” (EX-1003, ¶177.) 544 Petition, pp. 43-44	<i>interface.</i>” Because this interface is provided within a Forum, the interface is provided by “<i>the application-based information.</i>” [image omitted] Forums—Forsyth, Figure 7 As I discussed in §IV.B.4.a in my analysis of the “<i>providing a first interface</i>” limitation, the combination of Randall and Forsyth teaches or at least suggests these user interface pages are provided, e.g., via a website downloaded from the server. Because a Forum has multiple members, the user interface (e.g., webpage) is provided by the Forum to each Forum member. Thus, the combination of Randall and Forsyth discloses or at least suggests “<i>the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.</i>” Ex. 1003, ¶¶ 175-177
27	The Forums infrastructure, illustrated below, includes “<i>a plurality of servers</i>”: “internet servers” hosting individual Private and Public Forums (as enhanced by Forsyth) and “internet servers” hosting extensible databases (as taught by Randall). (Randall, 7:16-19.) As shown, wireless devices access these servers/databases via the wireless network and non-mobile	The Symbian Forums infrastructure, illustrated below, includes “<i>a plurality of servers</i>”: “internet servers” hosting individual Private and Public Forums (as enhanced by Forsyth) and “internet servers” hosting extensible databases (as taught by Randall). (Randall, 7:16-19.) As shown, wireless devices access these servers/databases via the wireless network and non-mobile

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	devices access these servers via Internet. (EX-1003, ¶185.) A POSITA would have been motivated to implement the functionality associated with providing Forums and the functionality of hosting a database on a single server to obtain, e.g., the benefits of more efficient maintenance as well as cost savings of reduced amount of network equipment. (EX-1003, ¶185.) Therefore, one of these plurality of servers, e.g., the server hosting the Private Forum and the user extensible database, is the apparatus described above in §V.B.1.b and one or more servers hosts other forums (e.g., Public Forum server). 544 Petition, p. 45	devices access these servers via Internet respectively. That is, this “plurality of servers” is “configured to communicate over a network.” As I noted in §IV.A.3, a POSITA would have been motivated, e.g., to implement the functionality associated with providing Forums and the functionality of hosting a database on a single server to obtain the benefits of more efficient maintenance and cost savings of reduced amount of network equipment. Therefore, one of these plurality of servers, e.g., hosting the Private Forums and the user extensible database, is the apparatus described above in §IV.B.2 in my analysis of claim 9. Other servers are also provided, e.g., to host other forums (e.g., the Public Forum server). Ex. 1003, ¶ 185
28	Independent claims 21 and 22 substantially overlap with server-side claim 1 and add nothing more than what was already set forth in at least claim 12. Similarly, independent claim 22 recites 3 limitations [22C], [22E], and [22F] substantially identical to limitations [21B]-[21D] and to a portion of limitation [12A] (“<i>the at least one content item comprising media data captured by the mobile device</i>”), [12C] and [12D]. Limitation [22D] is substantially the same as [12B]. Additionally, the combination discloses the “<i>accessing</i>” [22A] and “<i>providing at least one content item to at least one server</i>” [22B] for the same	Independent claims 21 and 22 substantially overlap with server-side claim 1 and add nothing more than what was already set forth in at least claim 12. Similarly, independent claim 22 recites 3 limitations [22C], [22E], and [22F] substantially identical to limitations [21B], [21C], and [21D] and to a portion of limitation [12A] (“<i>the at least one content item comprising media data captured by the mobile device</i>”), [12C] and [12D]. And limitation [22D] is substantially the same as limitation [12B]. Additionally, the combination discloses the “<i>accessing</i>” [22A] and “<i>providing at least one content item to</i>

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	reasons discussed in §V.D.4 for the “<i>designating</i>” limitation of claim 12. Accordingly, the Randall-Forsyth combination discloses claims 21 and 22 for the reasons discussed above in §§V.B/D. (EX-1003, ¶212.) 544 Petition, pp. 49-50	<i>at least one server</i>” [22B] for the same reasons discussed in §XX for the “<i>designating</i>” limitation of claim 12. Accordingly, the combination of Randall and Forsyth discloses each limitation in claims 21 and 22 for the reasons set forth above in §IV.B. Ex. 1003, ¶ 212
29	Neither Randall nor Forsyth explicitly states that the client-side program or server-side program is stored in a “<i>non-transitory computer-readable storage medium</i>.” Memory or another similar computer readable medium storing the software to be executed on the processor would necessarily be included in the server and mobile device. (EX-1003, ¶¶179, 206, <i>citing</i> EX-1026, 29-30, 37.) 544 Petition, p. 51	Neither Randall nor Forsyth explicitly states that the client-side program is stored of a “<i>non-transitory computer-readable storage medium</i>.” Memory or another similar computer readable medium storing the software to be executed on the processor would necessarily be included in the mobile device, as I discussed above for the server. (<i>See</i> Silberschatz, 29-30, 37.) Ex. 1003, ¶ 206
30	The user interface provided to a user (“<i>first interface</i>”) includes a user-activatable control mechanism (drop down menu) for designating content for insertion into a Forum. For example, in the “group based text messaging” Scenario 1, a user can “make a context menu appear” within the Forum, allowing the user to “carry out additional tasks related to the Forum.” (EX-1006, 6:44-49, Figure 8 (below-left).) “If a user selects ‘Forum Reply’ then a new message is posted to the Forum” including posting a response. (EX-1006, 6:54-56; Figure 9.)	The user interface provided to a user (“<i>first interface</i>”) provides user-activatable control mechanism (drop down menu of available actions) allowing for the designation of content to integrate into a Forum. For example, as discussed in §IV.B.1.d.(2), in Forsyth’s “group based text messaging” Scenario 1, a Forum member is “shown the messages posted to that Forum” on the Forum page (Figure 7 [below-top]). (Forsyth, 6:38-40.) Through this interface, the user can “make a context menu appear” which allows the user to “carry out additional tasks related to the Forum.” (Forsyth, 6:44-49, Figure

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	544 Petition, p. 52	8 (below-left).) “If a user selects ‘Forum Reply’ then a new message is posted to the Forum” including posting a response. (Forsyth, 6:54-56; Figure 9 (below-right).) Ex. 1003, ¶ 215
31	The network infrastructure implementing Forums includes “internet servers.” (Randall, 7:16-19.) These servers “use[] standard data transports such as WAP or http for data access.” (Randall, 45:14-15.) That is, as illustrated in Figure 4 below, Randall uses “existing transports” (communication means) for client-server communication such as “WAP to access the services on the server side” and “standard IP formats such as MIME, SMTP and HTTP” to “enable compatibility with Internet Messaging systems.” (Randall, 58:23-27.) As stressed by Randall, “the Internet and its servers can be used by a mobile device to deliver enchanting services that far surpass the present PC-Internet model.” (Randall, 46:8-10.) [image omitted] Symbian Forums—Randall, Figure 4 The Randall-Forsyth combination also discloses or suggests the server includes a “<i>network interface</i>” in order to access the Internet via HTTP as taught by Randall. (EX-1003, ¶222.) Moreover, the general architecture of a server (processor coupled to memory	Randall explains that the Symbian infrastructure implementing Forums includes “internet servers.” (Randall, 7:16-19.) The servers used in the infrastructure “embrace[] existing standards and initiatives” and “use[] standard data transports such as WAP or http for data access.” (Randall, 45:14-15.) That is, as illustrated in Figure 4 below, Randall uses “existing transports” (communication means) for client-server communication such as “WAP to access the services on the server side” and “standard IP formats such as MIME, SMTP and HTTP” to “enable compatibility with Internet Messaging systems.” (Randall, 58:23-27.) As stressed by Randall, “the Internet and its servers can be used by a mobile device to deliver enchanting services that far surpass the present PC-Internet model.” (Randall, 46:8-10.) [image omitted] Symbian Forums—Randall, Figure 4 Randall and Forsyth each discloses or at least suggests to a POSITA the server includes “<i>network interface</i>” for communication over the Internet via

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	and a network interface) was within the general knowledge of a POSITA by June 2002. (EX-1003, ¶¶194-198.) 544 Petition, pp. 53-54	protocols such as HTTP. Moreover, it would have been within the general knowledge of a POSITA that a server includes “<i>a network interface.</i>” Ex. 1003, ¶¶ 221-222
32	Pelkey’s Figure 1B (below) illustrates a network architecture “in which the messaging service [] may be implemented.” (EX-1007, 2:58-60.) The network “includes game systems 10 connected via communications circuits (e.g., modems, network interfaces, etc.) to a wide area network.” (EX-1007, 2:60-62.) A messaging service server may be included within the network server or as a standalone component. (EX-1007, 3:9-31; EX-1003, ¶238.) 544 Petition, p. 56	Figure 1B of Pelkey, reproduced below, illustrates a network “in which the messaging service described herein may be implemented.” (Pelkey, 2:58-60.) The network “includes game systems 10 connected via communications circuits (e.g., modems, network interfaces, etc.) to a wide area network.” (Pelkey, 2:60-62.) A network server 14 “stores games that may be played by users of the network.” (Pelkey, 3:4-5.) A messaging server may be included within the network server or as a standalone component. (Pelkey, 3:9-31.) Ex. 1003, ¶ 238
33	A POSITA would have been motivated to combine Eck’s teachings regarding PagerWorld with the network and message server architecture taught in Pelkey. (EX-1003, ¶¶244-48.) Pelkey and Eck both disclose devices in the same field as the ’578 patent—“network-based communication systems.” (EX-1001, 1:26-27; EX-1007, 1:37-42; EX-1008, Abstract.) Pelkey and Eck are also reasonably pertinent to problems addressed by the ’578 patent, namely “optimizing” the sharing of information content on	A POSITA would have been motivated to combine Eck’s teachings regarding PagerWorld with the network and message server architecture taught in Pelkey. Pelkey and Eck both disclose an enhanced version of the Nintendo GameBoy® that is in the same field as the ’578 patent—“network-based communication systems.” (See EX-1001, 1:26-28; Pelkey, 1:37-42; Eck, Abstract.) Pelkey and Eck are also reasonably pertinent to problems addressed by the ’578 patent, namely

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	mobile devices. (EX-1001, 1:51-55; EX-1003, ¶245.) Eck discloses PagerWorld features, including the ability to share photos and sound clips and exchange messages with other players. In the preferred embodiment, such information is exchanged using a “pager cartridge” where “message charges are generally based on the number of characters in the message.” (EX-1008, 16:57-60.) While Eck discloses its “invention” can be applied to other technologies like WAP (EX-1008, 25:17-20), it does not specifically disclose a client-server structure as taught in Pelkey. Pelkey discloses use of a network server and message server to facilitate game play and exchanging messages amongst users. A POSITA would be motivated to apply the network and message server architecture in Pelkey to Eck in order to avoid the charge-based system for exchanging messages and photos via pager cartridge in Eck. (EX-1003, ¶247.) In addition, a POSITA would be motivated to modify the “pager cartridge” in Eck as necessary to use PagerWorld in Pelkey given the disclosed benefits of PagerWorld including “exploration and adventure,” “chat and community interaction,” and “character growth.” (<i>Id.</i>; EX-1008, 10:13-19.) Notably, Pelkey does not describe any game play that includes in-game messaging	“optimizing” the sharing of information content on mobile devices. (<i>See, e.g.</i>, EX-1001, 1:50-55.) Eck discloses the features of a multi-player game, PagerWorld. Eck further discloses the ability to share photos and sound clips and exchange messages with other players. In the preferred embodiment, such information is exchanged using a “pager cartridge” where “message charges are generally based on the number of characters in the message.” (Eck, 16:57-60.) While Eck discloses that its “invention” can be applied to other technologies like WAP (Eck, 25:17-20), it does not specifically disclose a client-server structure as taught in Pelkey. Pelkey discloses the use of a network server and message server to facilitate game play and exchanging messages amongst users. But it does not specifically disclose the integration of messaging and sharing content like photos and sound clips with other users within its client-server environment. A POSITA would be motivated to apply the network and message server architecture in Pelkey to Eck in order to avoid the charge-based system for exchanging messages and photos via pager cartridge in Eck. In addition, a POSITA would be motivated to modify the “pager cartridge” in Eck as necessary to use PagerWorld in Pelkey given the

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	in conjunction with the aforementioned features. In addition, the combination is nothing more than the application of a known technique (Eck’s PagerWorld game) to a known method/product (Pelkey’s client-server based messaging server) which was ready for further improvement to achieve predictable results. Replacing the pager system infrastructure in Eck with the client-server architecture in Pelkey is the simple substitution of a one known element for another to achieve a predictable result (internet-based functionality). (EX-1003, ¶247.) A POSITA would have had a reasonable expectation of success in the combination and the results of the combination would have been predictable because both references are directed to the same product and activity (game play). (EX-1003, ¶248.) Both Pelkey and Eck disclose the desirability of combining messaging capabilities with game play in a portable gaming system. (EX-1007, 2:20-23; EX-1008, 10:32-44.) As explained below, the complimentary network architecture disclosed in Pelkey and Eck further demonstrates such a modification could be made with a reasonable expectation of success. (EX-1003, ¶248.) 544 Petition, pp. 59-61	disclosed benefits of PagerWorld including “exploration and adventure,” “chat and community interaction,” and “character growth.” (Eck, 10:13-19.) Notably, Pelkey does not describe any game play that includes in-game messaging in conjunction with the aforementioned features. In addition, the combination is nothing more than the application of a known technique (Eck’s PagerWorld game) to a known method/product (Pelkey’s client-server based messaging server) which was ready for further improvement to achieve predictable results. Replacing the pager system infrastructure in Eck with the client-server architecture in Pelkey is the simple substitution of a one known element for another to achieve a predictable result (internet-based functionality). As is using the PagerWorld “pager cartridge” in the Pelkey portable game machine. A POSITA would have had a reasonable expectation of success in the combination and the results of the combination would have been predictable because both references are directed to the same product and activity (game play). Both Pelkey and Eck disclose the desirability of combining messaging capabilities with game play in a portable gaming system. (Pelkey, 2:20-23; Eck, 10:32-44.) And as explained below, the complimentary network architecture disclosed in Pelkey and Eck further demonstrates that such a modification

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		could be made with a reasonable expectation of success. Ex. 1003, ¶¶ 244-248
34	Eck explains a pager cartridge “is provided for use with a game machine having a game program executing processing system including a microprocessor to execute a video game program and player controls operable by a player to generate video game control signals.” (Eck, 1:60-65; <i>see also</i> Pelkey, 6:44-46 (“program contained in cartridge 112 [] includes program code for a messaging service client”).) This arrangement is illustrated in Eck’s Figure 2 (below) showing the portable game machine with an inserted cartridge. This figure is identical to Pelkey’s Figure 4. [image omitted] Eck, Figure 2 Game machine 10 includes “central processing unit (CPU) 26 [misabeled as 25 in Fig. 2 above],” which further includes CPU core 30 [shaded blue] “that is connected to an internal read only memory (ROM) 32 and an internal random access memory (RAM) 34.” (Eck, 3:42-46.) Eck explains that “[i]nternal RAM 34 is used as a work memory of CPU core 30.” (Eck, 3:46-47.) For example, when executing a game program, “character data supplied from game cartridge 12 and the controller data	Eck explains that a cartridge including messaging functionality (e.g., a pager cartridge) “is provided for use with a game machine having a game program executing processing system including a microprocessor to execute a video game program and player controls operable by a player to generate video game control signals.” (Eck, 1:60-65; <i>see also</i> Pelkey, 6:44-46 (“program contained in cartridge 112 [] includes program code for a messaging service client”).) This arrangement is illustrated in Eck’s Figure 2 (below) showing the portable game machine with an inserted cartridge. I note this figure which is identical to Pelkey’s Figure 4. [image omitted] Eck, Figure 2 As shown above, the “game machine 10” includes “a central processing unit (CPU) 26 [misabeled as 25 in Fig. 2 above],” which “further includes a CPU core 30 [shaded blue] that is connected to an internal read only memory (ROM) 32 and an internal random access memory (RAM) 34.” (Eck, 3:42-46.) Eck explains that “[i]nternal RAM 34 is used as a work memory of CPU core 30.” (Eck, 3:46-47.) For example, when executing a

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	from operating keys 48a–48e, CPU 26 executes data processing and writes display data into a display RAM 52, using an extended RAM 50 when necessary.” (Eck, 4:46-50.) CPU 26 is the “<i>processor</i>”; ROM 50 and RAM 52 (shaded red) are “<i>memory</i>”; and as shown each of ROM and RAM is coupled to the processor. Should PO contend the recited “<i>memory</i>” in the “<i>processing element</i>” must store instructions executed by the “<i>processor</i>,” the Pelkey-Eck combination discloses this arrangement, as would any device running software. (EX-1003, ¶253.) The inserted cartridge includes ROM 42 which “contain[s] instructions” pertaining to, e.g., the messaging function. (See, e.g., Eck, 4:5-6, 7:7-12. When inserted, the “game machine circuitry [] access[es] information contained with ROM 42 (and read/write memory 46), which information controls the game machine ... under control of the ROM game program information.” (Eck, 4:9-20.) 544 Petition, pp. 62-64	game program, “character data supplied from game cartridge 12 and the controller data from operating keys 48a–48e, CPU 26 executes data processing and writes display data into a display RAM 52, using an extended RAM 50 when necessary” in accordance with the game program. (Eck, 4:46-50.) CPU 26 is the “<i>processor</i>”; ROM 50 and RAM 52 (shaded red) are “<i>memory</i>”; and as shown each of ROM and RAM is coupled to the processor. Should PO contend that the recited “<i>memory</i>” in the “<i>processing element</i>” must store instructions executed by the “<i>processor</i>,” I disagree, but the combination of Pelkey and Eck discloses this arrangement, as would any device running software. In the portable game machine illustrated above, the inserted cartridge includes ROM 42 which “contain[s] instructions” pertaining to, e.g., the messaging function. (See, e.g., Eck, 4:5-6, 7:7-12 (“[p]ager cartridge 100 includes a memory 145 for storing software used in the pager operations ... [i]t is of course possible to store the software for implementing at least some of these operations in the memory of game machine 10”).) When inserted, the “game machine circuitry [] access[es] information contained with ROM 42 (and read/write memory 46), which information controls the game machine ... under control of the ROM

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		game program information.” (Eck, 4:9-20.) Ex. 1003, ¶¶ 251-253
35	Eck discloses “a game machine is provided with ... digital camera circuitry configured to capture an image.” (Eck, 2:16-18.) For example, Eck discloses a pager cartridge, “is itself provided with a slot for receiving” another cartridge. (<i>See, e.g.</i>, Eck, 5:23-25.) One example of a “piggy-backed” cartridge is a “digital camera cartridge,” illustrated in Figure 14 (below): “thereby enabling game play or digital camera operations while pager cartridge 100 is attached to game machine 10.” (Eck, 22:14-20, 23:36-38.) [image omitted] Eck, Figure 14 The portable game machine having an inserted messaging cartridge and an inserted camera cartridge discloses the creation of at least one “<i>content item</i>.” (EX-1003, ¶258.) Eck’s digital camera cartridge “is usable to capture images, which images may then be transmitted to others via an operation using” the messaging cartridge into which the camera cartridge is inserted. (Eck, 23:38-41; <i>see also</i> Eck, 2:15-18 (“a game machine is provided with ... digital camera circuitry configured to capture an image”).) The “digital camera cartridge” may also be	Eck discloses “a game machine is provided with ... digital camera circuitry configured to capture an image.” (Eck, 2:16-18.) For example, Eck discloses that a messaging cartridge (e.g., pager cartridge), “is itself provided with a slot for receiving” another cartridge. (<i>See, e.g.</i>, Eck, 5:23-25.) One example of a “piggy-backed” cartridge is a “digital camera cartridge,” illustrated in Figure 14 (below): “pager cartridge 1000 itself includes a built-in cartridge slot to accept game cartridges or other accessories (such as read/write memory cartridges, a digital camera, etc.), thereby enabling game play or digital camera operations while pager cartridge 100 is attached to game machine 10.” (Eck, 22:14-20, 23:36-38 (“digital camera cartridge is also selectively insertable ... into the slot of another cartridge such as pager cartridge 100”).) [image omitted] Eck, Figure 14 The portable game machine having an inserted messaging cartridge and an inserted camera cartridge discloses the creation of at least one “<i>content item</i>.” Eck’s digital camera cartridge “is usable to capture images, which

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	“configured to capture sounds [and] these captured sounds may be used by game machine 10 and/or transmitted as a message using pager cartridge.” (Eck, 9:20-23.) 544 Petition, pp. 66-68	images may then be transmitted to others via an operation using” the messaging cartridge into which the camera cartridge is inserted. (Eck, 23:38-41; <i>see also</i> Eck, 2:15-18 (“a game machine is provided with ... digital camera circuitry configured to capture an image”).) The “digital camera cartridge” may also be “configured to capture sounds [and] these captured sounds may be used by game machine 10 and/or transmitted as a message using pager cartridge.” (Eck, 9:20-23.) Ex. 1003, ¶¶ 257-258
36	Eck discloses the Message Center screen (230) serves as a “<i>first interface</i>,” allowing users to designate content items such as messages for insertion into PagerWorld. (EX-1003, ¶261.) The interface enables users to read, compose, and send messages, with unread messages displayed in a window (232). Selecting a message takes users to the Read Message screen (250), where the content is displayed alongside the user’s persona character and the sender’s “handle,” facilitating the designation and management of shared content. (Eck, 11:26-40.) Such messages can include photos and sound clips obtained using the integrated digital camera. (Eck, 9:20-23 (“If the digital camera cartridge is configured to capture sounds, these captured sounds may be used by game machine 10 and/or	Eck discloses that the Message Center screen (230) serves as a “<i>first interface</i>,” allowing users to designate content items such as messages for insertion into PagerWorld. The interface enables users to read, compose, and send messages, with unread messages displayed in a window (232). Selecting a message takes users to the Read Message screen (250), where the content is displayed alongside the user’s persona character and the sender’s “handle,” facilitating the designation and management of shared content. (Eck, 11:26-40.) Such messages can include photos and sound clips obtained using the integrated digital camera. (Eck, 9:20-23.) (“If the digital camera cartridge is configured to capture sounds, these captured sounds may be used by game machine 10 and/or

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	transmitted as a message using pager cartridge 100.”.) Alternatively, the “<i>first interface</i>” is the “My Persona” screen depicted in Figure 8H (reproduced below). (EX-1003, ¶262.) [image omitted] Eck, Figure 8H “Here, a user may customize his/her persona character to his/her liking.” (Eck, 12:22-23.) As discussed elsewhere herein, “[t]t is even possible to customize the persona character using image data obtained with a digital camera cartridge.” (Eck, 12:38-40.) When a user customizes their persona character using a photo taken with the digital camera, or selects a photo or sound clip to include with a message, they are “<i>designating</i>” the photo for insertion into PagerWorld. (EX-1003, ¶263.) Also, the Pelkey-Eck combination discloses an “<i>application-based information channel</i>” under any of the constructions proposed by PO and Meta. (See EX-1003, ¶¶264-66.) Eck discloses that the messaging cartridge includes a memory “storing software used” in the messaging (e.g., pager) operations and “one or more video game programs that are executable by CPU 26 of game	transmitted as a message using pager cartridge 100.”) Alternatively, the “<i>first interface</i>” is the “My Persona” screen depicted in Figure 8H (reproduced below). [image omitted] Eck, Figure 8H “Here, a user may customize his/her persona character to his/her liking.” (Eck, 12:22-23.) As discussed elsewhere herein, “[t]t is even possible to customize the persona character using image data obtained with a digital camera cartridge.” (Eck, 12:38-40.) When a user customizes their persona character using a photo taken with the digital camera, or selects a photo or sound clip to include with a message, they are “<i>designating</i>” the photo for insertion into PagerWorld. Also, the combination of Pelkey and Eck discloses an “<i>application-based information channel</i>” under any of the constructions proposed by PO and Meta. Eck discloses that the messaging cartridge includes a memory “storing software used” in the messaging (e.g., pager) operations and “one or more video game programs that are executable by CPU 26 of game machine 10.” (Eck, 7:7-22.) In addition to messaging (e.g., paging

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	machine 10.” (Eck, 7:7-22.) The messaging cartridge “can be used in game playing” (Eck, 9:60-61) such as, “[i]nternet-based on-line” multi-player games like PagerWorld (Eck, 10:2-7.) 544 Petition, pp. 68-70	functions), the messaging cartridge “can be used in game playing.” (Eck, 9:60-61.) Ex. 1003, ¶¶ 261-265
37	While Eck uses the word “PagerWorld” in the title to reflect the communication means is paging, a POSITA would have understood that such a game is equally applicable when the communication means is another messaging type such as SMS or messaging via a WAP protocol. (EX-1003, ¶266.) PagerWorld includes client software in the portable game machine (client program) and corresponding software in the server (server program). (<i>See</i> Eck, 4:61-5:7, 9:40-59.) As such, PagerWorld is persistent—it remains in existence after individual users exit the world. PagerWorld is therefore a an “<i>application-based information channel</i>” under any proposed construction. (EX-1003, ¶266.) For example, PagerWorld is a “computer program-based medium for transferring information” (Patent Owner’s MTD-Meta-Litigation construction and Meta’s Meta-MDT-IPR construction) among members of the PagerWorld community. (<i>Id.</i>) PagerWorld is likewise a “virtual location at the content management site at which user-authored content may be added for transmission to the mobile web site” (Meta’s MDT-Meta-	Although Eck uses the word “PagerWorld” in the MUD title to reflect the communication means is paging, a POSITA would have understood that such a MUD is equally applicable when the communication means is another messaging type such as SMS or messaging via a WAP protocol. PagerWorld includes client software in the portable game machine (client program) and corresponding software in the server (server program). (<i>See</i> Eck, 4:61-5:7, 9:40-59.) As such, PagerWorld is persistent—it remains in existence after individual users exit the world. PagerWorld is therefore a an “<i>application-based information channel</i>” under any proposed construction. For example, PagerWorld is a “computer program-based medium for transferring information” (PO’s MDT-Meta-Litigation construction and Meta’s Meta-MDT-IPR construction) among members of the PagerWorld community. PagerWorld is likewise a “virtual location at the content management site at which user-authored content may be added for transmission to the mobile web site” (Meta’s MDT-Meta-Litigation

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	Litigation construction). (<i>Id.</i>) For example, the “Message Center” in PagerWorld is a “virtual location” to which user-authored content (messages) can be added for transmission to PagerWorld. Finally, PagerWorld includes “a component of a mobile site configured to permit a wide variety of mobile devices to send and receive content over a wireless network” (Patent Owner’s Meta-MDT-IPR construction). (<i>Id.</i>) The Pelkey-Eck combination discloses a “mobile device” under any construction for the reasons below. The Message Center, for example, is a “component” in PagerWorld that is configured to allow multiple mobile devices to send and receive content over a wireless network. (<i>Id.</i>) The Pelkey-Eck combination also discloses “<i>providing a first interface permitting designation of at least one content item via a mobile device.</i>” The network implementing the messaging service of Pelkey and Eck, illustrated in Pelkey’s Figure 1A (reproduced below), includes the game system (e.g., portable game machine) coupled via a network to a server. (Pelkey, 2:58-3:4.) The network server “provides the messaging service.” (Pelkey, 3:9-10.) The portable game machine transmits messages “with images and sound bytes to other pagers in the network.” (Eck, 16:42-45, 24:30-36, 2:15-23.)	construction). For example, the “Message Center” in PagerWorld is a “virtual location” to which user-authored content (messages) can be added for transmission to PagerWorld. Finally, PagerWorld includes “a component of a mobile site configured to permit a wide variety of mobile devices to send and receive content over a wireless network” (PO’s Meta-MDT-IPR construction). The combination of Pelkey and Eck discloses a “mobile device” under any construction for the reasons below. The Message Center, for example, is a “component” in PagerWorld that is configured to allow multiple mobile devices to send and receive content over a wireless network. The combination of Pelkey and Eck also discloses “<i>providing a first interface permitting designation of at least one content item via a mobile device.</i>” The network implementing the messaging service of Pelkey and Eck, illustrated in Pelkey’s Figure 1A (reproduced below), includes the game system (e.g., portable game machine) coupled via a network to a server. (Pelkey, 2:58-3:4.) The network server “provides the messaging service.” (Pelkey, 3:9-10.) The portable game machine transmits messages “with images and sound bytes to other pagers in the network using, for example, a digital camera cartridge in combination with a pager

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	This “image and sound data may be compressed/decompressed in accordance with well-known compression/decompression techniques to more effectively utilize the available bandwidth.” (Eck, 16:45-48.) The message may further include the sending user’s persona. (See Eck, 11:53-57, 12:36-38 (“Any time the user sends a message, his/her persona character appears alongside the message on the other user’s screen.”).) The image or sound byte is “<i>designated</i>” for insertion when it is selected by a user to be inserted into PagerWorld. Pelkey discloses that the server “suppl[ies] messages received from one logged-in player to another logged-in player.” (Pelkey, 17:1-5.) The message is thus provided via a “<i>first interface</i>” and as shown in the Figure below. (See, e.g., Eck. 2:15-18 (“a game machine is provided with radio circuitry configured to transmit messages”).) This is consistent with Eck’s use of GSM-SMS which requires a server to act as a message service centre for storing and forwarding messages from originators to recipients. (See §VI.A.1; EX-1003, ¶268.) Figure 1 below depicts a message from a portable game system being sent to the server. 544 Petition, pp. 70-72	cartridge.” (Eck, 16:42-45, 24:30-36, 2:15-23.) As explained by Eck, this “image and sound data may be compressed/decompressed in accordance with well-known compression/decompression techniques to more effectively utilize the available bandwidth.” (Eck, 16:45-48.) The message may further include the sending user’s persona as I discussed above. (See Eck, 11:53-57, 12:36-38 (“Any time the user sends a message, his/her persona character appears alongside the message on the other user’s screen.”).) The image or sound byte is “<i>designated</i>” for insertion when it is selected by a user to be inserted into PagerWorld. Pelkey discloses that the server “suppl[ies] messages received from one logged-in player to another logged-in player.” (Pelkey, 17:1-5.) The message is thus provided via a “<i>first interface</i>” and as shown in the Figure below. (See, e.g., Eck. 2:15-18 (“a game machine is provided with radio circuitry configured to transmit messages”).) This is consistent with Eck’s use of GSM-SMS which requires a server to act as a message service centre for storing and forwarding messages from originators to recipients. (See §IV.A.1.c.iii.) I illustrate this message flow in Pelkey’s Figure 1 below, showing a message from a portable game system being sent to the server. Ex. 1003, ¶¶ 266-268

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38	The server forwards the message received from the portable game device to the intended recipients (one or more (or all) messaging system users). (Eck, 9:46-49, 20:8-9.) (EX-1003, ¶269.) 544 Petition, p. 73	The server forwards the message received from the portable game device to the intended recipients (one or more (or all) messaging system users). Ex. 1003, ¶ 269
39	The “<i>content item</i>” is provided “<i>for insertion into an application-based information channel.</i>” (EX-1003, ¶271.) For example, when a message is forwarded to a recipient, the header information remains in the forwarded GSM-SMS message. This is again reflected in Eck’s Figure 8C (below-left) and Figure 8D (below-right). Figure 8C provides a list of unopened message and “[s]electing a message takes the user to a Read Message screen” shown in Figure 8D. (Eck, 11:26-32.) As shown in this figure, the message received at the user’s device includes the captured content and the determined information. Eck, Figure 8C (left), Figure 8D (right) Thus, the Pelkey-Eck combination discloses “<i>providing [at least a portion of] a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device.</i>” [1B]/[9B]. (EX-1003, ¶272.)	The “<i>content item</i>” is provided “<i>for insertion into an application-based information channel.</i>” For example, when a message is forwarded to a recipient, the header information remains in the forwarded GSM-SMS message. This is again reflected in Eck’s Figure 8C (below-left) and Figure 8D (below-right). Figure 8C provides a list of unopened message and “[s]electing a message takes the user to a Read Message screen” shown in Figure 8D. (Eck, 11:26-32.) As shown in this figure, the message received at the user’s device includes the captured content and the determined information. Eck, Figure 8C (left), Figure 8D (right) Thus, the combination of Pelkey and Eck discloses “<i>providing [at least a portion of] a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device.</i>” [1B]/[9B]. Ex. 1003, ¶¶ 271-272

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40	The '578 patent refers to “messaging, distributed collaboration, and location-based services” as examples of “wireless networking functionality.” (EX-1001, 1:36-41, 1:56-60.) Both Pelkey and Eck are directed to a messaging service provided using a portable game machine. Pelkey discloses a network “in which the messaging service” may be implemented. (Pelkey, 2:58-60.) The network “includes game systems 10 connected via communications circuits 12 (e.g., modems, network interfaces, etc.) to a wide area network 16 such as the Internet.” (Pelkey, 2:60-62.) Pelkey explains that game system 10 may be a video game system, such as the N64 video game system, connected to a television (<i>see</i> Pelkey, 3:38-48) or the portable game machine 110 (Pelkey, 4:55-57.). Below is Pelkey’s Figure 1A with the game system 10 on the left using the N64 game system illustrated in Pelkey’s Figure 2 and the game system 110 on the right using the portable game machine in Eck’s Figure 1B. The connection from the N64 game system to the server via the Internet as taught by Pelkey is also shown. [image omitted] Pelkey, Figure 1 Pelkey does not disclose details of the wireless network used to provide wireless messaging from the game	The '578 patent refers to “messaging, distributed collaboration, and location-based services” as examples of “wireless networking functionality.” (EX-1001, 1:36-41, 1:56-60.) Both Pelkey and Eck are directed to a messaging service provided using a portable game machine as I have discussed above. Pelkey discloses a network “in which the messaging service” may be implemented. (Pelkey, 2:58-60.) The network “includes game systems 10 connected via communications circuits 12 (e.g., modems, network interfaces, etc.) to a wide area network 16 such as the Internet.” (Pelkey, 2:60-62.) Pelkey explains that game system 10 may be a video game system, such as the N64 video game system, connected to a television. (<i>See</i> Pelkey, 3:38-48.) Game system 10 may also be the portable game machine 110. (Pelkey, 4:55-57.) I reproduced Pelkey’s Figure 1A below with the game system 10 on the left using the N64 game system illustrated in Pelkey’s Figure 2 and the game system 110 on the right using the portable game machine in Eck’s Figure 1B. I have also illustrated the connection from the N64 game system to the server via the Internet as taught by Pelkey. [image omitted] Pelkey, Figure 1 Pelkey does not disclose details of the

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	system to the server. (EX-1003, ¶276.) However, while Eck mentions use of a paging network for this functionality, Eck also explicitly discloses that its “present invention” may be “applied to other wireless technologies such a[s] GSM ... and WAP” (<i>Id.</i>; Eck, 25:17-20.) A POSITA would have been motivated to use either GSM-SMS or WAP for the messaging service, rather than paging, to obtain the enhanced features of those protocols. (EX-1003, ¶276.) Based on Eck’s disclosure, a POSITA would have understood that the portable game machine communicates with the server via messaging available via the GSM network (e.g., SMS) or messaging available via WAP. (<i>Id.</i>) GSM-SMS is “functionality implementable over a wireless network” and, as shown in Pelkey’s Figure 1, the GSM network is separate from the Internet connecting the N64 game system to the server. (EX-1003, ¶277.) Thus, the Pelkey-Eck combination discloses “<i>wireless networking functionality</i>” under both PO’s and Meta’s constructions from the Meta-MDT-IPR proceeding. (<i>Id.</i>) The WAP protocol stack transports data over GSM’s SMS. (<i>See</i> EX-1003, ¶276.) As discussed above, in a mobile originated message in SMS in a GSM network, the SMS message includes a header with data fields indicating control and content details for the	wireless network used to provide wireless messaging from the game system to the server. However, while Eck mentions use of a paging network for this functionality, Eck also explicitly discloses that its “present invention” may be “applied to other wireless technologies such a GSM (Global System for Mobile Communications) and WAP (Wireless Application Protocol).” (Eck, 25:17-20.) A POSITA would have been motivated to use either GSM-SMS or WAP for the messaging service, rather than paging, to obtain the enhanced features of those protocols. Based on Eck’s disclosure, a POSITA would have understood that the portable game machine communicates with the server via messaging available via the GSM network (e.g., SMS) or messaging available via WAP. GSM-SMS is “functionality implementable over a wireless network” and, as shown in Pelkey’s Figure 1, the GSM network is separate from the Internet connecting the N64 game system to the server. Thus, the combination of Pelkey and Eck discloses “<i>wireless networking functionality</i>” under both PO’s and Meta’s constructions from the Meta-MDT-IPR proceeding. As I discussed in §IV.A.1.c.ii, the WAP protocol stack transports data over GSM’s SMS. I provided an overview of a mobile originated

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	message. These fields, associated with the action of sending a message over the wireless network, are “<i>information associated with at least one wireless networking functionality of the mobile device.</i>” Thus, to send a message, the portable game machine determines this information to construct the GSM-SMS message. Figure 8C from Eck confirms that this information is determined. Specifically, this figure depicts the Message Center user interface screen presented to the player which shows a list of unread received messages with each message including the sending user’s name and associated persona image. Such information constitutes “<i>information associated with at least one wireless networking functionality of the mobile device.</i>” [image omitted] Eck, Figure 8C Such “<i>information associated with at least one wireless networking functionality of the mobile device</i>” is integrated, along with a “<i>content item</i>” to “<i>generate at least one integrated content item</i>” because such functionality facilitates transfer of the content item (message, image, sound) into PagerWorld (the application-based information channel). As in the case of Ground 1, sender information (“ADI,” “BOB,” “RAY,” or “KEN” of Fig. 8C or 8E) is integrated with the message-related information. (EX-1003, ¶280.)	message in SMS in a GSM network in my analysis of this limitation in Ground 1. As discussed in that section, the SMS message includes a header with data fields indicating control and content details for the message. For the reasons I discussed in §IV.B.4.b.i.a.(1), these fields, associated with the action of sending a message over the wireless network, are “<i>information associated with at least one wireless networking functionality of the mobile device.</i>” Thus, to send a message, the portable game machine determines this information to construct the GSM-SMS message. Figure 8C from Eck confirms that this information is determined. Specifically, this figure depicts the Message Center user interface screen presented to the player which shows a list of unread received messages with each message including the sending user’s name and associated persona image. Such information constitutes “<i>information associated with at least one wireless networking functionality of the mobile device.</i>” [image omitted] Eck, Figure 8C Such “<i>information associated with at least one wireless networking functionality of the mobile device</i>” is integrated, along with a “<i>content item</i>” to “<i>generate at least one integrated</i>

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	544 Petition, pp. 75-78	<i>content item</i>” because such functionality facilitates transfer of the content item (message, image, sound) into PagerWorld (the application-based information channel). As in the case of Ground 1, sender information (“ADI”, “BOB”, “RAY” or “KEN” of Fig. 8C or 8E) is integrated with the message-related information. Ex. 1003, ¶¶ 275-280
41	The main screen presents the user’s persona character, shown in Figure 8A as the character Mario, from the Mario Bros Nintendo game. (See Eck, 10:60-61.) The main screen also includes a set of icons including a book (“Pager Lingo”), an unopened envelope (“Message Center”), a globe (“PagerWorld”), and a face (“My Persona”). (Eck, 11:2-7.) [image omitted] Eck, Figure 7 (left), Figure 8A (right) PagerWorld facilitates interaction between a user of the mobile device and one or more additional users of PagerWorld in a number of ways. First, players “read and send messages from the main PagerWorld screen” which serves as “communication central.” (Eck, 10:32-34.) Second, players can select the PagerWorld icon 212 portal from the main screen and “step into a nation-wide or world-wide community of other PagerWorld players.” (Eck, 10:34-36.) Within the	The main screen presents the user’s persona character, shown in Figure 8A as the character Mario, from the Mario Bros Nintendo game. (See Eck, 10:60-61.) The main screen also includes a set of icons including a book (“Pager Lingo”), an unopened envelope (“Message Center”), a globe (“PagerWorld”), and a face (“My Persona”). (Eck, 11:2-7.) [image omitted] Eck, Figure 7 (left), Figure 8A (right) PagerWorld facilitates interaction between a user of the mobile device and one or more additional users of PagerWorld in a number of ways. First, players “read and send messages from the main PagerWorld screen” which serves as “communication central.” (Eck, 10:32-34.) Second, players can select the PagerWorld icon 212 portal from the main screen and “step into a nation-wide or world-wide community of other PagerWorld players.” (Eck, 10:34-36.) Within the

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	shared world, users interact by exchanging messages. 544 Petition, pp. 79-80	shared world, users interact by exchanging messages. Ex. 1003, ¶¶ 284-285
42	While in the Message Center (e.g., screen illustrated in Figure 8C (below-left)), user activates the quill icon 236 to navigate to the “Compose Message screen 290” of Figure 8F. (Eck, 11:37-38.) The “send to” window 292 “allows the user to choose to whom the message will be sent.” (Eck, 12:10-11.) A user can opt to send the message to an individual, to a pre-defined group (e.g., a buddy list), (Eck, 20:9), or as a broadcast to all messaging devices in PagerWorld, (Eck, 20:8, 9:46-49 (“messages from the paging system operator may be sent to all users in the paging system, to certain groups of users in the paging system or to a particular user in the paging system”)). For group messaging, Pelkey teaches that the messaging service client “allows the user to create a list (‘buddy list’) of other users (‘buddies’) with whom he/she wishes to remain in contact.” (Pelkey, 7:33-35.) The buddy list “is stored by the network server.” (Pelkey, 7:35-36.) In the Pelkey-Eck combination, the PagerWorld user can identify a “buddy list” in the “send to” window to send a “carbon copy” of the message. 544 Petition, p. 81	While in the Message Center (e.g., screen illustrated in Figure 8C (below-left)), user activates the quill icon 236 to navigate to the “Compose Message screen 290” of Figure 8F. (Eck, 11:37-38.) The “send to” window 292 “allows the user to choose to whom the message will be sent.” (Eck, 12:10-11.) A user can opt to send the message to an individual, to a pre-defined group (e.g., a buddy list), (Eck, 20:9), or as a broadcast to all messaging devices in PagerWorld, (Eck, 20:8, 9:46-49 (“messages from the paging system operator may be sent to all users in the paging system, to certain groups of users in the paging system or to a particular user in the paging system”)). For group messaging, Pelkey teaches that the messaging service client “allows the user to create a list (‘buddy list’) of other users (‘buddies’) with whom he/she wishes to remain in contact.” (Pelkey, 7:33-35.) The buddy list “is stored by the network server.” (Pelkey, 7:35-36.) In the combination of Pelkey and Eck, the PagerWorld user can identify a “buddy list” in the “send to” window to send a “carbon copy” of the message. Ex. 1003, ¶ 287
43	PagerWorld also supports insertion of captured data into PagerWorld through	PagerWorld also supports insertion of captured data into PagerWorld through

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	personalization of a user’s person character. Players in PagerWorld are represented “by a ‘persona character’ and it is this character that all other PagerWorld players will see.” (Eck, 10:23-25.) 544 Petition, p. 82	personalization of a user’s person character. Players in PagerWorld are represented “by a ‘persona character’ and it is this character that all other PagerWorld players will see.” (Eck, 10:23-25.) Ex. 1003, ¶ 289
44	The users may be “provided with the capability of including in their profiles customized faces (images) made up of various user-selected features” or “digital images of their own faces.” (Pelkey, 7:20-27.) For example, in Eck, the “persona character” can be “customize[d] using image data obtained with a digital camera cartridge.” (Eck, 12:38-40.) The persona character, is stored, in the combination at the network server. In addition to including the persona character in messages, in the PagerWorld game universe, players “walk their persona characters in a world featuring attractions and sideshows.” (Eck, 10:38-40, 13:29-31.) Thus, the image (persona) “<i>is to be inserted</i>” into PagerWorld for inclusion in the virtual world and message exchanged between players. (EX-1003, ¶290.) 544 Petition, pp. 82-83	The users may be “provided with the capability of including in their profiles customized faces (images) made up of various user-selected features” or “digital images of their own faces” to “enhance the ‘persona’ of the user.” (Pelkey, 7:20-27.) For example, in Eck, the “persona character” can be “customize[d] using image data obtained with a digital camera cartridge.” (Eck, 12:38-40.) The persona character, is stored, in the combination at the network server. In addition to including the persona character in messages, in the PagerWorld game universe, players “walk their persona characters in a world featuring attractions and sideshows.” (Eck, 10:38-40, 13:29-31 (during game play “the player may control his/her persona character to fight, flee or use some item in the player’s possession”).) Thus, the image (persona) “<i>is to be inserted</i>” into PagerWorld for inclusion in the virtual world and message exchanged between players. Ex. 1003, ¶ 290
45	Pelkey discloses that the server “suppl[ies] messages received from	Pelkey discloses that the server “suppl[ies] messages received from

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	one logged-in player to another logged-in player.” (Pelkey, 17:1-5.) The message is thus provided into the “<i>application-based information channel</i>” as shown in the modified Figure 1A (reproduced below). (See, e.g., Eck. 2:15-18 (“a game machine is provided with radio circuitry configured to transmit messages”).) (EX-1003, ¶291.) [image omitted] Pelkey, Figure 1A The Pelkey-Eck combination also discloses an “<i>application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.</i>” For example, as noted above, each user is capable of customizing their persona using, e.g., photos taken with the integrated digital camera. As noted above, “Message Center” includes an “Address Book” that “provides a listing of other users by their handles” and “the persona character of the other user as it appeared on his/her last communication with the user.” (Eck, 11:32-35; see Eck 12:16-19.) The “Address Book” is another example of a “<i>second interface</i>” where “<i>two or more users share access to a plurality of content items including the at least one integrated content item.</i>” (EX-1003, ¶292.)	one logged-in player to another logged-in player.” (Pelkey, 17:1-5.) The message is thus provided into the “<i>application-based information channel</i>” as shown in Figure 1A (reproduced below). (See, e.g., Eck. 2:15-18 (“a game machine is provided with radio circuitry configured to transmit messages”).) [image omitted] Pelkey, Figure 1A <i>The combination of Pelkey and Eck also discloses an “application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.”</i> For example, as noted above, each user is capable of customizing their persona using, e.g., photos taken with the integrated digital camera. As noted above, “Message Center” includes an “Address Book” that “provides a listing of other users by their handles” and “the persona character of the other user as it appeared on his/her last communication with the user.” (Eck, 11:32-35; see Eck 12:16-19.) The “Address Book” is another example of a “<i>second interface</i>” where “<i>two or more users share access to a plurality of content items including the at least one integrated content item.</i>” Ex. 1003, ¶¶ 291-292

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46	Eck explains a cartridge including messaging functionality (e.g., a pager cartridge) “is provided for use with a game machine having a game program executing processing system including a microprocessor.” (Eck, 1:60-65.) The messaging cartridge “includes a memory 145 for storing software used in the pager operations.” (Eck, 7:7-9.) Pelkey similarly discloses “[a] messaging service client is implemented by program code contained in an application (e.g., a video game, a web browser) executed by the game system.” (Pelkey, 1:42-44.) As explained in §VI.B.3, the inserted messaging cartridge includes ROM 42 which “contain[s] instructions” pertaining to, e.g., the messaging function. (<i>See, e.g.</i>, Eck, 4:5-6, 7:7-12.) When inserted, the “game machine circuitry [] access[es] information contained with ROM 42 (and read/write memory 46), which information controls the game machine ... under control of the ROM game program information.” (Eck, 4:9-20.) The game machine 10 then “automatically activates a display of messages on the display thereof in accordance with the operating software stored in the memory of the pager.” (Eck, 22:10-14.) Eck likewise discloses the use of executable software code to perform the disclosed functions. (Eck, 25:42-51.)	Eck explains that a cartridge including messaging functionality (e.g., a pager cartridge) “is provided for use with a game machine having a game program executing processing system including a microprocessor.” (Eck, 1:60-65.) The messaging cartridge “includes a memory 145 for storing software used in the pager operations.” (Eck, 7:7-9.) Pelkey similarly discloses “[a] messaging service client is implemented by program code contained in an application (e.g., a video game, a web browser) executed by the game system.” (Pelkey, 1:42-44.) As I discussed in §V.B.1.a.iii, the inserted messaging cartridge includes ROM 42 which “contain[s] instructions” pertaining to, e.g., the messaging function. (<i>See, e.g.</i>, Eck, 4:5-6, 7:7-12 (“[p]ager cartridge 100 includes a memory 145 for storing software used in the pager operations ... [i]t is of course possible to store the software for implementing at least some of these operations in the memory of game machine 10”).) When inserted, the “game machine circuitry [] access[es] information contained with ROM 42 (and read/write memory 46), which information controls the game machine ... under control of the ROM game program information.” (Eck, 4:9-20.) The game machine 10 then “automatically activates a display of

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	Therefore, the Pelkey-Eck combination discloses “<i>non-transitory computer-readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 1.</i>” (EX-1003, ¶296.) 544 Petition, pp. 85-86	messages on the display thereof in accordance with the operating software stored in the memory of the pager.” (Eck, 22:10-14.) Eck likewise discloses the use of executable software code to perform the disclosed functions: [block quote omitted] (Eck, 25:42-51.) Therefore, the combination of Pelkey and Eck discloses “<i>non-transitory computer-readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 1.</i>” Ex. 1003, ¶¶ 293-296
47	For example, Figure 1B in Pelkey discloses an embodiment that includes a “Messaging Service Server” 18 and a “Network Server” 14 that communicate over the internet (depicted as “WAN” 16). The “Message Service Server” and “Network Server” together comprise a “<i>plurality of servers.</i>” [image omitted] Pelkey, Figure 1B According to Pelkey, the “network server” “stores games that may be played by users of the network. These games may be one player games or	For example, Figure 1B in Pelkey discloses an embodiment that includes a “Messaging Service Server” 18 and a “Network Server” 14 that communicate over the internet (depicted as “WAN” 16). The “Message Service Server” and “Network Server” together comprise a “<i>plurality of servers.</i>” [image omitted] Pelkey, Figure 1B According to Pelkey, in the embodiment in Figure 1B, the “network server” “stores games that may be played by users of the

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	multi-player games.” (Pelkey, 3:4-9.) In such an embodiment, the processing steps set forth in claim 9 are each performed by the “messaging service server.” (EX-1003, ¶299.) 544 Petition, pp. 86-87	network. These games may be one player games or multi-player games. The multi-player games may involve competition between two or more users or may involve competition between a user and a server-generated opponent.” (Pelkey, 3:4-9.) In such an embodiment, the processing steps set forth in claim 9 are each performed by the “messaging service server.” Ex. 1003, ¶¶ 298-299
48	Pelkey explains that communication circuits 12 “may be provided internally to the game system or embodied as cartridges ... removably attachable to a port or bay of the game systems.” (Pelkey, 2:65-3:2.) Eck discloses the embodiment of a network interface in a cartridge. As shown in Eck’s Figure 5A, the pager cartridge includes “an antenna 130 connected to a conventional radio section 132 for receiving and sending messages.” (Eck, 6:34-36; <i>see also</i> Eck, 7:36-53 (describing a pager cartridge includes a codec/DSP section, bandpass filter, RF mixer and dual PLL section, crystal, transmitter, receiver and antenna).) The radio section and/or antenna is a “<i>network interface</i>.” 544 Petition, pp. 88-89	Pelkey explains that the communication circuits 12 “may be provided internally to the game system or embodied as cartridges ... removably attachable to a port or bay of the game systems.” (Pelkey, 2:65-3:2.) Eck discloses the embodiment of a network interface in a cartridge. As shown in Eck’s Figure 5A, the pager cartridge includes “an antenna 130 connected to a conventional radio section 132 for receiving and sending messages.” (Eck, 6:34-36; <i>see also</i> Eck, 7:36-53 (describing a pager cartridge includes a codec/DSP section, bandpass filter, RF mixer and dual PLL section, crystal, transmitter, receiver and antenna).) The radio section and/or antenna is a “<i>network interface</i>.” Ex. 1003, ¶ 307
49	Figure 8C in Eck depicts the Message Center user interface screen presented to the player showing a list of unread received messages with each message	Figure 8C in Eck depicts the Message Center user interface screen presented to the player which shows a list of unread received messages with each

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including the sending user's name and associated persona image. [image omitted] Eck, Figure 8C As noted above, Eck discloses that its "invention" can be used with wireless technologies such a GSM and WAP. (Eck, 25:17-20.) Like Randall and Forsyth, neither Pelkey nor Eck provides the details of the wireless messaging functionality of GSM-SMS or WAP. For the same reasons as above (<i>supra</i> §§V.A.1, VI.B.5), the GSM protocol includes fields associated with the action of sending a message over the wireless network and are therefore also "<i>information</i>" associated with "<i>wireless network functionality</i>" by inclusion in the protocol message originated by the sending mobile device. Messages transmitted via WAP will include the same additional information. In addition, PagerWorld integrates information comprising a "<i>collaboration action</i>" in game play. For example, Eck discloses that "[a]s players interact with other players in PagerWorld (e.g., by sending messages and playing games), players will share the fun and excitement of discovering new items, skills and appearances as their persona characters gain experience." (Eck, 10:27-31.) In addition, among the types of games that can be played in PagerWorld are	message including the sending user's name and associated persona image. [image omitted] Eck, Figure 8C As noted above, Eck discloses that its "invention" can be used with wireless technologies such a GSM (Global System for Mobile Communications) and WAP (Wireless Application Protocol). (Eck, 25:17-20.) Like Randall and Forsyth, neither Pelkey nor Eck provides the details of the wireless messaging functionality of GSM-SMS or WAP. I provide above a high-level overview of the protocol message used for GSM-SMS and WAP. (<i>Supra</i> §IV.B.4.b.i.a.) For the same reasons as above (<i>supra</i> IV.B.4.b.i.a.(1)), the GSM protocol includes fields associated with the action of sending a message over the wireless network and are therefore also "<i>information</i>" associated with "<i>wireless network functionality</i>" by inclusion in the protocol message originated by the sending mobile device. Messages transmitted via WAP will include the same additional information. In addition, PagerWorld integrates information comprising a "<i>collaboration action</i>" in game play. For example, Eck discloses that "[a]s players interact with other players in

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	“[t]eamwork-based adventures requiring input from multiple players with complementary skills.” (Eck, 13:40-45.) 544 Petition, pp. 90-92	PagerWorld (e.g., by sending messages and playing games), players will share the fun and excitement of discovering new items, skills and appearances as their persona characters gain experience.” (Eck, 10:27-31.) In addition, among the types of games that can be played in PagerWorld are “[t]eamwork-based adventures requiring input from multiple players with complementary skills.” (Eck, 13:40-45.) Ex. 1003, ¶¶ 317-322
50	As noted above, Pelkey discloses “a messaging service for communicating messages between and among users of video game systems.” (Pelkey, 1:14-16.) And Eck discloses transferring images taken with an integrated digital camera into PagerWorld and sharing such photos with other users through customizing personas with the camera photos and attaching photos and sound clips to messages. (Eck, 12:38-40; <i>see also</i> Eck 16:42-45.) Eck likewise discloses “image and sound data may be compressed/decompressed in accordance with well-known compression/decompression techniques to more effectively utilize the available bandwidth.” (Eck, 16:45-48.) A POSITA would understand the reference to “utilize the available bandwidth” to mean content	As noted above, Pelkey discloses “a messaging service for communicating messages between and among users of video game systems.” (Pelkey, 1:14-16.) And Eck discloses transferring images taken with an integrated digital camera into PagerWorld and sharing such photos with other users through customizing personas with the camera photos and attaching photos and sound clips to messages. (Eck, 12:38-40; <i>see also</i> Eck 16:42-45.) Eck likewise discloses that “image and sound data may be compressed/decompressed in accordance with well-known compression/decompression techniques to more effectively utilize the available bandwidth.” (Eck, 16:45-48.) A POSITA would understand the reference to “utilize the available bandwidth” to mean that content

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	integration options are based in part on available wireless networking functionalities. (Ex.1003, ¶324.) 544 Petition, pp. 92-93	integration options are based in part on available wireless networking functionalities. Ex. 1003, ¶¶ 323-324
51	Pelkey discloses in Figure 1B (below) an exemplary embodiment showing a plurality of servers accessible over the internet (depicted as WAN 16). [image omitted] Pelkey, Figure 1B Figure 1B of Pelkey illustrates a network “in which the messaging service described herein may be implemented.” (Pelkey, 2:58-60.) The network “includes game systems 10 connected via communications circuits (e.g., modems, network interfaces, etc.) to a wide area network.” (Pelkey, 2:60-62.) 544 Petition, pp. 93-94	Pelkey discloses in Figure 1B (below) an exemplary embodiment showing a plurality of servers accessible over the internet (depicted as WAN 16). [image omitted] Pelkey, Figure 1B Figure 1B of Pelkey illustrates a network “in which the messaging service described herein may be implemented.” (Pelkey, 2:58-60.) The network “includes game systems 10 connected via communications circuits (e.g., modems, network interfaces, etc.) to a wide area network.” (Pelkey, 2:60-62.) Ex. 1003, ¶¶ 327-328
52	As discussed above, the Pelkey-Eck combination discloses captured content obtained from the mobile device. Eck discloses that “<i>at least one content item</i>” comprises a source of at least “<i>device-captured image data</i>” and “<i>device-captured audio data.</i>” For example, as discussed above in connection with claim 1[A], Eck discloses “digital images may be captured by the camera and used by game machine 10 and/or transmitted as a message” and that “captured sounds may be used by game machine 10 and/or transmitted as a message	As discussed above, the combination of Pelkey and Eck discloses captured content obtained from a device-captured data source of the mobile device. Eck discloses that the “<i>device captured data source</i>” comprises a source of at least “<i>device-captured image data</i>” and “<i>device-captured audio data.</i>” For example, as discussed above in connection with claim 1[A], Eck discloses “[s]imilarly, in the case in which a digital camera cartridge is ‘piggy-backed’ to game machine 10 via pager cartridge 100, digital images may be captured by the

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	using pager cartridge 100.” (Eck, 9:16-25.) 544 Petition, p. 95	camera and used by game machine 10 and/or transmitted as a message using pager cartridge 100. If the digital camera cartridge is configured to capture sounds, these captured sounds may be used by game machine 10 and/or transmitted as a message using pager cartridge 100.” (Eck, 9:16-25.) Ex. 1003, ¶ 330
53	The Pelkey-Eck combination also discloses the “<i>mobile device comprises a global positioning system (GPS)-based navigational device.</i>” Eck discloses “a global positioning system (GPS) cartridge is also selectively insertable into the slot of game machine 10 or into the slot of pager cartridge 100.” (Eck, 22:28-30, 5:39-43.) Eck explains that “GPS is a satellite-based radio navigation system ... [that] permits users to determine their three-dimensional position velocity, and time.” (Eck, 22:30-34.) 544 Petition, p. 96	The combination of Pelkey and Eck also discloses that the “<i>mobile device comprises a global positioning system (GPS)-based navigational device.</i>” Eck discloses that “a global positioning system (GPS) cartridge is also selectively insertable into the slot of game machine 10 or into the slot of pager cartridge 100.” (Eck, 22:28-30, 5:39-43.) Eck explains that “GPS is a satellite-based radio navigation system developed and operated by the U.S. Department of Defense (DOD) and permits users to determine their three-dimensional position velocity, and time.” (Eck, 22:30-34.) Ex. 1003, ¶ 332
54	Eck discloses that GPS capability, the ability to send and receive messages (pages), and the ability to send and receive photos and audio files can be integrated into the portable gaming system without the need for cartridges. (Eck, 25:35-40.) 544 Petition, p. 96	Eck discloses that GPS capability, the ability to send and receive messages (pages), and the ability to send and receive photos and audio files can be integrated into the portable gaming system without the need for cartridges. (Eck, 25:35-40 (“In addition, while the pager cartridge, GPS cartridge, and digital camera cartridge are shown as add-on devices to an existing game machine, it is possible to incorporate

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		some or all of the circuitry needed to implement the above-described operations in the game machine itself (portable or otherwise).”).) Ex. 1003, ¶ 333