

181. For Claim 25, Dr. Greenberg again attempts to include by reference the analysis he provided for Claim 1. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 25 because Claim 1 is directed to different systems and contain different limitations. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 25, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 31

182. As discussed above, Claim 23 of the '761 Patent is valid in light of the '575 Patent. Because Claim 31 is dependent on Claim 23, Claim 31 is also valid in light of the '575 Patent. For at least this reason, the '575 Patent does not invalidate the '761 Patent.

183. Furthermore, I disagree with Dr. Greenberg's opinion that the '575 Patent discloses that the storage component stores the data and the metadata according to at least on of a relational and an object storage methodology. Dr. Greenberg has only referenced a section related to a prior art system which is explicitly disclosed to be different then the system in the '575 Patent. For at least these reasons, the '575 Patent does not invalidate the '761 Patent.

Claim 32

184. As discussed above, Claim 23 of the '761 Patent is valid in light of the '575 Patent. Because Claim 32 is dependent on Claim 23, Claim 32 is also valid in light of the '575 Patent. For at least this reason, the '575 Patent does not invalidate the '761 Patent.

185. Furthermore, I disagree with Dr. Greenberg's opinion that the '575 Patent discloses storing of the metadata in the storage component in association with data facilitates many-to-many functionality of the data via the metadata. The '575 Patent does not disclose that

metadata is used to facilitate the functionality of two or more users using two or more data files. For at least these reasons, the '575 Patent does not invalidate the '761 Patent.

Hess

186. I disagree that the Hess paper anticipates the '761 Patent. First, I disagree that the Hess paper invalidates the '761 Patent because the Hess paper is not prior art to the '761 Patent. Specifically, the Hess paper did not publish until July 22, 2002. As discussed above, the earliest effective filing date of the '761 Patent is December 11, 2002. Because the Hess paper did not publish before December 11, 2001, the Hess paper is not prior art to the '761 Patent. For at least these reasons, the Hess paper does not invalidate the '761 Patent.

187. In addition, it is my opinion that the '761 Patent is valid in light of the Hess paper because Dr. Greenberg fails to provide sufficient proof required to invalidate a patent. Specifically, Dr. Greenberg's descriptions are extremely general, do not address all of the elements, and are often inaccurate as to the actual disclosure. Moreover, his citations do not support his conclusions. As a consequence, Dr. Greenberg's disclosure has not provided sufficient evidence. Therefore, it is my opinion that Dr. Greenberg has failed to provide sufficient evidence to render the '761 invalid.

188. Dr. Greenberg's opinion that the Hess paper discloses the system described in the '761 Patent is wrong for several reasons. Generally, the Hess paper discloses a system which uses RF badges, cameras, electronic rings, or other means to detect the physical location of someone. Hess at 5. This is completely different from the teachings of the '761 Patent which discloses a computer implemented system so that users can collaborate in an effective and efficient manner. '761 Patent, Col. 2, ll. 50-59; Col. 13, ll. 47-54. Therefore, it is my opinion that the Hess paper is completely different than, and thus does not invalidate, the '761 Patent.

189. In addition, I disagree that the Hess paper invalidates the '761 Patent because the Hess paper does not disclose each and every element of the asserted claims. With regard to Claim 1, the Hess paper does not disclose a context component nor a tracking component as provided in the '761 Patent.

190. Specifically, the Hess paper does not disclose a context component as recited in Claim 1 of the '761 Patent. None of the citations provided by Dr. Greenberg teach that the Hess paper involves a computer implemented context component which captures context information associated with user-defined data. Instead, the Hess paper discloses logical devices called "mount points" which carry information about where a person's files are located. The mount points are used by the system as people move into different rooms called "active spaces." Moreover, the "mount points" do not capture context information associated with user-defined data. Instead, these "mount points" simply contain information about where the person's files are located. These files are then made available to the person in the "active space." For example, the Hess paper provides "context is used to 1) automatically make personal storage available to applications, conditioned on user presence..." and "the physical location of the user triggers the automatic configuration of the user's environment." Hess at 4. In addition, there is no disclosure regarding the dynamic storage of context information in metadata. Instead, the Hess paper suggests that user must attached context information manually. For example, "[t]he file system allows a specific context to be attached to data by simply copying it to a context directory. Presenting context through the file system interface allows standard file system primitives (i.e., rename, remove, copy, mkdir) to be used to attach and detach context to files." Hess at 7. Furthermore, Hess provides that "context is set manually" and the "manual

configuration is not a burden.” Hess at 10. For at least these reasons, the Hess paper does not invalidate the ‘761 Patent.

191. Moreover, the Hess paper does not disclose a tracking component as recited in Claim 1 of the ‘761 Patent. First, Dr. Greenberg uses a number of the same quotations and analysis for both the context and tracking component which renders his analysis nonsensical. Furthermore, none of the citations provided by Dr. Greenberg teach that a computer implemented tracking component. Instead, the Hess paper teaches “mount points” that are carried by people to detect their physical location. Hess at 4. Moreover, the location of the people is not stored. Instead, it is used to make data available in the particular space that the person is located. Hess at 5. Furthermore, as discussed above, no data is stored dynamically. Instead, the location of the person wearing the device is given access to files which are put in the appropriate directory. Hess at 7. In addition, the Hess paper does not describe dynamically updating the metadata when a user accesses data from a second context. In fact, there is no description of a user accessing data from a second context, and no description of updating metadata when a user access data from a second context. For at least these reasons, the Hess paper does not invalidate the ‘761 Patent.

Claim 4

192. As discussed above, Claim 1 of the ‘761 Patent is valid in light of the Hess paper. Because Claim 4 is dependent on Claim 1, Claim 4 is also valid in light of the Hess paper. For at least these reasons, the Hess paper does not invalidate the ‘761 Patent.

193. Furthermore, I disagree with Dr. Greenberg’s opinion that the Hess paper discloses the capturing of context information which includes a relationship between the user and at least one of an application, application data, and user environment. Greenberg’s citations to

the Hess paper describe, at most, a description of between a user's physical location (i.e. the office in which they are physically located) and a path to a subset of that user's files. Hess at 4-5, 7, 9. For at least these reasons, the '538 Patent and the '179 Patent do not invalidate the '761 Patent.

Claim 7

194. As discussed above, Claim 1 of the '761 Patent is valid in light of the Hess paper. Because Claim 7 is dependent on Claim 1, Claim 7 is also valid in light of the Hess paper. For at least these reasons, the Hess paper does not invalidate the '761 Patent.

195. Furthermore, I disagree with Dr. Greenberg's opinion that the Hess paper discloses associating data created in the first context with data created in the second context. The Hess paper describes a user physically moving from one location to another, such as a user going from their own office to a colleague's office, and that user's electronic files being made available in both physical locations. Hess at 3-5 This is not the same as the system disclosed in Claim 7 of the '761 Patent, in which the system automatically associates data created in a first computing context with data created in a second computing context. For at least these reasons, the '538 Patent and the '179 Patent do not invalidate the '761 Patent.

Claim 9

196. I disagree with Dr. Greenberg's opinion that the Hess paper discloses each and every element of Claim 9 of the '761 Patent. As I mentioned above, the Hess paper discloses logical devices called "mount points" which carry information about where a person's files are located. The mount points are used by the system as people move from one physical location to another physical location. The subject matter of Claim 9 to the '761 Patent, a computerized

method for automatically managing data is fundamentally different than the technology described in the Hess paper.

197. In addition, for many elements of Claim 9, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 1 or duplicates the same analysis and citations from Claim 1. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 9 because Claim 1 and Claim 9 are directed to different systems and contain different limitations. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

198. With regard to the first element of Claim 9, the Hess paper does not describe the computer-executable act of creating data within a user environment, as disclosed in the first element of Claim 9. While Dr. Greenberg does cite to portions of the Hess paper that discuss creating and storing a file, neither of these citations describe creating data in a user environment. Hess at 9, 12. The Hess paper similarly does not describe a web-based computing platform. Dr. Greenberg all but concedes this point by stating that Hess's system "could be" web-based because it used XML and a graphical user interface. *See* Greenberg Expert Report, Ex. C-4 at 10. The presence of a graphical user interface and XML do not, themselves, describe a web-based computing system. For at least these reasons, the '538 Patent and the '179 Patent do not invalidate the '761 Patent.

199. With regard to the second element of Claim 9, the Hess paper does not disclose dynamically associating metadata with the data, where the metadata includes information related to the user, the data, the application, and the user environment. Dr. Greenberg admits that there

is no explicit reference in the Hess paper disclosing an association of the metadata to the data, stating that the “mount tags” perform this function through “an implicit mechanism.” *See* Greenberg Expert Report, Ex. C-4 at 10. As I have stated above, the “mount tags” merely refer to the file path in which a user’s files are stored and do not perform the task of associating data with metadata. In addition, Dr. Greenberg’s analysis does not show that Hess discloses metadata including information related to the data. *See id.*

200. With regard to the third and fourth elements of Claim 9, Dr. Greenberg does not offer any analysis of these claim elements at all and merely refers to his analysis for several elements of Claim 1. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of these elements of Claim 9 and, to the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the ‘761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg’s opinion in my analysis above.

Claim 11

201. As discussed above, Claim 9 of the ‘761 Patent is valid in light of the Hess paper. Because Claim 11 is dependent on Claim 9, Claim 11 is also valid in light of the Hess paper. For at least these reasons, the Hess paper does not invalidate the ‘761 Patent.

202. Furthermore, I disagree with Dr. Greenberg’s opinion that the Hess paper discloses indexing the content of the user environment so that multiple users can access the content from multiple user environments. The Hess paper describes a system of “virtual directories” that allow multiple file paths to refer to the same underlying files. *See* Hess at 6. This system does not involve “indexing” the data in any meaningful way. In addition, as discussed above, Hess describes accessing data as a user moves from one physical location to

another, which is different from the method described in Claim 11, in which multiple users are can access data from different user environments in a computer system. For at least these reasons, the '538 Patent and the '179 Patent do not invalidate the '761 Patent.

Claim 16

203. As discussed above, Claim 9 of the '761 Patent is valid in light of the Hess paper. Because Claim 16 is dependent on Claim 9, Claim 16 is also valid in light of the Hess paper. For at least these reasons, the Hess paper does not invalidate the '761 Patent.

204. Furthermore, I disagree with Dr. Greenberg's opinion that the Hess paper discloses accessing the user environment from via a portable wireless device. Dr. Greenberg states that "Hess discloses accessing the user environment (for example the space) via a portable wireless device." Greenberg Expert Report, Ex. C-4 at 12. This argument is nonsensical because a "space" is a physical location, such as an office, and it is not possible for a person to access a physical location from a portable wireless device. Dr. Greenberg states no additional arguments regarding Claim 16, but again attempts to incorporate his obviousness argument reference into his anticipation argument for this claim. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of these elements of Claim 16 and, to the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 16, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 21

205. I disagree with Dr. Greenberg's opinion that the Hess paper discloses each and every element of Claim 21 of the '761 Patent. Dr. Greenberg provides absolutely no original analysis for this claim, and does not cite to any specific portions of the Hess paper as allegedly

disclosing each and every claim element of Claim 21. In fact, all that Dr. Greenberg does for his analysis of Claim 21 is incorporate by reference other portions of his report addressing claims 9 and 11. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claims 9 and 11 are directed to different systems and contain different limitations. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 23

206. I disagree with Dr. Greenberg's opinion that the Hess paper discloses each and every element of Claim 23 of the '761 Patent. Again, similar to his analysis of Claim 21, Dr. Greenberg provides analysis for only a narrow portion of one element of Claim 23, and relies on other portions of his report addressing Claims 1 and 9 for all other elements of the claim. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 23 because Claims 1 and 9 are directed to different systems and contain different limitations. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

207. I further disagree with Dr. Greenberg's analysis of the one portion of Claim 23 that he does address in his report. The Hess paper does not disclose assigning applications to a first user workspace. *See Hess* at 3 (“[u]sers can move between spaces and their environment... can move with them.”). Hess describes mobile users who are able to use their applications and

data as they move from one physical location to another, but this is distinct from the step of assigning applications to a user's computer-based user workspace. For at least these reasons, the Hess paper does not invalidate the '761 Patent.

Claim 25

208. As discussed above, Claim 23 of the '761 Patent is valid in light of the Hess paper. Because Claim 25 is dependent on Claim 23, Claim 25 is also valid in light of the Hess paper. For at least these reasons, the Hess paper does not invalidate the '761 Patent.

209. Furthermore, I disagree with Dr. Greenberg's opinion that the Hess paper a context component that captures data associated with a relationship between two different user workspaces. As I have stated several time above, the Hess paper does not disclose a context component. In addition, Dr. Greenberg's analysis for this claim discusses the mount server and virtual directory, which in my opinion do not capture data associated with the relationship between two user workspaces. For at least these reasons, the '538 Patent and the '179 Patent do not invalidate the '761 Patent.

Claim 31

210. As discussed above, Claim 23 of the '761 Patent is valid in light of the Hess paper. Moreover, Dr. Greenberg has failed to provide sufficient proof that the '761 Patent is invalid. Because Claim 31 is dependent on Claim 23, Claim 31 is also valid in light of the Hess paper. For at least these reasons, the Hess paper does not invalidate the '761 Patent.

Claim 32

211. As discussed above, Claim 23 of the '761 Patent is valid in light of the Hess paper. Moreover, Dr. Greenberg has failed to provide sufficient evidence to prove that the '761

Patent is invalid. Because Claim 32 is dependent on Claim 23, Claim 32 is also valid in light of the Hess paper. For at least these reasons, the Hess paper does not invalidate the '761 Patent.

The '306 Patent

212. I disagree that the '306 Patent⁴ anticipates the '761 Patent. First, it is my opinion that the '761 Patent is valid in light of the '306 Patent because Dr. Greenberg fails to provide sufficient proof required to invalidate a patent. Specifically, Dr. Greenberg's descriptions are extremely general, do not address all of the elements, and are often inaccurate as to the actual disclosure. Moreover, his citations do not support his conclusions. As a consequence, Dr. Greenberg's disclosure has not provided sufficient evidence. Therefore, it is my opinion that Dr. Greenberg has failed to provide sufficient evidence to render the '761 invalid.

213. Moreover, I disagree that the '306 Patent invalidates the '761 Patent because the '306 Patent does not disclose each and every element of the asserted claims. With regard to Claim 1, the '306 Patent does not disclose a context component nor a tracking component as provided in the '761 Patent.

214. Dr. Greenberg's opinion that the '306 Patent discloses all of the elements of the asserted claims of the '761 Patent is incorrect for several reasons. Generally, the '306 Patent discloses a meta-document which retains processing information. It is essentially a history system that keeps a history for several related documents. Moreover, the meta-document is sent from one source to another, and does not incorporate the idea of multiple contexts. The '761 Patent on the other hand captures environmental and tracking information and stores the

⁴ Dr. Greenberg includes the '934 Patent when referring to the '306 Patent. For consistency, I have done the same. However, the '934 Patent is not valid prior art because it was filed on September 24, 1999 and did not publish until September 30, 2004. As discussed herein, the inventors of the '761 Patent conceived of the invention which resulted in the issuance of the '761 Patent no later than August 19, 1999. Furthermore, as discussed above, the earliest effective filing date of the '761 Patent is December 11, 2002. Because the '934 Patent was not filed before August 19, 1999 and did not publish before December 11, 2001, the '934 Patent is not prior art to the '761 Patent. For at least these reasons, and for the same reasons discussed with regard to the '306 Patent, the '934 Patent does not invalidate the '761 Patent.

information on a storage component so that data can be shared among users in multiple contexts. '761 Patent, Col. 2, ll. 50-59; Col. 13, ll. 47-54. Therefore, it is my opinion that the premise of the '306 Patent is significantly different than, and thus does not invalidate, the '761 Patent.

215. Specifically, the '306 Patent does not disclose a context component as recited in Claim 1. None of the citations provided by Dr. Greenberg illustrate that a context component captures context, or environmental, information associated with user-defined content. Specifically, Dr. Greenberg states the context is the "source or environment 30." However, nothing about the "source or environment 30" is captured by the meta-document disclosed in the '306 Patent. Even the citation that Dr. Greenberg relies upon specifically states that "[p]rocessing information 21 is created (in this embodiment by source 30) and stored on meta-document 20" and does not disclose the environmental information is stored on meta-document.

216. Moreover, the '306 Patent does not disclose a context component as recited in Claim 1 because metadata representing the context is not dynamically stored on a storage component. Instead, all of the processing information associated with a document is stored as a document history. This distinction is provided throughout the disclosure of the '306 Patent. For example, the '306 Patent states that "[t]he processing information (14) is recorded on the meta-document (10) each time the meta-document (10) is processed in some manner." '306 Patent, Abstract. In fact, the concept of context is completely absent from the '306 Patent as the metadata discussed in the '306 Patent only concerns a document's history, not the environmental information associated with user-defined data created by user-interaction. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

217. Moreover, the '306 Patent does not teach a tracking component as recited in Claim 1 of the '761 Patent. Dr. Greenberg does not cite any passage of the '306 Patent that

discloses the tracking of a user from a first context to a second context. Instead, Dr. Greenberg repeats the same analysis with regard to the context component (which render his analysis nonsensical). In fact, the '306 Patent teaches away from tracking a user from one context to another. The '306 Patent provides that “[a]ll of the processing information in the meta-document is explicit, accessible and reusable so that other tools or people in different contexts can benefit from it.” '306 Patent at 3, ¶14. Even Dr. Greenberg’s own analysis states the '306 Patent teaches “transmission of document from the first source 30 to a second source 32)” and not the tracking of a user from one context to another. In addition, the meta-document is not accessible from multiple contexts. This is because the concept of a context (in the sense of an environment) is completely absent. Thus, there is nothing in the '306 Patent that discloses accessing data from multiple contexts because contexts are not disclosed at all. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

Claim 4

218. As discussed above, Claim 1 of the '761 Patent is valid in light of the '306 Patent. Because Claim 4 is dependent on Claim 1, Claim 4 is also valid in light of the '306 Patent. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

219. Furthermore, I disagree with Dr. Greenberg’s opinion that the '306 Patent discloses the capturing of context information which includes a relationship between the user and at least one of an application, application data, and user environment. Instead, the concept of a user environment is completely absent from the '306 Patent, as the '306 Patent only concerns a document’s history. Thus the relationship between the user and user environmental information is never captured. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

Claim 7

220. As discussed above, Claim 1 of the '761 Patent is valid in light of the '306 Patent. Because Claim 7 is dependent on Claim 1, Claim 7 is also valid in light of the '306 Patent. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

221. Furthermore, I disagree with Dr. Greenberg's opinion that the '306 Patent discloses wherein the data created in the first context is associated with data created in the second context. As discussed above, the concept of a context is completely absent from the '306 Patent, as the '306 Patent only concerns a document's history. Thus the '306 Patent cannot teach associating the data created in first context with a second context. Of note, despite the fact that Claim 7 is dependent of Claim 1, Dr. Greenberg's analysis relies on completely different definitions for second context. Namely, in Claim 1 second context is defined as "email," now for Claim 7 the same term is defined as "in the second environment's knowledge department." *See* Greenberg Expert Report, Ex. C-5 at 13. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

Claim 9

222. I disagree with Dr. Greenberg's opinion that the '306 Patent invalidates Claim 9 of the '761 Patent. Specifically, I disagree that the '306 Patent discloses the computer-executable act of creating data within a user environment of a web-based computer platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents. Of note, Dr. Greenberg is unable to define what in the '306 Patent corresponds to the web-based computer platform of Claim 9 as the '306 Patent merely teaches a meta-document which retains processing information.

223. In addition, Dr. Greenberg attempts to include by reference the analysis he provided from Claim 1a into his analysis of Claim 9. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 9 because Claim 1 and Claim 9 are directed to different systems and contain different limitations. Of note, Dr. Greenberg's analysis relies on defining user environment with inconsistent meanings within the same claim. For the first element, Dr. Greenberg's example of a user environment is a meta-document associated with the source or environment, while Dr. Greenberg's analysis of the second element of Claim 9 changes the term to mean domain. Greenberg Expert Report, Ex. C-5 at 14-15. Moreover, the concept of a user environment is completely absent from the '306 Patent, as the '306 Patent only concerns a document's history. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

224. With regard to the second element of Claim 9, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 1 or duplicates the same analysis and citations from Claim 1. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 9 because Claim 1 and Claim 9 are directed to different systems and contain different limitations. As discussed above, information representing the context is not dynamically stored on a storage component. Instead, all of the processing information associated with a document is stored as a document history. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

225. Again, with regard to the third element of Claim 9, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 1 or duplicates the same analysis and citations from Claim 1. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 9 because Claim 1 and Claim 9 are directed to different systems and contain different limitations. As discussed above, the '306 Patent teaches "transmission of document from the first source 30 to a second source 32" and not the tracking of a user from one user environment to another. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

226. Again, with regard to the fourth element of Claim 9, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 1 and Claim 4, or duplicates the same analysis and citations from Claim 1 and Claim 4. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 9 because Claim 1 (and Claim 4) and Claim 9 are directed to different systems and contain different limitations. As discussed above, the concept of a user environment is completely absent from the '306 Patent. Thus, there is nothing in the '306 Patent that discloses employing data from multiple user environments because user environments are not disclosed at all. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 11

227. As discussed above, Claim 9 of the '761 Patent is valid in light of the '306 Patent. Because Claim 11 is dependent on Claim 9, Claim 11 is also valid in light of the '306 Patent. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

228. Furthermore, I disagree with Dr. Greenberg's opinion that the '306 Patent discloses indexing context of the user environment such that a plurality of users can access the content from an associated plurality of user environments. As discussed above, the concept of a user environment is completely absent from the '306 Patent. Thus, there is nothing in the '306 Patent that discloses indexing content such that a multiple users can access multiple user environments. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

Claim 16

229. As discussed above, Claim 9 of the '761 Patent is valid in light of the '306 Patent. Because Claim 16 is dependent on Claim 9, Claim 16 is also valid in light of the '306 Patent. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

230. In contrast to Dr. Greenberg's assertion in his Expert Report, the claim chart does not even attempt to claim that '306 Patent discloses accessing the user environment via a portable wireless device. Instead, the claim chart only makes an unsupported obviousness argument which is addressed below. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

Claim 21

231. I disagree with Dr. Greenberg's opinion that the '306 Patent invalidates Claim 21 of the '761 Patent. I disagree that the '306 Patent discloses the computer-readable medium for creating data related to user interaction of a user within a user workspace of a web-based

computing platform using an application. Generally, the '306 Patent discloses a meta-document which retains processing information. It is essentially a history system that keeps a history for several related documents. Moreover, the meta-document is sent from one source to another, and does not incorporate the idea of multiple user workspaces. The '761 Patent on the other hand captures environmental and tracking information and stores the information on a storage component so that data can be shared among users in multiple user workspaces. '761 Patent, Col. 2, ll. 50-59; Col. 13, ll. 47-54. Therefore, it is my opinion that the premise of the '306 Patent is significantly different than, and thus does not invalidate, the '761 Patent.

232. In addition, Dr. Greenberg attempts to include by reference the analysis he provided from Claim 9 into his analysis of Claim 21. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 21 because Claim 9 and Claim 21 are directed to different systems and contain different limitations. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

233. With regard to the second element of Claim 21, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 9 or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 and Claim 21 are directed to different systems and contain different limitations. As discussed above, information representing the context is not dynamically stored on the web-based computing platform. Instead, all of the processing information associated with a document is stored as a document history. To the extent Dr. Greenberg has failed to address all of the additional limitations of

Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

234. Again, with regard to the third element of Claim 21, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 9 or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 and Claim 21 are directed to different systems and contain different limitations. As discussed above, '306 Patent teaches "transmission of document from the first source 30 to a second source 32" and not the tracking of a user from one user workspace to another. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

235. Again, with regard to the fourth element of Claim 21, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 9 or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 is directed to different systems and contain different limitations. Instead the concept of a user workspace is completely absent from the '306 Patent. Thus, there is nothing in the '306 Patent that discloses employing data from multiple user workspaces because user workspaces are not disclosed at all. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

236. Again, with regard to the fifth element of Claim 21, Dr. Greenberg simply attempts to include by reference the analysis he provided from Claim 11 or duplicates the same analysis and citations from Claim 11. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 11 is directed to different systems and contain different limitations. As discussed above, the concept of a user workspace is completely absent from the '306 Patent. Thus, there is nothing in the '306 Patent that discloses indexing content such that a multiple users can access multiple user workspaces. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 23

237. I disagree with Dr. Greenberg's opinion that the '306 Patent invalidates Claim 23 of the '761 Patent. Furthermore, I disagree that the '306 Patent discloses the computer-readable medium for creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application. Generally, the '306 Patent discloses a meta-document which retains processing information. It is essentially a history system that keeps a history for several related documents. Moreover, the meta-document is sent from one source to another, and does not incorporate the idea of multiple user workspaces. The '761 Patent on the other hand captures environmental and tracking information and stores the information on a storage component so that data can be shared among users in multiple user workspaces. '761 Patent, Col. 2, ll. 50-59; Col. 13, ll. 47-54. Therefore, it is my opinion that the premise of the '306 Patent is significantly different than, and thus does not invalidate, the '761 Patent. Information representing the context is not dynamically stored on a storage component of the

web-based server. Instead, all of the processing information associated with a document is stored as a document history.

238. In addition, Dr. Greenberg attempts to include by reference the analysis he provided from Claim 9 and Claim 1 into his analysis of Claim 23. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 23 because Claims 1 and 9 are directed to different systems and contain different limitations. Furthermore, Dr. Greenberg continues to use an incomplete analysis to support his assertions, as he merely cites to his analysis of Claim 9, another deficient analysis. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 23, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

239. With regard to the second element of Claim 23, none of Dr. Greenberg's citations teach that the system assigns one or more applications to the first user workspace. As discussed above, '306 Patent teaches "transmission of document from the first source 30 to a second source 32" and not the tracking of a user from one user workspace to another. As discussed above, because the concept of a user workspace is completely absent. Thus, there is nothing in the '306 Patent that discloses accessing data from multiple user workspaces because user workspaces are not disclosed at all. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 23, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 25

240. As discussed above, Claim 25 of the '761 Patent is valid in light of the '306 Patent. Because Claim 25 is dependent on Claim 23, Claim 23 is also valid in light of the '306 Patent. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

241. Furthermore, I disagree with Dr. Greenberg's opinion that the '306 Patent discloses that the context component captures relationship data associated with a relationship between a first user workspace and at least one other user workspace. Instead, the concept of a user workspace is completely absent from the '306 Patent, as the '306 Patent only concerns a document's history. Thus the relationship between the user and user environmental information is never captured. As discussed above, Dr. Greenberg's use of "source/environments" is inapposite to this claim. Furthermore, Dr. Greenberg's use of a "document cycle process" is inapposite to this claim as each usage of a document is not a user workspace. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

Claim 31

242. As discussed above, Claim 31 of the '761 Patent is valid in light of the '306 Patent. Because Claim 31 is dependent on Claim 23, Claim 23 is also valid in light of the '306 Patent. For at least these reasons, the '306 Patent does not invalidate the '761 Patent. Furthermore, Dr. Greenberg's citations of XML and RDF in the '306 Patent do not demonstrate that the storage component stores the data and the metadata according to at least one of a relational and an object storage methodology. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

Claim 32

243. As discussed above, Claim 32 of the '761 Patent is valid in light of the '306 Patent. Because Claim 32 is dependent on Claim 23, Claim 23 is also valid in light of the '306 Patent. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

244. Furthermore, I disagree with Dr. Greenberg's opinion that the '306 Patent discloses storing the metadata in the storage component in association with data facilitates many-to-many functionality of the data via metadata. As discussed above, metadata representing the context is not dynamically stored on a storage component. Instead, all of the processing information associated with a document is stored as a document history. Thus the '306 Patent does not disclose storing the metadata in the storage component in association with data facilitates many-to-many functionality of the data via metadata. For at least these reasons, the '306 Patent does not invalidate the '761 Patent.

The '994 Patent

245. I disagree that the '994 Patent anticipates the '761 Patent. First, it is my opinion that the '761 Patent is valid in light of the '994 Patent because Dr. Greenberg fails to provide sufficient proof required to invalidate a patent. Specifically, Dr. Greenberg's descriptions are extremely general, do not address all of the elements, and are often inaccurate as to the actual disclosure. Moreover, his citations do not support his conclusions. As a consequence, Dr. Greenberg's disclosure has not provided sufficient evidence. Therefore, it is my opinion that Dr. Greenberg has failed to provide sufficient evidence to render the '761 invalid.

246. Moreover, I disagree that the '994 Patent invalidates the '761 Patent because the '994 Patent does not disclose each and every element of the asserted claims. With regard to

Claim 1, the '994 Patent does not disclose a context component nor a tracking component as provided in the '761 Patent.

247. Dr. Greenberg's opinion that the '994 Patent discloses all of the elements of the asserted claims of the '761 Patent is wrong for several reasons. Generally, the '994 Patent discloses a middleware system. '994 Patent, Col. 1, ll. 9-15; Col. 4, ll. 12-18. Middleware is generally known as software that connects other software together. It commonly provides functionality which allows completely different software system to operate together. The '761 Patent on the other hand is a system which captures environmental and tracking information and stores the information on a storage component so that data can be shared among users in multiple contexts. '761 Patent, Col. 2, ll. 50-59; Col. 13, ll. 47-54. Therefore, it is my opinion that the premise of the '994 Patent is significantly different than, and thus does not invalidate, the '761 Patent.

248. Specifically, the '994 Patent does not disclose a context component as recited in Claim 1. None of the citations provided by Dr. Greenberg describe a context component that captures context information associated with user-defined data. This is because the '994 Patent teaches middleware, and the middleware merely gathers the information that is already provided by other systems in order to create an audit trail. '994 Patent, Col. 1, ll. 9-15; Col. 4, ll. 12-18. As such, there is no disclosure of a system which contains a context component as recited in Claim 1. In fact, the concept of a context (as environment) is completely absent. Moreover, the system does not keep track of contexts, or users moving among contexts. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

249. In addition, the '994 Patent does not teach a tracking component as recited in Claim 1. It appears that Dr. Greenberg also believes that a tracking component is not explicitly

disclosed as he states that the '994 Patent "necessarily involves tracking a change from one context to another." I disagree with Dr. Greenberg's statement as tracking a change from one context to another is not implicitly taught. In addition, it is irrelevant because the claim requires tracking a user from one context to another. There is nothing in the '994 Patent which teaches the tracking of a user from one context to another. In fact, tracking a user from one context to another has no utility for the system disclosed in the '994 Patent because it is middleware which keeps track of the information associated with documents, not users. Furthermore, there is also nothing which teaches updating the metadata based on the change when a user access data from a second context. Dr. Greenberg's citations do not provide any support, and actually teach away from this limitation because the situations involve sending a document from one system to another, and not where a user accesses data from a second context. '994 Patent, Col. 19, ll. 38-63; Col. 20, ll. 14-28. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

Claim 4

250. As discussed above, Claim 1 of the '761 Patent is valid in light of the '994 Patent. Because Claim 4 is dependent on Claim 1, Claim 4 is also valid in light of the '994 Patent. For at least this reason, the '994 Patent does not invalidate the '761 Patent.

251. Furthermore, I disagree with Dr. Greenberg's opinion that the '994 Patent discloses the capturing of context information which includes a relationship between the user and at least one of an application, application data, and user environment. As discussed above, the '994 Patent teaches a middleware system which imports data from other systems, and does not disclose capturing context information. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

Claim 7

252. As discussed above, Claim 1 of the '761 Patent is valid in light of the '994 Patent. Because Claim 7 is dependent on Claim 1, Claim 7 is also valid in light of the '994 Patent. For at least this reason, the '994 Patent does not invalidate the '761 Patent.

253. Furthermore, I disagree with Dr. Greenberg's opinion that the '994 Patent discloses that data created in the first context is associated with data created in the second context as the concept of contexts is completely absent for the '994 Patent. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

254. For Claim 7, Dr. Greenberg again attempts to include by reference the analysis he provided for Claim 1. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 7 because Claim 1 and Claim 7 are directed to different systems and contain different limitations. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 7, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 9

255. I disagree with Dr. Greenberg's opinion that the '994 Patent invalidates Claim 9 of the '761 Patent. Specifically, I disagree that the '994 Patent discloses the computer-executable act of creating data within a user environment of a web-based computer platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents. The '994 Patent teaches a middleware system that combines data from different sources for review, and the middleware system merely gathers the information that is already provided by other systems (e.g., Documentum EDMS and SAS/PH-Clinical

Software). '994 Patent, Col. 1, ll. 9-15; Col. 4, ll. 12-18. Other applications may feed documents into the system, but the middleware system is not disclosed to be used to create documents. As such, there is no disclosure of a system which contains a context component as recited in Claim 1. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

256. I disagree that the '994 Patent discloses the computer-executable act of dynamically associating metadata with the data, the data and metadata stored on a storage component of the web-based computing platform, the metadata includes information related to the user, the data, the application, and the user environment. The '994 Patent does not disclose dynamically associating metadata with the data. The '994 Patent teaches a middleware system that combines data from different sources for review, and the middleware merely gathers the information that is already provided by other systems (e.g., Documentum EDMS and SAS/PH-Clinical Software). '994 Patent, Col. 1, ll. 9-15; Col. 4, ll. 12-18. The '994 Patent does not teach dynamically associating metadata with this data as it is created. Rather, the '994 Patent teaches a system where any metadata is already included with the documents. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

257. Again, Dr. Greenberg attempts to include by reference the analysis he provided from Claims 1 and 4 into his analysis of the various elements of Claim 9. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 9 because Claim 1 and 4 are directed to different systems and contain different limitations the Claim 9. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 11

258. As discussed above, Claim 9 of the '761 Patent is valid in light of the '994 Patent. Because Claim 11 is dependent on Claim 9, Claim 11 is also valid in light of the '994 Patent. For at least this reason, the '994 Patent does not invalidate the '761 Patent.

259. Furthermore, I disagree with Dr. Greenberg's opinion that the '994 Patent discloses indexing content of the user environment such that a plurality of users can access the content from an associated plurality of user environments. For this claim, Dr. Greenberg has only cited to sections of the '994 Patent which disclose links from a document viewed in the Documentum EDMS document to a data in the SAS/PH-Clinical Software application. Simply creating a link to outside data is not equivalent to indexing data. Furthermore, the '994 Patent does not disclose indexing data so a plurality of user can access the data from a plurality of workspaces. Rather, the '994 Patent teaches that links to the data can only be accessed from one purported workspace, the Documentum EDMS interface. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

Claim 16

260. Dr. Greenberg has failed to provide any citations indicating how the limitation of Claim 16 is met by the '994 Patent. However, in his analysis he indicates that accessing the user environment via a portable wireless device is obvious. As such, I refer below to my discussion refuting the obviousness of Claim 16.

Claim 21

261. I disagree with the claim chart that the '994 Patent invalidates Claim 21 of the '761 Patent. First, the claim chart continues to use an incomplete analysis to support his assertions. For example, he fails to provide citations to the '994 Patent that disclose all elements

of Claim 21. Furthermore, I disagree that the '994 Patent discloses the computer-readable medium for creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application. First, as citations to the '994 Patent is not provided for all elements of Claim 21, it is improper to assert that the '994 Patent discloses this claim.

262. In addition, the claim chart attempts to include by reference the analysis he provided from Claim 9a into his analysis of Claim 21. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 21 because Claim 9 is directed to a different system and contain different limitations. For example, the claim chart fails to define what he asserts to be a "user workspace." The term "user workspace" is not used in Claim 9. As a result, the claim chart's method of merely incorporating by reference results in inconsistencies as he seems to define "application" and "user workspace" as the same thing. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

263. With regard to the second element of Claim 21, the claim chart simply attempts to include by reference the analysis he provided from Claim 9b or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 is directed to a different system and contains different limitations. For example, the claim chart fails to define what he asserts to be a "user workspace." The term "user workspace" is not used in Claim 9. As a result, the claim chart's method of merely incorporating by reference results in inconsistencies as he seems to define "application" and "user workspace" as the same thing. To the extent the

claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

264. Again, with regard to the third element of Claim 21, the claim chart simply attempts to include by reference the analysis he provided from Claim 9c or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 is directed to a different system and contains different limitations. For example, the claim chart fails to define what he asserts to be a "user workspace." The term "user workspace" is not used in Claim 9. As a result, the claim chart's method of merely incorporating by reference results in inconsistencies as he seems to define "application" and "user workspace" as the same thing. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

265. Again, with regard to the fourth element of Claim 21, the claim chart simply attempts to include by reference the analysis he provided from Claim 9d or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 is directed to a different system and contains different limitations. For example, the claim chart fails to define what he asserts to be a "user workspace." The term "user workspace" is not used in Claim 9. As a result, the claim chart's method of merely incorporating by reference results in inconsistencies as he seems to define "application" and "user workspace" as the same thing. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is

my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid.

Otherwise, I have addressed this aspect of the claim chart in my analysis above.

266. Again, with regard to the fifth element of Claim 21, the claim chart simply attempts to include by reference the analysis he provided from Claim 11 or duplicates the same analysis and citations from Claim 11. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 11 is directed to a different system and contains different limitations. For example, the claim chart fails to define what he asserts to be "user workspace," which is a term not used in Claim 11. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid.

Otherwise, I have addressed this aspect of the claim chart in my analysis above.

Claim 23

267. I disagree with Dr. Greenberg's opinion that the '994 Patent invalidates Claim 23 of the '761 Patent. Specifically, I disagree that the '994 Patent discloses a computer implemented context component of a web-based server for defining a first user workspace of the web-based server. Dr. Greenberg relies on applications (e.g., Documentum EDMS and SAS/PH-Clinical Software) which feed information into the middleware system in his analysis. These are not workspace as recited in Claim 23 of the '761 Patent and are not web-based systems. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

268. I disagree with Dr. Greenberg's opinion that the '994 Patent invalidates Claim 23 of the '761 Patent. Specifically, I disagree that the '994 Patent discloses a computer implemented context component which assigns one or more applications to the first user workspace as described in Claim 23. Dr. Greenberg relies on the separate applications (e.g.,

Documentum EDMS and SAS/PH-Clinical Software) feeding information into the middleware system of the '994 Patent as the user workspace. These programs are separate and independent programs which cannot be assigned to each other and do not form a workspace. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

269. For most of the elements of Claim 23, Dr. Greenberg attempts to include by reference the analysis he provided for Claims 1 and 9. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 23 because Claims 1 and 9 are directed to different systems and contain different limitations than Claim 23. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 23, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 25

270. As discussed above, Claim 23 of the '761 Patent is valid in light of the '994 Patent. Because Claim 25 is dependent on Claim 23, Claim 25 is also valid in light of the '994 Patent. For at least this reason, the '994 Patent does not invalidate the '761 Patent.

271. Furthermore, I disagree with Dr. Greenberg's opinion that the '994 Patent discloses that the context component captures relationship data associated with a relationship between the first user workspace and at least one other user workspace. Dr. Greenberg has identified workspaces as individual and separate software applications which feed documents into the middleware system (e.g., Documentum EDMS and SAS/PH-Clinical Software). However, Dr. Greenberg cites no support for his assertion that relationship data is captured which is associated with the relationship between these separate software applications. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

272. For Claim 25, Dr. Greenberg again attempts to include by reference the analysis he provided for Claim 1. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 25 because Claim 1 is directed to different systems and contain different limitations. To the extent Dr. Greenberg has failed to address all of the additional limitations of Claim 25, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed Dr. Greenberg's opinion in my analysis above.

Claim 31

273. As discussed above, Claim 23 of the '761 Patent is valid in light of the '994 Patent. Because Claim 31 is dependent on Claim 23, Claim 31 is also valid in light of the '994 Patent. For at least this reason, the '994 Patent does not invalidate the '761 Patent. Moreover, Dr. Greenberg has failed to provide sufficient evidence to prove that the '761 Patent is invalid. For at least these reasons, the '994 Patent does not invalidate the '761 Patent.

Claim 32

274. As discussed above, Claim 23 of the '761 Patent is valid in light of the '994 Patent. Because Claim 32 is dependent on Claim 23, Claim 32 is also valid in light of the '994 Patent. Moreover, Dr. Greenberg has failed to provide sufficient evidence to prove that the '761 Patent is invalid. For at least this reason, the '994 Patent does not invalidate the '761 Patent.

275. Furthermore, I disagree with Dr. Greenberg's opinion that the '994 Patent discloses storing of the metadata in the storage component in association with data facilitates many-to-many functionality of the data via the metadata. The '575 Patent does not disclose that metadata is used to facilitate the functionality of two or more users using two or more data files. For at least these reasons, the '575 Patent does not invalidate the '761 Patent.

The '313 and '648 Patents

276. I disagree with the section of Dr. Greenberg's report that discusses that the '313 Patent and the '648 Patent anticipate the '761 Patent. First, this opinion is based on a faulty premise. As discussed above, I understand that the '313 Patent and the '648 Patent cannot be considered a single reference because a mere incorporation by reference, without more, is not sufficient to treat the two references as one. Thus, this opinion that the '313 Patent and the '648 Patent anticipate the '761 Patent is wrong because this person has failed to identify where each and every element of the asserted claims is found in a single reference. Moreover, Dr. Greenberg's reliance on two references is an implicit admission that neither the '313 Patent nor the '648 Patent by themselves discloses each element of the claims. Furthermore, Dr. Greenberg does not provide a proper obviousness analysis (which is discussed in more detail below). For example, Dr. Greenberg does not specifically identify what should be combined or the reasons for doing so. For at least these reasons, the '313 Patent and the '648 Patent do not invalidate the '761 Patent.

277. Moreover, I disagree with this opinion that the '313 Patent invalidate the '761 Patent because the '313 Patent is not prior art to the '761 Patent. Specifically, the '313 Patent was filed on December 11, 2000 and did not publish until August 8, 2002. As discussed above, the inventors of the '761 Patent conceived of the invention which resulted in the issuance of the '761 Patent no later than August 19, 1999. Furthermore, as discussed above, the earliest effective filing date of the '761 Patent is December 11, 2002. Because the '313 Patent was not filed before August 19, 1999 and did not publish before December 11, 2001, the '313 Patent is not prior art to the '761 Patent. For at least these reasons, the '313 Patent does not invalidate the '761 Patent.

278. In addition, it is my opinion that the '761 Patent is valid in light of the '313 and '648 Patents because this analysis fails to provide sufficient proof required to invalidate a patent. Specifically, the descriptions are extremely general, do not address all of the elements, and are often inaccurate as to the actual disclosure. Moreover, the citations do not support the conclusions. Therefore, it is my opinion that this person has failed to provide sufficient evidence to render the '761 invalid.

279. The opinion provided that the '313 and '648 Patents disclose all of the elements of the asserted claims of the '761 Patent is wrong for several reasons. Generally, the '313 Patent discloses a system which allows a user to avoid having to log-in to multiple applications. '313 Patent, Col. 1, ll. 20-29. Moreover, the data among these applications cannot be shared. '313 Patent, Col. 1, ll. 57-66. The '648 Patent discloses a rule-based system that controls access to facilitate HIPAA compliance. Moreover, alerts can be sent from the system if rules are broken. The '761 Patent on the other hand is a system which captures environmental and tracking information and stores the information on a storage component so that data can be shared among users in multiple contexts. '761 Patent, Col. 2, ll. 50-59; Col. 13, ll. 47-54. Therefore, it is my opinion that the premise of the '313 and '648 Patents are significantly different than, and thus do not invalidate, the '761 Patent.

280. In addition, I disagree with the opinion that the '313 and '648 Patents invalidate the '761 Patent because the '313 and '648 Patents do not disclose each and every element of the asserted claims. With regard to Claim 1, the '313 and '648 Patents do not disclose a content component nor a tracking component as provided in the '761 Patent.

281. Specifically, the '313 and '648 Patents do not disclose a context component as recited in Claim 1. Each of the citations provided in the appended chart do not teach the

capturing of context information associated with user-defined data. This is because the system in the '313 Patent is used to allow a user, such as a doctor, to access multiple applications without having to reenter log-in credentials. '313 Patent, Col. 1, l. 57 to Col. 2, l. 2. The '313 Patent does not disclose a context component that captures any information associated with user-defined data. In fact, the "context data" that the chart refers to is actually the log-in credentials which are provided by the user. '313 Patent, Col. 2, ll. 10-16. This "context data" is shared among applications so that a user does not have to keep providing the information while accessing multiple applications. The "context gestures" that the chart refers to is actually an attempt by a user to use another application. For example, the '313 Patent provides "context gestures may take any of numerous forms, but generally are responsive to a need by the user to move between application...." '313 Patent, Col. 2, ll. 20-23. With regard to the '648 Patent, Dr Greenberg does not opine the '648 Patent discloses a context component. This is because the '648 Patent does not teach a context component as recited in Claim 1 of the '761 Patent. Moreover, the '313 and '648 Patents do not teach storing metadata and user-defined data on a storage component as the '313 and '648 Patent are silent as to where any user-defined data would be stored (notably, metadata is not found anywhere in the '313 and '648 Patents). For at least these reasons, the '313 and 648 Patents do not invalidate the '761 Patent.

282. In addition, the '313 and '648 Patents do not disclose a tracking component as recited in Claim 1 of the '761 Patent. Again, the provided chart refers to "context gestures" in both the context component and the tracking component analysis which renders the analysis nonsensical. Furthermore, the chart provides no citations or analysis for the limitation "wherein the user accesses the data from the second context." In fact, the '313 Patent teaches away from the tracking component recited in Claim 1 of the '761 Patent because the references simply

disclose a system where a user moves from one application to another without having to reenter log-in information. Each application, as disclosed in the '313 Patent, has its own distinct set of data which cannot be accessed from any other application. For example, the '313 Patent provides that "a patient's primary caregiver, may wish to first view medical record data or medical images for a particular patient, and in the same session view that patient's billing account or insurance information. Without context management, the primary caregiver would be required to enter data to identify him or herself in order to log in to the various databases containing the desired information..." '313 Patent, Col. 1, ll. 57-61. Moreover, the '313 Patent teaches "a physician handling one aspect of a patient's healthcare, e.g., respiratory conditions, may be barred from modifying or accessing patient medical records having to do with the patient's other medical conditions, e.g., mental health." Moreover, the '648 Patent does not teach a tracking component as recited in Claim 1 as the disclosure lacks any reference to a context as provided in the '761 Patent, much less the tracking of a user between multiple contexts. Thus, the '313 and '648 Patents do not disclose a system which facilitates the sharing of information among users which contains a context component and tracking component as recited in Claim 1 of the '761 Patent. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

Claim 4

283. As discussed above, Claim 1 of the '761 Patent is valid in light of the '313 and '648 Patent. Because Claim 4 is dependent on Claim 1, Claim 4 is also valid in light of the '313 and '648 Patent. Notably, the claim chart provides no citations to the '648 Patent that disclose the context component of Claim 1 or the any feature of Claim 4. For at least these reasons, the '313 and '648 Patent do not invalidate the '761 Patent.

284. Furthermore, I disagree with the claim chart that the '313 and '648 Patents disclose the capturing of context information which includes a relationship between the user and at least one of an application, application data, and user environment. First, as no citations to or analysis of the '648 Patent are provided in this section of the claim chart, it is improper to assert that the '648 Patent discloses this claim. The '313 Patent also does not this claim. Notably, the claim chart's analysis reveals that his assertion is limited to only the relationship between the user (employee) and the user environment (machine) as he is unable to define the "application." Furthermore, the claim chart's definition of user environment is inconsistent as he defines it as a machine for Claim 4 but as the "context manager" for Claim 9. Moreover, the claim chart's use of the "auditor" is inconsistent as he previously asserted it as the tracking component. Here "context information" is in reference to the context component. As such, the claim chart's use of terms and functionalities are nonsensical. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

Claim 7

285. As discussed above, Claim 1 of the '761 Patent is valid in light of the '313 and '648 Patents. Because Claim 7 is dependent on Claim 1, Claim 7 is also valid in light of the '313 and '648 Patents. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

286. Furthermore, I disagree with the claim chart that the '313 and '648 Patents disclose wherein the data created in the first context is associated with data created in the second context. First, as no citations to or analysis of the '648 Patent are provided in this section of the claim chart, it is improper to assert that the '648 Patent discloses this claim. The '313 Patent also does not this claim. The claim chart's analysis is faulty as it fails define what he asserts to be the

“data” as used in the claim. Furthermore, the citation that the claim chart has utilized does not disclose the association of “context gestures” created in one application with “context gestures” created in a second context. *See* Greenberg Expert Report, Ex. C-7 at 56. For at least these reasons, the ‘313 and ‘648 Patents do not invalidate the ‘761 Patent.

Claim 9

287. I disagree with the claim chart that the ‘313 and ‘648 Patents invalidate Claim 9 of the ‘761 Patent. Specifically, I disagree that the ‘313 and ‘648 Patents disclose the computer-executable act of creating data within a user environment of a web-based computer platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents. First, as citations to the ‘648 Patent are not provided for all elements of Claim 9, it is improper to assert that the ‘648 Patent discloses this claim. The ‘313 Patent also does not disclose the elements of this claim. The claim chart’s analysis relies on an inconsistent assertion of what the “context manager” of the ‘313 Patent is. As a reminder, the claim chart previously asserted that the context manager is the context component of Claim 1. Now the claim chart declares that the context manager is the “user environment” of Claim 9. Greenberg Expert Report, Ex. C-7 at 57. The “context manager” of the ‘313 Patent is not a “user environment,” as the “context manager” is neither an environment nor a “user environment” specific to any particular user. Similarly the “context manager” is not a “web-based computing platform” as the claim chart previously asserted that it is merely a piece of the context management system. Greenberg Expert Report, Ex. C-7 at 49-50.

288. In addition, the claim chart attempts to include by reference the analysis he provided from Claim 1 and 8 into his analysis of Claim 9. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 9 because Claim 1 and Claim 8 are

directed to different systems and contain different limitations. Furthermore no analysis is provided of Claim 8. To the extent the claim chart has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

289. With regard to the second element of Claim 9, the claim chart simply attempts to include by reference the analysis he provided from Claim 1 or duplicates the same analysis and citations from Claim 1. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 9 because Claim 1 and Claim 9 are directed to different systems and contain different limitations. For example, the claim chart fails to define what he asserts to be a "user environment." The term "user environment" is not used in Claim 1. As a result, the claim chart's method of merely incorporating by reference results in inconsistencies as he seems to define the "context component" and "user environment" as the same thing. To the extent the claim chart has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

290. Again, with regard to the third element of Claim 9, the claim chart simply attempts to include by reference the analysis he provided from Claim 1 or duplicates the same analysis and citations from Claim 1. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 9 because Claim 1 and Claim 9 are directed to different systems and contain different limitations. For example, the claim chart fails to define what he asserts to be the first and second "user environments," "application," and "employs." All of which are terms not used in Claim 1. The claim chart's use

of first and second “locations” is nonsensical as it requires a different definition of the same term, “user environment,” within the same claim (from “context manager” to “a particular computer”). Greenberg Expert Report, Ex. C-7 at 59. Furthermore, the chart provides no citations or analysis for the limitation “wherein the user employs at least one of the application and the data from the second environment.” To the extent the claim chart has failed to address all of the additional limitations of Claim 9, it is my opinion that he has not provided sufficient evidence to prove the ‘761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

Claim 11

291. As discussed above, Claim 9 of the ‘761 Patent is valid in light of the ‘313 and ‘648 Patents. Because Claim 11 is dependent on Claim 9, Claim 11 is also valid in light of the ‘313 and ‘648 Patents. For at least these reasons, the ‘313 and ‘648 Patents do not invalidate the ‘761 Patent.

292. Furthermore, I disagree with the claim chart’s opinion that the ‘313 and ‘648 Patents disclose indexing context of the user environment such that a plurality of users can access the content from an associated plurality of user environments. First neither patent discusses indexing content of the user environment. Furthermore, the ‘313 Patent is directed towards a way of auditing such that an auditor can extract information from the centralized storage location to generate an audit report. Thus indexing of any content within that storage location is merely for creating an audit report not “such that a plurality of users can access the content from an associated plurality of user environments.” Furthermore, the claim chart’s analysis, again, requires that the term “user environment” to be inconsistently defined for the same claim. This time defining “user environment” as “doctor’s offices” and “accounting

departments” as well as “a particular computer.” *See* Greenberg Expert Report, Ex. C-7 at 60-61. For at least these reasons, the ‘313 and ‘648 Patents do not invalidate the ‘761 Patent.

Claim 16

293. The ‘313 and ‘648 Patents do not disclose Claim 16. While Dr. Greenberg’s Expert Report asserts that the ‘313 and ‘648 Patents disclose Claim 16, the corresponding claim chart specifically omits Claim 16. *Compare* Greenberg Expert Report, ¶63, with *id.*, Ex. C-7. Thus despite Dr. Greenberg’s assertion otherwise, absolutely no analysis of the ‘313 and ‘648 Patents disclosing Claim 16 is provided. For at least these reasons, the ‘313 and ‘648 Patents do not invalidate the ‘761 Patent.

Claim 21

294. I disagree with the claim chart that the ‘313 and ‘648 Patents invalidate Claim 21 of the ‘761 Patent. First, the claim chart continues to use an incomplete analysis to support his assertions. For example, he fails to provide citations to the ‘648 Patent that disclose all elements of Claim 21. Furthermore, I disagree that the ‘313 and ‘648 Patents disclose the computer-readable medium for creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application. First, as citations to the ‘648 Patent are not provided for all elements of Claim 21, it is improper to assert that the ‘648 Patent discloses this claim. The ‘313 Patent also does not disclose the elements of this claim.

295. In addition, the claim chart attempts to include by reference the analysis he provided from Claim 9 into his analysis of Claim 21. I do not believe such incorporation by reference fully addresses all of the limitations of Claim 21 because Claim 9 is directed to a different system and contain different limitations. For example, the claim chart fails to define what he asserts to be a “user workspace.” The term “user workspace” is not used in Claim 9. As

a result, the claim chart's method of merely incorporating by reference results in inconsistencies as he seems to define "application" and "user workspace" as the same thing. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

296. With regard to the second element of Claim 21, the claim chart simply attempts to include by reference the analysis he provided from Claim 9 or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 is directed to a different system and contain different limitations. For example, the claim chart fails to define what he asserts to be a "user workspace." The term "user workspace" is not used in Claim 9. As a result, the claim chart's method of merely incorporating by reference results in inconsistencies as he seems to define "application" and "user workspace" as the same thing. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the '761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

297. Again, with regard to the third element of Claim 21, the claim chart simply attempts to include by reference the analysis he provided from Claim 9 or duplicates the same analysis and citations from Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 9 is directed to a different system and contain different limitations. For example, the claim chart fails to define what he asserts to be a "user workspace." The term "user workspace" is not used in Claim 9. As a result, the claim chart's method of merely incorporating by reference results in

inconsistencies as he seems to define “application” and “user workspace” as the same thing. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the ‘761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

298. Again, with regard to the fifth element of Claim 21, the claim chart simply attempts to include by reference the analysis he provided from Claim 11 or duplicates the same analysis and citations from Claim 11. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 21 because Claim 11 is directed to a different system and contain different limitations. For example, the claim chart fails to define what he asserts to be “user workspace,” which is a term not used in Claim 11. To the extent the claim chart has failed to address all of the additional limitations of Claim 21, it is my opinion that he has not provided sufficient evidence to prove the ‘761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

Claim 23

299. I disagree with the claim chart’s opinion that the ‘313 and ‘648 Patents invalidate Claim 23 of the ‘761 Patent. First, as citations to the ‘648 Patent are not provided for all elements of Claim 9, it is improper to assert that the ‘648 Patent discloses this claim. The ‘313 Patent also does not disclose the elements of this claim. Second, the claim chart continues to use an incomplete analysis to support his assertions. For example, he fails to provide citations to the ‘648 Patent that disclose all elements of Claim 23. Furthermore, I disagree that the ‘313 and ‘648 Patents disclose the computer-readable medium for creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application. To begin, the analysis of Claim 23 employs inconsistent definitions within the same claim, as “user

workspace” is first defined as a “point of use device” in Claim 23a1 then as software application in Claim 23b. Greenberg Expert Report, Ex. C-7 at 66-68. Furthermore, the “context manager” does not “define” the point of use machine as asserted by the claim chart. Greenberg Expert Report, Ex. C-7 at 66. Moreover, none of the claim chart’s citations teach that the “context manager,” asserted as the context component, assigns one or more applications to a “point of use device,” asserted as the first user workspace. Instead the “context manager” is generally used to pass information. To the extent the claim chart has failed to address all of the additional limitations of Claim 23, it is my opinion that he has not provided sufficient evidence to prove the ‘761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

300. Again, with regard to the second element of Claim 23, the claim chart simply attempts to include by reference the analysis he provided from Claim 1 and Claim 9 or duplicates the same analysis and citations from Claim 1 and Claim 9. I do not believe such incorporation by reference or duplication of analysis fully addresses all of the limitations of Claim 23 because Claim 1 and Claim 9 are directed to a different system and contains different limitations. For example, Claim 9 is in regards to a “context,” which the claim chart previously defined as an application. Claim 23, however, requires a “user workspace,” which the claim chart inconsistently defined as “point of use device.” As such, the claim chart’s reference to the analysis of Claim 9 for Claim 23 is nonsensical. To the extent the claim chart has failed to address all of the additional limitations of Claim 23, it is my opinion that he has not provided sufficient evidence to prove the ‘761 Patent is invalid. Otherwise, I have addressed this aspect of the claim chart in my analysis above.

Claim 25

301. As discussed above, Claim 25 of the '761 Patent is valid in light of the '313 and '648 Patents. Because Claim 25 is dependent on Claim 23, Claim 23 is also valid in light of the '313 and '648 Patents. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

302. Furthermore, I disagree with the claim chart that the '313 and '648 Patents disclose that the context component captures relationship data associated with a relationship between a first user workspace and at least one other user workspace. First, as no citations to or analysis of the '648 Patent are provided in this section of the claim chart, it is improper to assert that the '648 Patent discloses this claim. The '313 Patent also does not this claim. As discussed above, the claim chart is premised on unreasonably defining the context component and tracking component as the same thing. Such a reading is against the plain language of the claim. Furthermore the claim chart's definition of "user workspace" for Claim 23 was a "point of use device." As analysis for Claim 25 now defines "user workspace" as an application it is nonsensical. Moreover, the claim chart's analysis of Claim 25 with reference to the analysis of Claim 5 is improper as it was redacted. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

Claim 31

303. As discussed above, Claim 31 of the '761 Patent is valid in light of the '313 and '648 Patents. Because Claim 31 is dependent on Claim 23, Claim 23 is also valid in light of the '313 and '648 Patents. As no citations to or analysis of the '648 Patent are provided in this section of the claim chart, it is improper to assert that the '648 Patent discloses this claim. The '313 Patent also does not this claim. Moreover, Dr. Greenberg has failed to provide sufficient

evidence to prove that the '761 Patent is invalid. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

Claim 32

304. As discussed above, Claim 32 of the '761 Patent is valid in light of the '313 and '648 Patents. Because Claim 32 is dependent on Claim 23, Claim 23 is also valid in light of the '313 and '648 Patents. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

305. Furthermore, I disagree with the claim chart that the '313 and '648 Patents disclose storing the metadata in the storage component in association with data facilitates many-to-many functionality of the data via metadata. First, as no citations to or analysis of the '648 Patent are provided in this section of the claim chart, it is improper to assert that the '648 Patent discloses this claim. The '313 Patent also does not disclose the element of this claim because the "centralized storage location" stores information so that it can be extracted by an "auditor" for an audit report in compliance with HIPAA standards, not to facilitate many-to-many functionality. Moreover, Dr. Greenberg has failed to provide sufficient evidence to prove that the '761 Patent is invalid. For at least these reasons, the '313 and '648 Patents do not invalidate the '761 Patent.

THE '761 PATENT IS NOT OBVIOUS

306. I disagree with Dr. Greenberg's general conclusion that the '761 Patent is obvious. First, Dr. Greenberg does not provide an element by element analysis regarding any of the prior art and why those references render the '761 Patent obvious. Moreover, Dr. Greenberg fails to provide particular reasons about which references should be combined and why. Furthermore, Dr. Greenberg fails to identify any motivation or suggestion to combine particular references. Accordingly, Dr. Greenberg has not provided sufficient evidence necessary to prove

that the '761 Patent is obvious. For at least these reasons, the '761 Patent is not obvious over the prior art. To the extent Dr. Greenberg is permitted to testify regarding obviousness, or provides a specific analysis regarding obviousness, I reserve the right to respond to Dr. Greenberg's newly formed opinions.

307. Moreover, Dr. Greenberg's general opinion that Claims 9, 11, 21, 23, 25, 31 and 32 are obvious is wrong because it is based on a faulty premise. First, it is impossible to determine which aspects that Dr. Greenberg believes are obvious because he does not provide an element by element analysis. Moreover, his general opinion that anything and everything can easily be implemented on the Internet is false. A product which is available on the Internet is not the same as a product which is installed on a single computer or even a local network or intranet. There are many different protocols and even programming languages that are used in creating a web-based product. There are also many different conditions, such as intermittent availability of the network, latency, throughput, and security threats that someone has to take into account in creating a web-based product that are not considered when making a non-web-based product. For Dr. Greenberg to simply assume that one of skill in the art would be able to take any product and convert it to a web-based product is unreasonable. Notably, Dr. Greenberg does not address which prior art could be converted into a web-based product nor how one of skill in the art would be able to do so. All he states is that "it would have entailed a simple substitution of a World Wide Web-based environment in place of a non-Internet or non-web-based system to produce the systems and methods in claims 9, 11, 21, 25, 31 and 32 of the '761 patent." Dr. Greenberg does not identify what the simple substitution would be, or for which prior art. In any case, I disagree that the substitution would be simple and straight forward. Instead, it would require that

an entirely new product be created. For at least these reasons, the '761 Patent is not obvious over the prior art.

308. Dr. Greenberg's opinion with regard to Claim 16 also fails for many of the same reasons. First, Dr. Greenberg does not provide an element by element analysis, nor identify how or why certain references should be combined with each other. For example, Dr. Greenberg mentions the '403 Patent, but does not provide an element by element analysis of how the reference may be combined with other references, nor an analysis of the suggestion or motivation for combining specific references with the '403 Patent. Instead he makes the general conclusion that anything and everything can be made available on a portable wireless device. Aside from failing to provide sufficient proof to prove that the '761 Patent is invalid, Dr. Greenberg's opinion is unreasonable. It is not trivial for a program to be accessible on a portable wireless device. Like a program created for the Internet, a mobile application uses different protocols, programming languages, and must function in a wide variety of conditions that do not have to be considered when writing a software program which is installed on a desktop. For at least these reasons, the '761 Patent is not obvious over the prior art.

309. Dr. Greenberg's opinion with regard to Claim 31 also fails for many of the same reasons. First, Dr. Greenberg does not provide an element by element analysis, nor identify how or why certain references should be combined with each other. Thus, it is my opinion that Dr. Greenberg has failed to provide sufficient evidence to prove the '761 Patent is invalid. For at least these reasons, the '761 Patent is not obvious over the prior art.

310. Dr. Greenberg's opinion with regard to Claim 32 also fails for many of the same reasons. First, Dr. Greenberg does not provide an element by element analysis, nor identify how or why certain references should be combined with each other. Thus, it is my opinion that Dr.

Greenberg has failed to provide sufficient evidence to prove the '761 Patent is invalid. For at least these reasons, the '761 Patent is not obvious over the prior art.

311. Dr. Greenberg's opinion with regard to "other combinations" is vague and does not meet the requisite standard to prove that the '761 Patent is invalid. As noted above, Dr. Greenberg does not provide an element by element analysis regarding any of the prior art and why those references render the '761 Patent obvious. Moreover, Dr. Greenberg fails to provide particular reasons about which references should be combined and why. Furthermore, Dr. Greenberg fails to identify any motivation or suggestion to combine particular references. Accordingly, Dr. Greenberg has not provided sufficient evidence necessary to prove that the '761 Patent is obvious.

312. In addition, I disagree with the characterizations provided by Dr. Greenberg. I do not believe that the '575, '306, '538 and '994 Patents are readily combinable. Each of these patents teaches completely different systems as noted above. The fact that they are all assigned to Xerox is of no significance because the technologies are not similar. Dr. Greenberg provides no reasons why or how the references can be combined, likely because they cannot be combined since they involve different technology. Therefore, it is my opinion that one of ordinary skill would not have treated the Xerox references together as Dr. Greenberg has generally alleged.

313. Moreover, the Hess paper cannot be combined. Notably, Dr. Greenberg does not identify what the Hess reference can be combined with. In any case, I do not believe that the Hess paper can be combined with any of the other references because the technology is completely different than the other references, and the '761 Patent as noted above.

314. Similarly, the iManage manual cannot be combined. Notably, Dr. Greenberg does not identify what the iManage manual can be combined with. In any case, I do not believe

that the iManage can be combined with any of the other references because the technology is completely different than the other references, and the '761 Patent as noted above. Moreover, I disagree with Dr. Greenberg's general assertion that one of skill the art would have easily substituted details of another reference to produce the system claimed in the '761 Patent. First, it is unclear what those details are because Dr. Greenberg does not identify them. Furthermore, each of the references teach systems which are different from each other and the '761 Patent as noted above. Moreover, one of skill in the art would not be motivated to combine any of these references because they are technically distinct. For at least these reasons, the '761 Patent is not obvious over the prior art.

SECONDARY CONSIDERATIONS FOR NON-OBVIOUSNESS OF THE '761 PATENT

315. In addition the reasons provide above, it is my opinion that the '761 Patent is not obvious based on the secondary consideration for non-obviousness. Notably, Dr. Greenberg did not discuss the secondary considerations for non-obviousness in his report.

316. I understand that certain secondary factors can be taken into consideration when determining whether a patent claim is non-obvious. These secondary considerations include the invention addressing a long-felt but unresolved need, and the teaching away by others from the invention. If these secondary considerations are demonstrated then they indicate that a patent claim is non-obvious. From my knowledge of the industry, it is my opinion that the '761 Patent exhibits the secondary considerations of non-obviousness I discussed above.

317. There was long-felt unresolved need in the industry for the invention of the '761 Patent because previously available collaboration tools were insufficient for productive online collaboration. Past methods of data management demonstrate others failed in creating a tool that could effectively manage an ever-increasing amount of data used in an ever-increasing variety of

ways by an ever-increasing number of users. For example, most collaboration tools in the industry at the time was based on a folder structure where users manually name the folders and categorize files by subjectively deciding which folders to store the file in. As a result, if another user wanted to collaborate on a document, this user would be required to guess which folders the file is potentially located in, then look through each of the files of those folders. The invention in the '761 Patent breaks from this failure by creating a system which leverages user environments, context information, and metadata to provide an efficient online collaboration experience. As the collaboration of multiple users using multiple user environments can be complex, the invention in the '761 Patent also provides a tracking component for tracking of user movement from one user environment to another. Thus in my opinion, prior to the invention claimed in the '761 Patent, there was a long-felt but unresolved need for an online collaboration tool with all of the desired features described above.

318. Previous tools for collaboration taught away from the invention claimed in the '761 Patent as these tools focused its functionality to center around particular documents. As a result, these document centric tools taught away from several fundamental elements of the '761 Patent, such as tracking the movement of users moving from one "user environment" to another "user environment." Furthermore, previous tools relied on the subjective decisions of each individual user in specifying information about a document. Arguably, this was to give each individual user subjective control of where each of the documents were stored and what information is to be associated with which document. As such, this taught away from the '761 Patent's utilization of the uniform decisions made by the system. In my opinion, this indicates that the '761 Patent is not obviousness because others in the art taught away from the invention of the '761 Patent.

319. Furthermore, previous tools for sharing documents taught away from the invention claimed in the '761 Patent. This is because these tools did not leverage context metadata to provide online collaboration effectively for an ever-increasing number of users and amount of data. In my opinion, this indicates that the '761 Patent is not obviousness because others in the art taught away from the invention of the '761 Patent.

MATERIALITY

320. I have also read the expert report of Mr. Hughes. I understand that Mr. Hughes has submitted an opinion regarding an issue which is not in the case. Therefore, I specifically reserve the right to supplement my report regarding Mr. Hughes opinion if the issue is permitted in the case. In any case, I have briefly addressed Mr. Hughes' opinions below.

321. In my opinion, each of the facts and references cited by Mr. Hughes are not material to the patentability of the '761 Patent. In particular, these references are not material because each fails to show relevant claim limitations that were disclosed in the art already before the USPTO. For this reason, the '761 Patent is valid in light of these facts and references. Notably, Mr. Hughes' analysis is flawed from the outset as his opinion does not consider each limitation of any individual claim of the '761 Patent. Namely, Mr. Hughes states, "In my opinion, any reference that discloses capturing and storing context information about a) data and b) user interaction with the data, would have material to the patentability of claim 1 of the US Patent No. 7,139,761." As such, Mr. Hughes' test for materiality seems to ignore the tracking component found in the asserted claims. The following is an analysis of the facts and references cited by Mr. Hughes' Expert Report.

Bianco Thesis

322. The Bianco thesis is not material to the patentability of the '761 Patent. The Bianco thesis discloses a basic groupware system (which is discussed above) called DISCIPLER used for project management. *See* Bianco at 5. Groupware such as DISCIPLER were disclosed in art already before the examiner of the '761 Patent. In particular, U.S. Patent 6,622,147 ("the '147 Patent") entitled "Method and Apparatus for Group Action Processing Between Users of a Collaboration System" was considered by the examiner of the '761 Patent. The '147 Patent states, "The present invention also relates to time and action/project manage using a computer system. More specifically, the present invention relates to a method for collaboration between two or more persons for time and project management." '147 Patent, Col. 1, ll. 18-23.

323. Furthermore, similar to '147 Patent, the Bianco thesis does not teach the claims of the '761 Patent. For example, EventStream, which Mr. Hughes declares is the "key to collaboration in the DISCIPLER system," is a "read-only environment" where the "concept of the document is meaningless." *See* Bianco at 16-17. In particular, EventStream is simply a history system that records all events generated by users, ordered by the time when they occurred. Such a system merely serves to "provide graphical views of the collaborative process." *See* Bianco at 56. As such, the Bianco thesis is not material to the patentability of the '761 Patent. Notably, Dr. Greenberg did not consider this as a prior art reference in his analysis.

LifeStreams Project and LifeStreams Office.

324. The LifeStreams Project, which is discussed above, is not material to the patentability of the '761 Patent. The LifeStreams Project is similar to the EventStream in that it merely provides a graphical view. The only difference is that it is a graphical view of documents.

As such, it does not teach the claims of the '761 Patent. Accordingly, it is also not material to the patentability of the '761 Patent.

325. The description of LifeStream Office is less than a page and made up mostly of bullet points. Nevertheless, it is clear that the LifeStream Office does not disclose any claim of the '761 Patent. As Mr. Hughes acknowledges that it is merely a DMS system, the LifeStreams Project is not material to the patentability of the '761 Patent. Document management systems were already considered by the Patent Examiner of the '761 Patent. For example, the examiner cited the McKelvie reference during the prosecution of the '761 Patent. McKelvie discloses a system that “can represent the state of a collaborative document such as...document revision...etc.” This system also provides the “application logic that controls editorship and revision mechanisms for the document...” *See* McKelvie at 46, ¶0411. As such, this kind of system is cumulative of what was already before the USPTO, thus the LifeStream Office is not material to the patentability of the '761 Patent. Notably, Dr. Greenberg did not consider this as a prior art reference in his analysis.

CVW System

326. The CVW reference is not material to the patentability of the '761 Patent. The CVW reference is an “Overview” of the CVW system, a collaboration system is based on virtual rooms (also discussed above). *See* CVW Overview at 1. “CVW allows people to gather in rooms to talk through chat or audio/video conferencing and share text and URLs with one another with their chat.” *Id.* Such a system had already been disclosed before the Examiner of the '761 Patent in the form of Patent Application No. 2002/0143877. Specifically the “Background of the Invention” of Patent Application No. 2002/0143877 discloses, “Instant messaging systems allow participants in a group to see whether members of the group are logged

on to the messaging system, and allow users, i.e., participants, to chat with each other using a text-based system. Collaborative tools such as NetMeeting, similarly, allow participants to see who is currently active in the system and allow the participants to join a conference and share documents.” Furthermore, the “document” related features of the CVW system are cumulative of the DMS references previously disclosed the USPTO.

327. Mr. Hughes’ analysis of the CVW system is demonstrative of the flawed premise each of his analyses are based on. In particular, Mr. Hughes does not even claim this there is a tracking component to track user activity. Instead, he vaguely declares that “information is collected about each document...” *See* Hughes Expert Report at 13. Furthermore, citations to support for his assertions are largely absent. In fact the only citation Hughes provides for the CVW system is to the document sharing feature which is typical of DMS systems. As this approach was already presented before and considered by the USPTO, the CVW reference is not material to the patentability of the ‘761 Patent. Notably, Dr. Greenberg did not consider this as a prior art reference in his analysis.

iManage DMS

328. As described previously, the iManage DMS should be considered cumulative and thus not material because it merely embodies art that was already before the USPTO. Mr. Hughes acknowledges that iManage is merely a DMS system as he, himself refers to iManage as “iManage DMS.” *See* Hughes Expert Report at 13. As document management systems were already presented and considered by the USPTO, the iManage DMS system is also not material to the patentability of the ‘761 Patent.

329. Furthermore, the iManage DMS merely uses the same tagging approach discussed in the “Background of the Invention” of the ‘761 Patent. ‘761 Patent, Col. 2, ll. 55-59.

Moreover, the iManage DMS is dependent on the same folder structure previously discussed in the "Background of the Invention" of the '761 Patent. The iManage manual explains that it is the users who create these folders, "which are static groups of documents you can create or share with other users. Folders provide a method for organizing and sharing documents easily." See "Folders and Sub-folders" iManage manual at 25. Furthermore it is the user who decides how to categorize the documents by adding them into these folders. See "Adding Documents to a Folder" iManage manual at 29. This method of categorization is merely cumulative of the system cited by the examiner disclosed in Patent No. 6,622,147 which states, "[i]n many prior art systems, the user is required to spend time navigating around a user interface to link information to the desired lists or categories to which it pertains." See '147 Patent, Col. 1, ll. 47-50.

330. The iManage DMS is dependent on conventional methods that were previously disclosed to the PTO, thus the iManage DMS is not material to the patentability of the '761 Patent.

I declare under penalty of perjury under the laws of the State of Pennsylvania and the United States that each of the above statements is true and correct. Executed on April 22, 2010 in Pittsburg, Pennsylvania.

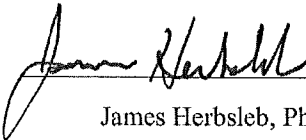

James Herbsleb, Ph.D.

EXHIBIT A

James D. Herbsleb
Professor of Computer Science
Director, Software Industry Center
Institute for Software Research
Carnegie Mellon University
February, 2008

Coordinates

5321 Wean Hall
Pittsburgh, PA 15213
Phone: (412) 268-8933

E-mail: jdh@cs.cmu.edu
Web page: <http://conway.isri.cmu.edu/~jdh/>
Fax: (412) 268-7287

Education

1991-93 Postdoctoral Research Fellow, University of Michigan
Collaborative Software Engineering

1991 M.S. University of Michigan
Computer Science

1984 Ph.D. University of Nebraska
Cognitive Social Psychology

1980 J.D. University of Nebraska
Joint Program in Law and Psychology

1976 B.A. Monmouth College, Monmouth, Illinois
Psychology and Economics

Employment Experience

2002-present Professor of Computer Science, Institute for Software Research, School of
Computer Science, Carnegie Mellon University

1996-2002 Member of Technical Staff, Software Production Research Department, Lucent
Technologies

1994-96 Member of Technical Staff, Software Engineering Institute, Carnegie Mellon
University

1991-93 Postdoctoral Research Fellow, University of Michigan

1992 Lecturer, Department of Psychology, University of Michigan

1988-91 Research and Teaching Assistantships, Department of Electrical Engineering and
Computer Science, University of Michigan

1982-89 Associate Professor, Department of Psychology, Hillsdale College, Hillsdale,
Michigan

Publications

Peer-Reviewed Journals

1. Gurbani, V.K., Garvert, A., & Herbsleb, J.D. (in press). Managing a Corporate Open Source Software Asset. To appear, *Communications of the ACM*.
2. Espinosa, A., Slaughter, S., Kraut, R., & Herbsleb, J. (2007). Familiarity, Complexity and Team Performance in Geographically Distributed Software Development. *Organization Science*, July-August, 18, pp. 613 – 630.
3. Espinosa, J. A., Slaughter, S. A., Kraut, R. E., & Herbsleb, J. D. (2007). Team Knowledge and Coordination in Geographically Distributed Software Development. *Journal of Management Information Systems*, 24, 1, pp. 5 – 12.
4. Herbsleb, J.D. & Mockus, A. (2003). An Empirical Study of Speed and Communication in Globally-Distributed Software Development. *IEEE Transactions on Software Engineering*, 29, 3, pp. 1-14.
5. Mockus, A., Fielding, R., & Herbsleb, J.D. (2002). Two Case Studies of Open Source Software Development: Apache and Mozilla. *ACM Transactions on Software Engineering and Methodology*, 11, 3, pp. 309-346.
6. Colbert, R. O., Compton, D. S., Hackbarth, R. L., Herbsleb, J. D., Hoadley, L. A., & Wills, G. J. (2001). Advanced Services: Changing How We Communicate. *Bell Labs Technical Journal*, 6(1), Jan.-Jun. 2001, pp. 211-228.
7. Herbsleb, J.D. & Moitra, D. Global Software Development. *IEEE Software*, March/April 2001, pp. 16-20.
8. El Emam, K., Goldenson, D., McCurley, J., Herbsleb, J. D. (2001). Modeling the Likelihood of Software Process Improvement: An Exploratory Study. *Empirical Software Engineering*, 6, 3, pp. 207-229.
9. Herbsleb, J. D. & Grinter, R. E. (1999). Architectures, Coordination, and Distance: Conway's Law and Beyond. *IEEE Software*, Sept/Oct 1999, pp. 63-70.
10. Herbsleb, J. D., & Kuwana, E. (1998). An Empirical Study of Information Needs in Collaborative Software Design. *Journal of the Information Processing Society of Japan*, 39, 3, 1998.
11. Herbsleb, J. D., Zubrow, D., Goldenson, D., Hayes, W., & Paulk, M. (1997). Software Quality and the Capability Maturity Model. *Communications of the ACM*, 40, 30-40.
12. Herbsleb, J. D., Klein, H., Olson, G. M., Brunner, H., Olson, J. S., and Harding, J. (1995). Object-oriented analysis and design in software project teams. *Human Computer Interaction*, 10, 249-292.
13. Olson, G. M., Herbsleb, J. D., and Rueter, H. H. (1994). Characterizing the sequential structure of interactive behaviors through statistical and grammatical techniques. *Human Computer Interaction*, 9, 427-472.
14. Herbsleb, J.D., Sales, B.D., Overcast, T.D. (1985). Challenging Licensure and Certification, *American Psychologist*, Vol. 40, pp. 1165-1178.

Peer-Reviewed Conferences

15. Cataldo, M., Bass, M., Herbsleb, J.D., Bass, L. (2007). On Coordination Mechanisms in Global Software Development. *International Conference on Global Software Engineering*, Munich, Germany, August 27-30, pp. 71-80.
16. Lescher, C., Bass, M., Herbsleb J.D. (2007). Collaboration in Global Software Projects at Siemens: An Experience Report. *International Conference on Global Software Engineering*, Munich, Germany, August 27-30, pp. 33-39.
17. LaToza, T.D., Garlan D., Herbsleb J.D., & Myers, B.A. (2007). Program Comprehension as Fact-Finding, in proceedings of the *European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering*, Dubrovnik, Croatia, September 3-7, pp. 361-370.
18. Dekel, U. & Herbsleb, J.D. (2007). Notation and Representation in Collaborative Object-Oriented Design, in Proceedings, *OOPSLA 2007*, pp. 261-280.
19. Bass, M., Herbsleb, J., Cataldo, M., Bass, L. Architectural Misalignment: An Experience Report. In Proceedings, *Sixth Working IEEE/IFIP Conference on Software Architecture*. Mumbai, India, January 6-9, 2007.
20. Balan, R.K., Gergle, D., Satyanarayanan, M., & Herbsleb, J. Simplifying Cyber Foraging for Mobile Devices. In Proceedings, *ACM International Conference on Mobile Systems, Applications, and Services*. San Juan, Puerto Rico, June 11-14. pp. 272-285.
21. Cataldo, M., Wagstrom, P., Herbsleb, J.D., Carley, K. (2006). Identification of coordination requirements: Implications for the design of collaboration and awareness tools. In Proceedings, *ACM Conference on Computer-Supported Cooperative Work*, Banff Canada, pp. 353-362. Received *Best Paper Award*.
22. Herbsleb, J.D., Mockus, A., Roberts, J.A. (2006). Collaboration in Software Engineering Projects: A Theory of Coordination. *International Conference on Information Systems*, Milwaukee, WI. Received *Best in Track Award*.
23. Mullick, N., Bass, M., Houda, Z., Sangwan, R., Paulish, D., Cataldo, M., Herbsleb, J., Bass, L. (2006). Siemens Global Studio Project: Experiences adopting an integrated GSD infrastructure. *IEEE International Conference on Global Software Engineering*.
24. Gurbani, V.K., Garvert, A., Herbsleb J.D. A Case Study of a Corporate Open Source Development Model. (2006). In Proceedings, *International Conference on Software Engineering*, Shanghai, China, May 20-25, 2006, pp. 472-481.
25. Li, P.L., Herbsleb, J., Shaw, M., Robinson, B. Experiences and Results from Initiating Field Defect Prediction and Product Test Prioritization Efforts at ABB Inc. In *Proceedings of the International Conference on Software Engineering*, Shanghai, China, May 20-25, 2006, pp. 413-423.
26. Espinosa, A., Slaughter, S. A., Herbsleb, J. D. and Kraut, R. E. (2005). Coordination Mechanisms in Globally Distributed Software Development. In *Proceedings of the First International Conference on Management of Globally Distributed Work*, Bangalore, India.

27. Li, P.L., Herbsleb, J., Shaw, M. "Forecasting Field Defect Rates Using a Combined Time-based and Metrics-based Approach: a Case Study of OpenBSD". In *Proceedings of the 16th IEEE International Symposium on Software Reliability Engineering*, Nov 2005.
28. Herbsleb, J., Paulish, D.J., Bass, M. (2005). Global Software Development at Siemens: Experience from Nine Projects. *International Conference on Software Engineering (ICSE)*, pp. 524 - 533, St. Louis, MO, May 15-21, 2005.
29. Wagstrom, P., Herbsleb, J., Carley, K. A Social Network Approach to Free/Open Source Software Simulation. To appear, the *First International Conference on Open Source Systems*, Genoa, Italy, July 11 - 15, 2005.
30. Li, P. L., Herbsleb, J., Shaw, M. Finding Predictors of Field Defects for Open Source Software Systems in Commonly Available Data Sources: a Case Study of OpenBSD (2005). To appear, IEEE International Software Metrics Symposium, 19-22 September, Como, Italy.
31. Li, P., Shaw, M., Herbsleb J., Ray, B., & Santhanam, P. (2004). Empirical Evaluation of Defect Projection Models for Widely-deployed Production Software Systems. To appear, *ACM Symposium on the Foundations of Software Engineering (FSE)*.
32. Herbsleb, J.D. & Mockus, A. (2003). Formulation and Preliminary Test of an Empirical Theory of Coordination in Software Engineering. In proceedings, *ACM Symposium on the Foundations of Software Engineering (FSE)*, Helsinki, Finland, pp. 112-121.
33. Espinosa, J. A., Kraut, R.E., Slaughter, S. A., Lerch, J. F., Herbsleb, J. D., Mockus, A. Shared mental models, familiarity, and coordination: A multi-method study of distributed software teams (2002). *International Conference on Information Systems (ICIS)*, Barcelona, Spain, December 15th – 18th, pp. 425-433.
34. Handel, M. & Herbsleb, J.D. (2002). What is Chat Doing in the Workplace? Proceedings of *ACM Conference on Computer-Supported Cooperative Work (CSCW)*, New Orleans, LA, pp. 1-10.
35. Herbsleb, J.D., Atkins, D.L., Boyer, D.G., Handel, M., & Finholt, T.A. (2002). Introducing Instant Messaging and Chat into the Workplace. In proceedings of *ACM Conference on Computer-Human Interaction (CHI)*, pages 171-178, Minneapolis, MN, April 20-25.
36. Mockus, A. & Herbsleb, J.D. Expertise Browser: A Quantitative Approach to Identifying Expertise (2002). In proceedings of *International Conference on Software Engineering (ICSE)*, pp. 503-512, Orlando, FL, May 19-25.
37. Herbsleb, J.D., Mockus, A., Finholt, T.A., & Grinter, R.E. (2001). An Empirical Study of Global Software Development: Distance and Speed. In proceedings, *International Conference on Software Engineering (ICSE)*, pages 81-90, Toronto, Canada, May 15-18.
38. Siy, H.P., Mockus, A, Herbsleb, J.D., Krishnan, M., and Tucker, G. T. (2001). Making the software factory work: Lessons from a decade of experience. In proceedings, *Metrics 2001: Seventh International Symposium on Software Metrics*, pages 317-327, London, England, April 4-6.

39. Mockus, A. & Herbsleb, J.D. Challenges of global software development. (2001). In proceedings, *Metrics 2001: Seventh International Symposium on Software Metrics*, pages 182-184, London, England, April 4-6.
40. Espinosa, J. A., Kraut, R.E., Slaughter, S. A., Lerch, J. F., Herbsleb, J. D., Mockus, A. (2001). Shared Mental Models and Coordination in Large-Scale, Distributed Software Development. To appear in proceedings, *International Conference on Information Systems (ICIS)*, New Orleans, LA, December 16- 19.
41. Godefroid, P., Herbsleb, J.D., Jagadeesan, L.J., Li, D. (2000). Ensuring Privacy in Presence Awareness Systems: An Automated Verification Approach. In proceedings, *ACM Conference on Computer-Supported Cooperative Work (CSCW)*, pages 59-68, Philadelphia, PA, Dec. 2-7.
42. Herbsleb, J.D., Mockus, A., Finholt, T.A., & Grinter, R.E. (2000). Distance, Dependencies, and Delay in a Global Collaboration. In Proceedings, *ACM Conference on Computer-Supported Cooperative Work (CSCW)*, pages 319-328, Philadelphia, PA, Dec. 2-7.
43. Mockus, A., Fielding, R.T., & Herbsleb, J. (2000). A Case Study of Open Source Software Development: The Apache Server. In proceedings, *International Conference on Software Engineering (ICSE)*, pages 263-272, Limerick Ireland, June 5-7.
44. Herbsleb, J. D. & Grinter, R. E. (1999). Splitting the Organization and Integrating the Code: Conway's Law Revisited. In proceedings, *International Conference on Software Engineering (ICSE)*, pages 85-95, Los Angeles, CA, May 16-22.
45. Herbsleb, J. D. Metaphorical Representation in Collaborative Software Engineering. (1999). In proceedings, *International Joint Conference on Work Activities, Coordination, and Collaboration*, pages 117-125, San Francisco, CA, February 22-25.
46. Grinter, R. E., Herbsleb, J. D., & Perry, D. E. (1999). The Geography of Coordination: Dealing with Distance in R&D Work. In proceedings, *International Conference on Supporting Group Work*, Phoenix, AZ, November 14-17.
47. Herbsleb, J. D. & Grinter, R. E. (1998). Conceptual Simplicity Meets Organizational Complexity: Case Study of a Corporate Metrics Program. In proceedings, *International Conference on Software Engineering (ICSE)*, pages 271-280, Kyoto, Japan, April 19-25.
48. Herbsleb, J. D. & Goldenson, D. (1996). A systematic survey of CMM experience and results. In proceedings, *International Conference on Software Engineering (ICSE)*, pages 323-330, Berlin, Germany, March 25-30.
49. Herbsleb, J. D., and Kuwana, E. (1993). Preserving knowledge in design projects: What designers need to know. In proceedings, *Human Factors in Computing Systems (CHI)*, pages 7-14, Amsterdam, The Netherlands, April 24-29.
50. Kuwana, E. and Herbsleb, J.D. (1993). Representing knowledge in requirements engineering: An empirical study of what software engineers need to know. In proceedings, *IEEE International Symposium on Requirements Engineering*, p. 273-276, San Diego, CA, January 4-6.

Book Chapters

51. Olson, G. M., Olson, J. S., Storrøsten, M., Carter, M., Herbsleb, J., and Rueter, H. (1996). The structure of activity during design meetings. In T. Moran & J. Carroll (Eds.) *Design Rationale: Concepts, Techniques, and Use*. Lawrence Erlbaum: Mahwah, NJ, pp. 217-239.
52. Goldenson, D.R., El Emam, K., Herbsleb, J., and Deephouse, C. (1998) Empirical studies of software process assessment methods, in T. P. Rout (ed.) *Software Process Assessment and Improvement*, Southampton, UK: Wit Press, 1998.

Keynote addresses, Invited Talks

53. Herbsleb, J. (2007). Global Software Engineering: The Future of Socio-technical Coordination, in *Future of Software Engineering 2007*, L. Briand and A. Wolf, Editors. 2007, IEEE-CS Press. (Invited presentation, ICSE 2007.)
54. Herbsleb, J. (2007). Open Source Ecologies. IBM Toronto, Academy of Technology Open Source Conference, February 27, 2007. (Keynote address).
55. Herbsleb, J. (2007). Aligning Coordination Behavior with Coordination Needs: Congruence in Software Development. IBM TJ Watson Research, February 13, 2007. (Invited presentation).
56. Herbsleb, J. (2007). Coordination in Engineering: Computing Task Dependencies from Work Artifacts. Boeing Phantom Works, January 9, 2007. (Invited presentation.)
57. Herbsleb, J. (2006). Coordination in GSD: Making the Invisible Visible. *International Conference on Global Software Engineering*, Florianopolis, Brazil, Oct. 16. (Keynote address)
58. Herbsleb, J. (2006). From Software Engineering to Software as Service: Computing Task Dependencies from Work Artifacts. Microsoft Research Laboratory, August 11, 2006. (Invited presentation.)
59. Herbsleb, J. (2006). Dependencies and awareness in unstable environments. Stanford University, March 22, 2006. (Invited presentation.)
60. Herbsleb, J. (2006). Overcoming the Challenges of Global Development. *OOP 2006*, Munich, Germany, January 18, 2006. (Invited presentation).
61. Herbsleb, J. (2006). What Every Commercial Developer Should Know about How Open Source Works. *OOP 2006*, Munich, Germany, January 19, 2006. (Invited presentation).
62. Herbsleb, J. (2005). Integrating organizational systems. Keynote, Siemens Technology Day 2005, Salzburg, Austria, 11/7/2005.
63. Herbsleb, J. (2005). Beyond computer science. *International Conference on Software Engineering (ICSE)*, pp. 23-27, St. Louis, MO, May 15-21, 2005 (invited presentation).
64. Herbsleb, J. (2004). Why open source works. *Open Source and Free Software: Concepts, Controversies, and Solutions*, May 9-11, University of Toronto, Toronto, Canada. <http://osconf.kmdi.utoronto.ca/default.htm> (invited presentation.)
65. Herbsleb, J. (2003). Two Cases of Open Source Software Development: Apache and Mozilla. *HBS - MIT Sloan Free/Open Source Software Conference: New Models of Software*

Development, June 19-20, Harvard Business School and MIT Sloan School of Business.
<http://opensource.mit.edu/conference.html> (invited presentation.)

66. Herbsleb, J. (2002). Research Priorities in Open Source Software Development. *Advancing the Research Agenda on Free/Open Source Software*, Oct. 14, Brussels, Belgium. Institute of Infonomics, University of Maastricht and Center for Information Policy, University of Maryland. <http://www.infonomics.nl/FLOSS/workshop/> (invited presentation.)
67. Herbsleb, J., (with Atkins, D., Handel, M., Mockus, A., Perry, D., Wills, G). Global Software Development: The Bell Labs Collaboratory. In proceedings, *International Conference on Software Engineering (ICSE 2001)* Toronto, Canada, May 15-18, p. 681. (Invited presentation.)

Selected Other Papers

68. Wagstrom, P. & Herbsleb, J.D. (2006). Dependency forecasting in the distributed agile organization. *Communications of the ACM*, 49 (10), pp. 55-56.
69. Shaw, M., Herbsleb, J.D., Ozkaya, I., & Root, D. (2005). Deciding What to Design: Closing a Gap in Software Engineering Education Invited paper for Education and Training Track of 27th *International Conference on Software Engineering (ICSE 2005)*, May 2005, book chapter to appear.
70. Herbsleb, J.D. & Moitra, D. Global Software Development. *IEEE Software*, March/April 2001. (Special issue, Herbsleb, J.D. & Moitra, D., Eds.)
71. Rocco, E., Finholt, T.A., Hofer, E.C., & Herbsleb, J.D. (2001, April). Out of sight, short of trust Presentation at the Founding Conference of the European Academy of Management. Barcelona, Spain.
72. Finholt, T. A., Rocco, E., Bree, D., Jain, N., & Herbsleb, J. D. NotMeeting: A Field Trial of NetMeeting in a Geographically Distributed Organization. *SIGCHI Bulletin*, April 1999.
73. Boyer, D. G., Cortes, M., Herbsleb, J. D., & Handel, Mark J. Virtual Community Presence Awareness. In Proceedings, *CSCW '98 Workshop on Designing Virtual Communities for Work*, Seattle, WA, November 14-18, 1998.
74. Herbsleb, J.D. Hard problems and hard science: On the practical limits of experimentation. (1998). *IEEE TCSE Software Process Newsletter*, No. 11, Winter 1998, 18-21.
75. Herbsleb, J. D. Supporting the emergence of abstractions in software design. (1997). *CHI 97 Workshop on Interactive Systems for Supporting the Emergence of Concepts and Ideas*.
76. Goldenson, D. & Herbsleb, J. (1995). After the appraisal: A systematic survey of process improvement, its benefits, and factors that influence success. Technical Report CMU/SEI-95-TR-009, Carnegie Mellon University.
77. Herbsleb, J., Carleton, A, Rozum, J., Siegel, J., Zubrow, D. (1994). Benefits of CMM-based software process improvement: Initial results. Technical Report CMU/SEI-94-TR-13, Carnegie Mellon University.
78. Herbsleb, J., Zubrow, D., Siegel, J., Rozum, J., Carleton, A. (1994). Software process improvement: State of the Payoff. *American Programmer*, 7, 2-12.

Funding

1. National Science Foundation, IIS-0414698. Coordination, communication, and collaboration in open source software development. \$400,000. PI: Herbsleb. Co-PIs: Carley, Kraut, Mockus.
2. National Science Foundation, IIS-0534656. The role of architecture in facilitating design collaboration. \$500,000. PI: Herbsleb. Co-PIs: Garlan, Paulish.
3. Corporate funding: Siemens Corporate Research, IBM Faculty Award.
4. SEI IR&D. Understanding organizational risk in architectural design. \$246,000. With Bass & Klein.
5. Sloan Foundation. Software Industry Center.

Selected Press Coverage

Open Source Development Models Fall Flat, *Computerworld*, May 12, 2004.
<http://www.computerworld.com/printthis/2004/0,4814,93109,00.html>

You Can Surf but You Can't Hide, *New York Times*, February 7, 2002.
<http://www.nytimes.com/2002/02/07/technology/circuits/07HERE.html?ex=1025680685&ei=1&en=f0e9040e3b056fec>

Software Development Goes Global. *Computerworld*, June 26, 2000.
http://www.computerworld.com/cwi/story/0,1199,NAV47_STO46187,00.html

Unit of One: The Road not Taken. *Fast Company*, June 2000.
<http://www.fastcompany.com/online/35/one.html>

Dissertation Supervision

Committee Chair or Co-chair

Matthew Bass, Institute for Software Research, CMU

Marcelo Cataldo (with Kathleen Carley), Institute for Software Research, SCS, CMU.

Uri Dekel, Institute for Software Research, SCS, CMU.

Peter Landwehr (with Kathleen Carley), Institute for Software Research, SCS, CMU.

Patrick Wagstrom (with Kathleen Carley), Engineering and Public Policy, CMU.

Professional Activities

Associate Editor, *ACM Transactions on Software Engineering and Methodology*, 2008-present
Editorial Board, *Empirical Software Engineering*, 2006-present
Conference Co-Chair, *Computer-Supported Cooperative Work (CSCW)* 2004
Program Committee, *International Conference on Software Engineering*, 2008
Program Committee, *Foundations of Software Engineering (FSE)* 2008
Program Committee, *Foundations of Software Engineering (FSE)* 2006
Program Committee, *Foundations of Software Engineering (FSE)* 2004
Program Committee, *International Conference on Software Engineering (ICSE)* 2003
Program Co-Chair, *Human-Computer Interaction Consortium (HCIC)* 2002.
Guest editor, Special issue of *IEEE Software* on Global Software Development (Mar./Apr. 2001)
Reviewer, ACM Conference on *Computer-Human Interaction (CHI)*
Reviewer, ACM Conference on *Computer-Supported Cooperative Work (CSCW)*
Reviewer, *ACM Transactions on Information Systems (TOIS)*
Reviewer, *IEEE Transactions on Software Engineering*
Reviewer, *Empirical Software Engineering*
Reviewer, *Empirical Studies of Programmers*
Reviewer, *Human-Computer Interaction*
Reviewer, *IBM Systems Journal*
Member, Association for Computing Machinery

EXHIBIT B

EXHIBIT B - LIST OF MATERIALS REVIEWED

Title/Description of Document	Bates No.
U.S. Patent No. 7,139,761	LTI 000001 - 31
File History of U.S. Patent No. 7,139,761 (including cited prior art references)	
Provisional Application No. 60-432255	LTI 000742 - 60
Leader Project Functional Specification and corresponding e-mail from Michael McKibben to Brad Whiteman dated August 19, 1999	LTI 012960 - 88
Claim Construction Order dated March 9, 2010	
Leader Technologies, Inc.'s Third Supplemental Response to Facebook, Inc.'s Interrogatory No. 1, First Supplemental Response to Facebook, Inc.'s Interrogatory No. 8, and Second Supplemental Responses to Facebook, Inc.'s Interrogatories Nos. 10 and 12-17, served on November 20, 2009	
Plaintiff Leader Technologies, Inc.'s Supplemental Responses to Defendant Facebook, Inc.'s Interrogatory Nos. 1, 4, 5, 7, 10, 12-18, served on April 1, 2010	
Pseudo Code Implementation of Context and Tracking Components	
Excerpts from the deposition transcript of Jeffrey R. Lamb, dated February 19, 2010 (Exhibit B-17 to Greenberg Expert Report)	
Expert Report of Saul Greenberg, Ph.D., and all exhibits attached thereto, dated April 8, 2010	
Expert Report of James Patrick Hughes, and all exhibits attached thereto, dated April 8, 2010	
U.S. Patent No. 6,418,461	
U.S. Patent No. 6,539,371	
U.S. Patent Application Pub. No. 2002/0143877	
U.S. Patent Application Pub. No. 2003/0217096	
U.S. Patent No. 6,154,465	

Title/Description of Document	Bates No.
U.S. Patent No. 6,311,228	
U.S. Patent Application Pub. No. 2002/001301	
U.S. Patent No. 6,622,147	
U.S. Patent Application Pub. No. 2003/0069849	
U.S. Patent No. 6,714,921	
U.S. Patent Application Pub. no. 2002/0078150	
U.S. Patent No. 6,370,538	
U.S. Patent No. 6,308,179	
iManage DeskSite 6.0 - User Reference Manual	
Hess, Christopher K., <i>A Context File System for Ubiquitous Computing Environments</i> (July 2002)	
U.S. Patent No. 6,430,575	
European Patent App. No. EP 1087306	
U.S. Patent No. 7,590,934	
U.S. Patent No. 6,236,994	
U.S. Patent No. 6,941,313	
U.S. Patent No. 6,434,403	
Excerpts from Microsoft Computer Dictionary (Exhibit B-12 to Greenberg Expert Report)	
U.S. 7,346,648	
Bianco, <i>An Interface for the Visualization and Manipulation of Asynchronous Collaborative Work within the DISCIPLINE system</i> (January 2000)	LTI 134982 - 5046
Greenberg, Saul, et al., <i>Personalizable Directories: A Case Study in Automatic User Modeling</i>	

Title/Description of Document	Bates No.
Greenberg, Saul, <i>User Modeling in Interactive Computer Systems</i> (February 1984)	
Greenberg, Saul, <i>The Computer User as Toolsmith - The Use, Reuse, and Organization of Computer-based Tools</i> (Cambridge Univ. Press 1993).	
Witten, Ian H., <i>Liveware: a new approach to sharing data in social networks</i> (Int. J. Man-Machine Studies 1991).	
Witten, Ian H., and Greenberg, Saul, <i>Supporting command reuse: mechanisms for reuse</i> (Int. J. Man-Machine Studies 1993).	
Witten, Ian H., Darragh, John J., and Greenberg, Saul, <i>Predictive interfaces: what will they think of next?</i> (Cambridge Univ. Press 1995).	
Roseman, Mark, and Greenberg, Saul, <i>TeamRooms: Network Places for Collaboration</i> (ACM Press 1996).	
Greenberg, Saul, and Tauscher, Linda, <i>How people revisit web pages: empirical findings and implications for the design of history systems</i> (Int. J. Human-Computer Studies 1997).	
Greenberg, Saul, and Mark Roseman, <i>A Tour of TeamRooms</i> (ACM Press 1997)	
Cockburn, A., Greenberg, Saul, McKenzie, B., et al., <i>WebView: A Graphical Aid for Revisiting Web Pages</i> (Proceedings of the OZCH'99 Australian Conference on Human Computer Interaction 1999).	
Kaasten, S., <i>Integrating Back, History, and Bookmarks in Web Browsers</i> (Dept. of Computer Science, Univ. of Calgary 2001).	
Greenberg, Saul, <i>Context as a Dynamic Construct</i> (Human-Computer Interaction, Vol. 16, pp. 257-268, 2001).	
Tam, J., <i>Supporting Change Awareness in Visual Workspaces</i> (Dept of Computer Science, Univ. of Calgary 2002).	
Greenberg, Saul, and Roseman, M., <i>Using a Room Metaphor to Ease Transitions in Groupware</i> (MIT Press 2003).	

EXHIBIT C

Pseudo code implementation of Context and Tracking Components

This report describes the implementation in pseudo code of a context and a context tracking functionality based on the descriptions provided in the provisional patent application. The design approach was to articulate into pseudo code a generalization of the workflow example provided in ATTACHMENT 2 of the provisional patent application. In that regards, the pseudo code contains two basic elements:

- (a) a generic application skeleton that allows the user to navigate through contexts as defined in a particular workflow (referred to as Webslice in ATTACHMENT 2) and where the change of context is identified automatically
- (b) an implementation of a context (referred to as Boards in ATTACHMENT 2)

Those two elements also utilize the source code described in the Web and WebSlice classes as described in ATTACHMENT 2 of the provisional patent application.

Class: WebApp

```
import java.awt.AWTEvent;
import java.awt.Menu;
import java.awt.MenuItem;
import java.awt.event.ActionListener;
import java.util.Collection;
import java.util.Iterator;
import java.util.List;

/**
 * This class represents the general skeleton of an application
 * (e.g. web based application) that would provide an end-user
 * with the basic interface to create contexts, navigate across
 * them based on the workflows relevant to the user and track
 * changes to contexts.
 */
public class WebApp {
    /* the basic elements to keep track of */
    private Collection<Web> webs;
    private Web currentUserWeb; // the specific web. It is possible to have multiple webs
                                // and the user selects one at any particular time
    private Board currentUserCtx; // the specific context within a particular web
    private WebSlice currentUserWorkFlow;
    private String userID;

    /*
     * UI elements
     */
    private Menu menuWebs;
    private Menu menuWebSlices;
    private Menu menuBoards;

    /**
     * Constructor
     * @param the User that is using the particular instance of the application
     */
    public WebApp(String userName) {
        this.userID = userName;
        this.currentUserWeb = null;
        this.currentUserCtx = null;
        this.currentUserWorkFlow = null;
        setupWebApp();
    }

    /*
     * We assume that there is some persistent repository where the definitions of Webs
     * WebSlices and Boards are stored. This method would access such data and present it
     * to the user. Upon selection of the relevant UI elements on the part of the user,
     * the basic elements (e.g. currentUserWeb, currentUserCtx, currentUserWorkFlow) would
     * be defined
     */
    public void setupWebApp() {
        /*
         * For simplicity sake, we assume that the persistent storage interface referred to
         * in page 11 of the provisional patent application (CollectionFactory)
         */
        this.webs = CollectionFactory.getPersistentCapableCollectionOfWebs();
        /*
         * At this point we would have a collection of instantiated Web objects.
         * The next step would be to present the list of available Webs to the user
         * through some UI element (e.g. a menu) so the user select the web of interest.
         */
        menuWebs = new Menu("Webs");
        menuWebSlices = new Menu("Workflows");
        menuBoards = new Menu("Contexts");
        for(Iterator iter = webs.iterator(); iter.hasNext(); ) {
            Web w = (Web) iter.next();
            menuWebs.add(new MenuItem(w.getName()));
            // getName method is defined in ATTACHMENT 2, page 12
        }
        /*
         * The UI element would have event-based mechanism such as a listener that
         * automatically detect the users' selection. Upon reception of the event,
         * the application can automatically update its internal state. Specifically,
         * once a use selects a particular Web, the variable currentUserWeb can be
         * updated and the list of available Contexts (or Boards) in the Web can be
         * retrieved and displayed.
         */
    }
}
```

```

menuWebs.addActionListener(new ActionListener() {
    public void actionPerformed(AWTEvent e) {
        MenuItem m = (MenuItem)e.getSource();
        String webName = m.getLabel();
        // the getWebByName method would iterate over the webs collection
        // and return the right object
        currentUserWeb = this.getWebByName(webName);
        currentUserCtx = null;
        currentUserWorkFlow = null;
        /*
         * We now have the a Web object. The first step is to update the
         * menus with the webslices
         */
        menuWebSlices.removeAll();
        menuBoards.removeAll();
        Collection<WebSlice> slices =
        CollectionFactory.getPersistentCapableCollectionOfWebSlices();
        for(Iterator iter = slices.iterator(); iter.hasNext(); ) {
            WebSlice ws = (WebSlice) iter.next();
            menuBoards.add(new MenuItem(ws.getName()));
        }
    }
});

/*
 * The next step is to add a listener to the menu of Workflows (webslices)
 */
menuWebSlices.addActionListener(new ActionListener() {
    public void actionPerformed(AWTEvent e) {
        MenuItem m = (MenuItem)e.getSource();
        String webSliceName = m.getLabel();
        Collection<WebSlice> slices =
        CollectionFactory.getPersistentCapableCollectionOfWebSlices();
        for(Iterator iter = slices.iterator(); iter.hasNext(); ) {
            WebSlice ws = (WebSlice) iter.next();
            if (webSliceName.equals(ws.getName())) {
                currentUserWorkFlow = ws;
            }
        }
        currentUserCtx = null;
        menuBoards.removeAll();
        /*
         * We now update the menu with the appropriate list of contexts (boards)
         */
        List boards = currentUserWeb.getBoardsList();
        // getBoardsList method is defined in ATTACHMENT 2, page 14
        for(Iterator iter = boards.iterator(); iter.hasNext(); ) {
            Board b = (Board) iter.next();
            menuBoards.add(new MenuItem(b.getName()));
        }
    }
});

/*
 * Finally, we add a listener to the menu of Contexts (Boards)
 */
menuBoards.addActionListener(new ActionListener() {
    public void actionPerformed(AWTEvent e) {
        MenuItem m = (MenuItem)e.getSource();
        String boardName = m.getLabel();
        /*
         * the getBoardByName method would iterate over the
         * currentUserWeb's list of boards and return the right
         * Board object corresponding to the boardName string
         */
        Board oldCtx = currentUserCtx;
        currentUserCtx = getBoardByName(boardName);
        if (oldCtx != null && oldCtx.getName() != currentUserCtx.getName()) {
            //The user changed contexts
            currentUserCtx.importDataFromParent(currentUserWeb,
                currentUserWorkFlow);
        }
        /*
         * At this point a particular UI element that articulates the context
         * should be updated. For instance, a list of applications as well as
         * the list of data elements that are available could be displayed
         * using the data provided by the accessor methods from the Board Class
         * such getAllDataItems(),getAllUpstreamDataItems() and getAllAppItems()
         */
    }
});

```

```

        });
    }
    /*
    */
    public Web getWebByName(String name) {
        for (Iterator iter = webs.iterator(); iter.hasNext(); ) {
            Web w = (Web)iter.next();
            if (name.equals(w.getName())) {
                return w;
            }
        }
        return null;
    }
    /*
    */
    public Board getBoardByName(String name) {
        List boards = currentUserWeb.getBoardsList();
        // getBoardsList method is defined in ATTACHMENT 2, page 14
        for (Iterator iter = boards.iterator(); iter.hasNext(); ) {
            Board b = (Board) iter.next();
            if (name.equals(b.getName())) {
                return b;
            }
        }
        return null;
    }
} //END-OF-CLASS

```

Class: Board

```
import java.util.Collection;
import java.util.HashMap;
import java.util.HashSet;
import java.util.Iterator;

/**
 * A Board represents a particular context that consists of a collection of data
 * and applications. Building the example of workflow in ATTACHMENT 2, we also
 * assume that a Board contains a collection of individuals associated with the context
 */
public class Board {
    /* the basic constituent elements of a Board */
    HashMap<String,DataItem> data; // a hash table of data objects (e.g. files, emails, etc)
    HashMap<String,AppItem> apps; // a hash table of applications
    HashSet<String> users; // a hash table of users associated with the context
                                // (following the workflow example)

    String name;

    /* another set of elements that might be useful are those data items from upstream
     * contexts in the workflow that that might be relevant to the current context
     */
    HashMap<String,DataItem> upstreamData;

    /**
     * Constructor
     * @param the name of the Board
     */
    public Board(String name) {
        this.name = name;
        data = new HashMap<String,DataItem>();
        apps = new HashMap<String,AppItem>();
        users = new HashSet<String>();

        upstreamData = new HashMap<String,DataItem>();
    }

    /*
     * As users move across contexts, they might find the need to access data items from
     * upstream context in the workflow. This method imports the data items from the
     * Board's parent nodes
     * ASSUMPTION: error would generate some appropriate exception
     */
    public void importDataFromParent(Web w, WebSlice ws) {
        if (w.contains(this)) { // we only do work if this Board belongs to the Web
                                // method defined in ATTACHMENT 2, Web class, page 13
            /*
             * get the set of boards that are part of the workflow of interest as
             * represented by the webslice
             */
            Board[] boardsInWS = ws.getBoards();
            // method defined in ATTACHMENT 2, WebSlice class, page 18
            /*
             * get the list of the parents of the current board.
             */
            Set<Boards> parents = w.getParents(this);
            // method defined in ATTACHMENT 2, Web class, page 14
            /*
             * we import data from the parents that are in the webslice
             */
            for(int i=0; i < boardsInWS.length() {
                if (parents.contains(boardsInWS[i])) {
                    Collection dataToImport = boardsInWS[i].getAllDataItems();
                    for(Iterator iter = dataToImport.iterator(); iter.hasNext()); {
                        DataItem ditem = (DataItem)iter.next();
                        if (!upstreamData.containsKey(ditem.id)) {
                            upstreamData.put(ditem.id,ditem);
                        }
                    }
                }
            }
        }
    }

    /*
     * A particular data item might move from context to context as the workflow
     * progresses. This method transfer an imported data item into the permanent set of
     * data items of the board.
     * ASSUMPTION: error would generate some appropriate exception
     */
}
```

```

    */
    public void transferDataItem(DataItem d) {
        if (!data.containsKey(d.id)) { data.put(d.id,d); }
    }

    /*
    * As described in ATTACHMENT 2, a particular workflow could be modified such that
    * two interrelated Boards (e.g. A->B->C->D) are merged into a combined context
    * (e.g. A->B/C->D). This method accomplishes such operation.
    * ASSUMPTION: error would generate some appropriate exception
    */
    public void merge(Board src) {
        /*
        * we start by merging the data items
        */
        Collection dataToMerge = src.getAllDataItems();
        for(Iterator iter = dataToMerge.iterator(); iter.hasNext();) {
            DataItem ditem = (DataItem)iter.next();
            if (!data.containsKey(ditem.id)) { data.put(ditem.id,ditem); }
        }
        /*
        * 2nd, we merge the list of applications available in this context
        */
        dataToMerge = src.getAllAppItems();
        for(Iterator iter = dataToMerge.iterator(); iter.hasNext();) {
            AppItem ditem = (AppItem)iter.next();
            if (!apps.containsKey(ditem.id)) { apps.put(ditem.id,ditem); }
        }
        /*
        * Finally, we merge the set of users associated with the context
        */
        for(Iterator iter = src.getAllUsers(); iter.hasNext();) {
            String user = (String)iter.next();
            users.add(user);
        }
    }

    /*
    * accessor methods
    */
    public String getName() {
        return this.name;
    }
    public void addDataItem(DataItem d) {
        data.put(d.id,d);
    }
    public void removeDataItem(String did) {
        data.remove(did);
    }
    public void removeDataItem(DataItem d) {
        data.remove(d.id);
    }
    public Collection<DataItem> getAllDataItems() {
        return data.values();
    }
    public DataItem getDataItem(String did) {
        return data.get(did);
    }
    public boolean hasDataItem(String did) {
        return data.containsKey(did);
    }
    public boolean hasDataItem(DataItem d) {
        return data.containsKey(d.id);
    }
    public Collection<DataItem> getAllUpstreamDataItems() {
        return upstreamData.values();
    }
    public void addAppItem(AppItem d) {
        apps.put(d.id,d);
    }
    public void removeAppItem(String did) {
        apps.remove(did);
    }
    public void removeAppItem(AppItem d) {
        apps.remove(d.id);
    }
    public Collection<AppItem> getAllAppItems() {
        return apps.values();
    }
    public AppItem getAppItem(String did) {

```

```
        return apps.get(did);
    }
    public boolean hasAppItem(String did) {
        return apps.containsKey(did);
    }
    public boolean hasAppItem(AppItem d) {
        return apps.containsKey(d.id);
    }
    public void addUser(String uid) {
        users.add(uid);
    }
    public void removeUser(String uid) {
        users.remove(uid);
    }
    public Iterator<String> getAllUsers() {
        return users.iterator();
    }
    public boolean hasUser(String uid) {
        return users.contains(uid);
    }
} //END-OF-CLASS
```

CERTIFICATE OF SERVICE

I, Gladys Tong, hereby certify that on April 22, 2010, I served the foregoing on the following as noted:

BY E-MAIL

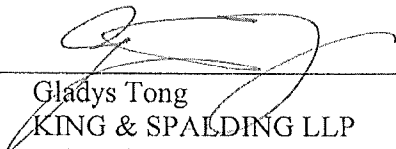
Steven L. Caponi
Blank Rome LLP
1201 Market Street
Wilmington, DE 19801

E-Mail: caponi@blankrome.com

BY E-MAIL

Heidi Keefe
Mark Weinstein
Jeffrey Norberg
Melissa Keyes
Cooley Godward Kronish LLP
Five Palo Alto Square
3000 El Camino Real
Palo Alto, California 94306-2155
Tel: (650) 213-0300
Fax: (650) 213-8158

E-Mail: hkeefe@cooley.com
E-Mail: mweinstein@cooley.com
E-mail : jnorberg@cooley.com
E-mail: mkeyes@cooley.com



Gladys Tong
KING & SPALDING LLP
333 Twin Dolphin Drive
Suite 400
Redwood Shores, CA 94065
(650) 590-0700