UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

EBAY, INC.,[1]
Petitioner,

v.

LEXOS MEDIA IP, LLC,
Patent Owner.

Case IPR2023-01000
Patent 5,995,102

EXPERT DECLARATION OF SAMUEL H. RUSS, PH.D.

[1] The Board joined eBay, Inc. as a party (Petitioner) to this proceeding in IPR2024-00336. Original Petitioner Amazon.com, Inc. has been terminated in this proceeding.

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I. INTRODUCTION

1. I, Samuel Russ, submit this Declaration in support of the Patent Owner's response to the Petition filed by Patent Owner Lexos Media IP, LLC, ("Patent Owner" or "Lexos Media").

2. I have been asked to review the Petition and its exhibits, as well as the Board's Institution Decisions concerning both Petitioner eBay and Amazon and render an independent opinion on the merits of the Petition.

3. All of the opinions set forth in this Declaration are based on my own personal knowledge, professional experience, education, and judgment in consideration of the documents, materials and information referenced herein.

4. I am being compensated for my services as an independent expert in these proceedings at an hourly rate of $450. I expect to be available to provide oral testimony should the need arise. My compensation is not in any way contingent upon the outcome of any *Inter Partes* review. I have no financial or personal interest in the outcome of these proceedings, or of any related litigation and have no previous relationship with or ties to the Patent Owner.

5. My experience and education are detailed in my curriculum vitae ("CV"), which I understand has been submitted into the record of this proceeding as EX. 2032. My CV also lists publications on which I am a named author and identifies parties on behalf of whom I have previously provided expert testimony.

6. I have technical experience in a number of areas, and have particular expertise in electronics, security systems, payment terminals, and their related technologies, such as in debit-capable payment terminals and digital set-top boxes, which include design, physical security, system layout, and cryptography schemes. This expertise is directly applicable to the technical area of the ’102 patent, which relates to a server system and method for providing a cursor on a webpage that has the shape and appearance of a specific image that promotes a product or service on the webpage when the user moves their initial cursor image over a specific portion of the webpage that corresponds to the specific image.

7. I received my bachelor’s degree in electrical engineering from Georgia Institute of Technology in 1986. I then received my Ph.D. in electrical engineering from Georgia Institute of Technology in 1991.

8. From 2007 to the present, I have been a member of the faculty of the University of South Alabama as an Assistant and Associate Professor in the Department of Electrical and Computer Engineering. During that time, I have won awards for excellent teaching and have been actively publishing research in home networking and digital video recording (DVR) technologies. I am active in the Institute of Electrical and Electronic Engineers (IEEE) and am a Distinguished Lecturer for the IEEE Consumer Electronics Society. As an example of the type of research I perform, I helped to manage the development of a fully functional “CubeSat” satellite that was successfully launched into space in September 2022 and sent back data.

9. From 2000 to 2007, I worked for Scientific-Atlanta (now Cisco's Service Provider Video Tech. Group), where I managed a cable set-top box (STB) design group that designed four STB models, including the Explorer 4200 (non-DVR) and 8300 (DVR) models. Both models sold several million units. As design-group manager, I was responsible for managing the design and prototyping activities of the group, for interfacing with other groups (especially integrated-circuit design, procurement, software developers, the factory where prototypes were built, and product managers), and for maintaining the hardware and mechanical development schedule. The hardware, software, and system design of cable set-top boxes entails security at a variety of levels, including conditional access, broadcast encryption, key management, and service authorization.

10. While at Scientific-Atlanta, I also became a staff expert in home networking, conducting demonstrations of wireless video technology, and managing a group that developed a new coaxial home networking system. The coaxial system won a Technology and Engineering Emmy® Award in 2013. I became a staff expert in DVR reliability, and led a team that improved the software, hardware, repair, and manufacturing processes. Through my time there, I gained considerable technical knowledge and expertise in the cryptographic processes involved in broadcast encryption, content protection, key management, and conditional access. I am a named inventor on fifty-one (51) patent applications that were filed while I was at Scientific-

Atlanta, twenty-nine (29) of which have issued as U.S. patents as of the writing of this declaration.

11. From 1999 to 2000, I was a Staff Electrical Engineer and then Matrix Manager at IVI Checkmate (now Ingenico), where I managed the hardware design team that completed the design of the eN-Touch 1000 payment terminal. This terminal was in widespread use, for example, at the self-checkout at Home Depot. This terminal contained the cryptographic systems and physical security needed to conduct debit transactions, including the use of ATM cards, debit cards, and PIN numbers. Debit-capable terminals require a great deal of physical and communications security and key management because of their direct connection to the financial and banking community. The eN-Touch 1000 could capture human signatures (and transmit them for storage) and was the first widely sold payment terminal to use capacitive touch-screen technology.

12. I also served on the faculty of Mississippi State University from 1994 to 1999 as an Assistant Professor in the Department of Electrical & Computer Engineering where I taught circuit board design and two-way interactive video classes, among other things. I was Thrust Leader of the Computing Systems Research Thrust and Systems Integration Group at the NSF Engineering Research Center of Mississippi State University from 1994 to 1999. I managed a multi-year research project in distributed computing.

13. From 1992 to 1994, I was Director of Manufacturing at Dickerson Vision Technologies (now Cognex) where I oversaw the development and implementation of a manufacturing plan for the company.

14. I have spent 5 years developing Windows applications, including a user interface for a machine vision system while at Dickerson Vision Technology. I have also studied browser-based applications and know the differences between developing Windows applications and browser applications and know what the skills were of a POSITA in 1997 as well as the challenges that a POSITA would face in trying to convert a windows application into a browser application or in attempting to modify the HTML protocol.

15. I have also authored over 30 journal articles and conference papers. A conference paper on digital video recording won second place in a “Best Paper” competition at the 2011 International Conference on Consumer Electronics in Las Vegas, NV.

16. Through my research and work, I have been a joint inventor on 29 issued U.S. patents related to client devices, television, multimedia systems, and interactive programming. Additionally, I have been a joint inventor on 9 issued European patents, also related to client devices, multimedia, and storage devices.

17. Therefore, based on my education, professional experience of 35 years, and my writing of scholarly books and publications, I am an expert in the relevant field of the ’102 patent and have been an expert in this field since well before June 25, 1997,

which I understand is the filing date of the ’102 patent. I am intimately familiar with how a person having ordinary skill in the art would have understood and used the terminology found in the ’102 patent as of that date.

18. All of the opinions included herein are based on my personal knowledge, my education, and my professional experience and judgment in consideration of the documents submitted in this IPR proceeding, the papers and exhibits submitted by both parties, the documents discussed in the body of this Declaration, including the Declaration of Petitioner’s expert witness Dr. Craig Rosenberg. I have also reviewed certain documents filed in connection with the ongoing IPRs, and the transcript from the deposition of Dr. Rosenberg in the underlying Amazon litigation that has since settled.

II. LEGAL STANDARDS

19. The paragraphs in this section present an overview of some basic legal principles that counsel has explained to me, and which I have applied in arriving at my conclusions. I am not an attorney or a legal expert, and I offer no opinions on the law.

20. I understand that for an invention claimed in a patent to be found patentable, it must be, among other things, new and not obvious in light of what came before it. Patents and publications which predated the invention are generally referred to as “prior art.”

21. I understand that in this proceeding the burden is on the party asserting unpatentability to prove it by a preponderance of the evidence. I understand that “a

preponderance of the evidence" is evidence sufficient to show that a fact is more likely than not.

22. I have been informed that the terms in a claim subject to *Inter Partes* Review are given the meaning they would have had to a person of ordinary skill in the art at the time of the invention. After being construed in this manner, the claims are compared with the prior art.

A. Legal Standards: Person Of Ordinary Skill In The Art

23. I understand from counsel that patents are not written to be read by experts or by the general public. Instead, they are written to be understandable to a person having ordinary skill in the appropriate art. I understand that factors that may be considered in determining the ordinary level of skill in the art include: 1) the types of problems encountered in the art, 2) the prior art solutions to those problems, 3) the rapidity with which innovations are made, 4) the sophistication of the technology, and 5) the educational level of active workers in the field.

24. In determining the characteristics of a hypothetical person of ordinary skill in the art of the patents-at-issue at the time of the claimed inventions, I considered these factors. It is my understanding that not all such factors may be present in every case, and one or more of them may predominate.

B. Legal Standards: Obviousness

25. I understand that determining whether a claimed invention is obvious requires one to determine the scope and content of the prior art, identify the differences

between the asserted claims and the prior art, determine the level of ordinary skill in the pertinent art at the time the invention was made, and then decide whether each claim as a whole would have been obvious to a person of ordinary skill in the pertinent art when viewing the prior art.

26. I understand that a prior art combination is able to render a patent claim as obvious only if each and every claim limitation is taught or suggested by the prior art combination.

27. Moreover, even if the prior art teaches each and every element in the claims at issue, I understand that fact alone would not prove obviousness. Most, if not all, inventions rely on building blocks of prior art. I understand that it is necessary to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patents-at-issue.

28. Thus, in evaluating whether a claimed invention is obvious, one must consider whether there was a reason that would have prompted a person having ordinary skill in the art to combine the known elements in a way that the claimed invention does, taking into account factors such as (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function, (2) whether the claimed invention provides an obvious solution to a known problem in the relevant field, (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention, (4) whether the prior art teaches away from combining elements in the claimed invention, (5) whether it would

have been obvious to try the combinations of elements (such as when there is a design need or market pressure to solve a problem, and there are a finite number of identified predictable solutions), and (6) whether the change resulted more from design incentives or other market forces.

29. In addition, to find that the prior art rendered the invention obvious, one must find that it provided a reasonable expectation of success, one must consider each claim separately, and one cannot use hindsight – *i.e.*, one can consider only what was known at the time of the invention. I understand that hindsight bias is likely to be present where the asserted motivation to combine does not provide a sufficient reason, supported by rational underpinnings, for combining the references in the claimed manner.

C. Legal Standards: Claim Construction

30. I have been informed that the terms of the patents-at-issue should be construed under the same claim construction standard that would be used to construe the claim in a civil action. I have also been informed that the meaning of a term may be evidenced by a variety of sources, including the words of the claims, the specification, drawings and prior art.

31. I understand that extrinsic evidence may be consulted for the meaning of a claim term as long as it is not used to contradict claim meaning that is unambiguous in light of the patent's intrinsic evidence.

III. LEVEL OF SKILL IN THE ART

32. I understand that the Board adopted the following level of ordinary skill in the art in 1997.: "A person of ordinary skill in the art ("POSITA") at the claimed priority date would have had experience in the fields of human factors engineering or human computer interaction. A POSITA would have at least a bachelor's degree in computer science, computer engineering, human factors engineering, or a related field and would have had at least two years of relevant work experience in the fields of UI design, or equivalent experience." Paper 9 at 15. I do not disagree with this finding.

IV. CLAIM CONSTRUCTION

33. I understand that the Board, in its Institution Decision, noted various constructions from district court claim construction orders, but concluded that "at this time, we note these constructions, but do not construe any terms." Paper 9 at 17.

34. I do not believe Dr. Rosenberg gave proper effect to the meaning of the claim terms. In my analysis, I have applied these following constructions that were either agreed upon by Original Petitioner and Patent Owner or were issued by the United States District Court for the Eastern District of Texas:

CLAIM TERM	PARTIES' AGREED CONSTRUCTION
"said specific image includes/including content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal" *See* '102 Patent, Claim 72; '449 Patent, Claims 1, 38, 53.	"an image representative of at least a portion of the subject or topic being displayed on the screen" *Lexos Media IP, LLC v. APMEX, Inc.*, No. 216CV00747JRGRSP, 2017 WL 1021366, at *5–6 (E.D. Tex. Mar. 16, 2017).
"specified content information" *See* '102 Patent, Claim 72; '449 Patent, Claims 1, 38 and 53. **"content information"**	The term "specified content information" / "content information" means "information provided to a user's terminal for use in the display, such as a web page."

See EX. 1008.

CLAIM Term	The Court's Construction
"**cursor display code**" ('102 Patent, Claim 72; '449 Patent, Claims 1, 27, 53)	"computer code for modifying the display of the cursor image"
"**cursor display instruction**" ('102 Patent, Claim 72; '449 Patent, Claims 1, 27, 53; '241 Patent, Claim 35)	"an instruction operable to modify the display of a cursor image"

"**cursor image," "initial cursor image," "modified cursor image**" ('102 Patent, Claim 72; '449 Patent, Claims 1, 27, 53; '241 Patent, Claim 35)	"a movable image on a display screen whose position can be controlled through a user interface"

See EX. 2008 at 22-23.

V. SUMMARY OF OPINIONS

35. My opinions are set forth in the body of this Report. Without intending to limit in any way the opinions expressed in this Report, the following is a summary of my opinions.

36. The Challenged Claims are not invalid for any of the reasons asserted by Dr. Rosenberg and the Petition.

37. The Challenged Claim are not invalid for obviousness in view of Malamud.

38. The Challenged Claim are not invalid for obviousness in view of Malamud and Nakagawa.

39. The Challenged Claims are not invalid for obviousness in view of Nielsen and Malamud.

VI. OVERVIEW OF THE COMMON SPECIFICATION OF THE CHALLENGED PATENTS

40. The ’102 Patent was filed on June 25, 1997 and is entitled “Server System and Method for Modifying a Cursor Image.” The ’102 Patent relates generally to serving webpages that use specific cursor images to promote a product or service advertised or sold on the webpage.

41. The ’102 Patent names James Samuel Rosen, Thomas A. Schmitter, and Mark S. Hall as the inventors. It was assigned to the Patent Owner by an instrument executed on January 15, 2013 and recorded in the PTO on March 19, 2013 and expired on June 25, 2017.

42. The ’449 Patent is entitled “Server System and Method for Modifying a Cursor Image.” It was filed on September 21, 1999 as a continuation of the application that became the ’102 Patent and was therefore effectively filed on June 25, 1997. The ’449 Patent shares the same specification as the ’102 Patent and also names James Samuel Rosen, Thomas A. Schmitter, and Mark S. Hall as the inventors. The records of the PTO show that the patent was assigned to Plaintiff by an instrument executed on January 15, 2013 and recorded in the PTO on March 19, 2013. Because of the terminal disclaimer, the ’449 Patent expired on the same day as the ’102 Patent, that is, June 25, 2017.

43. The ’102 and ‘’449 Patent share a common specification having a priority date of June 25, 1997 (“Common Specification”). For ease of reference, patent

citations to the Common Specification will be with reference to the column and line numbering of the ’102 Patent.

44. These customized webpage cursor images could include multiple components, including components that were spaced apart from the primary cursor image and were not of a normal size or in a normal cursor location and which had their own movement that tracked the movement of the modified cursor image.

45. For example, the specification provides an exemplary embodiment detailing a webpage advertising a product, Fizzy Cola, wherein the webpage displays an image of a Fizzy Cola bottle as part of its content and the webpage’s cursor image is modified to a dynamic cursor image showing a person holding a straw wherein the straw always points toward the top of the Fizzy Cola bottle, regardless of where the cursor moves on the screen. See ‘102 Patent at 17:15-31. As the specification explains in this passage, the straw may either be part of the same cursor image or could be a separate "satellite" image, a "sprite," whose movement on the screen is related to the movement of the cursor. *Id.* The patent also explains that the sprites may appear and disappear as desired and “enhance the invention by enabling the use of graphical elements which are associated with the cursor but which reside outside the limited cursor "space" (which in some systems may be, at maximum, 32 by 32 pixels). For the purposes of the invention, however, there should be no limitation to the size of the cursor.” *Id.* at 17:25-31. Importantly, the cursor’s features are tied to the content being displayed by the browser. (*Ibid.*)

46. This teaching of non-traditional cursor images used for promotional purposes is reinforced throughout the specification. For example, Cursor Display Instructions that include parameters that control the type of cursor image for the modification, how long the changed image should remain before reverting, the changed image's trajectory path, where the image should change based upon its screen location and what satellite images should be used that track the cursor's movement. 9:39-65.

47. Large portions of the Common Specification are directed to teaching how to implement non-standard cursors on webpages, and the specification devotes all of columns 9 through 13 to this task, explaining to a POSITA that browser extensions and plug-ins such as Active X, JavaBeans, JavaScript or VBScript would be used to implement the desired cursor modifications.

48. As the specification explains, cursor display instructions are initially embedded inside of an HTML document, e.g. a webpage. When the browser processes the instructions, retrieves cursor display code (ActiveX) and cursor information to display the specific image via display drivers. The specification in FIG. 4 provides exemplary cursor display instructions written for ActiveX. *See,*
'102 Patent, EX. 1001, at 9:1-63.

49. Further detail regarding implementing a cursor modification on a webpage is provided throughout the specification, and particularly through columns 10-13. In my opinion, this level of detail regarding the implementation of the cursor

modification on a webpage is necessary for a POSITA in 1997 to accomplish the modification without undue experimentation, particularly given that the Challenged Claims also require the modification to occur only when the cursor is hovering over specified content to be displayed as defined in the HTML file for the webpage. Specifically, having a cursor's shape and configuration being tied to the dynamically loaded information being displayed under it would have been difficult to accomplish. The specification expressly discloses dynamically downloadable and executable code, such as ActiveX or JavaScript, would be needed to implement a system that could respond dynamically both to user cursor movements and to Web-based content to be displayed.

50. The object of the invention is also clearly stated in the specification. At the time of the invention, more and more companies were advertising on the Internet. '102 Patent, 1:21-23. Three typical forms of advertising at the time of the invention were "banner ads," 1:24-25, "frames," 1:55-56, and "self-appearing windows." 2:4-5. Each form of advertising had its drawbacks and limitations, as explained in the specification. 1:24- 2:32. Consequently, the inventors recognized "a need for a simple means to deliver advertising elements . . . without the annoyance of totally interrupting and intrusive content delivery, and without the passiveness of ordinary banner and frame advertisements which can be easily ignored." 2:27-32. Thus, achieving webpages that used cursor images to provide "on-screen advertising" was the fundamental objective of the disclosure. 2:44-47. Therefore, how to implement the

browser-based cursor modification of the claimed inventions had to be carefully taught because browsers did not have such specific functionality already included as part of the HTML protocol. This is in contrast with tooltips, wherein all the web page developer had to do was enter HTML tags in order to achieve a tooltip.

51. Thus, the claimed inventions provide for server systems that enable a cursor or pointer displayed on a remote client's computer to change its appearance to a "specific image" that is representative of the content being displayed on that client computer. 4:4-12. The modified cursor image can be used by the provider of displayed web content to advertise or promote the displayed content. 3:51-4:3. As the Common Specification explains, "[t]he present invention provides a means for enabling cursors and pointers to change color, shape, appearance, make sounds, display animation, etc., when the user's terminal or computer, known as the 'client' or 'user' terminal, which has a network connection, receives certain instructions from a remote or 'server' computer attached to the network" (3:51-57) whereby "the generic cursor or pointer icons used in many networking applications, such as black arrows, hands with a pointing finger, spinning wheels, hourglasses, wristwatches, and others, will change appearance, and in some cases may incorporate sound or animation, in a way that is linked and related to the content, such as a webpage, which is being transmitted to and displayed on the client computer." `102 Patent, 3:57-64. As a result, the cursor "convey[s] a message that relates to the advertising content within the webpage being transmitted and displayed." 3:67-4:3.

52. Figure 8 of the Common Specification, reproduced below, shows a webpage according to the invention wherein a webpage 60a is displayed to a user including banner ad 62 for cola. Id. at 13:31–37. The cursor on this webpage changes from a standard cursor (e.g., an arrow) to cola-bottle-shaped cursor 44a, which is associated with banner ad 62. *Id.* The '102 Patent describes interactions between a server system and a user's terminal to effectuate the cursor change. *Id.* at 4:4–9, 5:37–49, 5:48–65, 7:16–40.

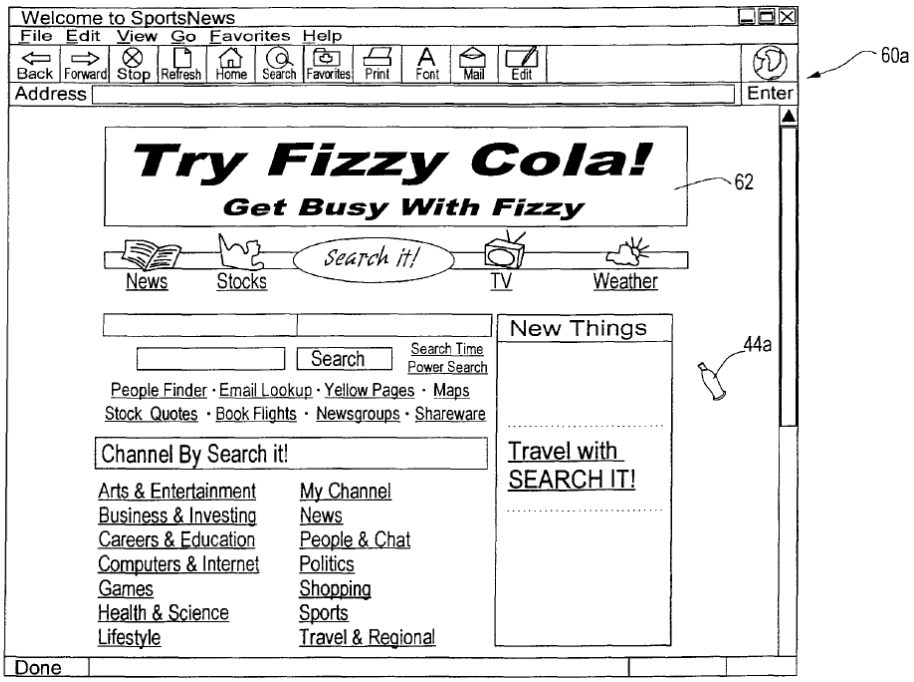


FIG. 8

53. The server system transmits specified content information to the user terminal, including information to be displayed on the user's computer (such as a hypertext markup language ("HTML") webpage), cursor display instructions, and cursor display code. 8:4–23. The cursor display instructions indicate where the cursor image data corresponding to the new appearance of the cursor resides. 8:49–64. The

cursor display code causes the user's terminal to display cursor image data in place of the original cursor, using the API of the operating system to effect these changes. 8:34–37, 8:52–57; 13:19–30.

54. As extensively described in the Common Specification (*e.g.* 7:41-14:64), when a browser requests a webpage from a server, it receives back an HTML file that includes content to displayed and/or pointers thereto, formatting instructions on how to display the content, and instructions and/or code specifying how the webpage is to interact with the user, including how the cursor modification takes place and specific images are displayed. The browser then uses the received information to generate the webpage displayed to the user, including the shape and appearance of the modified cursor image.

55. As the Common Specification also describes, the content of the specific image may be dynamically updated and may also change based upon cursor movement, according, e.g., to changes in its position or speed. 14:49-53 ("…it is possible to vary the modification to the cursor as a function of cursor position. For example, the cursor pointer could be controlled such that it 'points' to a specific location on the screen regardless of the cursor's location on the screen as illustrated in line 214 of FIG 4."); 14:54-64 ("In accordance with another embodiment of the invention it is possible to vary the modification to the cursor as a function of cursor velocity. For example, the cursor image could change from a stationary bird to a bird with flapping wings only when the cursor is moved quickly across the screen as

illustrated in line 215 of FIG. 4."); 17:17-21 ("A dynamic cursor image could then be used to show a person holding a straw in such a way that the straw always points from the user toward the top of the Fizzy bottle, no matter where the cursor moves on the screen."); 17:55-61 ("It may also be desirable in certain cases to put alphanumeric data in the cursor 'space' to convey information to users, such as stock prices, baseball game scores, the temperature in Florida, etc. The data can be static, semi-static (i.e. updated periodically), or dynamic (updated frequently -- possibly incorporating available streaming-data and data compression technologies.")

56. Thus, the Asserted Patents disclose and enable systems and methods in which cursor images are dynamically modified for promotional and advertising purposes. In the '102 and '449 Patents, the specific shape and appearance of the modified cursor image corresponds to other content being displayed on the webpage to promote that content. The modified cursor image may include a dynamic visual image that tracks the movement of a cursor. The various examples disclosed in the Common Specification of promotional cursors include that dynamically update in response to the cursors' movements and associated images that are spaced apart from with the modified cursor image and track the movement of a cursor.

57. Through these teachings, the patents provided an important benefit to Internet retailers who used these inventions to promote internet sales at a time when most shoppers were not familiar with buying products over the internet rather than in a brick-and-mortar environment.

58. It was previously known to allow a user to click on a product image on a webpage in order to have a magnified image of the product appear, and then click again to have the magnified image disappear or restore the product image to its original size. While useful, this method involved several mouse clicks and was not naturally intuitive to an online shopper. The inventors provided a technical solution that could be used to allow the online shopper to dynamically inspect a product image by simply moving the initial cursor image over a portion of the product image to obtain a specific image that highlights a portion of the product image and displays that same portion of the product image in zoomed form wherein, as the user moves the cursor to highlight a different portion of the product image, the zoomed image dynamically updates so it continues to correspond to the highlighted portion of the product image. This allowed the online shopper to have a better shopping experience by simulating the physical inspection of a product at a brick-and-mortar store.

VII. OPINIONS REGARDING PETITION

A. GROUND 1: Malamud combined with knowledge of a POSITA

1. Overview of Malamud (EX. 1004)

59. Malamud is Microsoft patent that extends the existing Windows 3.1 operating system (or a comparable window-based operating system) by adding a proposed new window procedure. A windows Application can invoke the new window procedure so that metadata about a named file stored on the computer (Fig. 1, “data processing system 10”) that would normally be displayed in the status bar of a

window could instead by displayed in a text or image box of an "information cursor" when the user moves the cursor over the file's icon in a desktop type window. *See. e.g.*, Malamud, EX. 1004; Background of the Invention at col. 1, lines 15-31; Summary of the Invention at col. 1, lines 44-57; Figs 3-5 (book icon 32).

60. Malamud expressly describes that the text file associated with book icon 32 is a pre-exiting file stored on the computer, with a pre-existing icon:

> FIG.2b shows an example of how the name cursor 26 is used. **Suppose that a book icon 32, representing a book of text stored in the system 10 (FIG. 1)**, is displayed on the video display 20. When the pointing portion 28 of the name cursor 26 points to the book icon 32, the name box 30 of the name cursor displays the phrase "Book Cover".

EX. 1004 at 3:35-38 (emphasis added).

61. Malamud's specification explains that the function of the new window procedure is to "pass[a] message to operating system specifying info[rmation] about [the] object." (Box 58 in Fig. 7). It describes how this window procedure operates:

> After the window procedure has determined what is at the specified cursor position, the procedure passes a message to the operating System 22 (FIG. 1) that tells the operating system what type of cursor to display and sets forth the contents and type of information to be displayed in the cursor (step 58 in FIG. 7).

EX. 1004 at 5:46-53.

62. Pointedly, Malamud describes this proposed window procedure separately from the program responsible for creating the window. The latter sends a message to the former for processing. As Malamud explains:

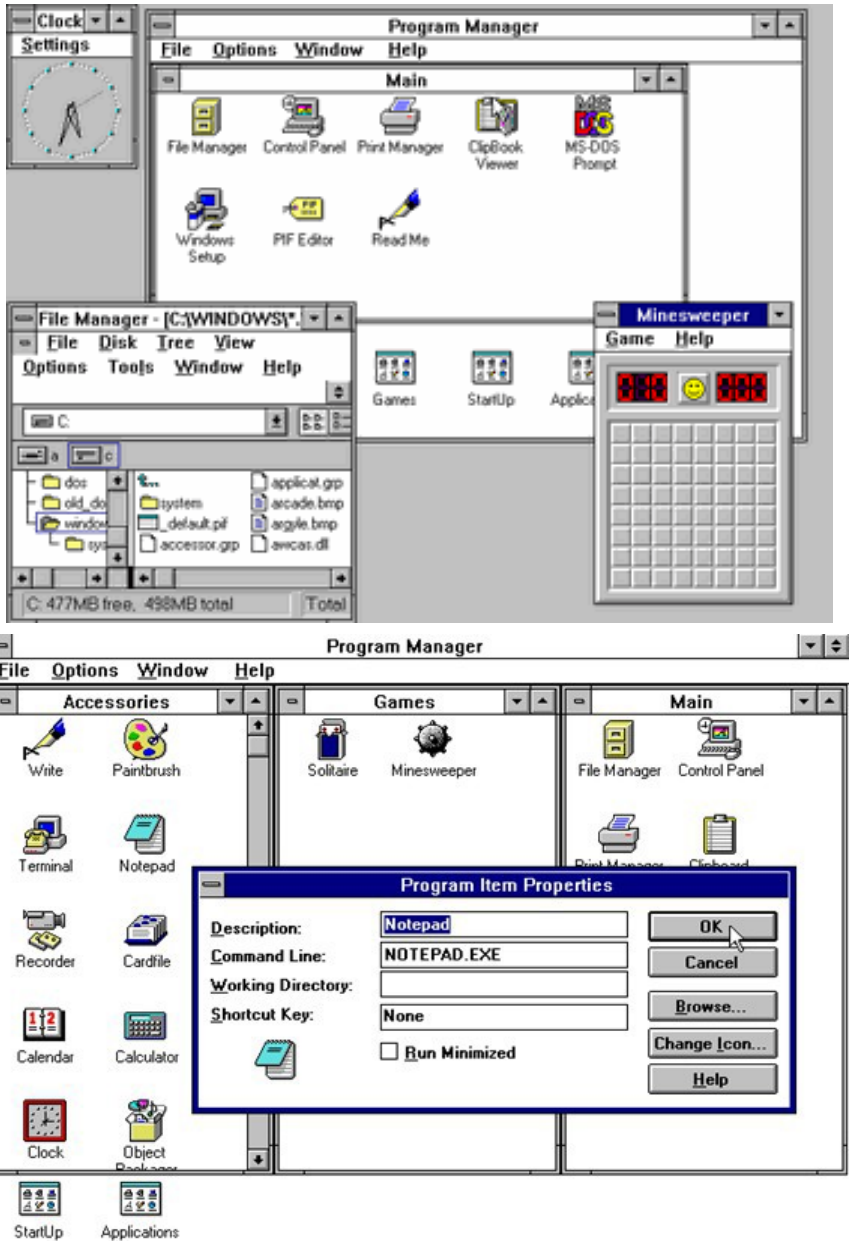
> When an event occurs, the event is translated into a message that is put into the message queue for the program. The program retrieves and delivers the message to the proper window procedure by executing a block of code known as the "message loop'. The window procedure that received the message then processes the message.

EX. 1004 at 4:59:-65

63. In other words, the "window procedure" is a built-in operating system function, with an API to an application program to allow the latter to invoke this window procedure.

64. A POSITA would understand from Malamud's specification as a whole that the window procedure does not generate the icon or even the metadata to be inserted into the information cursor. Rather, as a POSIT would understand, the Windows 3.1 operating system (as do most windows based operating systems) maintains metadata about a stored file and generates a "desktop" window that displays icons representing files and applications that the user can select. See also, EX. 1003-1, Declaration of Dr. Rosenberg ("Rosenberg Decl.") at ¶ 40 ("a popular type of GUI is the "desktop metaphor," where the computer screen represents a virtual desktop with icons representing files and applications that users can select.)

65. For example, the Windows 3.1 operating system by itself generates various user configurable "desktop" windows for "accessories," "games," "startup" or any other category that the user wishes to have. These desktop-type windows display the icons for application and data files (such as text files) stored on the computer.



66. As these above screenshots of Windows 3.1 generated windows reflect, Windows 3.1 is itself a program that generates user configurable windows that display

icons associated with stored application and text files. A POSITA understands that operating systems such as Window 3.1 maintain metadata about a stored file that they can displayed in the status bar or, as posited by Malamud's proposed extension to Windows 3.1, in an information cursor. I should also note that all of these disclosures match exactly my experiences in writing Windows applications in the 1992-1993 timeframe.

67. In sum, Malamud proposes an extension to Windows 3.1 or similar operating system to provide a new method of displaying metadata maintained by the operating system for a file stored on the computer that is running that operating system. Instead of the operating system displaying file information (aka "metadata") regarding that file in the status bar on the periphery of the window, the file's metadata can be displayed in an information box of an information cursor when the operating system or an application program invokes the new window procedure.

2. Initial Opinions Regarding Malamud and Dr. Rosenberg's Analysis of the Same

68. Having thoroughly reviewed the Rosenberg declaration, I offer the following initial opinions regarding Malamud and Dr. Rosenberg's testimony regarding the same. Dr. Rosenberg's analysis of Malamud is contrary to its specification and how that specification would be read by a POSITA.

69. First, a POSITA would understand that Malamud specifically describes a proposed extension to the Windows 3.1 operating system that adds a new window

procedure to support the use of information cursors in order to display metadata for a named entity (e.g., a file or object for which there is metadata and an icon). A POSITA reading Malamud would also understand that window procedures generally are part of the Windows 3.1 operating system and that they are assigned to specific windows, consistent with Malamud's description.

70. As I previously discussed, the operating system can itself turn on Malamud's proposed window procedure to display the metadata it maintains for a stored filed in an information cursor information cursor rather than in the status bar of a desktop windows. For instance, Malamud explains that its exemplary book icon is for a book that is already stored on the computer in the Windows system. EX. 1004, at 3:36-37. Malamud expressly defines the system as a computer system. *Id.* at 3:15-25. A POSITA would understand that a book stored on the system means that it is filed in the filing system in the computer's memory just like any other file.

71. Moreover, a POSITA would understand that Windows operating systems, such as Windows 3.1, create desktop windows that display icons of stored files. Compare, Malamud Fig. 5 below with this Windows 3.1 generated desktop window:

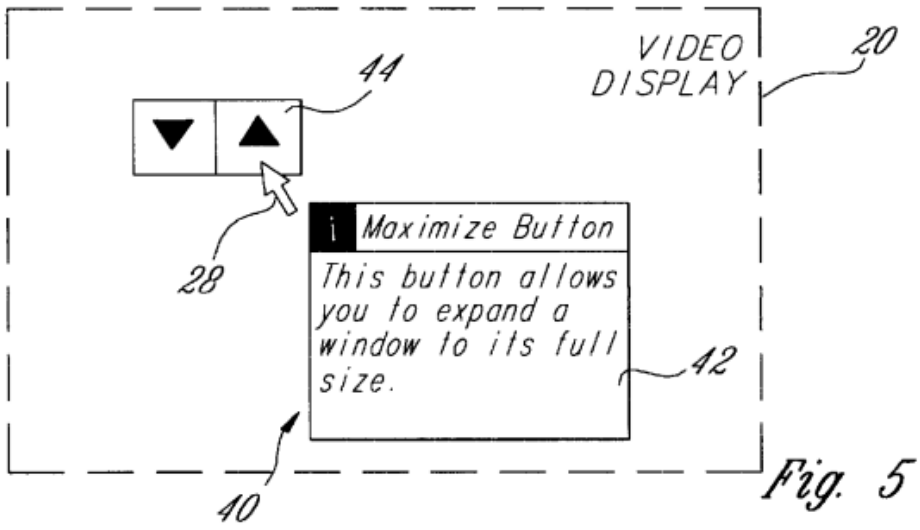


Fig. 5

72. As can be seen from the comparison, the up down arrows 44 of Fig. 5 are from a Windows 3.1 generated window. Moreover, Malamud explains that the bitmap of the information cursor (28 and 40) is also provided by the operating system.

73. Likewise, compare the Windows 3.1 generated desktop window above with Malamud's Fig. 4 (showing a portion of the video display screen of the user's computer):

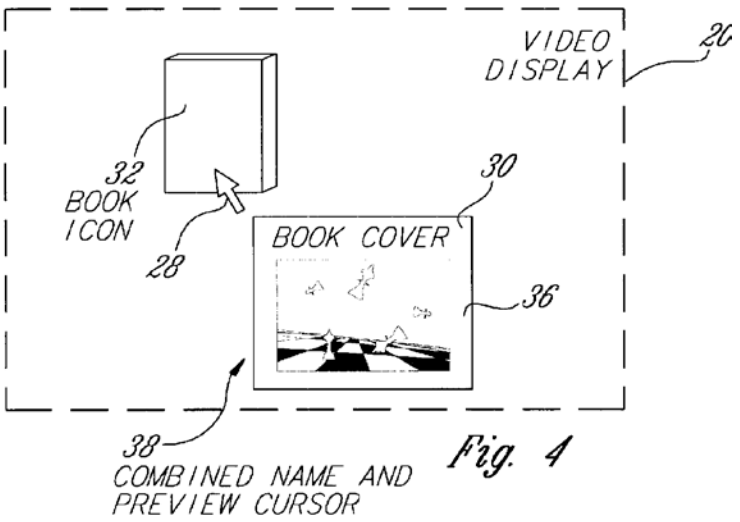


Fig. 4

74. Fig. 4 is consistent with the Windows 3.1 desktop window and further explains to a POSITA that Microsoft, the assignee and developer of the Malamud application, was concerned with upgrading its Windows 3.1 operating system so that the user has the ability to "mouse over" an already displayed icon (32) in the desktop window in order to see in the information portion (38) of an information cursor (28,38) the metadata (30, 36) regarding the associated file rather than in a status bar. The Malamud specification is tied very tightly to the Windows 3.1 operating system (or a comparable windows-based operating system) with a new proposed window procedure which determines whether an icon for a stored file is a "named object" (*i.e.*, one that has associated metadata in the operating system), selects the appropriate bitmap for the

information associated with that metadata, and sends the command to the display drivers to display the bitmap populated with the associated metadata.

75. Specifically, a POSITA would understand that when an Windows-based application program, such as Corel's WordPerfect program (a popular windows-based text editor in 1997) or Microsoft's Word program (also a popular text editor both then and today) has been opened, such as by double-clicking on its icon displayed on a Windows 3.1 desktop window, Windows 3.1 opens a new window for that program with the command buttons and other features displayed therein. The user can create a new file in the open window and use the application's functionality to store the file. Furthermore, a POSITA would understand that when the file is stored, Windows 3.1 will assign and manage an icon in association with that file. In this case, because the file was created in Word, Windows 3.1 will associate a Word icon with the file as part of its metadata.

76. Second, a POSITA reading Malamud would understand that the Windows-based program merely invokes the window procedure to turn on the information cursor functionality, with the two available options regarding when the information cursor is displayed. For example, let's assume that the user or Microsoft configured the Word program to turn on the Windows 3.1's information cursor extension. When a user is later trying to open the Word file they created from within the Word's window, the application has no need to send the icon associated with the file or its metadata to the window procedure because the operating system already has

the icon and other file metadata from the time that it was first stored thereupon. Hence, Malamud does not describe the application program sending the file's icon or metadata for display in the information portion of the information cursor to the window procedure.

77. Therefore, the Petition is incorrect in its assumption that if a POSITA chose to download an application that invoked the information cursor window procedure of Malamud, the application would necessarily include either the icon for the file or the file's metadata to be displayed within the information cursor. A POSITA would also understand that application programs do not generally work this way.

78. Malamud's window procedure is disclosed as having a very narrow functionality, namely to receive the cursor position, determine whether the icon of a named entity is located at the cursor position and, if so, convey to the display driver which type of information cursor is to be displayed and what file metadata is to be displayed therein. In other words, the proposed Windows extension simply has no need to create file icons or other file metadata for stored files because the operating system already has and manages that information for a stored file.

79. I disagree that Malamud describes an application program that would (a) supply its own file to be stored on the computer with an icon and metadata for that file for display in the box of the information cursor, (b) create its own window in which the icon would be displayed, and (c) interact with Malamud's proposed window procedure to display an information cursor with such metadata. Not only would such

a hypothetical application program contradict Malamud's specification, but also it would also involve modifying the Windows operating system (and Malamud's extension), which a POSITA would not have any reasonable expectation of success in so doing, lest they be creating their own operating system, which would also be impractical and would require undue effort and experimentation. In other words, the hypothetical application described by Dr. Rosenberg is so far afield of what a POSITA writing a Windows program in 1997 would contemplate, that the system would require a major engineering effort, and may not even work at all.

80. In paragraph 84 of his declaration, Dr. Rosenberg conflates functions of the proposed Windows 3.1 information cursor extension with functions of the application program using that extension. He cites Malamud at 5: 22-45, which describes the interaction between the operating system and the information cursor window procedure—not the interaction between the application program and the window procedure. Column 5 describes that the operating system sends a message providing the cursor location that is routed by the application program to the window procedure. As discussed previously, the proposed window procedure decides based upon the cursor position as to "whether a named entity is present at the specified cursor position." Ex. 1004 at 5:35-36. "After the window procedure has determined what is at the specified cursor position, the procedure passes a message to the operating System 22 (FIG. 1) that tells the operating system what type of cursor to display and

sets forth the contents and type of information to be displayed in the cursor (step 58 in FIG. 7)." Id. at 5:46-53.

81. The application program merely invokes the window procedure and sets whether an information cursor is to be displayed or not. If set to "on", the information box of the information cursor is always displayed but is blank when the cursor position is not over icon and only populated when the cursor position is over the icon. If set to "off" then the information cursor is only displayed (and with its content) when the cursor position is over the icon. In this regard, Malamud states:

> Whether the information cursor is displayed depends upon whether the information cursor is designated as "On" or "Off". The operating system checks whether the information cursor is "On" (step 60). In certain instances, the user may have the option of Specifying whether the information cursor is "On' or "Off". Alternatively, the information cursors may be programmed by the application program or operating System 22 (FIG. 1) Such that they are automatically turned "On' when the conventional cursor points to a named entity. This latter option provides an automatic mechanism for Switching "On" or "Off" the information cursor. If the information cursor is not "On', a conventional cursor is displayed (step 64). As an example, consider the name cursor 26. If the name cursor 26 is "Off", the name box 30 is not displayed (FIG.2a). Instead, a conventional cursor is displayed. On the other hand, if the name cursor is "On', the pointing portion 28 is displayed along with the appropriate name information (step 62) to be used in the name box.

EX. 1004, at 5:65-6:17

82. Thus, Malamud explains that the operating system or the application program can invoke these options, or a user may be provided the option. Importantly, the only thing that the application can do is to turn the feature on or off. All of the work and every active function is carried out by the Windows operating system, the icons are managed by Windows, and the information in the cursor is metadata for the

information cursor is managed by Windows. Indeed, even "the appearance of the information cursors…is dictated by bitmaps stored within the operating system 22" (5:15-17).

83. I therefore strongly disagree with Dr. Rosenberg's erroneous analysis regarding the teachings of Malamud that he relies upon to conclude that there is much similarity between (1) the inventions described in the Common Specification of the '102 and '449 patents directed to promotional cursors in webpages and (2) the proposed Windows extension of Malamud. I also disagree that the differences between these are obvious to a POSITA in 1997. Some of these differences are:

a. Malamud only describes that the Windows-based application invoking the information cursor window procedure can only turn the information cursor on or off. There is no description in Malamud of the window procedure being designed to receive the metadata for display within the information portion of the information cursor from a Windows-based program invoking it.

b. The Windows 3.1 operating system did not need the Malamud extension to display icons or metadata for a file. The Malamud extension is only for allowing the operating system to display these items in an information cursor. The only API to the windows procedure described in Malamud is to turn the information cursor window procedure off or on. Therefore, the API would have to be modified to allow a Windows-based program to provide an icon or

metadata to the windows procedure. This change would require approval and implementation by Microsoft, or the development by a POSITA of their own operating system designed to interact with the application program in this manner. Neither of these options would have involved any reasonable amount of effort and without undue experimentation or have reasonable or predictable chance of success.

c. Downloading a Windows-based application program from a server that invokes the Malamud window procedure extension would not result in the download of any icon or any metadata about a file for display in the information box of the information cursor. As is expressly disclosed in Malamud, these icons and metadata are pre-existing and stored by the operating system itself, as are the bitmap files that create the information cursor outline and shape. There is simply no description of extension itself having any pre-loaded icons, information cursors, or content. Nor would it make sense for Malamud to create icons, information cursors, or content for files that already exist and have these things. Being the architect of both Windows 3.1 and Malamud, Microsoft understood this and provided no description within Malamud concerning the creation of items that already exist. And a POSITA runs into the same problem when trying to modify the extension to receive this information for the same reasons as described in the paragraph above.

84. The Board determined that, for the purposes of institution, the application program may be providing the icon information displayed on the terminal based upon discussion within Malamud of messaging by the operating system to a window procedure associated with a window. For the reasons discussed above, it is not my opinion that Malamud discloses its windows application as providing the icon, but rather that a POSITA reading Malamud would understand that the Windows operating system provides the icon as well as the metadata to be shown in the information cursor.

85. Finally, a POSITA would not understand a downloaded application to be either the claimed "specified content information" (webpage file), "information to be displayed" (webpage content over which the initial cursor is moved to trigger transformation thereof into the shape and appearance of the specific image), "cursor display code" (Active X or JavaScript), cursor display instructions (URL for Active X or JavaScript file). Rather, even if a compiled application is requested, it is information to be installed onto the computer—not requested information to be displayed. This distinction is critical, and further explains why Malamud does not disclose a window application sending icons or file metadata with which to populate the information area of an information cursor to the window procedure or any other information that would meet the "specified content information" required by Claim 72. Such information does not come from the application program, it comes from the Windows 3.1 operating system in communication with Malamud's new information cursor window procedure.

86. Further compounding Malamud's lack of disclosure of a windows program providing the window procedure with the "specified content information" is the requirement that such information be requested via server. The embodiments within the '102 Patent concern advertising on web pages displayed home shoppers' computers, which webpages come from a server and interact with a browser. There is simply no need for a server or a browser in practicing Malamud.

87. Stated differently, a POSITA would understand "specified content information" to be requested online content for display, such as a webpage. A user would not expect, upon requesting "specified content information," the computer to download an entire computer program to be installed on the computer. Indeed, the latter would be more akin to the user requesting a virus program instead of a webpage. A POSITA simply would not understand specified content information in this manner.

88. I disagree with Dr. Rosenberg when he states that it would have been obvious to add a client/server architecture to Malamud. His stated reasons are: "1) the reduction in distribution costs, 2) the increased speed by which users could obtain an application program using the client-server model, and 3) the fact that software companies could ensure that the latest version of the software was always available to end users." EX. 1003 at ¶ 91. None of these provided motivations address any shortcoming in Malamud, and no motivation to modify Malamud to add the claimed server/client architecture exists. As already discussed, Malamud is designed to function using a pre-exiting operating system; a server system is simply not relevant

to the goals of Malamud. It is also for this reason that it would not have been "obvious to try" adding a server/client architecture to Malamud, as a POSITA would never have been inclined to attempt to modify Malamud in the first instance, let alone try several different modifications, because is it simply not necessary to do so in order to take advantage of Malamud. What Dr. Rosenberg is proposing is a complete redesign of Malamud that a POSITA would not be motivated to make because it would not be necessary. Even if such a motivation existed, a POSITA would not be able to predictively succeed since it would require a change in the way an operating system functions and a POSITA would not be in the same position as Microsoft (or another operating system manufacturer.)

89. I also disagree with Dr. Rosenberg's unsupported conclusion that it "was extremely likely for a user's computer to be connected to a network and/or have networking capabilities." *Id.* at ¶ 93. Internet connectivity was much rarer on desktop computers in 1997, particularly in home computers. These computers almost exclusively still used dial-up connections. While some corporate computers had local networks using the Ethernet, the '102 Patent was concerned with advertising on webpages, which is well beyond corporate Local Area Networks and gets into Wide Area Networks. Given the bandwidth and cost of the internet in 1997, downloading computer programs was not as viable an option then as it is today and there would have been no obvious benefit of modifying Malamud to do so.

90. Dr. Rosenberg's further statements that "the distribution of software from a server to a user's computer over a network was also well-known and a common practice" is unsupported and factually incorrect. Id. It was not commonplace in 1997 to download software programs over the internet. Windows application programs such as Word and WordPerfect were large files in comparison to HTML webpage files and the cost for internet bandwidth in 1997 was too high to make downloading feasible. Furthermore, as the common specification of the '102/'449 patent describes, cursor modification code and instructions needed to effectuate the cursor modification may be cached in memory once a webpage is first loaded, further reducing bandwidth. See EX. 1001 at Fig. 3 (items 101, 104, 106, 108, 112, 114, 116, 118, 122), 4:25-49; 8:38-67; 9:21-65 (particularly at lines 45-46); 11:30-45. It simply would not make sense to a POSITA to modify Malamud to download an application program in some attempt to implement Claim 72 because of the problems such modifications would cause and because there would be no motivation to do so.

3. Dr. Rosenberg Does Not Demonstrate Malamud Renders Claim 72 of the '102 Patent Obvious.

91. In my opinion, the method of Claim 72 of the '102 Patent would not have been obvious to a POSITA in view of Malamud. I also disagree with Dr. Rosenberg's approach that the obviousness of the claim is properly addressed by breaking a claim apart into its constituent claim elements and making some argument why modification of that particular claim element would be obvious. Rather, one must look at the claim

as a whole and the prior art as a whole and then comparing the entirety of its teachings against the entire claim when comparing their similarities and differences in arriving at a conclusion.

92. In my opinion, when the claim is viewed as a whole and Malamud is viewed in the totality of its teachings, there is little similarity between the two and the differences are not obvious. With that said, I will address each element because Dr. Rosenberg has done so.

Element 72[Preamble]: A method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server, comprising:

93. I disagree that Malamud rendered Element 72[Preamble] obvious. Malamud does not disclose or suggest the claimed method of modifying an initial cursor image displayed on the display of a user terminal corrected to at least one server. Dr. Rosenberg, in his paragraphs 87-94, overlooks that Claim 72 requires a server because the Common Specification is directed to serving webpages to user terminals in order to instruct the browser render a webpage with a customized, content-specific, promotional cursor image. In contrast Malamud is directed to an extension for a Windows operating system that does not require a server to operate and is not suitable for the claimed system and methods disclosed in the Common Specification.

94. Though Dr. Rosenberg is not incorrect when he states that a computer can be connected by a network to a server with a reasonable expectation of success, he fails to explain why a POSITA would benefit from downloading a window procedure,

or a windows application program that invokes that window procedure, in the context of Malamud. Sending HTML webpages to a remote computer is not relevant to Malamud, because application program files are not webpages. For one, webpages do not have to be installed like an application program in order to operate. Dr. Rosenberg asserts that downloading the Netscape Navigator 2.0 browser from a server is somehow relevant to the obviousness of Claim 72. I disagree.

95. Additionally, downloading a browser is entirely distinct from downloading a webpage because the browser is an application program needed to render a webpage, rather than the webpage itself. Therefore, even if a POSITA could download the Netscape Navigator 2.0 browser from a server, this has no bearing on Claim 72.[2] The appeal to Netscape Navigator is further misplaced when one considers that, to display content using it, two downloads are needed – one for the program and one for the web page. The asserted claim, however, requires a single user request for both.

96. I agree generally with Dr. Rosenberg's statements in his ¶¶ 91-92 that downloading application programs in 1997 was not uncommon and could have some benefits. But he does not address that, in Malamud, it is the operating system and

[2] Moreover, the argument is incomplete, at best, because Dr. Rosenberg does not consider whether the cursor changes are system cursor from the operating system. Also, the use of system cursors indicating a current processing status or available function were distinguished from the claimed "specific image" cursors during prosecution.

Malamud's proposed new window procedure that are responsible for the display and content of the information cursor. The Windows-based application program only specifies whether the window procedure will have the information cursor off or on. Therefore, merely serving the application program (or even the proposed window procedure/extension) from a server does not result in the method recited in the claimed steps and Dr. Rosenberg cannot show that "any application program that used Malamud's cursor-modification method" (Rosenberg Decl., ¶ 92) expressly or inherently would contain the icon, the associated file, the metadata to be displayed in the information portion of the information cursor or the callouts to cursor display instructions and code to create the shape of the specific image that indicates the subject or topic of at least a portion of the webpage content ("information to be displayed") when the cursor is moved over that content.

97. As I have previously discussed, all that the application program that invokes Malamud's proposed window procedure does is inform the operating system whether to invoke the information cursor in "on" or "off" mode. The rest of Malamud teaches that the operating system and the window procedure dictate the type of information cursor to be displayed, its shape, and the content in the information portion of the information cursor—not the application program that invokes the window procedure. Moreover, as I have previously explained, Malamud describes this procedure only with regard to a pre-existing file that already has been stored on the computer and already has metadata that was previously displayed in a status bar but

which will now instead be displayed via the new proposed window procedure in an information cursor when such functionality is invoked by the user, application program or the operating system. *See* Ex. 1004 at 5:65-6:17 (explaining that whether the information cursor is displayed depends on whether the information cursor is designated as "on" or "off" may be an option given the user or "may be programmed by [either] the application program or the operating system.")

Element 72[a]: receiving a request at said at least one server to provide specified content information to said user terminal;

98. In my opinion, Element 72[a] would not have been obvious to a POSITA in view of Malamud and Dr. Rosenberg fails to show it would.

99. This claim element serves to highlight the requirement of a request to a server to provide the specified webpage (specified content information) to the user terminal. This is done so that the browser on the user terminal can follow the cursor display instructions from the webpage to transform the initial cursor image into the shape and appearance of the specific image. Malamud, on the other hand, teaches a Windows operating system extension that can be invoked by either the operating system or a Windows-based program (*see* EX. 1004 at 6:4-8) and needs no such request to a server. It is clear to a POSITA that the term "specified content information" refers to the HTML file that will contain both the webpage content (information to be displayed) with callouts to the appropriate cursor display instructions and code (such as Active X or JavaScript code) along with any necessary parameters that the browser

needs in order to effectuate the transformation of the initial cursor image into the shape and appearance of a specific image that indicates the topic or subject of at least part of the webpage.

100. The Original Petitioner and the Patent Owner stipulated that the term "specified content information" / "content information" means "information provided to a user's terminal for use in the display, such as a web page." EX. 1008. This construction is consistent with how a POSITA reading the Common Specification would understand this term because the Common Specification is directed to serving online content to be displayed, such as a webpage. *See, e.g.*, EX. 1001 at Background of the Invention (discussing the problems with on-line advertising being addressed by the invention); 3:15-21 (the invention is directed to "providing a system for delivering advertising elements online"); Figs. 7-9 (showing the webpages with an initial cursor image and transformed specific cursor image); 5:58-65 (discussing the browser and that the "server 12 functions as a so called 'web site'") 6:7-18 (explaining browsers working dynamically at "run-time" versus statically at "compile-time"); 8:38-11:60 (discussing how the browser is used to transform the cursor image on the webpage using plug-ins such as Active X).

101. A POSITA would not see a Windows application program as "information for use in the display, such as a webpage." Rather, the POSITA would see it as information to be installed because a Windows application program cannot run to invoke Malamud's window procedure without first being installed. An

application program is not like a webpage or other online content that a browser can dynamically render, and it is therefore unsuitable to the purpose of serving webpages with promotional cursors.

102. Also, downloading the Windows application program described in Malamud would not result in the downloading of either the specific image (information cursor content) or the information for display (icon) that triggers that transformation of initial cursor image to the corresponding specific image because the associated icon and metadata for a file stored at the computer are created at the time the file is stored and already managed by the Windows 3.1 operating system. Consequently, downloading Malamud's application program from a server would not comprise a request to a server to provide specified content information to a user terminal.

103. Dr. Rosenberg states: "[t]he application program comprises 'specified content information' because it includes content to be displayed on the screen when the program is run, and it includes instructions regarding the modified cursor, such as whether to display an information cursor, the type of information cursor to display, and an indication of the content of the information cursor." EX. 1003-1, ¶ 96. His explanation for this statement is that the book icon 32 relates to the application running in that window because there is a discussion in the specification that windows displayed on the screen are generated by various programs. But this conclusion is inconsistent with the totality of Malamud's specification because the Windows application program only invokes the window procedure and there is no description

that it passes the icon to the latter. Because Dr. Rosenberg's analysis of how the Windows application program interacts with Malamud's window procedure is incorrect, his conclusion that it passes icon information or file metadata is flawed. Because his obviousness analysis is also premised on this faulty conclusion, his conclusion that all a POSITA must do to achieve the claimed method is to serve the Windows application program from a server is incorrect.

104. Downloading Malamud from a server would therefore not meet this element. A POSITA in 1997 would also not have been motivated to download a Windows application program from a server, because (a) there would be no need to introduce a server just to download one Windows application program, (b) Windows application programs are large in size in comparison to webpages, and (c) internet bandwidth in 1997 was both limited and expensive.

Element 72[b]: providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image; and

105. In my opinion, Element 72[b] would not have been obvious to a POSITA in view of Malamud and Dr. Rosenberg fails to properly show it would.

106. Here again, this claim element serves to highlight the requirement of a request to the server to provide the specified HTML webpage file (specified content information) to the user terminal so that the browser on the user terminal can follow the cursor display instructions and use the cursor image data corresponding to a

specific image from the webpage to transform the initial cursor image into the shape and appearance of the specific image. Malamud fails to disclose this Element for at least the same reasons as I articulated concerning Element 72(a) above. It is the operating system which contains all of the information that will be displayed, not Malamud's extension thereto. Modifying either Windows 3.1 or Malamud to retroactively meet the limitations of Claim 72 is improper, lacks motivation, and lacks a reasonable expectation of success.

107. In this regard, Dr. Rosenberg is vague even in his speculations and incorrectly conflates the stated functions of the Windows application program with Malamud's window procedure. For example, in his ¶ 99, Dr. Rosenberg asserts that that the program includes instructions and information regarding the display of elements depicted by the application program, including the objects that the application programs will display."

108. Dr. Rosenberg's support for his statements in ¶ 99 are found in his ¶ 100, but that does not withstand scrutiny because he mishmashes therein Malamud's stated functions which augment the operating system with Malamud's new window procedure and the Windows application program that invokes the new window procedure. For example Dr. Rosenberg asserts that the application program "includes at least one cursor display instruction in the program, which is checked when a cursor is placed over an object on the display screen, and the instruction contains information that is passed to the operating system to cause the cursor image to change to an

information cursor, such as a preview cursor," citing to 5:47-62 of Malamud and characterizing the window procedure to be part of the application program. *Id.* But Malamud describes this as a function of the window procedure, not of the application program. Moreover, a POSITA reading Malamud would understand that the window procedure is part of the operating system-- not part of the application program that invokes it. First, Malamud never describes the window procedure as part of the application program in the passages Dr. Rosenberg cites or elsewhere. Even if one considers it to be part of the application program, the sole function of the window procedure is to invoke a set of built-in operating-system functions. Second, a POSITA understands that a window procedure is part of the operating system, not the application program that invokes it.

109. This error in Dr. Rosenberg's analysis taints the rest of his testimony in his ¶ 100, regarding the presence of element 72[b]. For example, Dr. Rosenberg also states therein that "the application program in Malamud contains instructions whether to display an information cursor, and if so the type of information cursor (such as a preview cursor or a combined name and preview cursor) for each entity displayed in the application window, and based on those instructions in the application program, messages are sent to the OS regarding the display of the information cursors." Again, the function of specifying which type of information cursor to display and sending that message to the operating system is described in the cited passages as a function of the window procedure and not of the Windows application program that may invoke it.

While Dr. Rosenberg is correct that the window procedures may send to the operating system a message with a pointer of a bitmap of graphical information to display in information portion of the information cursor, this again is described in Malamud as a function of the window procedure invoked by the application program--- not a part of it. Thus, Dr. Rosenberg cannot show that downloading the application program from a server expressly or inherently results in the download of cursor image data.

Element 72[c][i]: transforming said initial cursor image displayed on said display of said user terminal into the shape and appearance of said specific image in response to said cursor display instruction, wherein said specified content information includes information that is to be displayed on said display of said user's terminal, wherein said specific image includes content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal, and

110. Malamud does not teach this limitation, even if the Windows application program was downloaded from a server and was designed to invoke the proposed Malamud extension. The metadata and icon associated with a stored file already exists and are managed by the operating system. The Windows application that takes advantage of Malamud's proposed extension to Windows 3.1 only invokes the extension and sets which mode of information cursor display it wants. The Windows application does not contain the extension. As a POSITA would understand, the extension is part of the operating system, and not the program. However, if the extension was somehow part of the program, it would not contain metadata and icons of any files stored on the computer. And a request for such a program would not be a request for specified content information, as previously discussed. Indeed, this would

be so even if the Windows application contained the file, the file's icon, the information cursor bitmap, and the data to be included in the information portion of the information cursor because it would still not operate like the integrated server system for displaying content and a POSITA would not consider the request for such an application to be a request for the claimed "specified content information."

111. Importantly, Dr. Rosenberg does not express an opinion that Malamud actually discloses this entire element. Rather, he only states in his ¶ 102 regarding this element that "that the application program would contain cursor display instructions that instruct the performance of the functionality discussed below." To the extent that Dr. Rosenberg anywhere else expresses the opinion that the entirety of this claim element is met, such an opinion would be incorrect.

112. First, in his ¶ 103, Dr. Rosenberg again conflates the functionality of the window procedure with the functionality of the application program. It is the window procedure and not the application program that Malamud describes which "tells the operating system what type of cursor to display and sets forth the contents and type of information to be displayed in the cursor (step 58 in FIG. 7)." The only interaction between the application program and the window procedure is for the application program to invoke the procedure and to set whether the information cursor is on or off. But the cursor display instruction must indicate a cursor display code operable to process the cursor display instruction. Therefore, even if one were to download a Windows application program that included Malamud's window procedure, the

window procedure only identifies bitmaps for the icon and for the information cursor, not code. Malamud does not need to identify any code to the operating system to display information cursors because that code would already exist in the operating system. In contrast, the claimed inventions disclosed in the Common Specification require the identification of cursor display code such as ActiveX because browsers do not contain the code needed to display webpages that practice the method of Claim 72.

113. Perhaps recognizing this flaw, Dr. Rosenberg asserts in his ¶ 104 that a POSITA would understand that the application program provides "information to be displayed in the window for that application." While that statement is not in itself incorrect as a general matter, Dr. Rosenberg fails to address that the "information to be displayed" required by Claim 72 is the information over which the initial cursor image moves in order to trigger its transformation into the shape and appearance of a corresponding specific image. In the common specification of the '102/'449 patents, this is a particular portion of the webpage's display content over which the initial cursor image is moved to initiate the cursor image transformation. In the content of Malamud, this would be the icon of the stored file.

114. But Dr. Rosenberg never testifies that the application program provides the icon of the stored file. This alone is fatal to his analysis. He only generally states in his ¶ 104 that the "the application program would include information to be displayed on the display of the user's terminal." Likewise, in his ¶ 105, Dr. Rosenberg only cites to the specific image (*i.e.*, graphical image displayed in the preview cursor)

and not the icon. But the claim requires both the "specific image" element and the "information to be displayed" element, wherein the latter is what the initial cursor image must move over in order to trigger the transformation of the initial cursor image into the shape and appearance of the specific image. Moreover, as previously discussed the specific image is identified by the window procedure (which would have access to the file's metadata) and not by the Windows application program invoking it. Because the Dr. Rosenberg does not and cannot testify that the application program would send both the icon and the specific image, and because a POSITA would understand from reading Malamud that the icon and specific image are provided by the Windows operating system communicating with the new window procedure, this element is not present in Malamud. Dr. Rosenberg repeats that same error in his ¶ 108 wherein he again reads the claim's requirement for "information to be displayed" onto Malamud's description of the pointer to a bitmap file. Whether he is referring to the bitmap file of the information cursor itself or the bitmap of a graphical image to be displayed in the information portion of the information cursor, neither bitmap is the file icon. This claim element is not disclosed by Malamud.

Element 72[c][ii]: wherein said cursor display instruction indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal.

115. In his paragraph ¶ 106, Dr. Rosenberg opines that (1) Malamud discloses this element; and (2) it would be obvious that the application program would contain this element. I disagree with both opinions for the reasons below.

116. This claim element captures the teachings of the common specification of the ’102/’449 patents that in order to effectuate the cursor modification in a webpage rendered by a browser, some additional cursor display code such as Active X or JavaScript is necessary. Therefore, the common specification teaches that this cursor display code must be identified in the HTML file for the webpage requested from the server by the browser. Thus, the cursor display instruction must indicate a cursor display code operable to process the cursor display instruction.

117. However, even if the Windows application program were served from a server and contained Malamud’s window procedure, the windows procedure only identifies bitmaps for the icon and for the information cursor, not the code to display the information cursor, because that code already exists in the operating system. In contrast, the claimed inventions disclosed in the Common Specification require the identification of cursor display code such as ActiveX because browsers do not contain the code needed to display webpages that practice the method of Claim 72.

118. In his paragraph ¶ 106, Dr. Rosenberg opines that (1) Malamud discloses this element; and (2) it would be obvious that the application program would contain this element. Both are incorrect. First, in his ¶ 107, Dr. Rosenberg again conflates the functionality of the window procedure with the functionality of the application

program. It is window procedure, not the invoking Windows ***application program***, as Malamud describes, "that indicates what type of cursor to display and, for a preview cursor, a pointer to a bitmap of graphical information that the operating system should display in the preview portion of the modified cursor image." Second, Dr. Rosenberg concludes erroneously that "cursor display instructions in the application program indicates what cursor display code must formulate and convey the message and cause the user's computer to properly display the appropriate type of information cursor. This is incorrect because Malamud teaches that each type of information cursor is stored in the operating system as a bitmap. Therefore, the window procedure only identifies which bitmap image to use for displaying the specific information cursor type--it does not need to identify any code.

119. Perhaps recognizing this shortcoming, Dr. Rosenberg asserts in his ¶ 109 "that it also would have been obvious to a POSITA that the cursor display instruction indicates the cursor display code needed to process the cursor display instruction because the information in the instruction must be properly conveyed to the OS, and it was common to convey information to the OS through an API call. The cursor display instruction in Malamud instructs whether a particular entity has an associated information cursor and, if so, the type of information cursor and the text and/or preview image to display. Because different pieces of information need to be conveyed to the OS for different types of information cursors, such as text for information cursor that includes a name box or a pointer for an information cursor that includes a preview

portion, it would have been obvious to a POSITA that the information contained in the instruction would indicate what code is needed to process the instruction to properly formulate and convey the message to the OS through the appropriate API call, as this was an extremely common procedure. Therefore, it would have been obvious to a POSITA that the instruction, based upon the information contained therein, would indicate the code to use to process the instruction."

120. This is incorrect and contrary to Malamud's specification. As I have already discussed, the window procedure described in Malamud only sends an identification of which bitmap to use to the operating system, not which code. Therefore, it is pure fiction to add another API call, no matter how commonplace, when there is no requirement in Malamud to do so. Moreover, this suggested modification would require a POSITA to change the design of the proposed window procedure, which is not tenable as I previously discussed. Therefore, such a modification would not have been obvious, at least because there was no motivation to make it and because there would be no reasonable expectation of success without undue effort and/or experimentation.

4. Claims 1, 27, 53 of the ’449 Patent are Not Rendered Obvious by Malamud, and Dr. Rosenberg does not show otherwise.

a. Downloading Malamud’s Application Program from a Server Does Not Disclose the Challenged Claims, and there is No Motivation of Doing So

121. I discussed in addressing Dr. Rosenberg’s opinions regarding Claim 72 of the ’102 Patent the reasons a POSITA would have not been motivated to download Malamud’s application program from a server, and why doing so would not have in any event resulted in the practice of Claim 72 or otherwise rendered that claim obvious. These same opinions also apply to the Challenged Claims of the ’449 Patent.

b. Claim 1 of the ’449 Patent

Element 1[Preamble]: A server system for modifying a cursor image to a specific image having a desired shape and appearance displayed on a display of a remote user’s terminal, said system comprising:

122. In my opinion, Malamud does not disclose or render obvious a server system for modifying a cursor image to a specific image having a desired shape and appearance displayed on a display of a remote user’s terminal as required by element 1[Preamble] for at least all the reasons that I have discussed in connection with Claim 72.

123. Malamud does not disclose any server system at all. Malamud is a Microsoft patent that discloses an extension to the Windows 3.1 operating system (or a comparable system) by providing a new window procedure. In Malamud, a Windows application program can invoke the window procedure so that the metadata of a stored

file can be displayed in an information cursor instead of in a status bar when the Windows program has a window open in which in an icon for a stored file is displayed.

124. In addition to invoking the window procedure, the application program can set the procedure to always display the information cursor or to only display it when the cursor position is over the icon of a stored file. There is no description of the Windows application program communicating to the windows procedure (a) any specific image to display in the information cursor; (b) an icon; or (c) the information cursor. All of this data is understood to a POSITA to be maintained by the operating system for every stored file having such associated data.

125. Furthermore, as I previously explained, a POSITA would not have been motivated to modify Malamud in order for the Windows application file to supply the icon and metadata for a stored file provided by the Windows application itself, because any such change would necessarily involve changing the design of the API to the Windows extension, and therefore the operating system. Such a change would have to be approved and made by the operating system's manufacturer, which is not something that a POSITA could predictably or reliably accomplish. Alternatively, a POSITA would have to design their own operating system to effectuate this modification of Malamud, which would also be beyond the capability of a POSITA without undue effort.

126. Additionally, even if a POSITA could effectuate the change to the Windows extension and provide a Windows application program that contained the data to create the

information cursor, a file icon, and the metadata to be displayed in the information cursor, this would still not result in the practice of the claimed invention. This is because there would still be no request for specified content information, which Original Petitioner Amazon (into whose shoes eBay has stepped) and the Patent Owner agreed to mean "information to be used in the display, such as a webpage" because an application program is not like a webpage whereby a server system for modifying the cursor image on the remote user's terminal is achieved. Unlike a webpage, which a browser can immediately render to modify the cursor image in real-time, downloading such an application program would not result in the claimed cursor modification. The user would have to install the application program before it could communicate with the operating system, including the windows extension. Therefore, downloading an application program would be wholly unsuitable to the purpose of the claim and would not result in the claimed system. Additionally, unlike the claimed specified content information, a Windows application program would typically be a large file and not as prone to download as a webpage in 1997, because of internet costs and bandwidth constraints, making the argument even more far-fetched.

Element 1[a]: cursor image data corresponding to said specific image;

127. In my opinion, Malamud does not disclose or render obvious element 1[a] (when read in connection with the rest of the claim's requirements), because Malamud does not disclose or suggest to a POSITA a server to provide specified content

information to the user's terminal wherein said specified content information cursor image data corresponding to a specific image.

128. A Windows application program that invoked (or even contained) Malamud's extension to Windows 3.1 sent from a server in response to a request for the program would not meet this claim element for the reasons I have previously stated. The application program is not "information to be used in the display, such as a webpage" per the agreed upon construction. A POSITA understands that an application program does not operate like a webpage or banner ad or other online content for display that is suitable for the claimed integrated display method which can be achieved by a browser and webpage server because a Windows application program would have to be installed in order to communicate with Malamud's extension to Windows 3.1 operating system.

129. Also, Malamud does not describes any interface in which the application program communicates to the windows procedure a specific image (*i.e.*, the metadata to be displayed in the information cursor) for a file stored on the computer. Indeed, because the window procedure is part of the operating system that maintains such information, even a Windows application that included the windows extension would not contain such information for any stored file.

130. Therefore, the application program in Malamud also does not comprise specified content information because it does include the metadata associated with the

stored files to be displayed in the information cursor (which is maintained by the operating system.)[3]

131. Moreover, a POSITA would not be motivated to change the API to allow for the Windows application program to send the metadata (to be included in the information cursor for a stored file) to the windows procedure because such a change would have to be approved and implemented by the operating system manufacture (here Microsoft) or require a POSITA to develop their own operating system with the modified API. This is not something a POSITA would have a reasonable, predictable expectation of success in doing without undue burden, if at all.

132. Finally, a POSITA in 1997 would not be motivated to download such a Windows application from a server because of bandwidth and cost issues and doing so would still not result in Claim 1 because it would not have created the networked display system of the claims like one achieves by serving an HTML webpage file to a browser.

3. A POSITA would also understand that a Windows extension is part of an operating system and the Windows application program only interfaces with it through an application program interface ("API") to it. And the API to Malamud's proposed Windows extension only contemplates that the application program can invoke the extension and make one setting that determines whether (1) the information cursor's information portion is always displayed or (2) only displayed while the cursor is over the icon. Malamud does not contemplate a design in which the application program sends metadata for display in the information cursor to the Windows extension.

133. Thus, in my opinion, Element 1[a] is not disclosed in Malamud for at least the same reasons that the claimed cursor image data is not disclosed for Claim 72[b].

Element 1[b]: cursor display code, said cursor display code operable to modify said cursor image; and

134. I consider this element in detail below with Element 1[c][iii].

Element 1[c][i]: a first server computer for transmitting specified content information to said remote user terminal,

135. In my opinion, Element 1[c] would not have been obvious to a POSITA in view of Malamud because Malamud does not disclose or suggest to a POSITA a first server computer for transmitting specified content information to said remote user terminal. This claim element highlights the need for a server to be connected to the user terminal to provide the specified content information, such as a webpage, to a user terminal so that the browser can render the webpage and follow the cursor display instructions (in the HTML file for the webpage) to transform the initial cursor image displayed on the user's terminal into the shape and appearance of the specific image

136. I understand that eBay has "stepped into the shoes" of Amazon with regard to this Petition. Amazon and the Patent Owner stipulated that the term "specified content information" / "content information" means "information provided to a user's terminal for use in the display, such as a web page."

137. I also understand that eBay's Petion was allowed to join Amazon's Petition because it was a "copycat" Petition that raised no new substantive grounds.

But whether eBay is bound by Amazon and Lexos Media's stipulated construction, it is my opinion that this construction is correct because a POSITA reading the Common Specification would understand that the term "specified content information" is directed information for use in the display, such as a webpage" because the Common Specification throughout is directed to serving online content to be displayed, such as a webpage. *See, e.g.*, EX. 1001 at Background of the Invention (discussing the problems with on-line advertising being addressed by the invention); 3:15-21 (the invention is directed to "providing a system for delivering advertising elements online"); Figs. 7-9 (showing the webpages with an initial cursor image and transformed specific cursor image); 5:58-65 (discussing the browser and that the "server 12 functions as a so called 'web site'") 6:7-18 (explaining browsers working dynamically at "run-time" versus statically at "compile-time"); 8:38-11:60 (discussing how the browser is used to transform the cursor image on the webpage using plug-ins such as Active X).

138. Malamud does not disclose any server system receiving a request for "information for use in the display, such as a web page" as required by the claim. Dr. Rosenberg posits that it would be obvious to serve a Windows application program from a server. But Windows application programs are not like webpages and a POSITA would not consider an application program to be "specified content information." The Common Specification throughout is specification is clear that the specified content information, such as a webpage file, is online content that a browser

can render for display in real time. Application programs, on the other hand, must be installed and is therefore unsuitable to creating the claimed server system.

139. A theoretical Windows application program that invoked (or even contained) Malamud's extension to Windows 3.1 served from a server in response to a request for the program would still not meet this claim element because such an application program is not "information to be used in the display, such as a webpage" per the agreed upon construction. A POSITA understands that an application program does not operate like a webpage or banner ad or other online content for display that is suitable for a display system such as achieved by a browser and webpage server because a POSITA would understand that a Windows application program would have to be installed in order to communicate with Malamud's extension to Windows 3.1 operating system.

140. However, even if the Windows application program described in Malamud were served from a server, such would not result in the downloading of either the specific image (information cursor content) or the information for display (icon) that triggers that transformation of initial cursor image to the corresponding specific image for the reasons that I have discussed, even if the Windows procedure itself was included in the Windows application program because the associated icon and metadata for a file stored at the computer are created at the time it is stored and managed by the Windows 3.1 operating system. Even if a POSITA were to download

Malamud's application program from a server would not be a request to a server to provide specified content information to a user terminal.

141. I also disagree that a POSITA in 1997 would have been motivated to download their Windows application programs, such as the one described in Malamud, from a server, for the reasons I have already discussed because there would be no need to introduce a server to practice Malamud and because application programs are much larger in size that webpages, particularly in 1997, and because internet bandwidth was both limited and expensive.

142. In sum, Element 1[c][i] would have not been obvious to a POSITA in view of Malamud because a Window operating system, including Malamud's Windows extension, is not a server system. Malamud's Windows extension would not be a part of a Windows application program that invokes the extension. The Windows application program would only contain the API call to invoke the extension and set the information cursors to "on" or "off." Such a program is not like a webpage or other specified content information. Rather the application program has to be installed first before it can initiate communication with the Windows application. Moreover, the application program would not have metadata to display in an information for any stored file. In order to conjure up an application program that communicated both the icon and metadata for a file for display to the operating system would involve a change to the API into Malamud Window's extension, at a minimum, and perhaps even further

changes to the Windows operating system, or the development of a new independent operating system, which is impractical to a POSITA.

Element 1[c][ii]: said specified content information including at least one cursor display instruction indicating a location of said cursor image data, said cursor display instruction and said cursor display code operable to cause said user terminal to display a modified cursor image on said user's display in the shape and appearance of said specific image,

143. In my opinion, Element 1[c][ii] is not disclosed or rendered obvious by Malamud. This claim element captures the teachings of the Common Specification that in order to effectuate the cursor modification in a webpage rendered by a browser, some additional cursor display code such as ActiveX or JavaScript is necessary to effectuate the desired modification. The cursor display instruction must indicate cursor image data whereby the cursor display instruction and code are able to cause the use terminal to display a modified cursor image on the user's display in the shape and appearance of the specific image.

144. There is no description in Malamud of the Windows application program communicating to the windows procedure any specific image to display in the information cursor or any instruction that would affect the shape or appearance of the specific image. Rather, all that is disclosed is that the Windows application can set an on/off toggle whereby either the information cursor's information box is always displayed and is blank when the cursor is not over the icon, or that the information cursor box is only displayed with the metadata contained in it (*i.e.*, not blank) when

the cursor is over the icon. But these options do not change the shape or appearance of the specific image because same the specific image is always displayed regardless of which setting the Windows application program set for Malamud's window procedure.

145. While Malamud discloses that the window procedure can communicate the bitmap of an image to be displayed in the information box of the information cursor, as well as the bitmap of the information cursor type to be displayed for a stored file, Malamud describes not state the source either bitmap. Nor does it have to because Malamud describes that the operating system already has both bitmaps. EX. 1004 at 5:16-18 ("The appearance of the cursor on the video display 20 (FIG. 1) is dictated by bitmaps stored with the operating system 22."); 5: 59-62 ("The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion.") This description is consistent with Malamud's overall disclosure that it is directed to a window procedure that is part of the operating system and therefore already has access to the metadata for stored files to display in the information cursor.

Element 1[c][iii]: wherein said specified content information is transmitted to said remote user terminal by said first server computer responsive to a request from said user terminal for said specified content information, and wherein said specified content information further comprises information to be displayed on said display of said user's terminal.

Element 1[c][iv]: said specific image including content corresponding to at least a portion of said information to be displayed on said display of said user's terminal, and wherein said cursor display code is operable to process

said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image in response to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal, and wherein said specific image relates to at least a portion of said information to be displayed on said display of said remote user's terminal.

146. In my opinion, Elements 1[c][iii] and [iv] are not disclosed nor rendered obvious to a POSITA in view of Malamud. These claim elements serve to highlight the that a server needs to provide the specified HTML webpage file (specified content information) to the user terminal so that the browser on the user terminal can display the webpage content (information to be displayed) on the user terminal wherein the movement of the cursor over that particular information to be displayed will trigger the cursor modification into the shape and appearance of the corresponding specific image. Malamud's application program does not generally comprise "specified content information" for the reasons previously stated.

147. The Petitioner reads the "information be displayed" element onto the icon 32 for file stored in the computer system, But Malamud does not describe the application program as having the book icon 32 for the stored file, nor providing it to the window procedure. Nor does Malamud describe the window procedure providing or identifying the icon for display. Nor would there be any need for the Windows application program to do so because Malamud shows that the icon is pre-existing and is already displayed before the window procedure has begun actively monitoring the cursor position.

148. Dr. Rosenberg does not express any opinion that Malamud's application program actually provides the icon of the stored file. This alone is fatal to his analysis. See Ex. 1003-1 at ¶ 102 (only testifying that "that the application program would contain cursor display instructions that instruct the performance of the functionality discussed below."); ¶ 104 (only testifying that "the application program would include information to be displayed on the display of the user's terminal."); ¶ 105 (only citing to graphical image displayed in the preview cursor--- not the icon.); ¶ 108 (again not reading the "information to be displayed" element onto the icon)]

149. But the claim requires both the "specific image" element and the "information to be displayed" element, wherein the latter is what the initial cursor image must move over in order to trigger the transformation of the initial cursor image into the shape and appearance of the specific image. Because the Petitioner cannot establish that the application program would send both the icon and the image to be displayed in the information cursor, this alone is fatal to this ground.

150. Malamud contains a general statement, which is correct, that when a Windows operating system opens a Windows application program, it creates a new window and assigns a window procedure and a message queue for that window. *See*, EX. 1004 at 5: 53-59 (explaining the operating system "logically divides the user interface into a number of windows" wherein "each window has a separate window procedure associated with it" and "a message queue for each program that generates windows.") But this passage does not describe the Windows application program

supplies the icon. A POSITA would understand that an application program does not create or contain all the content in a window that it generates. Rather, the application's window may display content supplied by the application program and also content supplied by the operating system. For example, a POSITA would understand that icons and metadata for windows functions or stored files are supplied by the operating system. The passage relied upon therefore provides no express or inherent support for the proposition that the icon was generated by the application program.

151. Even if the Windows application program was downloaded from a server and was designed to invoke the proposed Malamud extension, these elements would not be met for the reasons I have previously stated. The metadata and icon associated with a stored file already exists and are managed by the operating system. The Windows application that takes advantage of Malamud's proposed extension to Windows 3.1 only invokes the extension and sets which mode of information cursor display it wants. The Windows application does not contain the extension. As a POSITA would understand, the extension is part of the operating system, and not the program. However, if the extension was somehow part of the program, it would not contain metadata and icons of any files stored on the computer and a request for such a program would not be a request for specified content information, as previously discussed. Indeed, this would be so even if the Windows application contained the file, the file's icon, the information cursor bitmap, and the data to be included in the information portion of the information cursor because it would still not operate like the

integrated server system for displaying content and a POSITA would not consider the request for such an application to be a request for the claimed "specified content information." Thus, Claim 1 would have not have been obvious in view of Malamud for at least the reasons set forth herein.

c. Claim 27 of the '449 Patent

152. I agree with Dr. Rosenberg that the only difference between Claim 27 and Claim 1 is that Claim 1 recites that the modified cursor image is displayed in response to movement of the cursor image over "a display of said at least a portion of said information to be displayed on said display of said user's terminal" (EX. 1002 at 19:1-3), whereas Claim 27 recites that the modified cursor image is displayed in response to movement of the cursor image over "a specified location on said display of said user's terminal." Regardless, I have been informed that Claim 27 has been previously canceled before the Petition was filed. I provide my opinions regardless due to their potential relevancy to Ground 3, and it is my opinion that Claim 27 is not disclosed or rendered obvious by Malamud for all the reasons that I have stated concerning Claim 1 (and Claim 72 of the '102 patent).

153. I disagree with Dr. Rosenberg's conclusion that "when the cursor is moved, a message is transmitted from the operating system and identifying the location of the mouse on the screen, and that information is used by the application program to determine whether to display the modified cursor." Malamud describes that it is Malamud's window procedure that makes this determination, not the application

program. Indeed, Malamud pointedly explains that the application program forwards this message to the window procedure for processing. EX. 1004 at 5:22-30 ("Initially, the cursor position is moved by the mouse 18 or other input device to point within the window (step 48 in FIG. 6). A message is generated and sent to the application program that is executing, which, in turn, forwards the message to the window procedure associated with the window (step 50). The message specifies the position of the cursor in the window as described above. The window procedure then determines what is displayed at the cursor position within the window (Step 52).")

d. Claim 53

Element 53[Preamble]: A method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server, comprising:

154. In my opinion, Element 53[Preamble] would not have been obvious to a POSITA in view of Malamud because Malamud does not disclose or render obvious a server system for modifying the display of an initial cursor image displayed on a display of a user connected to at least one sever.

155. It would not have been obvious to a POSITA to use Malamud's method for modifying a cursor image displayed on a computer connected to a server, and a POSITA would have not been motivated to do so for the reasons discussed above in connection with Claim 1 and regarding the preambles of the other Challenged Claims.

Element 53[a]: receiving a request at said at least one server to provide specified content information to said user terminal;

156. In my opinion, Element 53[a] would not have been obvious to a POSITA in view of Malamud because Malamud does not disclose or suggest to a POSITA requesting a server to provide specified content information to the user's terminal, for the reasons I have explained previously in connection with Claim 1.

Element 53[b]: providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image; and

157. In my opinion, Element 53[b] would not have been obvious to a POSITA in view of Malamud because Malamud does not disclose or suggest to a POSITA providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image, for the reasons I have explained previously in connection with Claim 1.

Element 53[c][i]: transforming said initial cursor image displayed on said display of said user terminal into the shape and appearance of said specific image in response to said cursor display instruction, wherein said specified content information includes information that is to be displayed on said display of said user's terminal, wherein said specific image includes content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal, and

Element 53[c][ii]: wherein said cursor display instruction indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image in response to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal, and

Element 53[c][iii]: wherein said specific image has a shape and appearance relating to said information to be displayed.

158. In my opinion, Element 53[c][i]-[iii] would not have been obvious to a POSITA in view of Malamud because Malamud does not disclose or suggest to a POSITA sending the specified content information from the server in response to a request for such specified content information wherein the cursor display instruction indicates a cursor display code operable to process the cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image in response to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal, wherein said cursor display instruction indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image in response to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal, and wherein said specific image has a shape and appearance relating to said information to be displayed, for the reasons I have supplied in connection with Claim 1.

B. GROUND 2: Malamud combined with Nakagawa

1. Overview of Nakagawa (EX. 1005)

159. Nakagawa is not directed to online advertising, the requesting and service of webpages, the modification of cursors or the display of online content. It is directed

to a system for automatically requesting and distributing software to be installed on client computers to so that the software is properly maintained without the need for human intervention. As Nakagawa describes its system and method allows for "distributing and maintaining software…where a number of various software users and a number of vendors can systematically manage the distribution and maintenance of plural sets of various object software." *See*, EX. 1005 at 5:5-10.

160. As Nakagawa describes with regard to a preferred embodiment shown in its FIG 7:

> When a user activates the object software, the client program CP generates a list of file names in a directory managed by the client program CP, and transmits it to the server program SP of the vendor computer 27. The client program CP receives an answer from the server program SP of the vendor computer 27, and deletes unnecessary files and enters received files (or modules) according to an instruction of the server program SP.
>
> The vendor computer 27 stores the server program SP which manages a library of the object software and the versions of all modules based on the development and update of the Software developer.
>
> When module configuration information of the user computer is transmitted from the client program CP, the server program SP receives the information and determines which module is required, unnecessary, or an old version in the software configuration of the client. Then, the server program SP specifies the names of the modules to be deleted and installed to generate update information as an answer to the client program CP. The update information and the modules to be installed are provided for the client program over the network 28.

Id. at 33:22-43.

161. Thus, Nakagawa teaches how to distribute software and updates thereto over a network for installation at a remote computer.

162. As discussed above, there is no motivation to modify Malamud to arrive at Claim 72 and no shortcomings with Malamud that are fixed via the addition of a downloading an application program for the reasons I have previously stated. Therefore, combing Malamud with Nakagawa does not fix the deficiencies identified in Malamud above.

163. In paragraph 117 of his declaration, Dr. Rosenberg states: "[a] POSITA… would have been motivated to combine the teachings of Malamud and Nakagawa to distribute Malamud's application program to users over a network from a server, and it would have been well within the technical skill of a POSITA to do so with a high likelihood of success."

164. I understand this statement to mean either that Malamud's proposed new window procedure extension to the Windows 3.1 operating system to support the display of information cursors could be distributed via Nakagawa's distribution system, or that a Windows application that invokes the Windows 3.1 extension could be distributed via Nakagawa's system.

165. Neither the distribution of the Windows 3.1 extension itself or a Windows application that invokes the extension inherently practices the claimed method of Claim 72 or the clamed systems or methods (of any of the other Challenged claims) for the reasons that I have discussed already with regard to Malamud, namely:

a. There is no request for "specified content information" that includes information to be displayed (such as a webpage).

b. Neither the Windows 3.1 extension nor the Windows based application program that invokes the extension include "information to be displayed" (putatively, the stored file's associated icon) over which the cursor has to be moved in order to trigger the transformation of the initial cursor image into the shape and appearance of a corresponding "specific image" (putatively, the stored file's associated metadata displayed in the information portion of the information cursor).

c. A POSITA would not be motivated to develop a Windows application program that would communicate a file, its icon, and its metadata to the Windows 3.1 to use with Malamud's proposed window procedure because it would involve a change to the design of the Windows 3.1 operating system, which is not predicable or feasible for a POSITA without undue experimentation and effort, if possible at all.

2. The Combination of Nakagawa and Malamud Does Not Render Claim 72 of the '102 Patent Obvious

Element 72[Preamble]: A method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server, comprising:

166. Element 72[Preamble] would not have been obvious to a POSITA in view of the combination of Malamud and Nakagawa for the same reason as explained in connection with Element 72[Preamble] in Ground 1. Malamud does not disclose or

suggest to a POSITA a server "providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image" and Nakagawa does not correct the failings of Malamud.

167. Finally, it would not have been obvious to a POSITA in 1997 to try to download such a Windows application from a server per Nakagawa because of bandwidth and cost issues and because and because doing so still would not result in practice of Claim 72 for the reasons explained in Ground 1.

Element 72[a]: receiving a request at said at least one server to provide specified content information to said user terminal;

168. In my opinion, Element 72[a] would have not been obvious to a POSITA in view of Malamud and Nakagawa because I Malamud disagree that either of these references discloses requesting a server to provide specified content information to the user's terminal.

169. Malamud is deficient for the reasons I identified above in connection with Ground 1, Element 72[a] and Nakagawa does not correct the deficiencies.

170. I also disagree that a POSITA in 1997 would have been motivated to set up a system as described in Nakagawa to download Windows application programs, such as the one described in Malamud, from a server, for the reasons I have already discussed because (a) there would be no need to introduce a server just to send down one Windows application program; (b) Windows application programs are larger than

webpages; and (c) internet bandwidth was both limited and expensive. Also, downloading the Windows application program described in Malamud would not result in the downloading of either the specific image (information cursor content) or the information for display (icon) that triggers that transformation of initial cursor image to the corresponding specific image for the reasons that I have discussed, even if the Windows procedure itself was included in the Windows application program because the associated icon and metadata for a file stored at the computer are created at the time it is stored and managed by the Windows 3.1 operating system. In other words, even if a POSITA were to combine Malamud's teaching with the Nakagawa's disclosure would not render this claim limitation obvious, as the request to download Malamud's application program from a server would not be a request to a server to provide specified content information to a user terminal.

Element 72[b]: providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image; and

171. In my opinion, Element 72[b] would have not been obvious to a POSITA in view of Malamud and Nakagawa because neither of these references discloses or suggests to a POSITA a server to provide specified content information to the user's terminal wherein said specified content information includes at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image. Malamud is deficient for the reasons already provided, and Nakagawa does not correct Malamud's deficiency. Also, it would not have been obvious to a POSITA in

1997 to try to download such a Windows application from a server per Nakagawa because of bandwidth and cost issues and because and because doing so still would not result in practice of Claim 72 for the reasons explained in Ground 1

Element 72[c][i]: transforming said initial cursor image displayed on said display of said user terminal into the shape and appearance of said specific image in response to said cursor display instruction, wherein said specified content information includes information that is to be displayed on said display of said user's terminal, wherein said specific image includes content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal, and

172. As explained above, Malamud does not teach this limitation, even if the Windows application program was downloaded from a server and was designed to invoke the proposed Malamud extension. Nakagawa does not correct this deficiency in Malamud, nor does the Petitioner allege that it does.

Element 72[c][ii]: wherein said cursor display instruction indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal.

173. Neither Malamud nor Malamud in combination with Nakagawa teaches or renders obvious this claim requirement. Malamud is deficient for the reasons previously identified. Nakagawa does not correct Malamud's deficiencies. The cursor display instruction must indicate a cursor display code operable to process the cursor display instruction. However, even if the windows application included the Windows extension (and it would not), the extension only identifies bitmaps for the icon and for the information cursor, not **code**. The claimed inventions disclosed in the Common

Specification require the identification of cursor display code such as ActiveX because browsers do not contain the code needed to display webpages that practice the method of Claim 72. In contrast, Malamud is a windows extension and does not need to identify any code to the operating system that communicates with the display driver because that code already exists.

3. The Combination of Nakagawa and Malamud Does Not Render the Challenged Claims of the '449 Patent Obvious

a. Motivation to Combine

174. I discussed the reasons a POSITA would not have been motivated to combine Malamud and Nakagawa in connection with the '102 Patent. (*See* § V[B][2]; *see also* § V[B][3], Element 72[Preamble].) That same lack of motivation also applies here.

b. Claim 1

Element 1[Preamble]: A server system for modifying a cursor image to a specific image having a desired shape and appearance displayed on a display of a remote user's terminal, said system comprising:

175. In my opinion, Element 1[Preamble] would not have been obvious to a POSITA in view of Malamud and Nakagawa for the same reasons as I have explained in connection with Claim 72 [Preamble].

176. In my opinion, Malamud does not disclose or render obvious a server system for modifying the display of an initial cursor image on a remote terminal into the shape and appearance of a specific image on a remote user terminal as required by

element 1[Preamble] for all the same reasons that I have discussed in connection with Claim 72.

Element 1[a]: cursor image data corresponding to said specific image;

177. In my opinion, Malamud does not disclose or render obvious element 1[a] (when read in connection with the rest of the claim's requirements), because Malamud does not disclose or suggest to a POSITA a server to provide specified content information to the user's terminal wherein said specified content information cursor image data corresponds to a specific image. Malamud is deficient for the reasons previously identified above with respect to my analysis at section VII (B)(4) above.

178. A Windows application program that invoked (or *arguendo* contained) Malamud's extension to Windows 3.1 served from a server in response to a request for the program would not meet this claim element for the reasons I have stated. The application program is not "information to be used in the display, such as a webpage" per the agreed upon construction. A POSITA understands that an application program does not operate like a webpage or banner ad or other line content for display that is suitable for integrated display method such as achieved by a browser and webpage server because a POSITA would understand that a Windows application program would have to be installed in order to communicate with Malamud's extension to Windows 3.1 operating system.

179. In light thereof, because Nakagawa fills in none of the missing matter, in my opinion, Element 1[a] would not have been obvious to a POSITA in view of

Malamud and Nakagawa. Thus, in my opinion, Element 1[a] is not disclosed in Malamud for the same reasons that the claimed cursor image data is not disclosed for Claim 72[b] and previously stated for Claim 1 with respect to Malamud alone.

Element 1[b]: cursor display code, said cursor display code operable to modify said cursor image; and

180. While do not agree with Dr. Rosenberg's discussion in regards to this element, I do not dispute whether Element 1[b] is disclosed in Malamud.

Element 1[c][i]: a first server computer for transmitting specified content information to said remote user terminal,

181. In my opinion, Element 1[c][i] would not have been obvious to a POSITA in view of Malamud and Nakagawa because Malamud does not disclose or suggest to a POSITA a first server computer for transmitting specified content information to said remote user terminal, as discussed previously with respect to this element in my analysis of Ground 1, Claim 1.

182. The parties agreed that "specified content information" means "information provided to a user's terminal for use in the display, such as a web page." (EX. 1008 at 3.) A Windows application program that invokes Malamud's window procedure does not comprise "specified content information" because Malamud does not describe it to either generate or transmit the icon or the metadata displayed in the application window. (EX. 1004 at 3:36-39, 3:59-4:18.)

183. In light thereof, because Nakagawa fills in none of the missing matter, in my opinion, Element 1[c][i] would not have been obvious to a POSITA in view of Malamud and Nakagawa.

Element 1[c][ii]: said specified content information including at least one cursor display instruction indicating a location of said cursor image data, said cursor display instruction and said cursor display code operable to cause said user terminal to display a modified cursor image on said user's display in the shape and appearance of said specific image,

184. As previously discussed, in my opinion, Element 1[c][ii] is not disclosed in Malamud. In addition to an application program not meeting the agreed construction for the term "specified content information" being "information for use in the display, such as a webpage file." A POSITA would not consider as application program to meet this construction because it is not like a webpage file that a browser can immediately render to display the modified cursor image. Instead, an application program must be compiled or at least installed in order to operate. Thus, a POSITA would not consider an application program to meet the definition of "specified content information."

185. In addition to invoking Malamud's window procedure, the application program can set the window procedure to always display the information cursor or to only display it when the cursor position is over the icon of a stored file. There is no description of the Windows application program communicating to the windows procedure any specific image to display in the information cursor or the information

cursor. All of this data is understood to a POSITA to be maintained by the operating system for every stored file having such associated data.

186. Furthermore, a POSITA would not have been motivated to modify Malamud in order for the Windows application file to supply this information because any such change would necessarily involve changing the design of the API to the Windows extension, and therefore a change to the operating system. A POSITA would have to get such a change approved by the operating system's manufacturer which is not something that a POSITA could predictably accomplish. Alternatively, a POSITA would have to design their own operating system to effectuate this modification of Malamud, which would also be beyond the capability of a POSITA without undue effort.

187. In light thereof, because Nakagawa fills in none of the missing matter, in my opinion, Element 1[c][ii] would not have been obvious to a POSITA in view of Malamud and Nakagawa.

Element 1[c][iii]: wherein said specified content information is transmitted to said remote user terminal by said first server computer responsive to a request from said user terminal for said specified content information, and wherein said specified content information further comprises information to be displayed on said display of said user's terminal,

188. In my opinion, Element 1[c][iii] would not have been obvious to a POSITA in view of Malamud for the reasons previously articulated in section VII (B)(4) above.

189. In light thereof, because Nakagawa fills in none of the missing matter, in my opinion, Element 1[c][iii] would not have been obvious to a POSITA in view of Malamud and Nakagawa. Also, as further discussed in regard to Element 1[c][i], Malamud's application program does not comprise specified content information or information to be displayed on the user's computer.

Element 1[c][iv]: said specific image including content corresponding to at least a portion of said information to be displayed on said display of said user's terminal, and wherein said cursor display code is operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image in response to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal, and wherein said specific image relates to at least a portion of said information to be displayed on said display of said remote user's terminal.

190. In my opinion, Element 1[c][iv] is not disclosed nor rendered obvious in Malamud for the reasons previously articulated in section VII (B)(4) above.

191. Again, the Windows application program that invokes Malamud's window procedure does not contain the bitmaps to the information cursor nor the

content to be placed therein, nor the icons, for stored files and there would be no reason for the application program to send this information to the windows procedure because the operating system already has and maintains this information for stored files.

192. In light thereof, because Nakagawa fills in none of the missing matter, in my opinion, Element 1[c][iv] would not have been obvious to a POSITA in view of Malamud and Nakagawa.

c. Claim 27

193. Claim 27 is word-for-word identical to Claim 1 except that Claim 1 recites that the modified cursor image is displayed in response to movement of the cursor image over "a display of said at least a portion of said information to be displayed on said display of said user's terminal" (EX. 1002 at 19:1-3), whereas Claim 27 recites that the modified cursor image is displayed in response to movement of the cursor image over "a specified location on said display of said user's terminal" (*id*. at 20:63-65). I have been informed that Claim 27 has been previously canceled before the Petition was filed. I provide my opinions regardless due to their potential relevancy to Ground 3 Malamud teaches that when the cursor is moved, a message is transmitted identifying the location of the mouse on the screen, and that information is used to determine whether to display the modified cursor. (EX. 1004 at 5:3-7 ("The mouse messages specify the status of mouse buttons and the position of the cursor within the window. The position of the cursor within the window is specified in (X, Y) coordinates relative to the upper left-hand cover of the window."), 5:22-45).) In light of that teaching in

Malamud and for the reasons set forth above regarding Claim 1, Claim 27 would not have been obvious to a POSITA in view of Malamud and Nakagawa.

d. Claim 53

Element 53[Preamble]: A method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server, comprising:

194. In my opinion, Element 53[Preamble] would not have been obvious to a POSITA in view of Malamud and Nakagawa for all the reasons Malamud alone did not disclose this element or Claim 72.

Element 53[a]: receiving a request at said at least one server to provide specified content information to said user terminal;

195. In my opinion, Element 53[a] would not have been obvious to a POSITA in view of Malamud and Nakagawa for all the reasons Malamud alone did not disclose this element or Claim 72.

Element 53[b]: providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image; and

196. In my opinion, Element 53[b] would not have been obvious to a POSITA in view of Malamud and Nakagawa for all the reasons Malamud alone did not disclose this element or Claim 72.

Element 53[c][i]: transforming said initial cursor image displayed on said display of said user terminal into the shape and appearance of said specific image in response to said cursor display instruction, wherein said specified content information includes information that is to be displayed on said display of said user's terminal, wherein said specific image includes content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal, and

197. In my opinion, Element 53[c][i] would not have been obvious to a POSITA in view of Malamud and Nakagawa for all the reasons Malamud alone did not disclose this element or Claim 72.

Element 53[c][ii]: wherein said cursor display instruction indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal, and

198. In my opinion, Element 53[c][ii] would not have been obvious to a POSITA in view of Malamud and Nakagawa for all the reasons Malamud alone did not disclose this element or Claim 72.

Element 53[c][iii]: wherein said specific image has a shape and appearance relating to said information to be displayed.

199. In my opinion, Element 53[c][iii] would not have been obvious to a POSITA in view of Malamud and Nakagawa for all the reasons Malamud alone did not disclose this element or Claim 72.

C. GROUND 3: Nielsen in combination with Malamud

1. Overview of Nielsen

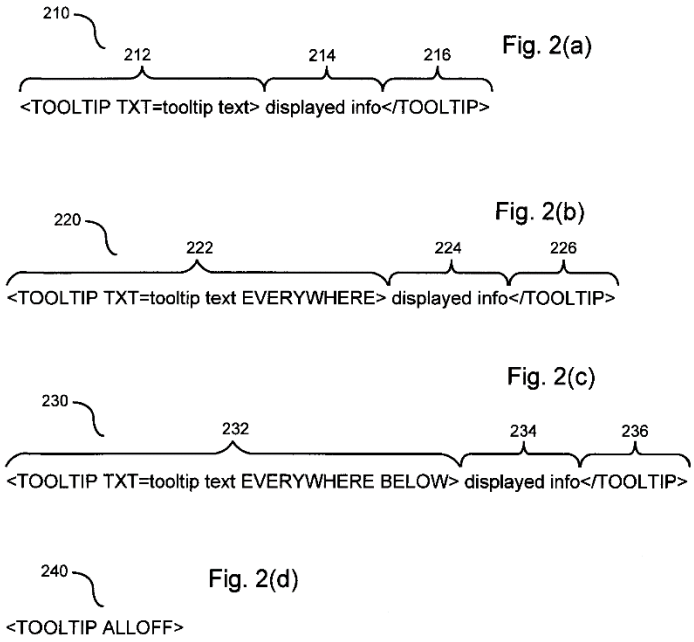
200. Nielsen is not directed to modifying cursor images. Nielsen is directed to a specific addition to the HTML protocol to add "tooltip" tags to the HTML protocol. Because Nielsen changes the HTML protocol, HTML browsers that support the HTML protocol would include the code to make a tooltip appear on the user's display when the tags are used in a webpage.

201. As Nielsen explains, browsers that do not support the tags will simply ignore them and not have the functionality:

> The present invention allows for the use of tooltips in Web Pages. Thus, any information displayed on display device 160 by browser 130 can have a tooltip associated therewith. When the user places the cursor on a predetermined location on display device 160 for a predetermined period of time, tooltip text is displayed, providing further explanation of the information at the predetermined location. In a preferred embodiment, Web Pages specified using the present invention can still be displayed using Web browsers that have not been enhanced to recognize tooltips because these browsers will simply ignore the tooltips tag.

Nielsen at 3:34-45.

202. Therefore, as shown in Figures 2(a)-2(c), all a webpage developer must do into insert into the webpage's HTML file, adjacent to any webpage content for which they wish a tooltip to be displayed, an opening and closing tooltip tag and the tooltip text in between the tags



203. In a primary example given, shown in FIG. 4, the tooltip text "London Heathrow" will appear over the webpage text "LHR" when a cursor has been positioned somewhere over "LHR" for a sufficient length of time. Likewise, the tooltip text "United Airlines" will appear above the webpage text "UA" and the tooltip text "San Francisco" will appear over the webpage text "SFO." *See,* Nielsen at 4:58-67.

204. Much like Malamud 's Windows 3.1 operating system extension in the form of a new window procedure used to display an information cursor, Nielsen discloses an extension to the HTML protocol to display a tooltip.

205. Because Nielsen is an extension of the HTML protocol, all of the necessary code to implement Nielsen's proposed extension will be built into the browser. Therefore, all Nielsen disclosed to a POSITA is how to place an opening

and closing tooltip tag into the webpage's HTML file next to the associated character string, with the tooltip text (or image file hyperlink) that webpage developer wishes to have displayed inserted as metadata between the opening and closing tooltip tags. Nothing more need be sent in the HTML file. By simply inserting the tags and the metadata between them, when a user pauses their cursor position over that character string on the displayed webpage for a predetermined amount of time, the programming built into the HTML protocol will display the tooltip text or image adjacent to that character string.

206. It should be noted that Nielsen has nothing to do with modifying cursor images. Dr. Rosenberg asserts that it would have been obvious to a POSITA modify Nielsen's proposed extension to the HTML protocol so that the cursor is modified and an information cursor is displayed instead of a tooltip.

207. First and foremost, the modification that Dr. Rosenberg is suggesting is not practical to a POSITA and would have no reasonable expectation of success without undue burden, since it would require making a change to the HTML protocol in order to effectuate. This would require going to the Internet Engineering Task Force ("IETF"), the committee responsible for determining whether any change will be made to the HTML protocol, who would then have to approve the change, implement it into the HTML protocol and then every browser would ultimately have

to be updated around the world in order the execute the change. A POSITA would not be motivated to make this change.

208. Another reason that a POSITA would not be motivated to make the aforementioned change is that Nielsen contemplates that there would be a dense number of discrete pieces of text on the webpage that would require a tooltip. In the example given in Nielsen, there are a long list of airport abbreviations displayed on the webpage, each one with its own tooltip. The tooltip for each is displayed adjacent to the abbreviations. Once the cursor has moved away from the abbreviation, the tooltip is no longer displayed. Even if a POSITA could accomplish changing the HTML protocol to display an information cursor instead of a tooltip, they would not be motivated to so because it would not better accomplish the purpose of the tooltip and could be confusing because the cursor would be constantly changing from the initial cursor to the information cursor and back. Or if the information cursor was always "on" then it would be confusing because it would always be displayed with constantly updating information that the user may or may not want to see.

209. Yet another reason that a POSITA would not be motivated to modify Nielsen to practice Claim 72 is because Claim 72 (and each Challenged Claim) requires that the initial cursor image is transformed/modified into the specific image corresponding to the webpage content in response to movement of the initial cursor over that particular webpage content. This claim requirement is not disclosed in

Nielsen, and is contrary to Nielsen's purposes, because tooltips are not displayed in response to cursor movement over the associated webpage content. Rather, they are displayed in response to a pause in cursor movement over such content. The reason for this is clear: Nielsen recognizes that it would be annoying to show tooltips merely by moving over the associated text (or image) because the user may or may not need to see the tooltip. Therefore, Nielsen incorporates a pause. A POSITA would not be motivated to eliminate the tooltip pause because it would be equally annoying to display an information cursor with the tooltip information instead of the tooltip simply by scrolling the cursor over triggering content even when that information is not desired.

210. In contrast, immediately transforming the initial cursor image into the shape and appearance of the specific image in response to movement of the initial cursor image over the corresponding webpage content is desired in the context of goals explained in the Common Specification of the '102 and '449 patents because the whole idea is to immediately show the user the specific image to promote the product or service to which the webpage is directed when they move their cursor over the corresponding webpage content, even if the user does not want to see it. Advertising and promotion, like death and taxes, are not optional and it is not their primary purpose to be user-friendly.

211. Therefore, I believe it to be implausible, if not impossible, to combine the event-driven aspects of Malamud's application with the HTML-tag system disclosed in Nielsen. Any attempt at doing so would not have had a reasonable chance of success and would have required undue experimentation (namely, re-writing either Malamud in HTML or Nielsen into an event-driven system).

212. The details of how this combination would function are not explained by Dr. Rosenberg, who merely concludes it would be obvious to extend Nielsen's tooltip features to include modified cursors and graphical images. Lacking technical explanation, there is little for me to respond to herein. That said, there is no motivation presented to combine Malamud and Nielsen for the reasons I have previously explained.

213. Nielsen's HTML-based tooltips do not contain the grammar or syntax to implement event-driven programming. In contrast, the '102 Patent teaches using JavaScript to implement the event driver portion of the claims, which provided a POSITA in 1997 with guidance of how to build a webpage that could have had instructions sent via server that would implement the event-driven portions of the claims. The concept of augmenting the HTML standard to include event driven aspects is not a motivation a POSITA would have had back in 1997, as a POSITA would not need to know event-driven programming in order to implement Nielsen's tooltip tags. And as explained above, Malamud relies on Windows for events-driven

programming. Neither references how to implement events-driven programming on a webpage, and Petitioner does not account for this failure in the teachings in combining Nielsen with Malamud.

2. The Combination of Nielsen and Malamud Does Not Render Claim 72 of the '102 Patent Obvious

Element 72[Preamble]: A method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server, comprising:

214. In my opinion, Element 72[Preamble] would not have been obvious to a POSITA in view of Nielsen and Malamud.

215. Neither Nielsen nor Malamud discloses the claimed method. Nielsen is directed to serving and displaying webpage but is not directed to modifying a cursor image on the served webpage. Rather, it describes an addition to the HTML protocol to display a tooltip. Malamud is directed modifying cursor image using an extension of Windows 3.1 operating system. It is not directed to serving webpages or other online content for display as discussed previously.

216. A POSITA would not "have been motivated to modify the teachings of Nielsen with the teachings of Malamud such that the tooltip is not just displayed in proximity to the object to which the cursor is pointing, but rather is displayed as part of a modified cursor image to ensure that user sees the supplemental information or graphic." (Rosenberg Decl., ¶ 147.)

217. First, a POSITA would have no need to substitute the tooltip with an information cursor "to ensure that the user sees the supplemental information or graphic" because, as Nielsen explains, the tooltip is already automatically displayed placed adjacent to the associated webpage content:

> Displaying the tooltip is done by looking up the point denoted by (X2, Y2) in the tooltip data structure for the current page and finding the tooltip text for the Screen region that (X2, Y2) falls within. The text preferably is displayed in a yellow rectangle that is positioned one line above the top of this Screen region and centered around X2. If placing the rectangle about the region would make it extend beyond the top of the browser window than the rectangle is lowered by as many pixels as it would have extended beyond the top of the browser window. If centering the rectangle around X2 would cause it to extend to the left or the right of the browser window, then the rectangle is moved right or left, respectively, by as many pixels as it would have extended. If the text in the tooltip is so long that the rectangle would be wider than the width of the browser window then the text is word-wrapped to fit within a rectangle the width of the browser window.

EX. 1006 at 7:16-32.

218. Second, a POSITA would not have been motivated to try to make a change to the HTML protocol. The HTML protocol is controlled by the Internet Engineering Task Force (the "IETF"). The IETF is a committee that decides what changes will be implemented to the HTML protocol. A would have to get the IETF to approve any proposed change to the HTML protocol. Then the IETF would have to design new HTML code to implement the proposed change. Then browsers around the world would have to be updated to accomplish the change. Because a POSITA would know that they would not have any predictable success to

accomplish the change with any reasonable amount of effort I do not believe it would even cross their mind to try to modify Nielsen.

219. A POSITA in 1997 would not necessarily know how to implement an information cursor in a browser without a change to the HTML protocol. Neither Nielsen nor Malamud teach how to implement an information cursor in a browser. I believe the Common Specification could enable such a modification, but that cannot be used to fill in the missing teachings of Malamud and Nielsen.

220. Thus, it would not have been obvious for a POSITA to modify the teachings of Nielsen in order to change an initial cursor image into a modified cursor image that includes the tooltip for the reasons cited above.

Element 72[a]: receiving a request at said at least one server to provide specified content information to said user terminal;

221. In my opinion, Element 72[a] is neither disclosed in Nielsen nor in Malamud nor would have been obvious to a POSITA in view of Nielsen and Malamud.

222. I disagree with Dr. Rosenberg that Nielsen teaches "receiving a request at said at least one server to provide specified content information to said user terminal." The term "specified content information" requires (a) "at least one indication of cursor image data corresponding to a specific image" and (b) "at least one cursor display instruction" that "indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor

image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal.

223. Nielsen does not include requesting a server to provide, or a server providing "specified content information" because neither the tooltip tags, nor the metadata within the tooltip tag is an indication of cursor image data corresponding to a specific image. Neither is a tooltip tag a cursor display instruction that indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal.

224. The terms cursor display instruction has been construed as "an instruction operable to modify the display of a cursor image." *See* EX. 2008 (Amazon Claim Construction Order), 22. The term "cursor display code" has been construed as "computer code for modifying the display of a cursor image." The terms "cursor image" (and, likewise, "initial cursor image" and "modified cursor image") has been construed as a "moveable image on a display screen whose position can be controlled through a user interface."

225. The tooltip tags and their metadata are not instructions or code that modify the display of a cursor image and a tooltip is not a moveable image whose position can be controlled through a user interface. The tooltip is a static image.

226. Malamud teaches adding a new window procedure to the Windows operating system and substantively has nothing to do with serving specified content information from a server, for all the reasons previously addressed. It would not have been obvious to a POSITA to modify Nielsen's tooltip display instructions to make them cursor display instructions, as taught by Malamud, and a POSITA would not have been motivated to make such a modification because there was no problem with displaying a tooltip that would require the modification to displaying it in an information cursor because, as will be discussed further below, (a) the tooltip was already displayed near where the cursor is located and no advantage would have been gained from displaying it the box of an information cursor; and (b) no advantage would be gained by eliminating the need for the user to hover their cursor over the associated web content for a predetermined period of time to indicated they wished to see to the tooltip and making tooltip instead displayed immediately in response to movement over that webpage content because that would mean tooltips would be momentarily displayed as the user moved their cursor around the webpage, whether they wished to see it or not. Therefore, even if modifying Nielsen did not require a change to the HTML protocol and was within the ability of a POSITA

without undue effort (and it was not), a POSITA would not have been motivated to even try to make that modification.

Element 72[b]: providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image; and

227. In my opinion, Element 72[b] would not have been obvious to a POSITA in view of Nielsen and Malamud for the reasons I have explained in connection with element 72[a] because neither the tooltip commands/tags nor the tooltip metadata comprises either a cursor display instruction or an indication of the cursor image data. And it would not have been obvious to display tooltips as part of a modified cursor image since that would have required a change in the operating of the HTML protocol. Furthermore, to accomplish this change without modifying the HTML protocol is not taught by either Nielsen or Malamud and would not have been within the skill of a POSITA in 1997 without the extensive teachings of the Common Specification in how to change the cursor used in connection with a webpage in the claimed manner, or even why.

228. Changing a tooltip to a cursor image is not accomplished merely by "modify[ing] the indication of a bitmap for a graphical tooltip image into an indication of cursor image data corresponding to a specific image," as Dr. Rosenberg suggests, because a cursor image is not merely a bitmap. Rather, a cursor image has to be tied to cursor position so that moves in accordance with a user input, something

that a tooltip, which is static, does not do. Indeed, it is exactly in this claim requirement and to implement the claimed cursor transformation that the use of browser plug-ins such as ActiveX are taught in the Common Specification--and not in Nielsen or Malamud.

229. A POSITA would also have not been motivated to display a tooltip in an information cursor because doing so would not improve Nielsen. The tooltip is already displayed near the associated webpage content, and only after the user has paused their cursor over that webpage content for enough time to indicate their desire to see the tooltip. A POSITA would also not be motivated to make this change because attempting to display the tooltip in an information cursor would simply confound matters because the tooltip (a) could potentially be displayed in other places that are not near the associated webpage content and (b) would be displayed without requiring a pause where it would be displayed simply whenever the user scrolled the associated webpage content whether the user desired to see it or not. A POSITA therefore would not be motivated to make the display of the tooltip responsive to movement over the associated webpage content.

Element 72[c][i]: transforming said initial cursor image displayed on said display of said user terminal into the shape and appearance of said specific image in response to said cursor display instruction, wherein said specified content information includes information that is to be displayed on said display of said user's terminal, wherein said specific image includes content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal, and

230. In my opinion, Element 72[c][i] would have not been obvious to a POSITA in view of Nielsen and Malamud because changing Nielsen's static tooltip to a dynamic cursor image does not involve simply changing one bitmap to another for the reasons I previously stated, and a POSITA would not have been motivated to make this change. Additionally, there is no improvement to Nielsen by making this change because the tooltip is already displayed alongside the corresponding webpage text or image and the Nielsen teaches that the HTML protocol automatically corrects any stray formatting issues to ensure that the tooltip is displayed adjacent to the corresponding text of image.

231. Moreover, a POSITA would not be motivated to make this change because displaying a tooltip in the information area of an information cursor would complicate the display of the tooltip since the tooltip would still be displayed even when the cursor had moved away from the webpage text or image to which it corresponds. Furthermore, a POSITA would not improve Nielsen by making the tooltip displayed in an information cursor because to do so would eliminate the built-in delay of Nielsen, as discussed further for the next element.

Element 72[c][ii]: wherein said cursor display instruction indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal.

232. In my opinion, Element 72[c][ii] would not have been obvious to a POSITA in view of Nielsen and Malamud. In Nielsen's change to the HTML protocol, the user must pause the cursor for a predetermined sufficient period of time over the webpage text or image in order for the tooltip to appear. See, e.g., EX. 1006 at 4: 37-41 (" When the user places the cursor on a predetermined location on display device 160 for a predetermined period of time, tooltip text is displayed, providing further explanation of the information at the predetermined location."); 4:46-49 ("In the example of FIG. 4, the user has placed the cursor over the text 'LHR" on line 302 and has let the cursor remain stationary for a predetermined period of time, such as three seconds."). There is no motivation to a POSITA to change this requirement of Nielsen because, even if a POSITA could had reasonable and predicable chance of success without undue effort or experimentation in changing the HTML protocol in this manner, or in implementing this change without a change to the HTML protocol so that it would work in browsers, it would not improve Nielsen to display a tooltip because the user would no longer have to pause to indicate to the system that they wanted to see the tooltip and would be seeing tooltips by simply having moved their cursor over webpage content whether they wanted to see the tooltip or not.

233. In conclusion, the combination of Nielsen and Malamud does not render Claim 72 obvious.

3. The Combination of Nielsen and Malamud Does Not Render Claims 1, 27, 38 or 53 of the '102 Patent Obvious

a. Motivation to Combine

234. I discussed the reasons a POSITA would not have been motivated to combine Nielsen and Malamud in connection with the '102 Patent. (*See* § VII(C)(3)(a).) That same lack of motivation applies here.

b. Claim 1

Element 1[Preamble]: A server system for modifying a cursor image to a specific image having a desired shape and appearance displayed on a display of a remote user's terminal, said system comprising:

235. In my opinion, Element 1[Preamble] would not have been obvious to a POSITA in view of Nielsen and Malamud for at least the same reasons I explained regarding Claim 72. See Section VII(C)(2), re Element 72[Preamble].

236. Neither Nielsen nor Malamud discloses a server system for modifying a cursor image to a specific image having a desired shape and appearance displayed on a display of a remote user's terminal. Nielsen's method is directed to serving and displaying webpage but is not directed to modifying a cursor image on the served webpage. Rather, it describes an addition to the HTML protocol to display a tooltip. Malamud is directed modifying cursor image using an extension of Windows 3.1 operating system. Malamud is directed to an addition to the Windows 3.1 (and similar) operating systems in which a Windows application program can invoke a

new windows procedure that allows metadata for a stored file to be displayed in an information cursor rather than in a status bar.

237. A POSITA would not "have been motivated to modify the teachings of Nielsen's tooltip with an information cursor because Malamud such that the tooltip is not just displayed in proximity to the object to which the cursor is pointing, but rather is displayed as part of a modified cursor image to ensure that user sees the supplemental information or graphic." (Rosenberg Decl., ¶ 147.)

238. First, a POSITA would have no need to substitute the tooltip with an information cursor "to ensure that the user sees the supplemental information or graphic" because, as Nielsen explains, the tooltip is already automatically displayed placed adjacent to the associated webpage content:

> Displaying the tooltip is done by looking up the point denoted by (X2, Y2) in the tooltip data structure for the current page and finding the tooltip text for the Screen region that (X2, Y2) falls within. The text preferably is displayed in a yellow rectangle that is positioned one line above the top of this screen region and centered around X2. If placing the rectangle about the region would make it extend beyond the top of the browser window than the rectangle is lowered by as many pixels as it would have extended beyond the top of the browser window. If centering the rectangle around X2 would cause it to extend to the left or the right of the browser window, then the rectangle is moved right or left, respectively, by as many pixels as it would have extended. If the text in the tooltip is so long that the rectangle would be wider than the width of the browser window then the text is word-wrapped to fit within a rectangle the width of the browser window.

EX. 1006 at 7:16-32.

239. Second, a POSITA would not have been motivated to try to make a change to the HTML protocol to try to replace the tooltip tag with an information cursor tag. The HTML protocol is controlled by the Internet Engineering Task Force (the "IETF"). The IETF is a committee that decides what changes will be implemented to the HTML protocol. A would have to get the IETF to approve any proposed change to the HTML protocol. Then the IETF would have to design new HTML code to implement the proposed change. Then browsers around the world would have to be updated to accomplish the change. Because a POSITA would know that they would not have any predictable success to accomplish the change with any reasonable amount of effort I do not believe it would even cross their mind to try to modify Nielsen in this manner.

240. Moreover, a POSITA in 1997 would not necessarily know how to implement an information cursor in a browser without a change to the HTML protocol. Neither Nielsen nor Malamud teach how to implement an information cursor in a browser. I believe the Common Specification does enable such a modification but that cannot be used to fill in the missing teachings of Malamud and Nielsen.

241. Thus, in my opinion, it would not have been obvious for a POSITA to modify the teachings of Nielsen in order to change an initial cursor image into a modified cursor image that includes the tooltip.

Element 1[a]: cursor image data corresponding to said specific image;

242. In my opinion, Element 1[a] would not have been obvious to a POSITA in view of Nielsen and Malamud's for the same reasons I stated with regard to Claim 72 (see, e.g., Section VII(C)(2), Element 72[b]) because the tooltip metadata does not comprises cursor image data. And it would not have been obvious to display tooltips as part of a modified cursor image since that would have required a change in the operating of the HTML protocol. Furthermore, to accomplish this change without modifying the HTML protocol is not taught by either Nielsen or Malamud and would not have been within the skill of a POSITA in 1997 without the extensive teachings of the Common Specification in how to change the cursor used in connection with a webpage in the claimed manner, or even why.

243. Changing a tooltip to a cursor image is not accomplished merely by "modify[ing] the indication of a bitmap for a graphical tooltip image into an indication of cursor image data corresponding to a specific image," as Dr. Rosenberg suggests, because a cursor image is not merely a bitmap. Rather, a cursor image has to also have instructions that tie it to cursor position, something that a tooltip, which is static, does not do. Indeed, it is exactly in this claim requirement and to implement the claimed cursor transformation in a webpage using a browser that requires use of code such as ActiveX as taught in the Common Specification, but not in Nielsen or Malamud.

Element 1[b]: cursor display code, said cursor display code operable to modify said cursor image; and

244. In my opinion, Element 1[b] would not have been obvious to a POSITA in view of Nielsen and Malamud. Nielsen implements no cursor display code whatsoever. Malamud, to the extent that it teaches cursor display code at all, teaches it as an undisclosed part of a Windows operating system and does not discuss how the cursor display code operates. A POSITA would not know how to implement the claimed cursor display code as I have previously discussed in connection with Claim 72 [Preamble] and described further in connection with the elements of Claim 1 below. Moreover, a POSITA would not be motivated to make any change to Nielsen because such a change would involve changing the operation of the HTML protocol to incorporate a new set of HTML tags to go into webpage files for browsers to execute information display cursors. However, in order to modify Nielsen to incorporate such tags, a POSITA would need to obtain a change to the HTML protocol, which would not have any predictable chance of success, if any at all, and would require undue effort and experimentation, for the reasons I have previously discussed because the IETF would have to approve and implement such a change and then browsers all around the country and the world would have to be updated so that they could execute the new information cursor tags.

245. Also, a POSITA would not be motivated to display a tooltip in an information cursor in the manner of Claim 1 because the claim requires that the

display of the specific image is in response to movement over the associated webpage content. Therefore, a POSITA would have to eliminate Nielsen's requirement for the user to hover their cursor over the associated webpage content. A POSITA would not wish to make this change because it would lead to tooltips being displayed when the user did not want them being displayed, and also being often displayed in the wrong place since the tooltip's location would move rather being statically displayed adjacent to the associated webpage content. A POSITA would have no reason to introduce such confusion and would not think of displaying a tooltip in the body of an information cursor. In contrast, allowing the initial cursor to be modified to the specific image in response to movement over the associated webpage content is desired in the claimed inventions because the goal of the claimed inventions disclosed in the Common Specification is to serve a webpage with browser instructions that can be implemented in real-time to modify the cursor image to a specific image used on the webpage to promote the sale of the product being advertised or offered on the webpage.

Element 1[c][i]: a first server computer for transmitting specified content information to said remote user terminal,

246. Element 1[c][i] is not disclosed in or rendered obvious by Nielsen or Malamud because, at a minimum, the claimed specified content information must include the cursor image data and cursor display instructions (recited in further

elements) that are not present anywhere in Nielsen. Nielsen does not teach the use of cursor display code or any cursor modification as a result of the use of cursor display instructions, cursor display code and cursor image data as the claim requires. Therefore, it does not transmit the claimed specified content information.

247. Malamud is directed to an enhancement to the Windows 3.1 (and similar) operating systems that adds a new window procedure to display metadata above a stored file in an information cursor. As I have previously discussed it does not disclose a request to a server for specified content information nor the transmission back of specified content information. The download of a Windows application program is not a transmission of specified content information because that term refers to "information to be used in the display, such as a webpage" and a POSITA reading the Common Specification would also see it the same way because they would understand that it refers to online content that a browser can render in real-time for display rather than a program that would have to be installed before it would even communicate with the windows procedure.

248. Moreover, the download of Malamud would not result in either the download of the icon nor the metadata for a stored file, for the same reasons I have discussed previously in connection with Claim 72.

249. The modifications to Nielsen proposed by Dr. Rosenberg are non-trivial and not obvious to a POSITA for all the aforementioned reasons because it would

involve a change to the HTML protocol that would require undue effort and be fraught with uncertainty if it could be accomplished at all or it would involve implementation knowledge beyond a POSITA in 1997. Dr. Rosenberg does not testify that a POSITA would have had this knowledge in 1997 to implement the Window operating system based technology for events-driven cursor modification into HMTL for use in a browser based environment in 1997.

250. Additionally, a POSITA would not be motivated to display a tooltip in an information cursor because doing so would not improve Nielsen. The tooltip is already displayed near the associated webpage content, and only after the user has paused their cursor over that webpage content for enough time to indicate their desire to see the tooltip. A POSITA would also not be motivated to make this change because attempting to display the tooltip in an information cursor would simply confound matters because the tooltip (a) could potentially be displayed in other places that are not near the associated webpage content and (b) would be displayed without requiring a pause where it would be displayed simply whenever the user scrolled the associated webpage content whether the user desired to see it or not. A POSITA therefore would not be motivated to make the display of the tooltip responsive to movement over the associated webpage content, instead of the lack of movement over the associated webpage text.

251. Therefore, this element would not have been obvious to a POSITA in view of Nielsen and Malamud because a POSITA would not have been motivated to make the suggested modification of Nielsen as Dr. Rosenberg hypothesizes.

Element 1[c][ii]: said specified content information including at least one cursor display instruction indicating a location of said cursor image data, said cursor display instruction and said cursor display code operable to cause said user terminal to display a modified cursor image on said user's display in the shape and appearance of said specific image,

252. Element 1[c][ii] is not disclosed in Nielsen because, at a minimum, the claimed specified content information must include the cursor image data and cursor display instructions that are not present anywhere in Nielsen. Nielsen does not teach the use of cursor display code or any cursor modification. Therefore, it does not transmit the claimed specified content information.

253. Malamud is directed to an enhancement to the Windows 3.1 (and similar) operating systems that adds a new window procedure to display metadata above a stored file in an information cursor. As I have previously discussed it does not disclose a request to a server for specified content information nor the transmission back of specified content information. The download of a Windows application program is not a transmission of specified content information because that term refers to "information to be used in the display, such as a webpage" and a POSITA reading the Common Specification would also see it the same way because they would understand that it refers to online content that a browser can render in

real-time for display rather than a program that would have to be installed before it would even communicate with the windows procedure.

254. Moreover, the download of Malamud would not result in the download of either the icon or the metadata for a stored file, for the same reasons I have discussed previously in connection with Claim 72.

255. The modifications to Nielsen proposed by Dr. Rosenberg are non-trivial and not obvious to a POSITA for all of the aforementioned reasons because it would involve a change to the HTML protocol that would require undue effort and be fraught with uncertainty if it could be accomplished at all or it would involve implementation knowledge beyond a POSITA in 1997. Dr. Rosenberg does not testify that a POSITA would have had this knowledge in 1997 to implement the claimed events-driven cursor modification, as previously discussed.

256. Additionally, a POSITA would not have been motivated to display a tooltip in an information cursor because doing so would not improve Nielsen. The tooltip is already displayed near the associated webpage content, and only after the user has paused their cursor over that webpage content for enough time to indicate their desire to see the tooltip. A POSITA would also not be motivated to make this change because attempting to display the tooltip in an information cursor would simply confound matters because the tooltip (a) could potentially be displayed in other places that are not near the associated webpage content and (b) would be

displayed without requiring a pause where it would be displayed simply whenever the user scrolled the associated webpage content whether the user desired to see it or not. A POSITA therefore would not be motivated to make the display of the tooltip responsive to movement over the associated webpage content, instead of the lack of movement over the associated webpage text.

257. Therefore, this element would not have been obvious to a POSITA in view of Nielsen and Malamud because a POSITA would not have been motivated to make the suggested modification of Nielsen as Dr. Rosenberg hypothesizes.

Element 1[c][iii]: wherein said specified content information is transmitted to said remote user terminal by said first server computer responsive to a request from said user terminal for said specified content information, and wherein said specified content information further comprises information to be displayed on said display of said user's terminal,

258. Element 1[c][iii] is not disclosed in Nielsen because, at a minimum, the claimed specified content information must include the cursor image data and cursor display instructions that are not present anywhere in Nielsen. Nielsen does not teach the use of cursor display code or any cursor modification as a result of the use of cursor display instructions, cursor display code and cursor image data as the claim requires. Therefore, it does not transmit the claimed specified content information.

259. Malamud is directed to an enhancement to the Windows 3.1 (and similar) operating systems that adds a new window procedure to display metadata above a stored file in an information cursor. As I have previously discussed it does

not disclose a request to a server for specified content information nor the transmission back of specified content information. The download of a Windows application program is not a transmission of specified content information because that term refers to "information to be used in the display, such as a webpage" and a POSITA reading the Common Specification would also see it the same way because they would understand that it refers to online content that a browser can render in real-time for display rather than a program that would have to be installed before it would even communicate with the windows procedure.

260. Moreover, the download of Malamud would not result in either the download of the icon nor the metadata for a stored file, for the same reasons I have discussed previously in connection with Claim 72.

261. The modifications to Nielsen proposed by Dr. Rosenberg are non-trivial and not obvious to a POSITA for all of the aforementioned reasons because it would involve a change to the HTML protocol that would require undue effort and be fraught with uncertainty if it could be accomplished at all or it would involve implementation knowledge beyond a POSITA in 1997. Dr. Rosenberg does not testify that a POSITA would have had this knowledge in 1997 to implement the claimed events-driven cursor modification, as discussed in connection with the other Elements.

262. Additionally, a POSITA would not have been motivated to display a tooltip in an information cursor because doing so would not improve Nielsen. The tooltip is already displayed near the associated webpage content, and only after the user has paused their cursor over that webpage content for enough time to indicate their desire to see the tooltip. A POSITA would also not be motivated to make this change because attempting to display the tooltip in an information cursor would simply confound matters because the tooltip (a) could potentially be displayed in other places that are not near the associated webpage content and (b) would be displayed without requiring a pause where it would be displayed simply whenever the user scrolled the associated webpage content whether the user desired to see it or not. A POSITA therefore would not be motivated to make the display of the tooltip responsive to movement over the associated webpage content, instead of the lack of movement over the associated webpage text.

263. Therefore, this element would not have been obvious to a POSITA in view of Nielsen and Malamud because a POSITA would not have been motivated to make the suggested modification of Nielsen as Dr. Rosenberg hypothesizes.

Element 1[c][iv]: said specific image including content corresponding to at least a portion of said information to be displayed on said display of said user's terminal, and wherein said cursor display code is operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image in response to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said

user's terminal, and wherein said specific image relates to at least a portion of said information to be displayed on said display of said remote user's terminal.

264. Element 1[c][iv] is not disclosed in Nielsen because, at a minimum, the claimed specified content information must include the cursor image data and cursor display instructions that are not present anywhere in Nielsen. Nielsen does not teach the use of cursor display code or any cursor modification as a result of the use of cursor display instructions, cursor display code to modify the cursor into the shape and appearance of said specific image in response to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal.

265. Malamud is directed to an enhancement to the Windows 3.1 (and similar) operating systems that adds a new window procedure to display metadata above a stored file in an information cursor. As I have previously discussed it does not disclose a request to a server for specified content information nor the transmission back of specified content information. The download of a Windows application program is not a transmission of specified content information because that term refers to "information to be used in the display, such as a webpage" and a POSITA reading the Common Specification would also see it the same way because they would understand that it refers to online content that a browser can render in

real-time for display rather than a program that would have to be installed before it would even communicate with the windows procedure.

266. Moreover, the download of Malamud would not result in either the download of the icon nor the metadata for a stored file, for the same reasons I have discussed previously in connection with Claim 72.

267. The modifications to Nielsen proposed by Dr. Rosenberg are non-trivial and not obvious to a POSITA for all of the aforementioned reasons because such a change would involve a change to the HTML protocol that would require undue effort and be fraught with uncertainty if it could be accomplished at all or it would involve implementation knowledge beyond a POSITA in 1997. Dr. Rosenberg does not testify that a POSITA would have had this knowledge in 1997 to implement the claimed events-driven cursor modification, as discussed further in connection with the remaining elements.

268. Additionally, a POSITA would not have been motivated to display a tooltip in an information cursor because doing so would not improve Nielsen. The tooltip is already displayed near the associated webpage content, and only after the user has paused their cursor over that webpage content for enough time to indicate their desire to see the tooltip. A POSITA would also not be motivated to make this change because attempting to display the tooltip in an information cursor would simply confound matters because the tooltip (a) could potentially be displayed in

other places that are not near the associated webpage content and (b) would be displayed without requiring a pause where it would be displayed simply whenever the user scrolled the associated webpage content whether the user desired to see it or not. A POSITA therefore would not be motivated to make the display of the tooltip responsive to movement over the associated webpage content, instead of the lack of movement over the associated webpage text.

269. Therefore, this element would not have been obvious to a POSITA in view of Nielsen and Malamud because a POSITA would not have been motivated to make the suggested modification of Nielsen as Dr. Rosenberg hypothesizes.

c. Claim 27

270. I agree that Claim 27 is word-for-word identical to Claim 1 except that Claim 1 recites that the modified cursor image is displayed in response to movement of the cursor image over "a display of said at least a portion of said information to be displayed on said display of said user's terminal" (EX. 1002 at 19:1-3), whereas Claim 27 recites that the modified cursor image is displayed in response to movement of the cursor image over "a specified location on said display of said user's terminal" (id. at 20:63-65). I agree this language makes no substantive difference with regard to asserted combination. Therefore, Claim 27 is not obvious in view of the combination of Nielsen and Malamud for all the same reasons as Claim 1.

d. Claim 38

The server system in accordance with Claim 27, wherein said specified content information is transmitted in the form of HTML files that define a web page.

271. Nielsen teaches an HTML file but not with the claimed specified content information for all the reasons set forth regarding Claim 1. Therefore, Claim 38 is not obvious in view of the combination of Nielsen and Malamud for all the same reasons as Claim 1.

e. Claim 53

Element 53[Preamble]: A method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server, comprising:

272. Element 53[Preamble] would not have been obvious to a POSITA in view of Nielsen and Malamud because neither discloses nor suggests a method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server for at least the same reasons I explained above for Element 1[Preamble] and also in my discussion of Ground I with regard to Malamud's lack of disclosure of Claim 53.

273. Neither Nielsen nor Malamud discloses a server system for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server. Nielsen is directed to serving and displaying webpage but is not directed to modifying a cursor image on the served webpage. Rather, it describes an addition

to the HTML protocol to display a tooltip. Malamud is directed to an addition to the Windows 3.1 (and similar) operating systems in which a Windows application program can invoke a new windows procedure that allows metadata for a stored file to be displayed in an information cursor rather than in a status bar.

274. A POSITA would not have been motivated to display a tooltip within an information cursor "to ensure that the user sees the supplemental information or graphic" because, as Nielsen explains, the tooltip is already displayed placed adjacent to the associated webpage content:

> Displaying the tooltip is done by looking up the point denoted by (X2, Y2) in the tooltip data structure for the current page and finding the tooltip text for the Screen region that (X2, Y2) falls within. The text preferably is displayed in a yellow rectangle that is positioned one line above the top of this screen region and centered around X2. If placing the rectangle about the region would make it extend beyond the top of the browser window than the rectangle is lowered by as many pixels as it would have extended beyond the top of the browser window. If centering the rectangle around X2 would cause it to extend to the left or the right of the browser window, then the rectangle is moved right or left, respectively, by as many pixels as it would have extended. If the text in the tooltip is so long that the rectangle would be wider than the width of the browser window then the text is word-wrapped to fit within a rectangle the width of the browser window.

EX. 1006 at 7:16-32.

275. Also, a POSITA would not be motivated to display tooltip content within an information cursor disclosed in Malamud because doing so would also require modifying Nielsen's requirement for the user to pause their cursor over the associated webpage content for a specified period of time (to indicate that they wish

the tooltip displayed) before the tooltip is displayed because in Malamud, as the claim requires, the tooltip is displayed in response to movement of the cursor over the icon (versus the lack of movement as taught in Nielsen.) A POSITA would not wish to make this change because it would lead to tooltips being displayed even when the user did not wish to see a tooltip. Also, it would result in the tooltip being displayed when the cursor was moved away from the tooltip's associated webpage content. A POSITA would have no reason to introduce such confusion to solve a non-existent problem in Nielsen.

276. In contrast, having the initial cursor modified to the shape and appearance of the specific image in response to movement over the associated webpage content is desired in the claimed inventions because the goal of the claimed inventions as disclosed in the Common Specification is to serve webpages with browser instructions that can be implemented in real-time to modify the initial cursor image to a specific image used on the webpage to promote the sale of the product being advertised or offered on the webpage. In other words, in the context of using cursors having the shape and appearance of the specific images for advertising and promotional purposes, the webpage designer will not want to offer the webpage user a choice to indicate whether or not they wish to see promotional cursor image.

277. Second, a POSITA would not have been motivated to make the modifications to Nielsen proffered by Dr. Rosenberg because to replace the tooltip

tag with an information cursor tag would require changing the HTML protocol. The HTML protocol is controlled by the Internet Engineering Task Force (the "IETF"). The IETF is a committee that decides what changes will be implemented to the HTML protocol. A POSITA would have to get the IETF to approve any proposed change to the HTML protocol. Then the IETF would have to design new HTML code to implement the proposed change. Then browsers around the world would have to be updated to accomplish the change. Because a POSITA would know that they would not have any predictable success to accomplish the change with any reasonable amount of effort I do not believe it would even cross their mind to try to modify Nielsen in this manner.

278. A POSITA in 1997 would also not necessarily know how to implement an information cursor in a browser without a change to the HTML protocol. Neither Nielsen nor Malamud teach how to implement an information cursor in a browser. The Common Specification enables such a modification but that cannot be used to fill in the missing teachings of Malamud and Nielsen. Dr. Rosenberg does not testify that such a change would have been within the skill of a POSITA and I would not agree that it in 1997 a POSITA would be motivated to make the claimed events-driven cursor image modifications on their own because such would require undue experimentation to implement.

279. Thus, in my opinion, it would not have been obvious for a POSITA to modify the teachings of Nielsen in order to change an initial cursor image into a modified cursor image that includes the tooltip.

Element 53[a]: receiving a request at said at least one server to provide specified content information to said user terminal;

280. I have already addressed in connection with discussing Claim 53 in Ground I that Malamud does not disclose receiving a request for specified content information, even if a Windows application program invoked (or, *arguendo,* contained) Malamud's window procedure. The term "specified content information" / "content information" has the agreed meaning of "information provided to a user's terminal for use in the display, such as a web page."

281. This agreed upon meaning is consistent with how a POSITA who read the Common Specification would understand the term because the Common Specification is clear throughout that the specified content information is a webpage file or other visual online content that a browser can request, receive and render for display in real time. *See, e.g.*, EX. 1001 at 6:7-18 (explaining browsers working dynamically at "run-time" versus statically at "compile-time") and 8:38-11:60 (discussing how the browser is used to transform the cursor image on the webpage using plug-ins such as Active X). A POSITA would not consider a request for a Windows application program to be a request for specified content information because such a program cannot be rendered by a browser and would have to first be

installed in order to even invoke the window procedure. Unlike a webpage's HTML file, a browser cannot render a Windows application program for display. Rather, a Windows application program that invoked (or even contained) Malamud's window procedure would be incapable of modifying a displayed cursor and would have to first be installed in order to invoke or communicate with Malamud's window procedure. Therefore, Malamud does not disclose requests for specified content information. Moreover, the download of Malamud would not result in either the download of the icon nor the metadata for a stored file, for the same reasons I have discussed previously in connection with Claim 72.

282. Nielsen does not disclose Element 53[a] because it is not directed to modifying cursor images at all. The claimed specified content information must include cursor display instructions and at least one indication of cursor image data—neither of which not present anywhere in Nielsen. Nielsen does not teach the use of cursor display code or any cursor modification as a result of the use of cursor display instructions, cursor display code and at least one indication cursor image data as the claim requires. Therefore, it also does not receive a request at a server for the claimed specified content information.

283. The modifications to Nielsen proposed by Dr. Rosenberg are non-trivial and not obvious to a POSITA for all of the aforementioned reasons because such a change would involve a change to the HTML protocol that would require undue

effort and be fraught with uncertainty if it could be accomplished at all or it would involve implementation knowledge beyond a POSITA in 1997. Dr. Rosenberg does not even testify that a POSITA would have had this knowledge in 1997 to implement the claimed events-driven cursor modification, as discussed further in connection with the remaining elements.

284. Additionally, a POSITA would not have been motivated to display a tooltip in an information cursor because doing so would not improve Nielsen. The tooltip is already displayed near the associated webpage content, and only after the user has paused their cursor over that webpage content for enough time to indicate their desire to see the tooltip. A POSITA would also not be motivated to make this change because attempting to display the tooltip in an information cursor would simply confound matters because the tooltip (a) could potentially be displayed in other places that are not near the associated webpage content and (b) would be displayed without requiring a pause where it would be displayed simply whenever the user scrolled the associated webpage content whether the user desired to see it or not. A POSITA therefore would not be motivated to make the display of the tooltip responsive to movement over the associated webpage content, instead of the lack of movement over the associated webpage text.

285. Therefore, this element would not have been obvious to a POSITA in view of Nielsen and Malamud because a POSITA would not have been motivated to make the suggested modification of Nielsen as Dr. Rosenberg hypothesizes.

Element 53[b]: providing said specified content information to said user terminal in response to said request, said specified content information including at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image; and

286. Element 53[b] would not have been obvious to a POSITA in view of Nielsen and Malamud for the same reason as Element 53[a].

Element 53[c][i]: transforming said initial cursor image displayed on said display of said user terminal into the shape and appearance of said specific image in response to said cursor display instruction, wherein said specified content information includes information that is to be displayed on said display of said user's terminal, wherein said specific image includes content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal, and

287. Element 53[c][i] would not have been obvious to a POSITA in view of Nielsen and Malamud for the same reason as Elements 1[a].

288. Neither Nielsen nor Malamud discloses transforming said initial cursor image displayed on said display of said user terminal into the shape and appearance of said specific image in response to said cursor display instruction, wherein said specified content information includes information that is to be displayed on said display of said user's terminal, wherein said specific image includes content corresponding to at least a portion of said information that is to be displayed on said

display of said user's terminal. Nielsen is not directed to modifying an initial cursor image displayed on the display of a user terminal at all. Rather, it describes an addition to the HTML protocol to display a static tooltip using tags built into the HTML protocol. Malamud is a new windows procedure provided as part of the Windows 3.1 operating system in which a Windows application program can invoke the new windows procedure to display metadata for a stored file in an information cursor rather than in a status bar. It is directed to modifying a cursor image in a windows environment but not in a server system in which the claimed specified content information is requested from and sent by a server. I have already explained that merely sending a Windows application program that invoked Malamud's new operating system window procedure would not actually include the window procedure as part of its program, and why even if it did such a program would not comprises the claimed "specified content information." Therefore, Malamud and Nielsen even if somehow combined do not yield any of the Challenged Claims.

289. Additionally, a POSITA would not have been motivated to modify the teachings of Nielsen's tooltip with an information cursor. First, there is no problem in Nielsen that would be solved by modifying a tooltip to an information cursor. The tooltip is already displayed only when the user has moved their cursor over the webpage content associated with the tooltip and it is already displayed adjacent to the associated webpage content. *See* EX. 1006 at 7:16-32.

290. Therefore, there is no problem solved or additional benefit from merely changing Nielsen's tooltip being displayed adjacent to the associated webpage content in a tooltip box versus being displayed in an information cursor box, because in either case the tooltip is only displayed when the user's attention is already on the associated webpage content because the cursor position is over that associated webpage content.

291. Moreover, a POSITA would not be motivated to replace Nielsen's tooltip with Malamud's information cursor because to do so would introduce problems and confusion. In particular, Nielsen's tooltip is only displayed after a user has paused their cursor over the associated webpage content for a period of time so as to indicate that they wish to see the content. Otherwise, tooltips would be displayed "willy nilly" as the user was moving their cursor around the webpage even when the user did not wish to see the tooltip. It would detract from the purpose of a tooltip to always show the tooltip and take away the user's control over when a tooltip was displayed.

292. Second, Dr. Rosenberg's suggested modification would, in the real world require adding an "information cursor" tag to the HTML protocol, a task that would require undue effort of a POSITA if it could be accomplished at all. The HTML protocol is controlled by the Internet Engineering Task Force (the "IETF"), a committee that decides what changes will

be implemented to the HTML protocol. A POSITA would have to get the IETF to approve any proposed change to the HTML protocol, the IETF would then have to design new HTML code to implement the proposed change, and browsers around the world would then have to be updated to accomplish the change. Because a POSITA would know that they would not have any predictable success to accomplish the change with any reasonable amount of effort I do not believe it would even cross their mind to try to modify Nielsen in this manner.

293. The other option would be for a POSITA to try to implement Malamud's operating system-based information cursors in an HTML environment, with no teachings in either Malamud or Nielsen how to do so. Malamud is a Microsoft patent and does not even go into any detail as to how Microsoft would implement the proposed new window procedure within its operating system. A POSITA in 1997 would not necessarily know how to implement an information cursor in a browser where there are no HTML tags (instructions) within the HTML protocol or code in browsers to implement the information cursors. Neither Nielsen nor Malamud teach how to implement an information cursor in a browser. The Common Specification does enable such a modification but that does not fill in the missing teachings of Malamud and Nielsen. As Dr. Rosenberg does not actually address this point there is nothing further to rebut in connection with the obviousness of modifying Nielsen in this manner.

294. Thus, in my opinion, it would not have been obvious for a POSITA to modify the teachings of Nielsen in order to change an initial cursor image into a modified cursor image that includes the tooltip.

295. Therefore, this limitation would not have been obvious to a POSITA in view of the teachings of Nielsen and Malamud, and POSITA would not have been motivated to combine the teachings of those references.

Element 53[c][ii]: wherein said cursor display instruction indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal, and

296. In my opinion, Element 53[c][ii] would not have been obvious to a POSITA in view of Nielsen and Malamud. Neither Nielsen nor Malamud disclose cursor display instruction that indicates a cursor display code operable to process said cursor display instruction to modify said cursor image to said cursor image in the shape and appearance of said specific image responsive to movement of said cursor image over a display of said at least a portion of said information to be displayed on said display of said user's terminal. Again, Nielsen is wholly devoid of any teachings regarding the modification of cursors of any kind.

297. Malamud does not disclose specified content information that includes cursor display instructions because it does not disclose any server system that receives any request for specified content information or serves a response with such

information. Even if a Windows application program were downloaded from a server, and that Windows application program invoked or even contained Malamud's window procedure the program itself would not comprise the claimed specified content information because the program would have to be installed before it could even communicate with the window procedure. Additionally, the Window application program only instructs the window procedure whether or not to display information cursors and whether the information cursor information box should always be displayed or only displayed when the cursor position is over the icon for the stored file. This instruction does not change the shape or appearance of the information cursor, or its content, in both cases the same information cursor and its content is displayed. Arguably, the window procedure transmits a cursor display instruction back to the operating system responsible for managing the display driver, but that window procedure is not part of the Window application program nor does it need to be.

Element 53[c][iii]: wherein said specific image has a shape and appearance relating to said information to be displayed.

298. I disagree with Dr. Rosenberg that Element 53[c][iii] is disclosed in Nielsen. The specific image is defined in the claim as the shape and appearance of the initial cursor after it has been transformed. Nielsen does not have any cursor transformations and modifying Nielsen to replace its tooltip with a Malamud's

information cursor does not make sense and would not be feasible, if at all, without undue effort or experimentation.

VIII. SUMMARY OF OPINIONS AND CONCLUDING STATEMENTS

299. I agree, in general, with the Declaration of Dr. Michael Shamos (EX. 2001).

300. The Petition does not establish that Malamud renders Claim 72 of the ‘102 Patent obvious to a POSITA, nor do I believe Malamud renders Claim 72 obvious.

301. The Petition does not establish that the combination of Malamud and Nakagawa renders Claim 72 of the ‘102 Patent to be obvious to a POSITA, nor do I believe this combination renders Claim 72 obvious.

302. The Petition does not establish that the combination of Nielsen and Malamud renders Claim 72 of the ‘102 Patent to be obvious to a POSITA, nor do I believe this combination renders Claim 72 obvious.

303. The Petition does not establish that Malamud renders Claims 1, 27, or 53 of the ‘449 Patent obvious to a POSITA, nor do I believe Malamud renders those claims obvious.

304. The Petition does not establish that the combination of Malamud and Nakagawa renders Claims 1, 27, or 53 of the ‘449 Patent to be obvious to a POSITA, nor do I believe this combination renders those claims obvious.

305. The Petition does not establish that the combination of Nielsen and Malamud renders Claims 1, 27, 38 or 53 of the '449 Patent to be obvious to a POSITA, nor do I believe this combination renders those claims obvious.

306. In signing this declaration, I recognize that the declaration will be filed as evidence in a contested case before the Patent Trial and Appeal Board of the United States Patent and Trademark Office. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination remotely within the United States during the time allotted for such cross-examination at a time and place agreed by counsel.

307. I hereby declare that all statements made herein of my own knowledge are true and correct under penalty of perjury and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of the Title 18 of the United States Code.

Executed on April 17, 2024 at Mobile, Alabama.

Samuel H. Russ, Ph.D.