

**Exhibit B-1 to Invalidity and Subject-Matter Ineligibility Contentions
United States Patent No. 6,118,449 in view of Malamud**

Exhibit B-1: Defendant's Invalidity Chart for U.S. Patent No. 6,118,449¹

U.S. Patent No. 6,437,800 ("Malamud")²

As demonstrated in the claim charts below, Claims 1, 27, 38 and 53 of U.S. Patent No. 6,118,449 are invalid (1) under one or more sections of pre-AIA 35 U.S.C. § 102 (e) as anticipated by Malamud; (2) under pre-AIA 35 U.S.C. § 103(a) as obvious in view of Malamud standing alone and combined with the knowledge of a person of ordinary skill in the art; and (3) additionally as obvious in view of Malamud in combination with one or more of the following references, including as described in the cover document accompanying Defendant's Invalidity Contentions: (1) the general knowledge of one of ordinary skill in the art; (2) the teachings of any of the prior art identified below; (3) the teachings of any of the prior art references set forth in Defendant's other invalidity claim charts with respect to the limitation-at-issue; and/or (4) the teachings of any of the prior art references set forth in the cover document of Defendant's invalidity contentions with respect to the key concepts applicable for the limitation-at-issue.

One of ordinary skill in the art, as of the priority date of the '449 patent, would have known to combine the prior art elements disclosed by the foregoing references using known methods, and to use these elements according to their established functions in order to achieve a known and predictable result.

To the extent that the following invalidity contentions reflect constructions of claim limitations consistent with or suggested by Lexos's Infringement Contentions, no inference is intended nor should any be drawn that Defendant agrees with Lexos's apparent claim constructions or infringement contentions. Defendant offers such invalidity contentions solely in the alternative to any position it may ultimately take as to any claim construction issues. Defendant denies that the accused products infringe the asserted claims and expressly reserves the right to contest Lexos's apparent claim constructions and infringement contentions.

Where the chart below states that a reference "discloses" a limitation, such disclosure may be express or inherent.

¹ Discovery in this case is ongoing and, accordingly, this invalidity chart is not to be considered final. Defendant has conducted the invalidity analysis herein based at least in part and in some instances entirely upon Lexos's apparent application of the claims of the '449 patent. By charting the prior art against the claims and limitations herein, Defendant is not admitting nor agreeing to Lexos's application of the claims at issue in this case, and these charts should not be interpreted as an admission or concession by Defendant that any particular construction or application of any claim limitation by Lexos is correct or proper. Additionally, these charts provide representative examples of portions of the charted references that disclose the indicated limitations under Lexos's application of the claims; additional portions of these references other than the representative examples provided herein may also disclose the indicated limitation(s) and Defendant contends that the asserted claims are invalid in light of the charted reference(s) as a whole in its or their entirety. Where a particular figure is cited, the citation should be understood to encompass the caption and description of the figure as well as any text relating to or describing the figure. Conversely, where particular text referring to a figure is cited, the citation should be understood to include the figure as well.

² U.S. Patent No. 6,437,800 was filed on October 26, 1994, published on August 20, 2002, and issued to Malamud et al. on August 20, 2002.

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Claim	Claim Language	Malamud ³
1pre	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:	Malamud discloses a system for modifying a cursor image to a specific image having a desired shape and appearance displayed on a display of a user's terminal. <i>See, e.g.:</i> • Malamud at Abstract: Information cursors are provided for use in an operating system and/or application programs. Each information cursor includes a pointing portion to point to objects displayed on a video display and an information portion to display information about an object to which the pointing portion points. The information displayed in an information cursor may include the name of the object, a preview of the contents of the object, or property information about the object. • Malamud at 1:35-43: In accordance with a first aspect of the present invention, a method is practiced in a data processing system having a video display and an input device. In this method, objects, including an information cursor, are displayed on a video display. The cursor is positioned over at least a portion of one of the objects that is displayed in response to a user using the input device. Information about the object which at least a portion of the cursor is over is displayed on the video display. • Malamud at 2:6-12:

³ U.S. Patent No. 6,437,800 ("Malamud"), entitled "Information Cursors," filed on October 26, 1994 and issued on August 20, 2002. Malamud claims priority as a continuation to U.S. Patent Appln. No. 08/054,564 filed on April 28, 1993, which was abandoned.

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Claim	Claim Language	Malamud ³
		In accordance with still another aspect of the present invention, a method is practiced wherein a pointing portion of an information cursor is displayed on the video display. The pointing portion points to an icon associated with an object. Information about the object that is associated with the icon to which the pointing portion points is displayed as part of the information cursor. • Malamud at 2:13-28: In accordance with a further aspect of the present invention, a data processing system includes a video display and an input device that is operable by a user to communicate with the data processing system. The data processing system includes a means for producing a user interface on the video display and a means for displaying objects on the user interface. The data processing system further includes a means for displaying a cursor and for moving the cursor in response to a user operating the input device. The cursor has an indicator portion and information display portion. The indicator portion indicates a user selected one of the objects that is displayed on the user interface. In addition, the data processing system includes a means for displaying information in the information display portion of the cursor regarding the object that is indicated by the indicator portion of the cursor. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available

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Claim	Claim Language	Malamud ³
		in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2a, 2 b and 2 c) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air.

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Claim	Claim Language	Malamud ³
		• Malamud at 5:47-53: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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).

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Claim	Claim Language	Malamud ³
		Malamud at Figs. 2b-2c: <i>Fig. 2b</i> <i>Fig. 2c</i>

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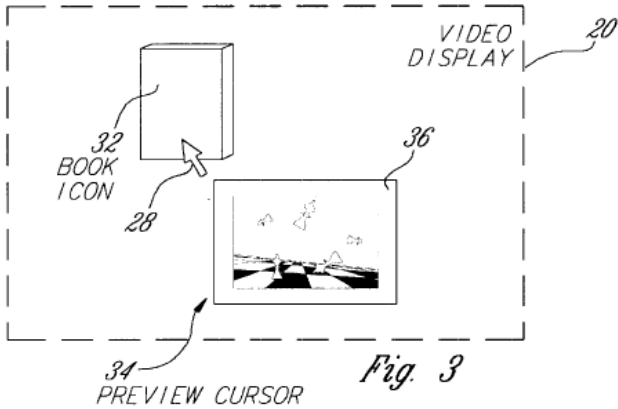
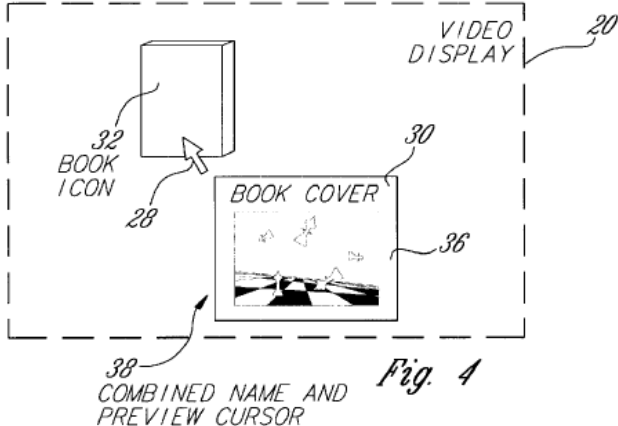
Claim	Claim Language	Malamud ³
		- Malamud at Figs. 3-4:  Fig. 3  Fig. 4 - Malamud at Fig. 6:

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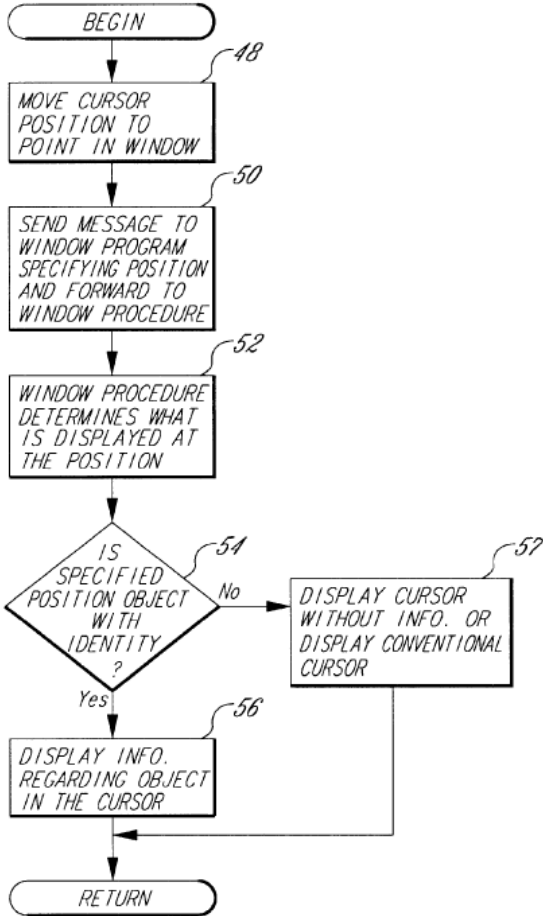
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> 56 56 --> RETURN([RETURN]) </pre> <i>Fig. 6</i> • Malamud at Fig. 7:

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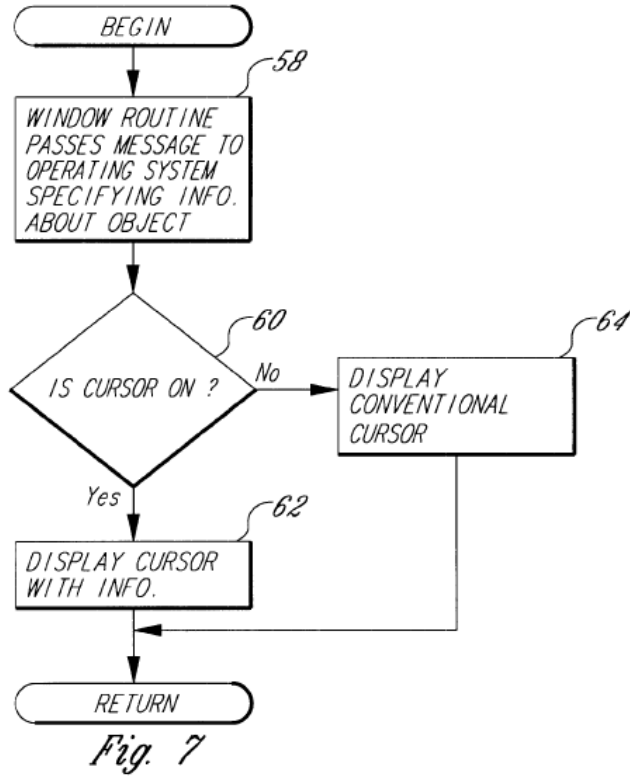
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> 62 62 --> RETURN([RETURN]) </pre> <i>Fig. 7</i> • Malamud at Fig. 8:

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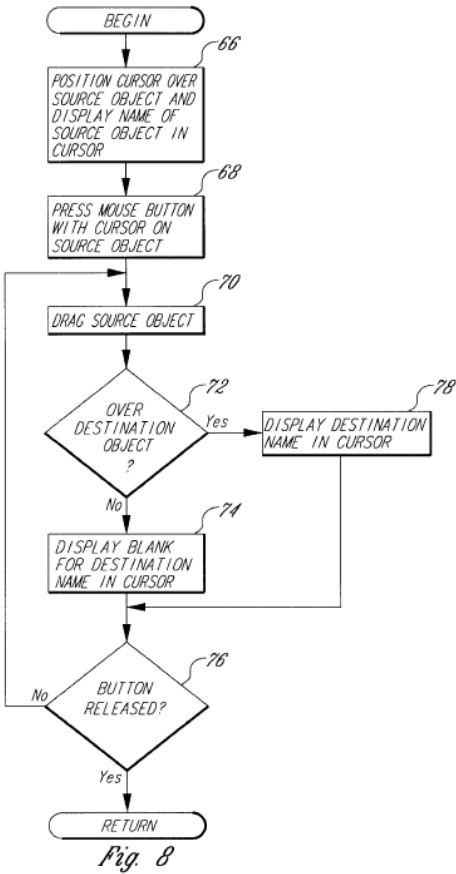
Claim	Claim Language	Malamud ³
		 <pre> graph TD 66([BEGIN]) --> 68[POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 68 --> 70[PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 70 --> 72{OVER DESTINATION OBJECT?} 72 -- Yes --> 78[DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{BUTTON RELEASED?} 74 --> 76 76 -- Yes --> 76R([RETURN]) 76 -- No --> 72 </pre> <i>Fig. 8</i> To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with

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Claim	Claim Language	Malamud ³
		one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
1a	cursor image data corresponding to said specific image;	Malamud discloses cursor image data corresponding to the specific image. <i>See, e.g.:</i> • Malamud at 1:15-31: Many operating systems provide a cursor that indicates a current position on a video display. The cursor is generally manipulable by an input device, such as a keyboard or a mouse. In certain operating systems, such as the Microsoft WINDOWS, version 3.1, operating system, which is sold by Microsoft Corporation of Redmond, Washington, a window may have a status bar that displays information about the object to which the cursor is currently pointing. As the cursor is moved to point at different objects, the contents of the status bar changes accordingly. The status bar is a separate graphic entity that is not connected to the cursor and does not move with the cursor. The status bar is positioned on the video display at a fixed location within a window. As such, a user has to look at two separate portions of the screen if he wishes to view both the cursor and the status bar. This separation of the status bar from the cursor can be confusing and burdensome to the user. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the

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		source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2<i>a</i>, 2<i>b</i> and 2<i>c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. The mouse messages specify the status of mouse buttons and the position of the cursor within the window. The position of the cursor

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Claim	Claim Language	Malamud ³
		within the window is specified in (X, Y) coordinates relative to the upper left-hand cover of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-18: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. • Malamud at 5:53-65: Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.

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1b	cursor display code, said cursor display code operable to modify said cursor image; and	Malamud discloses a cursor display code that is operable to modify the cursor image. <i>See, e.g.:</i> • Malamud at 1:15-31: Many operating systems provide a cursor that indicates a current position on a video display. The cursor is generally manipulable by an input device, such as a keyboard or a mouse. In certain operating systems, such as the Microsoft WINDOWS, version 3.1, operating system, which is sold by Microsoft Corporation of Redmond, Washington, a window may have a status bar that displays information about the object to which the cursor is currently pointing. As the cursor is moved to point at different objects, the contents of the status bar changes accordingly. The status bar is a separate graphic entity that is not connected to the cursor and does not move with the cursor. The status bar is positioned on the video display at a fixed location within a window. As such, a user has to look at two separate portions of the screen if he wishes to view both the cursor and the status bar. This separation of the status bar from the cursor can be confusing and burdensome to the user. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors.

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		• Malamud at 3:54-58: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. Initially, the cursor position is moved by the mouse 18 or other input device to point within the

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Claim	Claim Language	Malamud ³
		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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should

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		use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Fig. 6:

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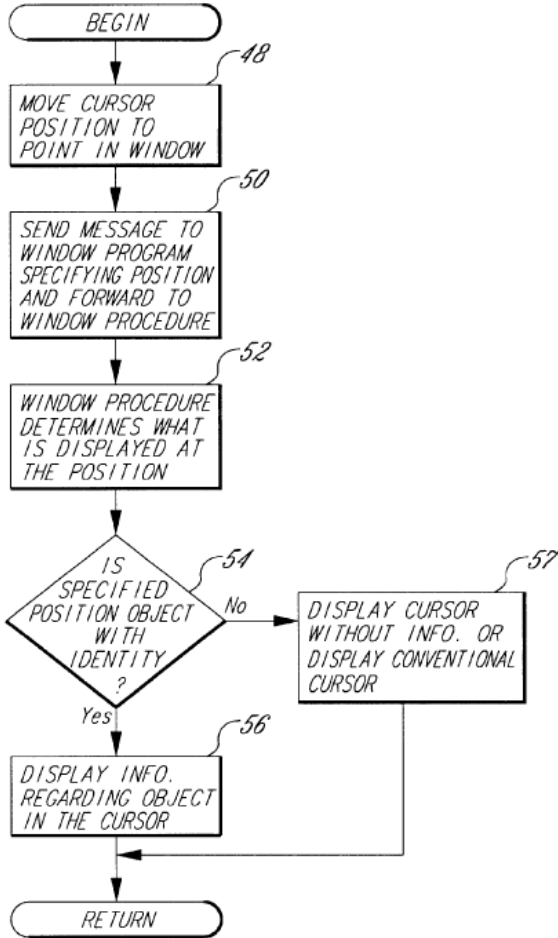
Claim	Claim Language	Malamud ³
		 <pre> graph TD 48([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> 56 56 --> 58([RETURN]) </pre> <i>Fig. 6</i> • Malamud at Fig. 7:

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Claim	Claim Language	Malamud ³
		<pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> 62 62 --> RETURN([RETURN]) </pre> <i>Fig. 7</i> • Malamud at Fig. 8:

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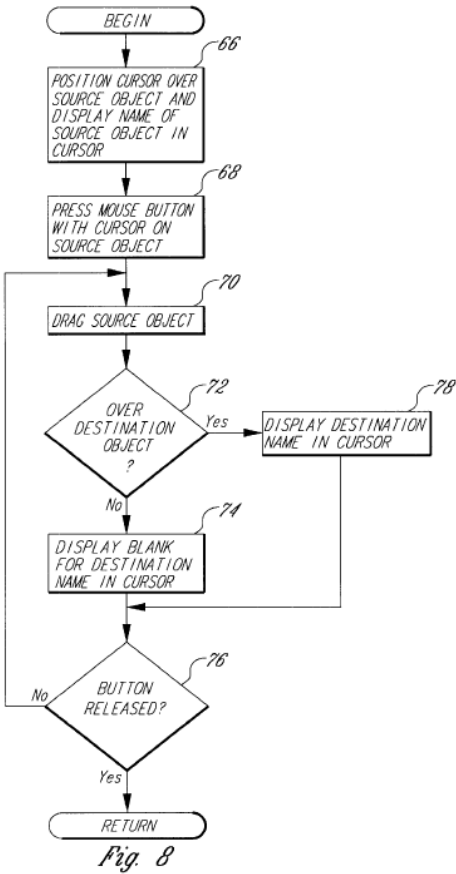
Claim	Claim Language	Malamud ³
		 <pre> graph TD 66([BEGIN]) --> 68[POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 68 --> 70[PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 70 --> 72{OVER DESTINATION OBJECT?} 72 -- Yes --> 78[DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{BUTTON RELEASED?} 74 --> 76 76 -- Yes --> 76R([RETURN]) 76 -- No --> 72 </pre> <i>Fig. 8</i> To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with

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Claim	Claim Language	Malamud ³
		one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
1c	a first server computer for transmitting specified content information to said remote user terminal, said specified content information including at least one cursor display instruction indicating a location of said cursor image data,	Malamud discloses that the first server computer transmits specified content information to the remote user terminal. Malamud also discloses that the specified content information includes at least one cursor display instruction indicating a location of the cursor image data. <i>See, e.g.:</i> • Malamud at 4:53-59: The operating system 22 (FIG. 1) logically divides the user interface into a number of windows. In general, each window has a separate window procedure associated with it. The operating system 22 maintains a message queue for each program that generates windows. As a program may generate multiple windows, the message queue may hold messages for multiple windows. • Malamud at 5:53-57: Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.

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1d	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, 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	Malamud discloses that the cursor display instruction and the cursor display code are operable to cause the user terminal to display a modified cursor image on the user's display in the shape and appearance of the specific image. Malamud also discloses that the specified content information is transmitted to the remote user terminal by the first server computer responsive to a request form the user terminal for the specified content information. <i>See, e.g.:</i> • Malamud at 4:53-59: The operating system 22 (FIG. 1) logically divides the user interface into a number of windows. In general, each window has a separate window procedure associated with it. The operating system 22 maintains a message queue for each program that generates windows. As a program may generate multiple windows, the message queue may hold messages for multiple windows. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse.

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Claim	Claim Language	Malamud ³
		• Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. After the window procedure has determined what

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Claim	Claim Language	Malamud ³
		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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
1e	wherein said specified content information further comprises information to be displayed on said display of said user's terminal, said specific image including content corresponding to at least a portion of said information to	Malamud discloses that the specified content information further comprises information to be displayed on the display of the user's terminal, the specific image including content corresponding to at least a portion of the information to be displayed on the display of the user's terminal. <i>See, e.g.:</i> • Malamud at Abstract: Information cursors are provided for use in an operating system and/or application programs. Each information cursor includes a pointing portion to point to objects

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	be displayed on said display of said user's terminal, and	displayed on a video display and an information portion to display information about an object to which the pointing portion points. The information displayed in an information cursor may include the name of the object, a preview of the contents of the object, or property information about the object. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to

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Claim	Claim Language	Malamud ³
		which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. <i>2a</i>, <i>2 b</i> and <i>2 c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45:

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Claim	Claim Language	Malamud ³
		The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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

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Claim	Claim Language	Malamud ³
		sets forth the contents and type of information to be displayed in the cursor (step 58 in FIG. 7). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Figs. 2b-2c:

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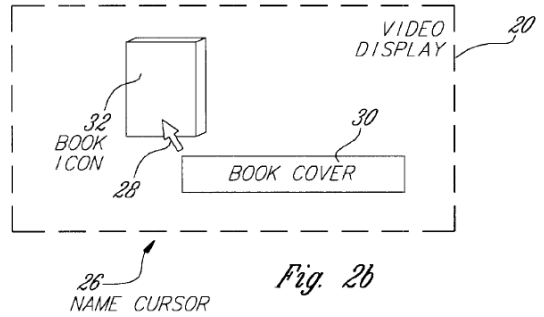
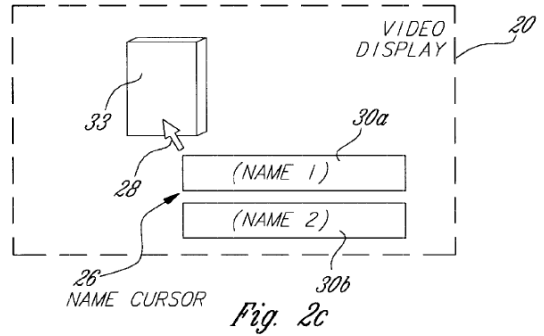
Claim	Claim Language	Malamud ³
		 <i>Fig. 2b</i>  <i>Fig. 2c</i> • Malamud at Figs. 3-4:

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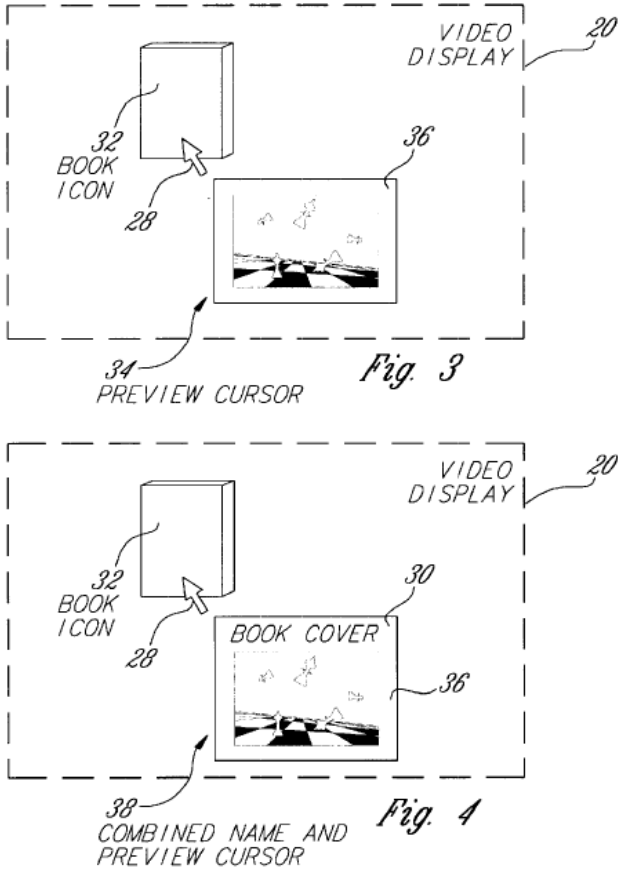
Claim	Claim Language	Malamud ³
		 The diagrams illustrate a user interface on a video display (20). In Fig. 3, a book icon (32) is shown with a preview cursor (34) pointing at it. The cursor is a small rectangle containing a landscape image (36). In Fig. 4, the cursor (38) is modified to display the text 'BOOK COVER' (30) above the landscape image (36). The book icon (32) is labeled 'BOOK ICON' (28).
1f	wherein said cursor display code is operable to process said cursor display instruction to modify said cursor image to	Malamud discloses that the cursor display code is operable to process the cursor display instruction to modify the cursor image to the cursor image in the shape and appearance of the specific image responsive to movement of the cursor image over a display of the at least a portion of the information to be displayed on the display of the user's terminal,

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Claim	Claim Language	Malamud ³
	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.	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. <i>See, e.g.:</i> • Malamud at 1:15-31: Many operating systems provide a cursor that indicates a current position on a video display. The cursor is generally manipulable by an input device, such as a keyboard or a mouse. In certain operating systems, such as the Microsoft WINDOWS, version 3.1, operating system, which is sold by Microsoft Corporation of Redmond, Washington, a window may have a status bar that displays information about the object to which the cursor is currently pointing. As the cursor is moved to point at different objects, the contents of the status bar changes accordingly. The status bar is a separate graphic entity that is not connected to the cursor and does not move with the cursor. The status bar is positioned on the video display at a fixed location within a window. As such, a user has to look at two separate portions of the screen if he wishes to view both the cursor and the status bar. This separation of the status bar from the cursor can be confusing and burdensome to the user. • Malamud at 3:32-35: Name cursor 26 includes a pointing portion 28 (i.e., a conventional pointing cursor) and a name box 30. The name box 30 displays the name of the object to which the pointing portion 28 points. • Malamud at 3:36-47: 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

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Claim	Claim Language	Malamud ³
		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”. More generally, the name box 30 displays the name of the item to which the pointing portion 28 points. The user interface may be programmed such that, when the pointing portion 28 points to nothing of significance, the name box 30 remains blank. Alternatively, the user interface may be programmed so that the name box 30 disappears in such an instance. • Malamud at 3:54-58: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. • Malamud at 3:59-4:3: FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. • Malamud at 4:19-32: An additional variety of information cursor that is provided by the preferred embodiment of the present invention is a property cursor 40, such as shown in FIG. 5. A property cursor 40 includes the pointing portion 28 and a property box 42. The

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Claim	Claim Language	Malamud ³
		property box 40 displays property information (often including the name of the object) regarding the object to which the pointer portion 28 points. In the example of FIG. 5, the property cursor 40 serves as a help cursor that displays help information in the property box 42 for the object to which the pointing portion 28 points. In FIG. 5, the pointer portion 28 points to a maximize button 44. The text in the property box 42 identifies the nature of the maximize button 44 to which the pointer portion 28 points and displays relevant help information regarding this object. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. Initially, the cursor position is moved by the mouse 18 or other input device to point within the

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Claim	Claim Language	Malamud ³
		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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should

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Claim	Claim Language	Malamud ³
		use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Figs. 2b-2c: <i>Fig. 2b</i> <i>Fig. 2c</i>

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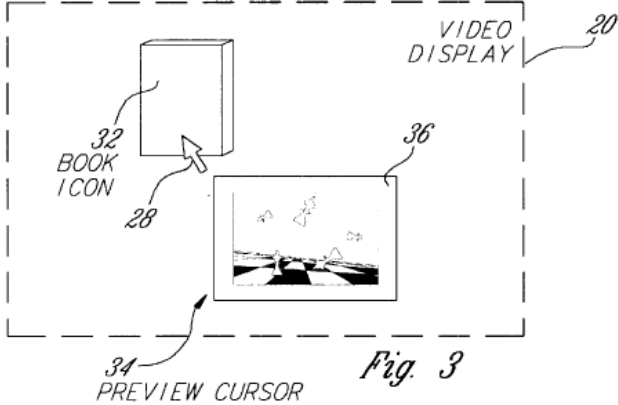
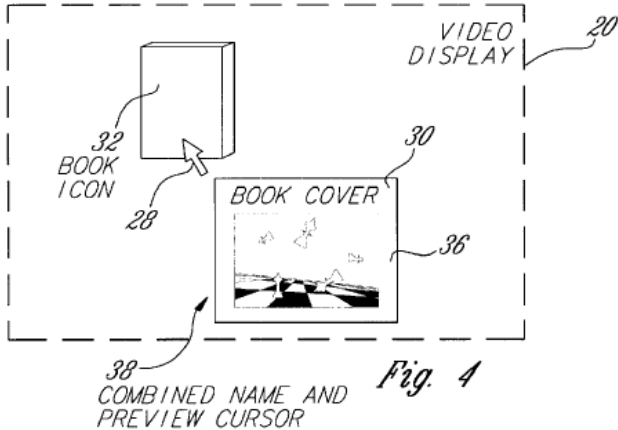
Claim	Claim Language	Malamud ³
		• Malamud at Figs. 3-4:  <i>Fig. 3</i>  <i>Fig. 4</i>

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Claim	Claim Language	Malamud ³
		Malamud at Fig. 6: <pre> graph TD BEGIN([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> RETURN([RETURN]) 56 --> RETURN </pre> <i>Fig. 6</i>

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Claim	Claim Language	Malamud ³
		- Malamud at Fig. 7: <pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> RETURN([RETURN]) 62 --> RETURN </pre> <i>Fig. 7</i> - Malamud at Fig. 8:

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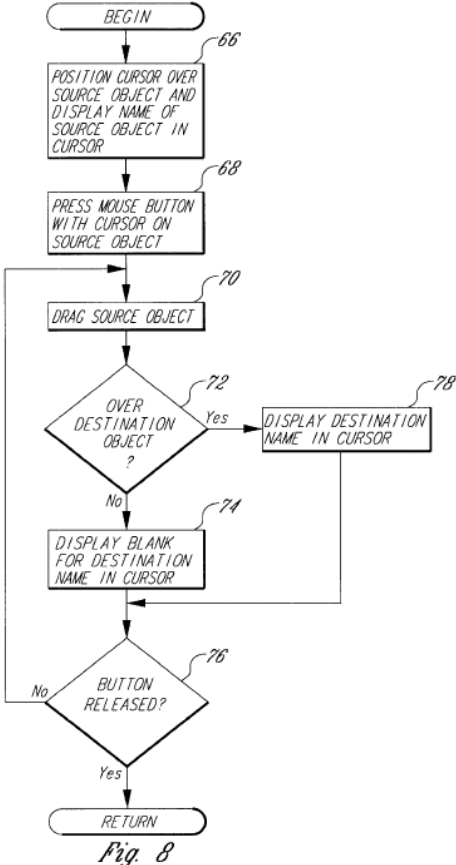
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 66[66: POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 66 --> 68[68: PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 68 --> 70[70: DRAG SOURCE OBJECT] 70 --> 72{72: OVER DESTINATION OBJECT?} 72 -- Yes --> 78[78: DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[74: DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{76: BUTTON RELEASED?} 74 --> 76 76 -- No --> 72 76 -- Yes --> RETURN([RETURN]) </pre> <i>Fig. 8</i> To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with

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Claim	Claim Language	Malamud ³
		one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
27pre	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:	Malamud discloses a system for modifying a cursor image to a specific image having a desired shape and appearance displayed on a display of a user's terminal. <i>See, e.g.:</i> • Malamud at Abstract: Information cursors are provided for use in an operating system and/or application programs. Each information cursor includes a pointing portion to point to objects displayed on a video display and an information portion to display information about an object to which the pointing portion points. The information displayed in an information cursor may include the name of the object, a preview of the contents of the object, or property information about the object. • Malamud at 1:35-43: In accordance with a first aspect of the present invention, a method is practiced in a data processing system having a video display and an input device. In this method, objects, including an information cursor, are displayed on a video display. The cursor is positioned over at least a portion of one of the objects that is displayed in response to a user using the input device. Information about the object which at least a portion of the cursor is over is displayed on the video display. • Malamud at 2:6-12:

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Claim	Claim Language	Malamud ³
		In accordance with still another aspect of the present invention, a method is practiced wherein a pointing portion of an information cursor is displayed on the video display. The pointing portion points to an icon associated with an object. Information about the object that is associated with the icon to which the pointing portion points is displayed as part of the information cursor. • Malamud at 2:13-28: In accordance with a further aspect of the present invention, a data processing system includes a video display and an input device that is operable by a user to communicate with the data processing system. The data processing system includes a means for producing a user interface on the video display and a means for displaying objects on the user interface. The data processing system further includes a means for displaying a cursor and for moving the cursor in response to a user operating the input device. The cursor has an indicator portion and information display portion. The indicator portion indicates a user selected one of the objects that is displayed on the user interface. In addition, the data processing system includes a means for displaying information in the information display portion of the cursor regarding the object that is indicated by the indicator portion of the cursor. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available

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Claim	Claim Language	Malamud ³
		in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2a, 2 b and 2 c) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air.

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Claim	Claim Language	Malamud ³
		• Malamud at 5:47-53: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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).

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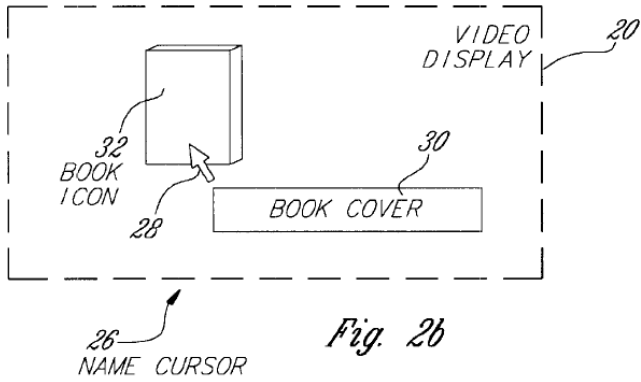
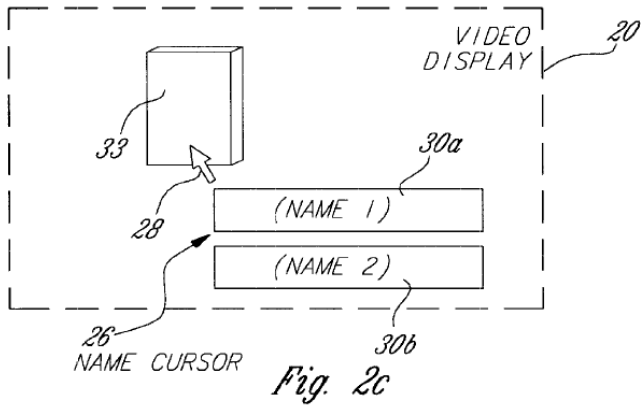
Claim	Claim Language	Malamud ³
		Malamud at Figs. 2b-2c:  Fig. 2b  Fig. 2c

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Claim	Claim Language	Malamud ³
		- Malamud at Figs. 3-4: Fig. 3 Fig. 4 - Malamud at Fig. 6:

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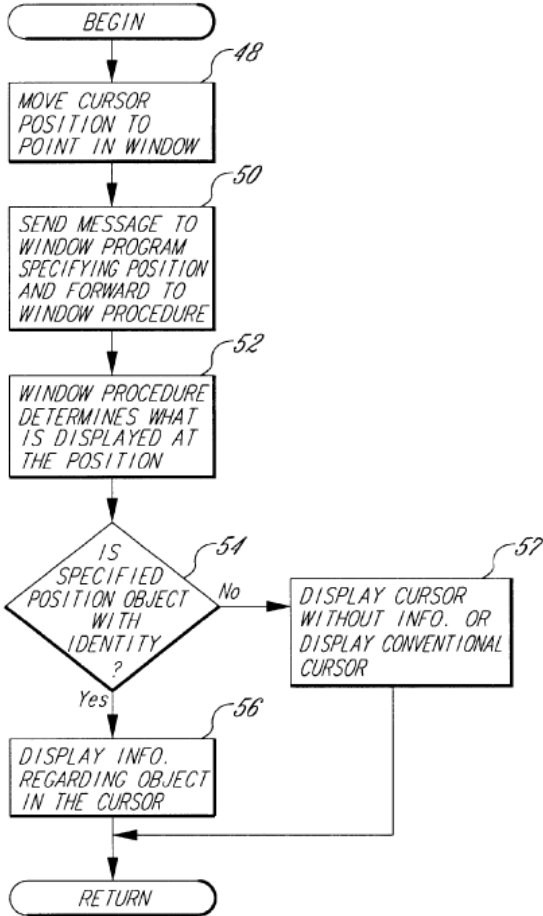
Claim	Claim Language	Malamud ³
		 <pre> graph TD 48([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> 56 56 --> 55([RETURN]) </pre> <i>Fig. 6</i> • Malamud at Fig. 7:

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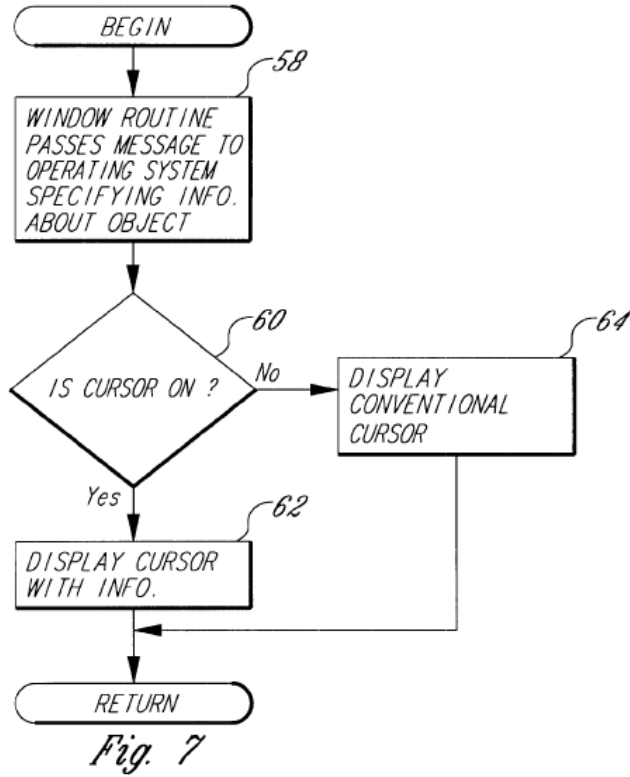
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> 62 62 --> RETURN([RETURN]) </pre> <i>Fig. 7</i> • Malamud at Fig. 8:

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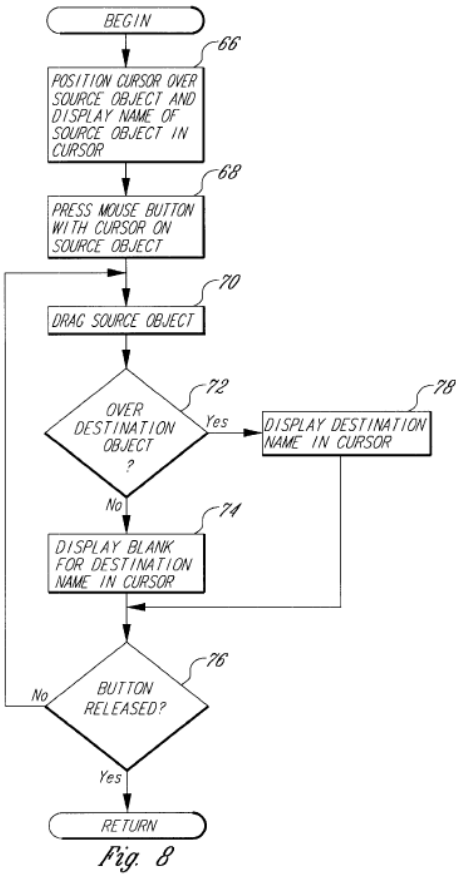
Claim	Claim Language	Malamud ³
		 <pre> graph TD 66([BEGIN]) --> 68[POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 68 --> 70[PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 70 --> 72{OVER DESTINATION OBJECT?} 72 -- Yes --> 78[DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{BUTTON RELEASED?} 74 --> 76 76 -- Yes --> 76R([RETURN]) 76 -- No --> 72 </pre> <i>Fig. 8</i> To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with

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Claim	Claim Language	Malamud ³
		one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto. To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
27a	cursor image data corresponding to said specific image;	Malamud discloses cursor image data corresponding to the specific image. <i>See, e.g.:</i> • Malamud at 1:15-31: Many operating systems provide a cursor that indicates a current position on a video display. The cursor is generally manipulable by an input device, such as a keyboard or a mouse. In certain operating systems, such as the Microsoft WINDOWS, version 3.1, operating system, which is sold by Microsoft Corporation of Redmond, Washington, a window may have a status bar that displays information about the object to which the cursor is currently pointing. As the cursor is moved to point at different objects, the contents of the status bar changes accordingly. The status bar is a separate graphic entity that is not connected to the cursor and does not move with the cursor. The status bar is positioned on the video display at a fixed location within a window. As such, a user has to look at two separate portions of the screen if he wishes to view both the cursor and the status bar. This separation of the status bar from the cursor can be confusing and burdensome to the user. • Malamud at 3:54-4:18:

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Claim	Claim Language	Malamud ³
		The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2<i>a</i>, 2<i>b</i> and 2<i>c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for

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Claim	Claim Language	Malamud ³
		the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-18: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. • Malamud at 5:53-65: Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42.

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Claim	Claim Language	Malamud ³
		To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
27b	cursor display code, said cursor display code operable to modify said cursor image; and	Malamud discloses a cursor display code that is operable to modify the cursor image. <i>See, e.g.:</i> • Malamud at 1:15-31: Many operating systems provide a cursor that indicates a current position on a video display. The cursor is generally manipulable by an input device, such as a keyboard or a mouse. In certain operating systems, such as the Microsoft WINDOWS, version 3.1, operating system, which is sold by Microsoft Corporation of Redmond, Washington, a window may have a status bar that displays information about the object to which the cursor is currently pointing. As the cursor is moved to point at different objects, the contents of the status bar changes accordingly. The status bar is a separate graphic entity that is not connected to the cursor and does not move with the cursor. The status bar is positioned on the video display at a fixed location within a window. As such, a user has to look at two separate portions of the screen if he wishes to view both the cursor and the status bar. This separation of the status bar from the cursor can be confusing and burdensome to the user. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing

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Claim	Claim Language	Malamud ³
		portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:54-58: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45:

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Claim	Claim Language	Malamud ³
		The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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

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Claim	Claim Language	Malamud ³
		sets forth the contents and type of information to be displayed in the cursor (step 58 in FIG. 7). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Fig. 6:

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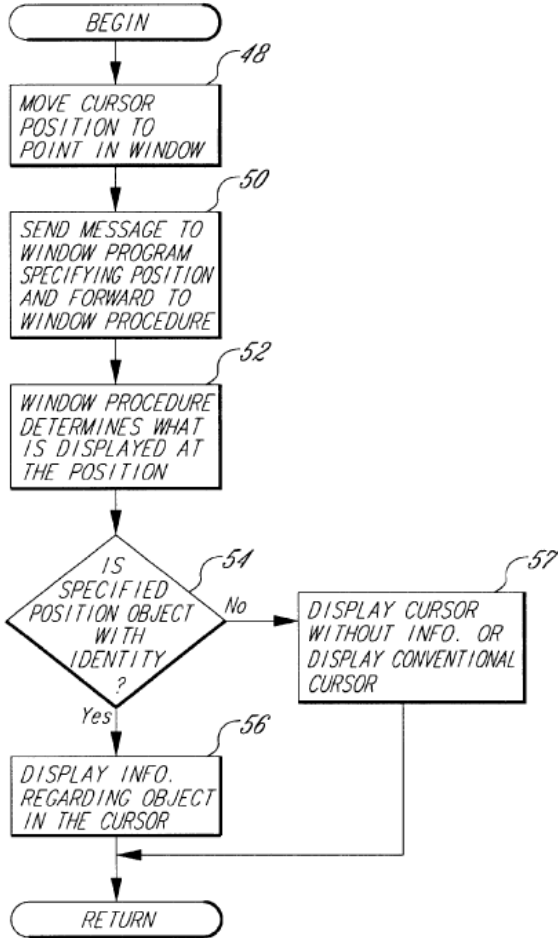
Claim	Claim Language	Malamud ³
		 <pre> graph TD 48([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> 56 56 --> 58([RETURN]) </pre> <i>Fig. 6</i> • Malamud at Fig. 7:

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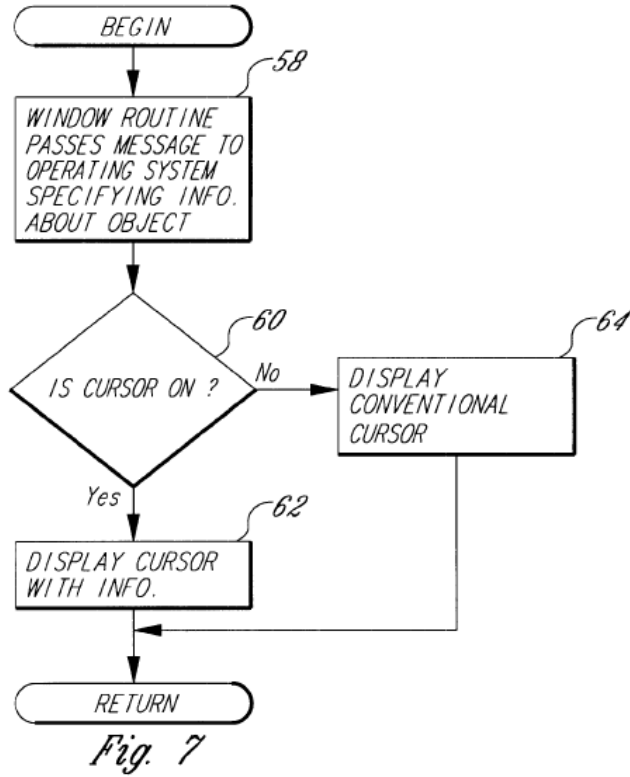
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> MERGE(()) 62 --> MERGE MERGE --> RETURN([RETURN]) </pre> <i>Fig. 7</i> • Malamud at Fig. 8:

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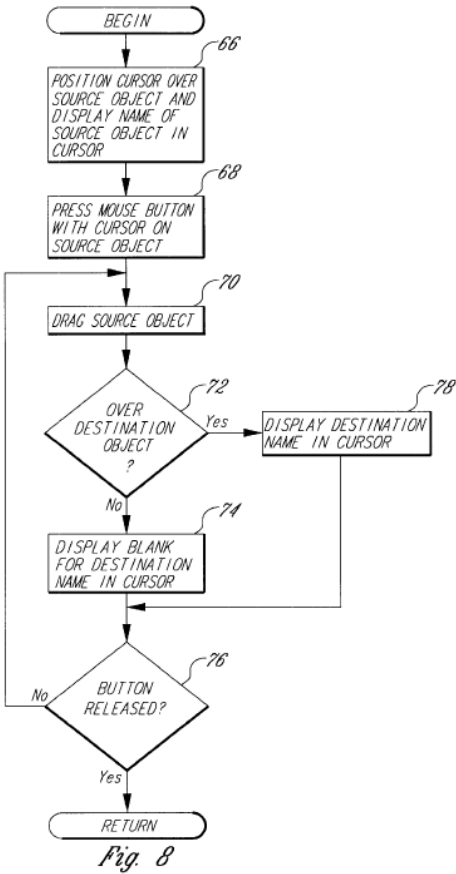
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 66[POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 66 --> 68[PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 68 --> 70[DRAG SOURCE OBJECT] 70 --> 72{OVER DESTINATION OBJECT?} 72 -- Yes --> 78[DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{BUTTON RELEASED?} 74 --> 76 76 -- No --> 70 76 -- Yes --> RETURN([RETURN]) </pre> <i>Fig. 8</i> To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.

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Claim	Claim Language	Malamud ³
27c	a first server computer for transmitting specified content information to said remote user terminal, said specified content information including at least one cursor display instruction indicating a location of said cursor image data,	Malamud discloses that the first server computer transmits specified content information to the remote user terminal. Malamud also discloses that the specified content information includes at least one cursor display instruction indicating a location of the cursor image data. <i>See, e.g.:</i> • Malamud at 4:53-59: The operating system 22 (FIG. 1) logically divides the user interface into a number of windows. In general, each window has a separate window procedure associated with it. The operating system 22 maintains a message queue for each program that generates windows. As a program may generate multiple windows, the message queue may hold messages for multiple windows. • Malamud at 5:53-57: Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.

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Claim	Claim Language	Malamud ³
27d	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, 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	Malamud discloses that the cursor display instruction and the cursor display code are operable to cause the user terminal to display a modified cursor image on the user's display in the shape and appearance of the specific image. Malamud also discloses that the specified content information is transmitted to the remote user terminal by the first server computer responsive to a request form the user terminal for the specified content information. <i>See, e.g.:</i> • Malamud at 4:53-59: The operating system 22 (FIG. 1) logically divides the user interface into a number of windows. In general, each window has a separate window procedure associated with it. The operating system 22 maintains a message queue for each program that generates windows. As a program may generate multiple windows, the message queue may hold messages for multiple windows. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change

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Claim	Claim Language	Malamud ³
		of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65:

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Claim	Claim Language	Malamud ³
		FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
27e	wherein said specified content information further comprises information to be displayed on said display of said user's terminal, said specific image including content corresponding to at least a portion of said information to	Malamud discloses that the specified content information further comprises information to be displayed on the display of the user's terminal, the specific image including content corresponding to at least a portion of the information to be displayed on the display of the user's terminal. <i>See, e.g.:</i> • Malamud at Abstract:

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Claim	Claim Language	Malamud ³
	be displayed on said display of said user's terminal, and	Information cursors are provided for use in an operating system and/or application programs. Each information cursor includes a pointing portion to point to objects displayed on a video display and an information portion to display information about an object to which the pointing portion points. The information displayed in an information cursor may include the name of the object, a preview of the contents of the object, or property information about the object. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book

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Claim	Claim Language	Malamud ³
		icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2<i>a</i>, 2<i>b</i> and 2<i>c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse.

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Claim	Claim Language	Malamud ³
		• Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. After the window procedure has determined what is at the specified cursor position, the procedure passes a message to the operating

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Claim	Claim Language	Malamud ³
		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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Figs. 2b-2c:

**Exhibit B-1 to Invalidity and Subject-Matter Ineligibility Contentions
United States Patent No. 6,118,449 in view of Malamud**

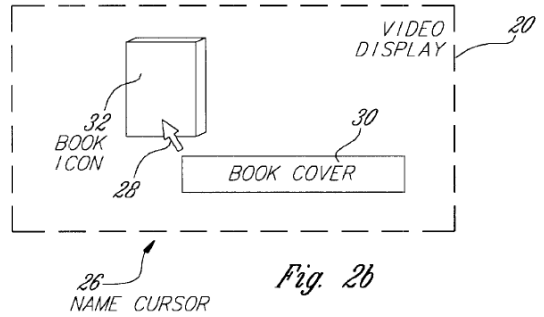
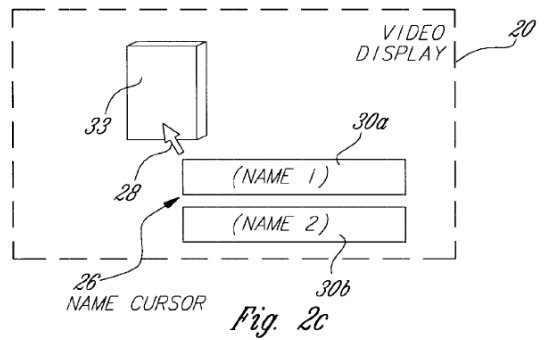
Claim	Claim Language	Malamud ³
		 Fig. 2b  Fig. 2c Malamud at Figs. 3-4:

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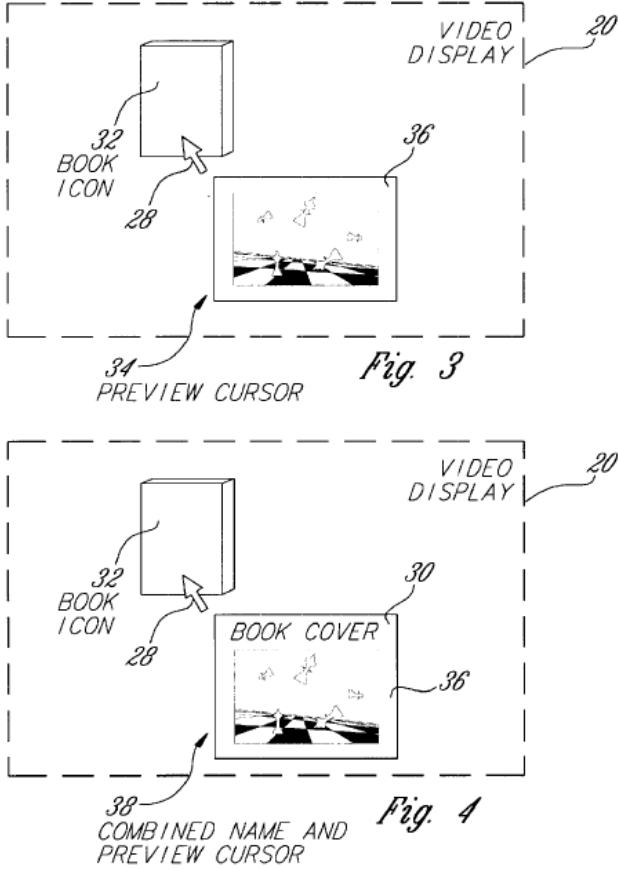
Claim	Claim Language	Malamud ³
		 The diagrams illustrate a user interface on a video display (20). In Fig. 3, a book icon (32) is shown with a preview cursor (34) pointing at it. The cursor is a small rectangle containing a landscape image. In Fig. 4, the cursor (38) is modified to display the text 'BOOK COVER' above the landscape image. The book icon is labeled 28 and the landscape image is labeled 36.
27f	wherein said cursor display code is operable to process said cursor display instruction to modify said cursor image to	Malamud discloses that the cursor display code is operable to process the cursor display instruction to modify the cursor image to the cursor image in the shape and appearance of the specific image responsive to movement of the cursor image over a display of the at least a portion of the information to be displayed on the display of the user's terminal,

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	said cursor image in the shape and appearance of said specific image in response to movement of said cursor image over a specified location 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.	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. <i>See, e.g.:</i> • Malamud at 1:15-31: Many operating systems provide a cursor that indicates a current position on a video display. The cursor is generally manipulable by an input device, such as a keyboard or a mouse. In certain operating systems, such as the Microsoft WINDOWS, version 3.1, operating system, which is sold by Microsoft Corporation of Redmond, Washington, a window may have a status bar that displays information about the object to which the cursor is currently pointing. As the cursor is moved to point at different objects, the contents of the status bar changes accordingly. The status bar is a separate graphic entity that is not connected to the cursor and does not move with the cursor. The status bar is positioned on the video display at a fixed location within a window. As such, a user has to look at two separate portions of the screen if he wishes to view both the cursor and the status bar. This separation of the status bar from the cursor can be confusing and burdensome to the user. • Malamud at 3:32-35: Name cursor 26 includes a pointing portion 28 (i.e., a conventional pointing cursor) and a name box 30. The name box 30 displays the name of the object to which the pointing portion 28 points. • Malamud at 3:36-47: 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

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		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”. More generally, the name box 30 displays the name of the item to which the pointing portion 28 points. The user interface may be programmed such that, when the pointing portion 28 points to nothing of significance, the name box 30 remains blank. Alternatively, the user interface may be programmed so that the name box 30 disappears in such an instance. • Malamud at 3:54-58: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. • Malamud at 3:59-4:3: FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. • Malamud at 4:19-32: An additional variety of information cursor that is provided by the preferred embodiment of the present invention is a property cursor 40, such as shown in FIG. 5. A property cursor 40 includes the pointing portion 28 and a property box 42. The

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		property box 40 displays property information (often including the name of the object) regarding the object to which the pointer portion 28 points. In the example of FIG. 5, the property cursor 40 serves as a help cursor that displays help information in the property box 42 for the object to which the pointing portion 28 points. In FIG. 5, the pointer portion 28 points to a maximize button 44. The text in the property box 42 identifies the nature of the maximize button 44 to which the pointer portion 28 points and displays relevant help information regarding this object. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. Initially, the cursor position is moved by the mouse 18 or other input device to point within the

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Claim	Claim Language	Malamud ³
		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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should

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Claim	Claim Language	Malamud ³
		use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Figs. 2b-2c: <i>Fig. 2b</i> <i>Fig. 2c</i>

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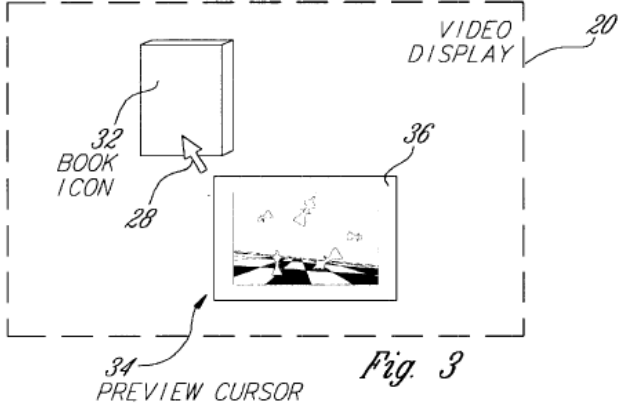
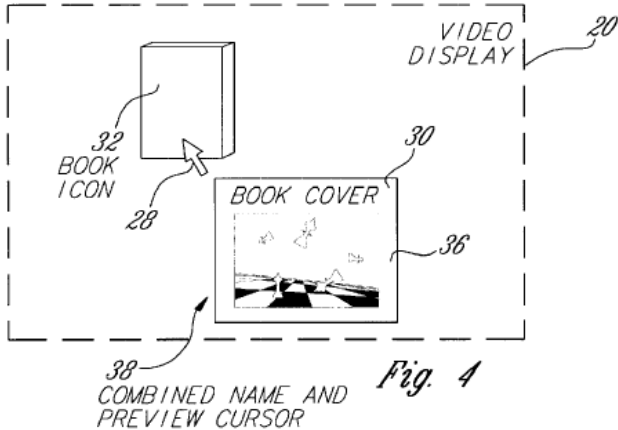
Claim	Claim Language	Malamud ³
		• Malamud at Figs. 3-4:  Fig. 3  Fig. 4

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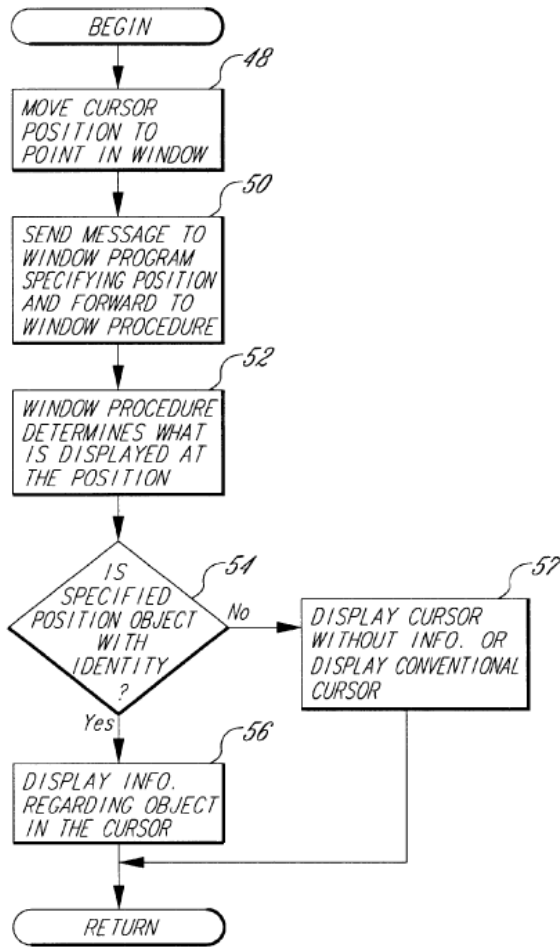
Claim	Claim Language	Malamud ³
		Malamud at Fig. 6:  <pre> graph TD 48([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> 56 56 --> 58([RETURN]) </pre> <i>Fig. 6</i>

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Claim	Claim Language	Malamud ³
		- Malamud at Fig. 7: <pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> RETURN([RETURN]) 62 --> RETURN </pre> <i>Fig. 7</i> - Malamud at Fig. 8:

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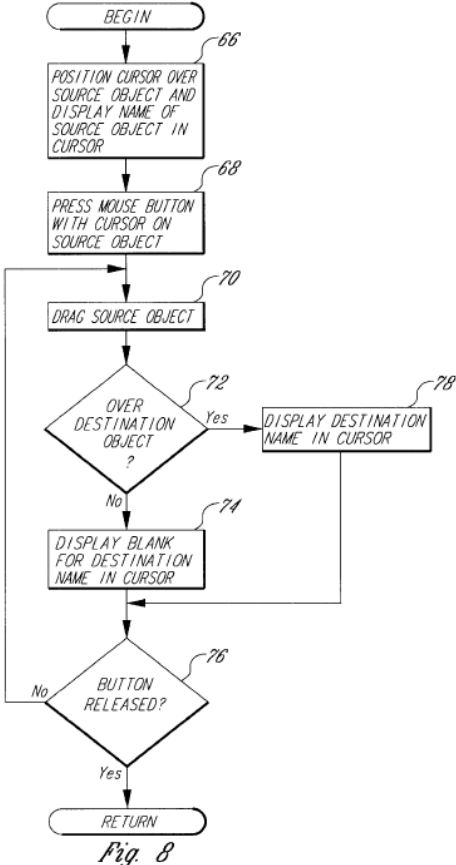
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 66[66 POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 66 --> 68[68 PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 68 --> 70[70 DRAG SOURCE OBJECT] 70 --> 72{72 OVER DESTINATION OBJECT ?} 72 -- Yes --> 78[78 DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[74 DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{76 BUTTON RELEASED?} 74 --> 76 76 -- No --> 72 76 -- Yes --> RETURN([RETURN]) </pre> <i>Fig. 8</i> To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with

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Claim	Claim Language	Malamud ³
		one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
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.	To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
53pre	A method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server, comprising:	Malamud discloses a method for modifying an initial cursor image displayed on a display of a user terminal connected to at least one server. <i>See, e.g.:</i> • Malamud at Abstract: Information cursors are provided for use in an operating system and/or application programs. Each information cursor includes a pointing portion to point to objects displayed on a video display and an information portion to display information about an object to which the pointing portion points. The information displayed in an information cursor may include the name of the object, a preview of the contents of the object, or property information about the object. • Malamud at 1:35-43: In accordance with a first aspect of the present invention, a method is practiced in a data processing system having a video display and an input device. In this method, objects, including an information cursor, are displayed on a video display. The cursor is positioned over at least a portion of one of the objects that is displayed in

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		response to a user using the input device. Information about the object which at least a portion of the cursor is over is displayed on the video display. • Malamud at 2:6-12: In accordance with still another aspect of the present invention, a method is practiced wherein a pointing portion of an information cursor is displayed on the video display. The pointing portion points to an icon associated with an object. Information about the object that is associated with the icon to which the pointing portion points is displayed as part of the information cursor. • Malamud at 2:13-28: In accordance with a further aspect of the present invention, a data processing system includes a video display and an input device that is operable by a user to communicate with the data processing system. The data processing system includes a means for producing a user interface on the video display and a means for displaying objects on the user interface. The data processing system further includes a means for displaying a cursor and for moving the cursor in response to a user operating the input device. The cursor has an indicator portion and information display portion. The indicator portion indicates a user selected one of the objects that is displayed on the user interface. In addition, the data processing system includes a means for displaying information in the information display portion of the cursor regarding the object that is indicated by the indicator portion of the cursor. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information

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Claim	Claim Language	Malamud ³
		cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2<i>a</i>, 2<i>b</i> and 2<i>c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name

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		cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 5:47-53: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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) • Malamud at 5:66-6:17: 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. 2<i>a</i>). Instead, a conventional cursor is displayed. On

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Claim	Claim Language	Malamud³
		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. • Malamud at Figs. 2b-2c:

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		<i>Fig. 2b</i> <i>Fig. 2c</i> • Malamud at Figs. 3-4:

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		Fig. 3 Fig. 4 • Malamud at Fig. 6:

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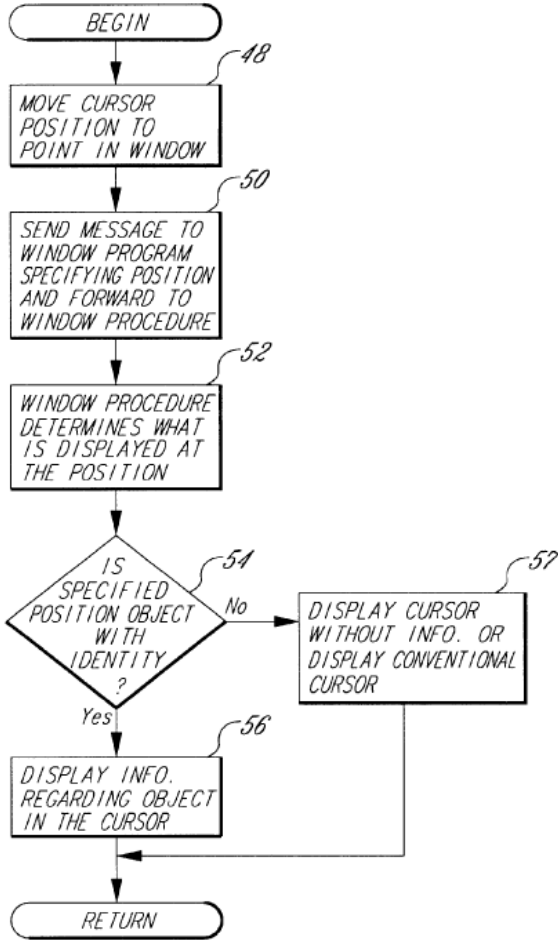
Claim	Claim Language	Malamud ³
		 <pre> graph TD 48([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> 56 56 --> 58([RETURN]) </pre> <i>Fig. 6</i> • Malamud at Fig. 7:

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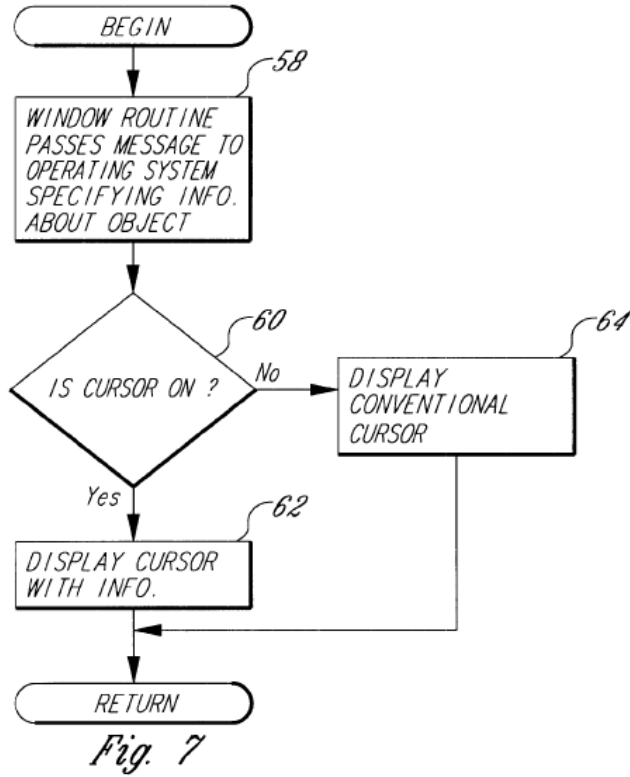
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> 62 62 --> RETURN([RETURN]) </pre> <i>Fig. 7</i> • Malamud at Fig. 8:

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Claim	Claim Language	Malamud ³
		<pre> graph TD 66([BEGIN]) --> 68[POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 68 --> 70[PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 70 --> 72{OVER DESTINATION OBJECT?} 72 -- Yes --> 78[DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{BUTTON RELEASED?} 74 --> 76 76 -- Yes --> 76R([RETURN]) 76 -- No --> 72 </pre> <i>Fig. 8</i> To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with

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		one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
53a	receiving a request at said at least one server to provide specified content information to said user terminal;	Malamud discloses receiving a request at the at least one server to provide specified content information to the user terminal. <i>See, e.g.:</i> • Malamud at 4:53-59: The operating system 22 (FIG. 1) logically divides the user interface into a number of windows. In general, each window has a separate window procedure associated with it. The operating system 22 maintains a message queue for each program that generates windows. As a program may generate multiple windows, the message queue may hold messages for multiple windows. • Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular

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		importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42.

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		To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
53b	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	Malamud discloses providing the specified content information to the user terminal in response to the request. Malamud discloses that the specified content information includes at least one cursor display instruction and at least one indication of cursor image data corresponding to a specific image. <i>See, e.g.:</i> • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:32-35:

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Claim	Claim Language	Malamud ³
		Name cursor 26 includes a pointing portion 28 (i.e., a conventional pointing cursor) and a name box 30. The name box 30 displays the name of the object to which the pointing portion 28 points. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2<i>a</i>, 2<i>b</i> and 2<i>c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name

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Claim	Claim Language	Malamud ³
		box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 4:53-59: The operating system 22 (FIG. 1) logically divides the user interface into a number of windows. In general, each window has a separate window procedure associated with it. The operating system 22 maintains a message queue for each program that generates windows. As a program may generate multiple windows, the message queue may hold messages for multiple windows. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45: The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop

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Claim	Claim Language	Malamud ³
		serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26

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Claim	Claim Language	Malamud ³
		(FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. To the extent Malamud does not explicitly and/or inherently disclose this element, it would have been obvious in view of the knowledge of a person of ordinary skill in the art in light of Malamud alone or it would have been obvious to combine Malamud with one or more prior art references identified in the cover document to which this chart is attached and/or in Appendix B thereto.
53c	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,	Malamud discloses transforming the initial cursor image displayed on the display of the user terminal into the shape and appearance of the specific image in response to the cursor display instruction. <i>See, e.g.:</i> • Malamud at Abstract: Information cursors are provided for use in an operating system and/or application programs. Each information cursor includes a pointing portion to point to objects displayed on a video display and an information portion to display information about an object to which the pointing portion points. The information displayed in an information cursor may include the name of the object, a preview of the contents of the object, or property information about the object.

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Claim	Claim Language	Malamud ³
		• Malamud at 1:35-43: In accordance with a first aspect of the present invention, a method is practiced in a data processing system having a video display and an input device. In this method, objects, including an information cursor, are displayed on a video display. The cursor is positioned over at least a portion of one of the objects that is displayed in response to a user using the input device. Information about the object which at least a portion of the cursor is over is displayed on the video display. • Malamud at 2:6-12: In accordance with still another aspect of the present invention, a method is practiced wherein a pointing portion of an information cursor is displayed on the video display. The pointing portion points to an icon associated with an object. Information about the object that is associated with the icon to which the pointing portion points is displayed as part of the information cursor. • Malamud at 2:13-28: In accordance with a further aspect of the present invention, a data processing system includes a video display and an input device that is operable by a user to communicate with the data processing system. The data processing system includes a means for producing a user interface on the video display and a means for displaying objects on the user interface. The data processing system further includes a means for displaying a cursor and for moving the cursor in response to a user operating the input device. The cursor has an indicator portion and information display portion. The indicator portion indicates a user selected one of the objects that is displayed on the user interface. In addition, the data processing system includes a means for displaying information in the information display portion of

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Claim	Claim Language	Malamud ³
		the cursor regarding the object that is indicated by the indicator portion of the cursor. • Malamud at 2:66-3:12: The present invention provides “information cursors” which display graphical or textual information about an object to which the cursor points. Each information cursor has two portions: a pointing portion and an information portion. The pointing portion points to a position on a video display. The information portion displays textual or graphical information about the object to which the pointing portion points. Information cursors are made available by an operating system to applications that are run on the operating system. Information cursors are available in a number of different varieties. Four varieties of information cursors are provided by the preferred embodiment. The four varieties of information cursors are name cursors, preview cursors, combined name and preview cursors, and property cursors. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns

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Claim	Claim Language	Malamud ³
		chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. <i>2a</i>, <i>2 b</i> and <i>2 c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. 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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:16-45:

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Claim	Claim Language	Malamud ³
		The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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

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Claim	Claim Language	Malamud ³
		in FIG. 7). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Figs. 2b-2c:

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Claim	Claim Language	Malamud ³
		<i>Fig. 2b</i> <i>Fig. 2c</i> • Malamud at Figs. 3-4:

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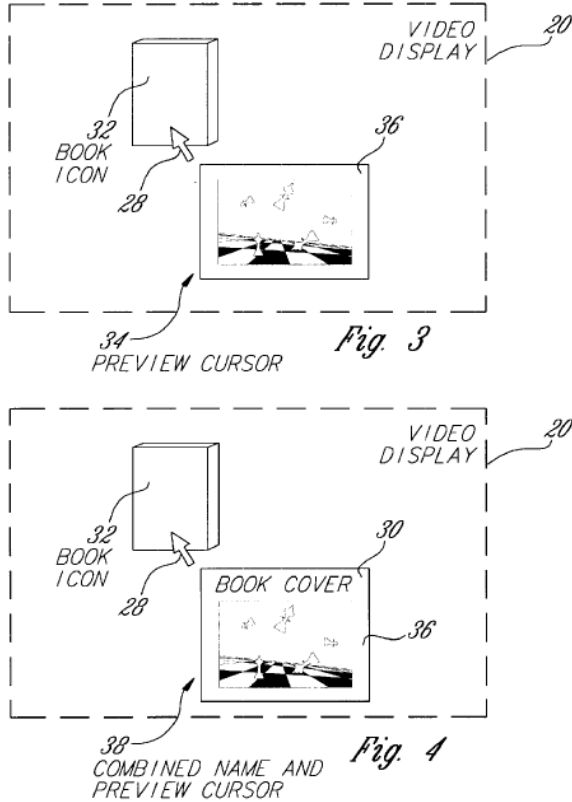
Claim	Claim Language	Malamud ³
		 The diagrams illustrate a user interface on a video display (20). In Fig. 3, a book icon (32) is shown with a preview cursor (34) pointing to it. A preview image (36) is displayed below the icon. In Fig. 4, the book icon (32) is shown with a combined name and preview cursor (38) pointing to it. A book cover (30) is displayed below the icon, and a preview image (36) is shown within the book cover.
53d	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	Malamud discloses that the specified content information includes information that is to be displayed on the display of the user's terminal. Malamud discloses that the specific image includes content corresponding to at least a portion of the information to be displayed on the display of the user's terminal. <i>See, e.g.:</i>

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Claim	Claim Language	Malamud ³
	content corresponding to at least a portion of said information that is to be displayed on said display of said user's terminal, and	• Malamud at 1:35-43: In accordance with a first aspect of the present invention, a method is practiced in a data processing system having a video display and an input device. In this method, objects, including an information cursor, are displayed on a video display. The cursor is positioned over at least a portion of one of the objects that is displayed in response to a user using the input device. Information about the object which at least a portion of the cursor is over is displayed on the video display. • Malamud at 3:36-47: 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". More generally, the name box 30 displays the name of the item to which the pointing portion 28 points. The user interface may be programmed such that, when the pointing portion 28 points to nothing of significance, the name box 30 remains blank. Alternatively, the user interface may be programmed so that the name box 30 disappears in such an instance. • Malamud at 3:54-4:18: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points.

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Claim	Claim Language	Malamud ³
		In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. The name cursor 26 (FIGS. 2<i>a</i>, 2<i>b</i> and 2<i>c</i>) and the preview cursor 34 (FIG. 3) may be combined into a combined name and preview cursor 38, as shown in FIG. 4. The combined name and preview cursor 38 includes three components. First, the preview cursor 38 includes a pointing portion 28 for pointing to an object on the video display 20, at least one name box 30 (two name boxes are used with a drag and drop operation, in a fashion analogous to that described above for the name cursor) for displaying the name of the object to which the pointing portion points and a preview portion 36 for holding a preview of the contents of the object to which the pointing portion points. In the example illustrated in FIG. 4, the name box 30 displays the phrase “Book Cover”, whereas the preview portion 36 displays the graphic of chess pieces flying through the air. • Malamud at 5:46-65: FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26 (FIG. 2<i>a</i>). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes

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Claim	Claim Language	Malamud ³
		a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42.
53e	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.	Malamud discloses that the cursor display instruction indicates a cursor display code operable to process the cursor display instruction to modify the cursor image to the cursor image in the shape and appearance of the specific image in response to movement of the cursor image over a display of the at least a portion of the information to be displayed on the display of the user's terminal, and wherein said specific image has a shape and appearance relating to said information to be displayed. <i>See, e.g.:</i> • Malamud at 1:15-31: Many operating systems provide a cursor that indicates a current position on a video display. The cursor is generally manipulable by an input device, such as a keyboard or a mouse. In certain operating systems, such as the Microsoft WINDOWS, version 3.1, operating system, which is sold by Microsoft Corporation of Redmond, Washington, a window may have a status bar that displays information about the object to which the cursor is currently pointing. As the cursor is moved to point at different objects, the contents of the status bar changes accordingly. The status bar is a separate graphic entity that is not connected to the cursor and does not move with the cursor. The status bar is positioned on the video display at a fixed location within a window. As such, a user has to look at two separate portions of the screen if

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Claim	Claim Language	Malamud ³
		he wishes to view both the cursor and the status bar. This separation of the status bar from the cursor can be confusing and burdensome to the user. • Malamud at 3:32-35: Name cursor 26 includes a pointing portion 28 (i.e., a conventional pointing cursor) and a name box 30. The name box 30 displays the name of the object to which the pointing portion 28 points. • Malamud at 3:36-47: 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”. More generally, the name box 30 displays the name of the item to which the pointing portion 28 points. The user interface may be programmed such that, when the pointing portion 28 points to nothing of significance, the name box 30 remains blank. Alternatively, the user interface may be programmed so that the name box 30 disappears in such an instance. • Malamud at 3:54-58: The target object name is not shown until the pointing portion 28 of the-name cursor 26 is moved to point to the target object. A source object icon 33 for the source object is dragged along with the cursor during the drag portion of the operation. • Malamud at 3:59-4:3:

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Claim	Claim Language	Malamud ³
		FIG. 3 shows an example of a preview cursor 34, which includes a preview portion 36 and the same pointing portion 28 as the name cursor 26. The preview cursor 34 provides a preview of the contents of the object to which the cursor points. In the example shown in FIG. 3, the preview cursor 34 points to the book icon 32 displayed on the video display 20. The preview portion 36 holds graphical data depicting a preview of the contents of the object (i.e., the book icon 32) to which the pointing portion 28 points. In the example of FIG. 3, the book concerns chess, and the preview portion 36 shows a graphical scene of chess pieces flying through the air. • Malamud at 4:19-32: An additional variety of information cursor that is provided by the preferred embodiment of the present invention is a property cursor 40, such as shown in FIG. 5. A property cursor 40 includes the pointing portion 28 and a property box 42. The property box 40 displays property information (often including the name of the object) regarding the object to which the pointer portion 28 points. In the example of FIG. 5, the property cursor 40 serves as a help cursor that displays help information in the property box 42 for the object to which the pointing portion 28 points. In FIG. 5, the pointer portion 28 points to a maximize button 44. The text in the property box 42 identifies the nature of the maximize button 44 to which the pointer portion 28 points and displays relevant help information regarding this object. • Malamud at 4:66-5:14: When a user positions a cursor with the mouse 18 over a window or clicks the mouse by depressing one of the mouse buttons within the window, the procedure for the window receives a mouse message. The operating system 22 provides a number of predefined mouse messages. The mouse messages specify the status of mouse

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Claim	Claim Language	Malamud ³
		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 corner of the window. The window procedure receives the mouse message and utilizes the information contained in the message to respond to the mouse activities. A new mouse message need not be generated for every single pixel position change of a mouse within a window; rather, a message may be generated each time the mouse moves more than a threshold number of pixels transversed by the mouse. • Malamud at 5:14-65: This message system plays a role in the implementation of information cursors described above. The appearance of the cursors on the video display 20 (FIG. 1) is dictated by bitmaps stored within the operating system 22. The role that the message loop serves in the implementation of the information cursors can be seen in the flowchart of FIG. 6, which illustrates the steps performed by the system 10 (FIG. 1) when the cursor moves into a window that is displayed on the video display 20. 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). For instance, an object may be at the specified position or nothing of particular importance may be at the specified position. A determination is made whether the specified position corresponds to the position of an object with an identity (step 54). In other words, a determination is made whether a named entity is present at the specified cursor position. If a named entity is present at the specified cursor position, the information regarding the object at the specified cursor position is displayed in the information cursor (step 56). If, however, a named entity is not present at the specified cursor position, either a conventional cursor is displayed or

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Claim	Claim Language	Malamud ³
		the information containing portion (e.g., name box 30, preview portion 36 or property box 40) of the information cursor is shown in blank (step 57). The choice between these options is controlled by the application program. FIG. 7 is a flowchart showing in more detail the steps that must be performed in order to realize step 56 of FIG. 6. 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). Suppose that the application program desires to display a name cursor 26 (FIG. 2a). A message requesting that a name cursor be displayed is passed to the operating system 22 along with a text string for the name to be displayed in the name box 30. However, if the cursor to be displayed is a preview cursor 34 (FIG. 3), a message specifying that a preview cursor is required is sent. The message includes a pointer to a bitmap of graphical information that the operating system 22 should use in the preview portion 36. Still further, a property cursor 46 may be requested in the message. The message, in such a case, includes a text string for the text of property information to be displayed in the property box 42. • Malamud at Figs. 2b-2c:

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Claim	Claim Language	Malamud ³
		<i>Fig. 2b</i> <i>Fig. 2c</i> • Malamud at Figs. 3-4:

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Claim	Claim Language	Malamud ³
		Fig. 3 Fig. 4 • Malamud at Fig. 6:

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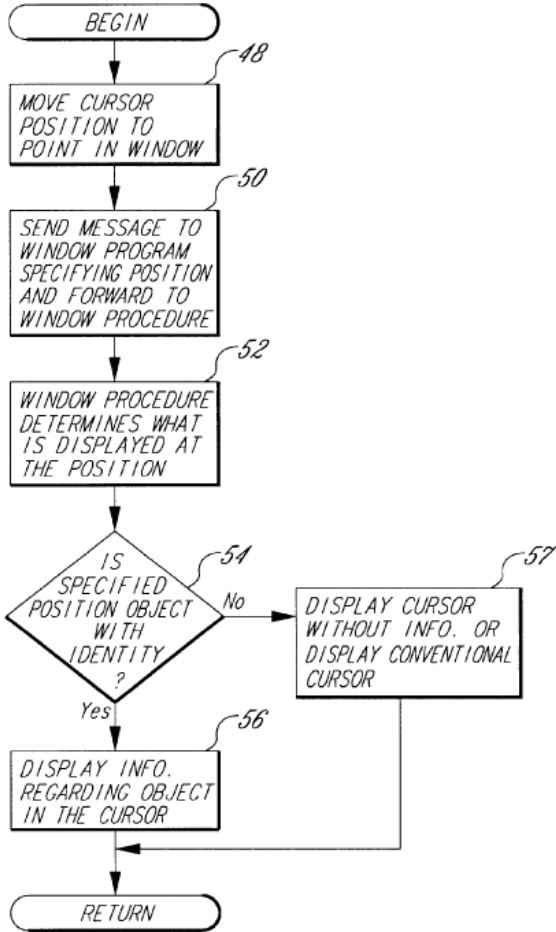
Claim	Claim Language	Malamud ³
		 <pre> graph TD 48([BEGIN]) --> 48[MOVE CURSOR POSITION TO POINT IN WINDOW] 48 --> 50[SEND MESSAGE TO WINDOW PROGRAM SPECIFYING POSITION AND FORWARD TO WINDOW PROCEDURE] 50 --> 52[WINDOW PROCEDURE DETERMINES WHAT IS DISPLAYED AT THE POSITION] 52 --> 54{IS SPECIFIED POSITION OBJECT WITH IDENTITY?} 54 -- No --> 57[DISPLAY CURSOR WITHOUT INFO. OR DISPLAY CONVENTIONAL CURSOR] 54 -- Yes --> 56[DISPLAY INFO. REGARDING OBJECT IN THE CURSOR] 57 --> 56 56 --> 58([RETURN]) </pre> <i>Fig. 6</i> • Malamud at Fig. 7:

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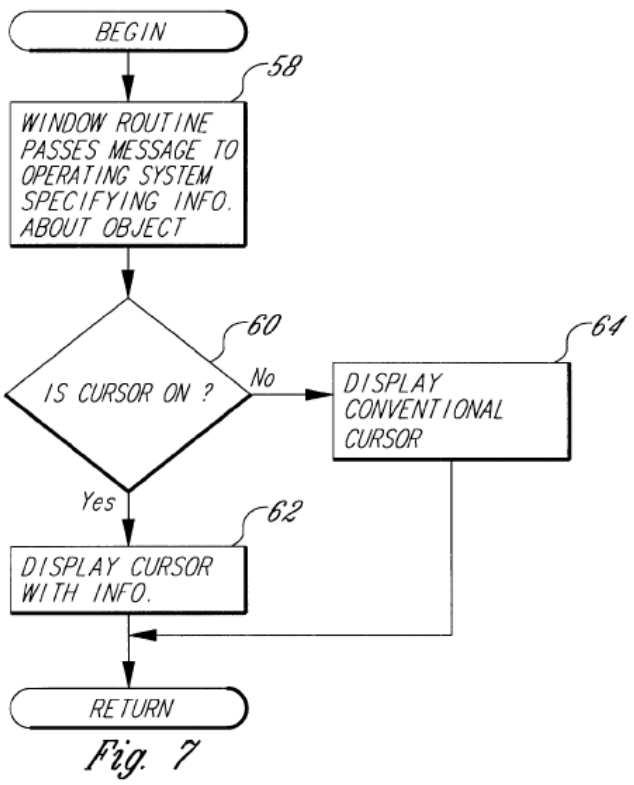
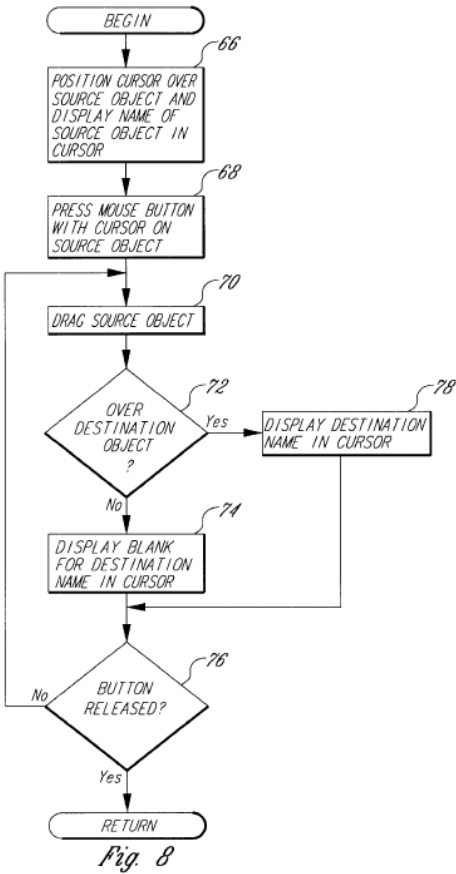
Claim	Claim Language	Malamud ³
		 <pre> graph TD BEGIN([BEGIN]) --> 58[WINDOW ROUTINE PASSES MESSAGE TO OPERATING SYSTEM SPECIFYING INFO. ABOUT OBJECT] 58 --> 60{IS CURSOR ON ?} 60 -- No --> 64[DISPLAY CONVENTIONAL CURSOR] 60 -- Yes --> 62[DISPLAY CURSOR WITH INFO.] 64 --> 62 62 --> RETURN([RETURN]) </pre> <i>Fig. 7</i> • Malamud at Fig. 8:

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United States Patent No. 6,118,449 in view of Malamud**

Claim	Claim Language	Malamud ³
		 <pre> graph TD 66([BEGIN]) --> 66[POSITION CURSOR OVER SOURCE OBJECT AND DISPLAY NAME OF SOURCE OBJECT IN CURSOR] 66 --> 68[PRESS MOUSE BUTTON WITH CURSOR ON SOURCE OBJECT] 68 --> 70[DRAG SOURCE OBJECT] 70 --> 72{OVER DESTINATION OBJECT?} 72 -- Yes --> 78[DISPLAY DESTINATION NAME IN CURSOR] 72 -- No --> 74[DISPLAY BLANK FOR DESTINATION NAME IN CURSOR] 78 --> 76{BUTTON RELEASED?} 74 --> 76 76 -- No --> 70 76 -- Yes --> 76([RETURN]) </pre> <i>Fig. 8</i>