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(54) **SYSTEM AND METHOD FOR CUSTOMIZING AN INTERACTIVE TRAINING SEQUENCE**

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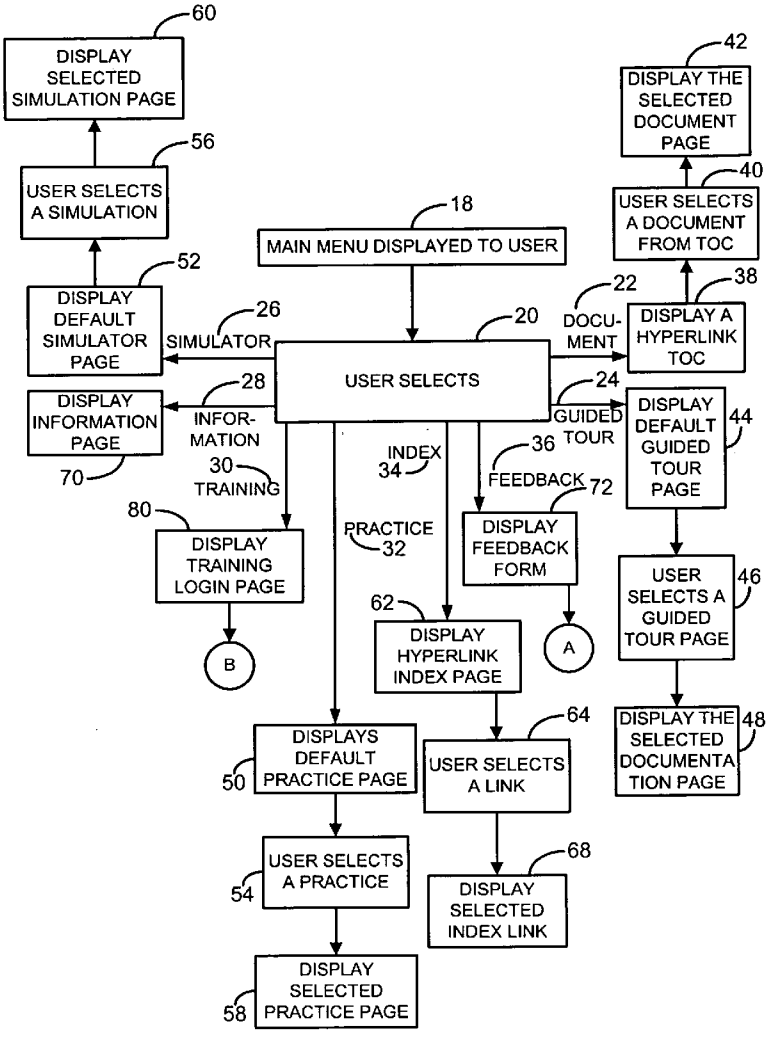
(57) **ABSTRACT**

The present invention provides an improved system and method for customizing an interactive training sequence. The present invention includes one or more sets of predefined questions for gathering predefined information of the user, a customization module for customizing the training sequence responsive to the user response to the set of predefined questions, one or more login identifications for uniquely linking the custom training sequence to the user, a training module for playing the custom training sequence in a user understandable format when selected by the user. The custom training sequence is stored as a plurality of digital files, and each digital file is designated by a Uniform Resource Locator.



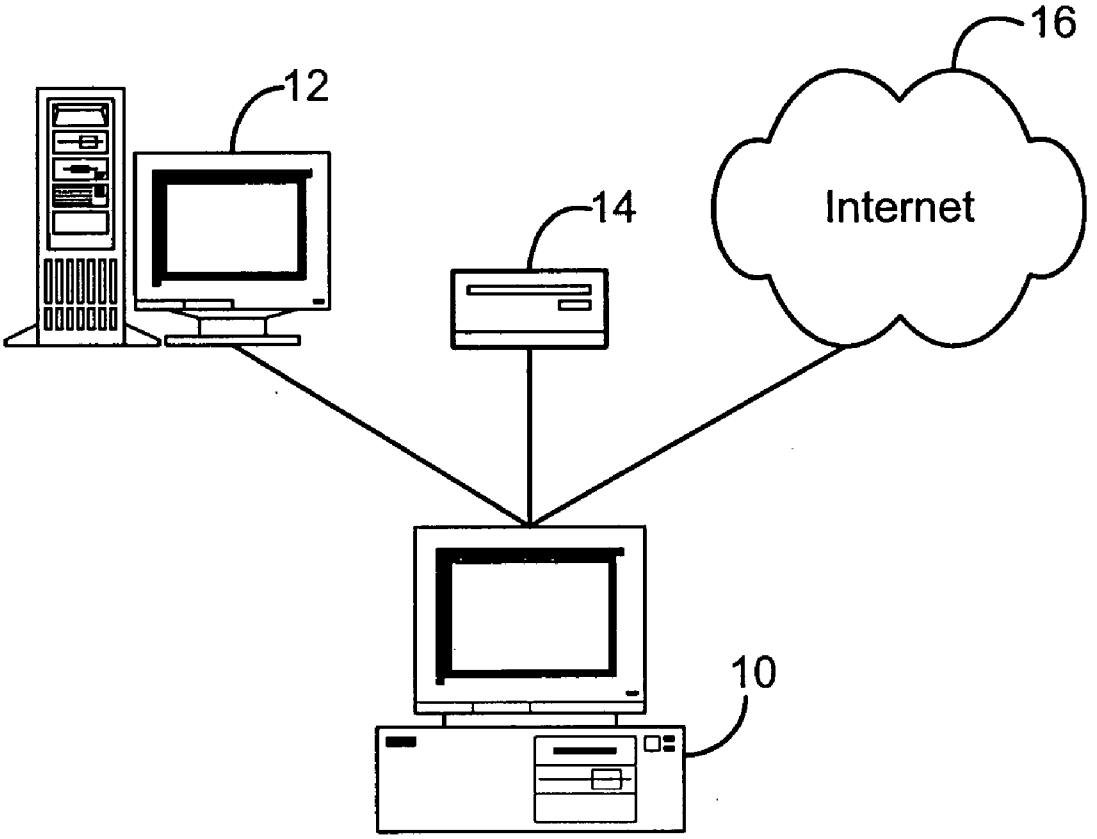


FIG. 1

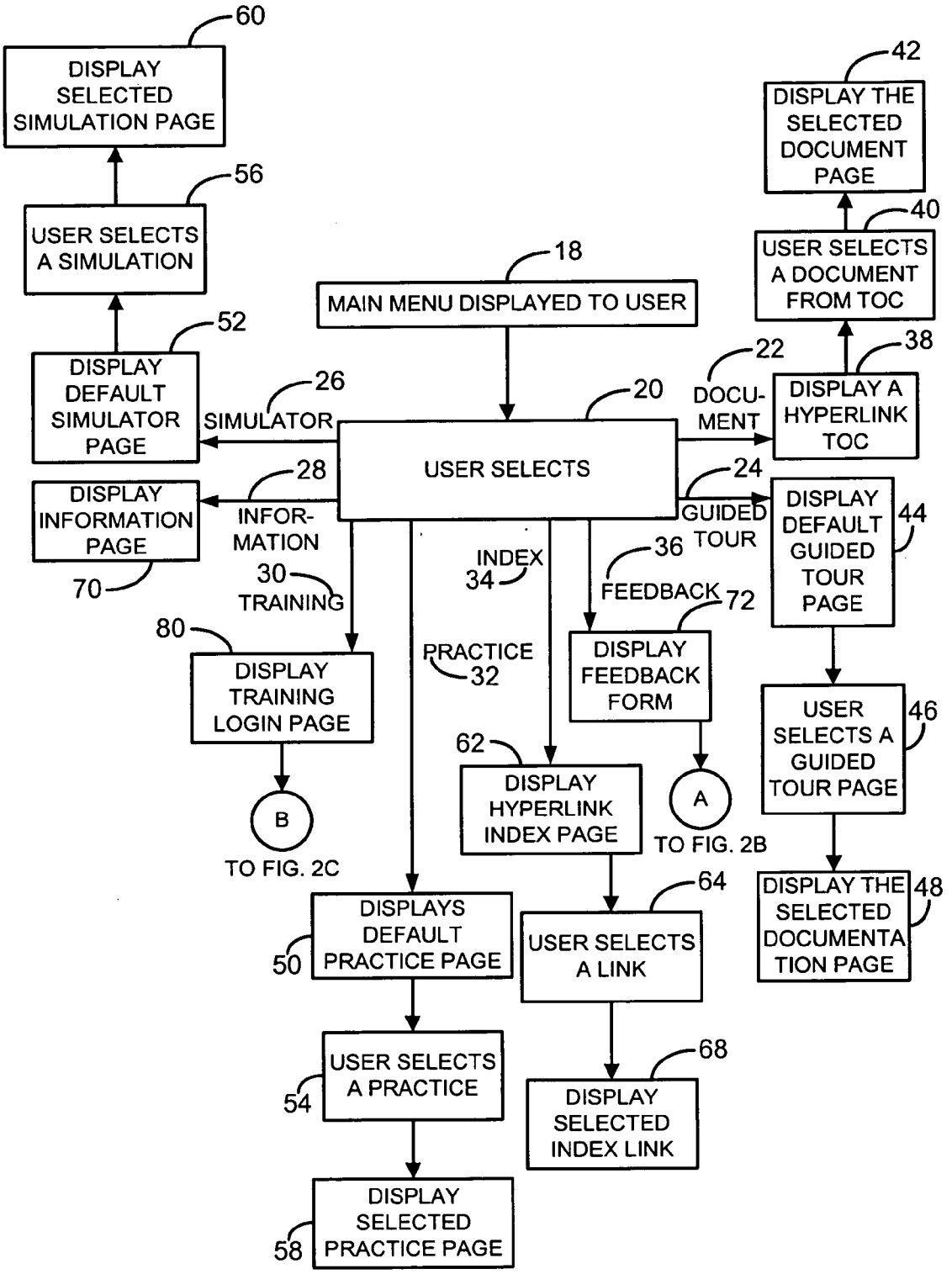

60
DISPLAY SELECTED SIMULATION PAGE
56
USER SELECTS A SIMULATION
52
DISPLAY DEFAULT SIMULATOR PAGE
18
MAIN MENU DISPLAYED TO USER
26
SIMULATOR
20
USER SELECTS
22
DOCU-MENT
42
DISPLAY THE SELECTED DOCUMENT PAGE
40
USER SELECTS A DOCUMENT FROM TOC
38
DISPLAY A HYPERLINK TOC
28
INFOR-MATION
24
GUIDED TOUR
DISPLAY INFORMATION PAGE
70
30
TRAINING
INDEX
34
36
FEEDBACK
72
DISPLAY DEFAULT GUIDED TOUR PAGE
44
80
DISPLAY TRAINING LOGIN PAGE
PRACTICE
32
DISPLAY FEEDBACK FORM
62
DISPLAY HYPERLINK INDEX PAGE
USER SELECTS A GUIDED TOUR PAGE
46
B
TO FIG. 2C
A
TO FIG. 2B
64
DISPLAYS DEFAULT PRACTICE PAGE
50
USER SELECTS A LINK
DISPLAY THE SELECTED DOCUMENTATION PAGE
48
USER SELECTS A PRACTICE
54
68
DISPLAY SELECTED INDEX LINK
DISPLAY SELECTED PRACTICE PAGE
58

FIG. 2A

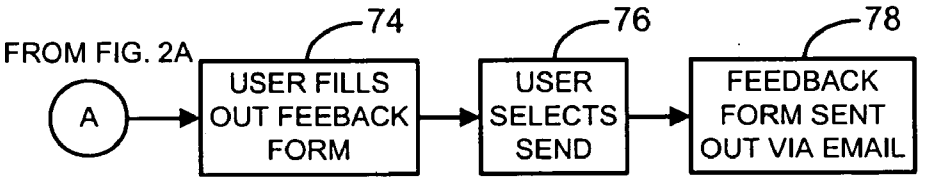

FROM FIG. 2A
A
74
USER FILLS OUT FEEBACK FORM
76
USER SELECTS SEND
78
FEEDBACK FORM SENT OUT VIA EMAIL

FIG. 2B

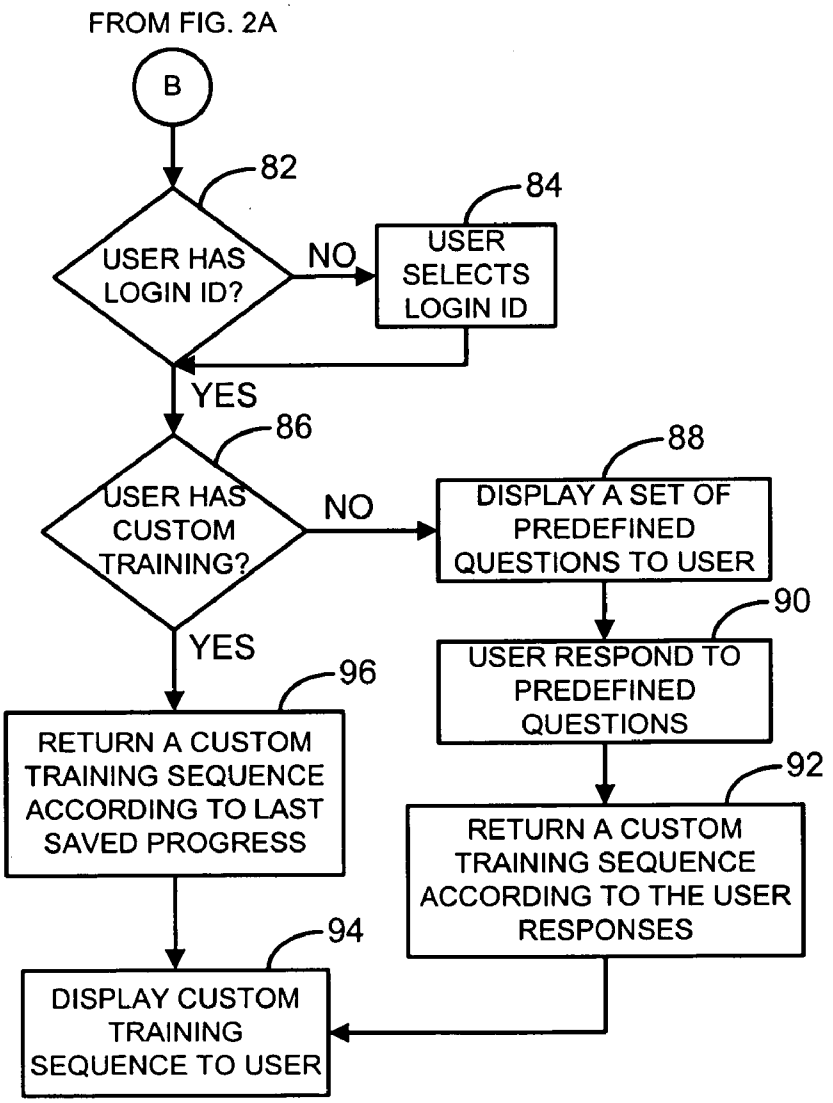

FROM FIG. 2A
B
82
USER HAS LOGIN ID?
NO
84
USER SELECTS LOGIN ID
YES
86
USER HAS CUSTOM TRAINING?
NO
88
DISPLAY A SET OF PREDEFINED QUESTIONS TO USER
90
USER RESPOND TO PREDEFINED QUESTIONS
92
RETURN A CUSTOM TRAINING SEQUENCE ACCORDING TO THE USER RESPONSES
YES
96
RETURN A CUSTOM TRAINING SEQUENCE ACCORDING TO LAST SAVED PROGRESS
94
DISPLAY CUSTOM TRAINING SEQUENCE TO USER

FIG. 2C

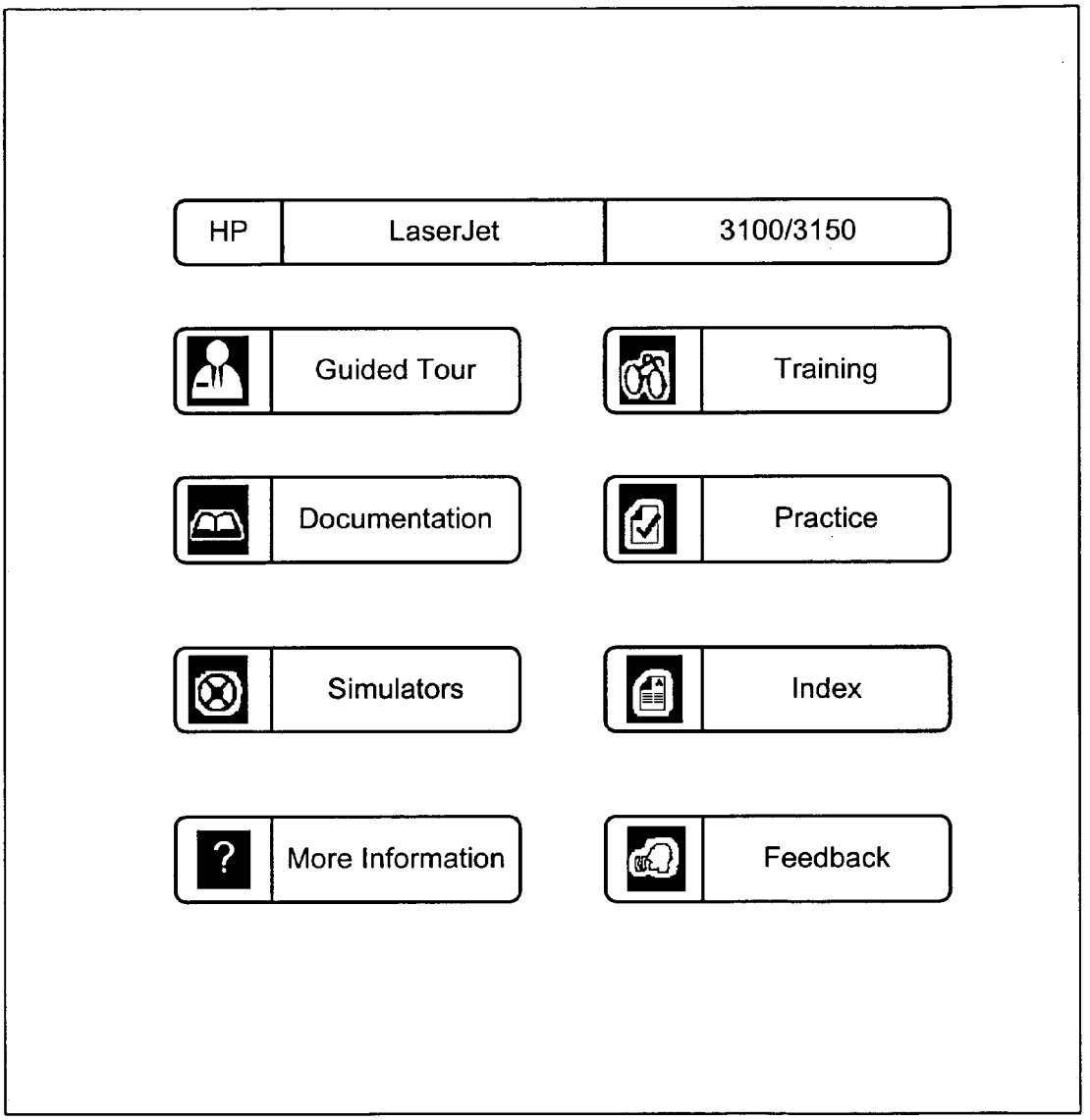

HP
LaserJet
3100/3150
Guided Tour
Training
Documentation
Practice
Simulators
Index
More Information
Feedback

FIG. 3

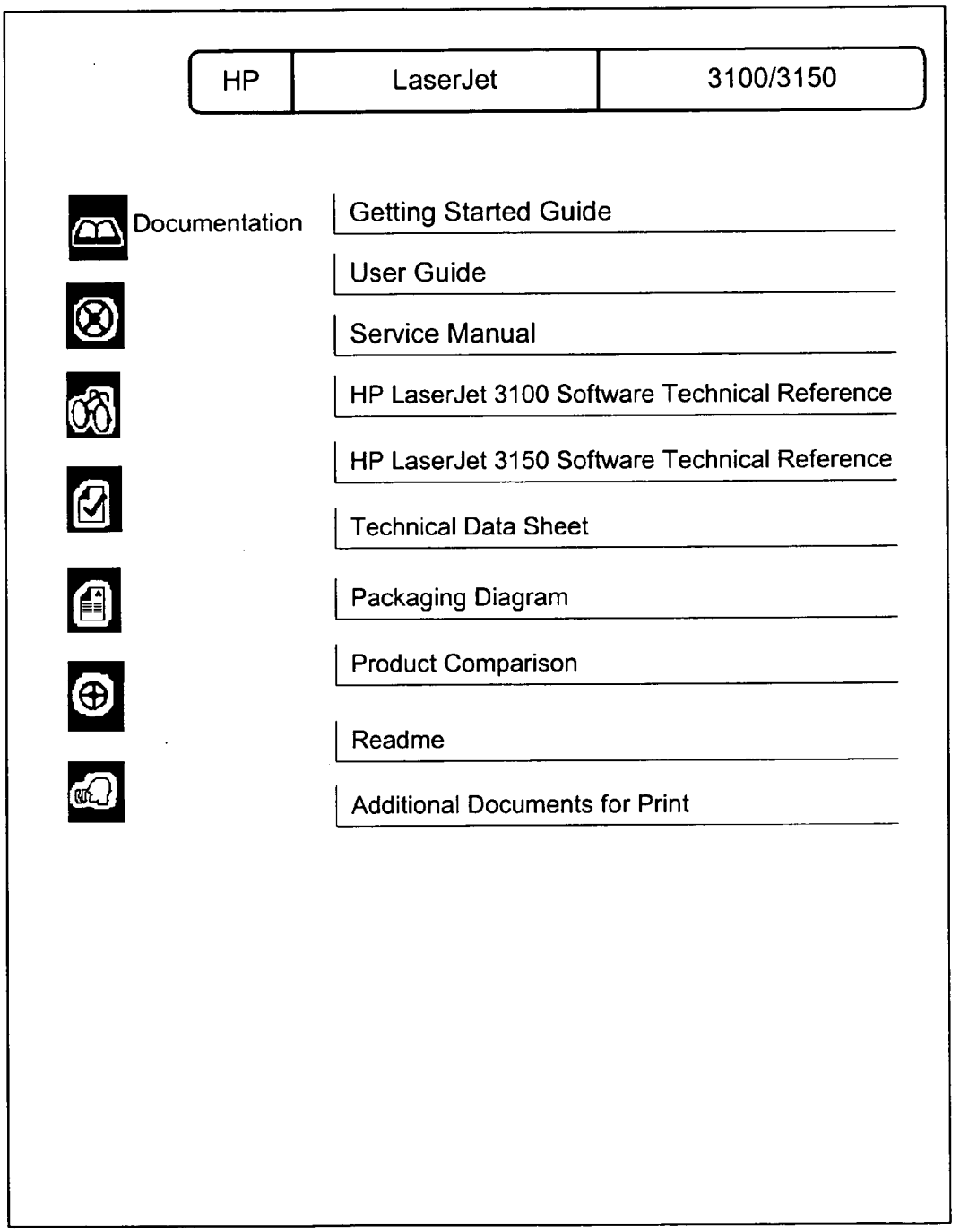
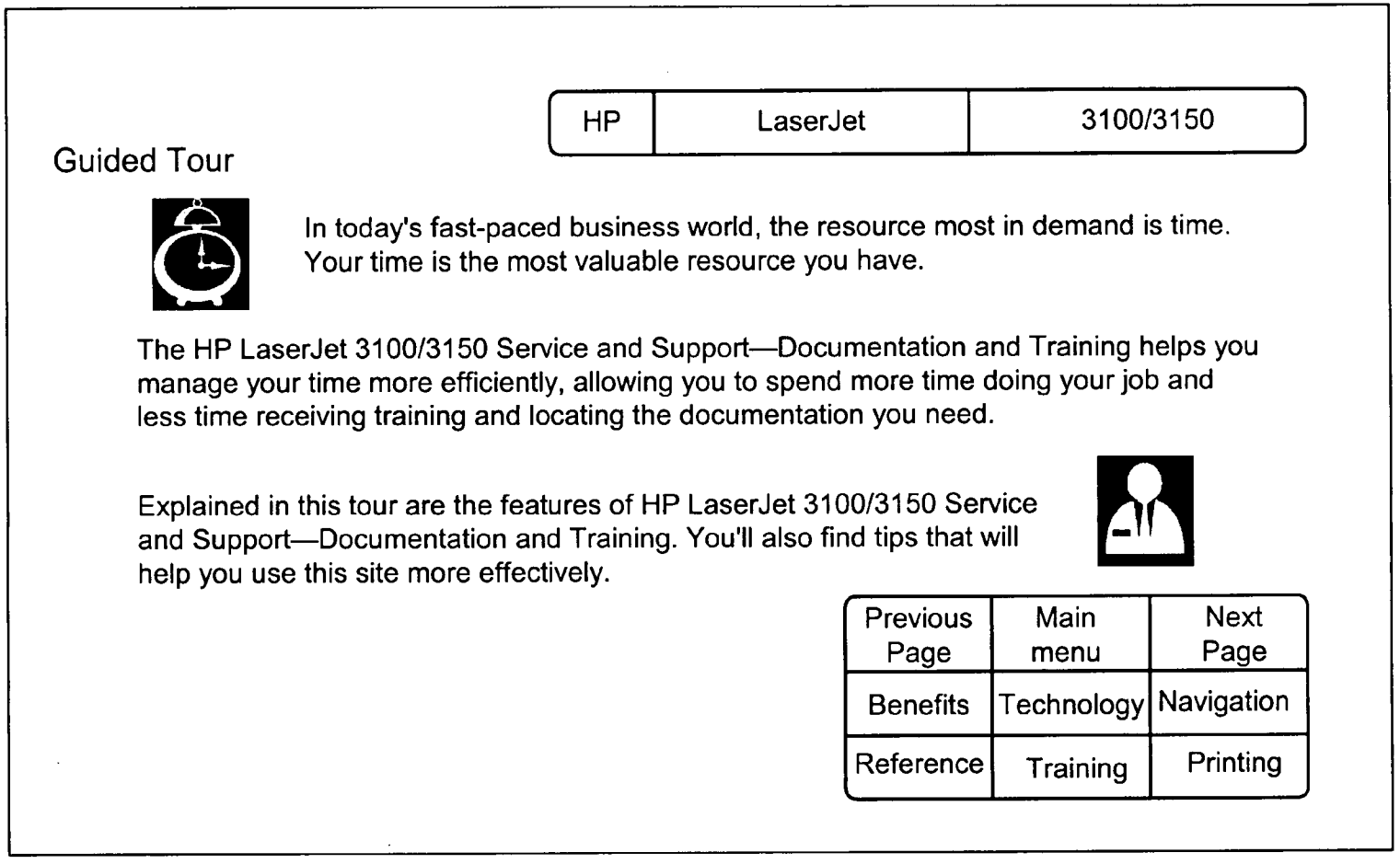

HP
LaserJet
3100/3150
Documentation
Getting Started Guide
User Guide
Service Manual
HP LaserJet 3100 Software Technical Reference
HP LaserJet 3150 Software Technical Reference
Technical Data Sheet
Packaging Diagram
Product Comparison
Readme
Additional Documents for Print

FIG. 4

FIG. 5


HP
LaserJet
3100/3150
Guided Tour
In today's fast-paced business world, the resource most in demand is time. Your time is the most valuable resource you have.
The HP LaserJet 3100/3150 Service and Support—Documentation and Training helps you manage your time more efficiently, allowing you to spend more time doing your job and less time receiving training and locating the documentation you need.
Explained in this tour are the features of HP LaserJet 3100/3150 Service and Support—Documentation and Training. You'll also find tips that will help you use this site more effectively.
Previous Page
Main menu
Next Page
Benefits
Technology
Navigation
Reference
Training
Printing

HP	LaserJet	3100/3150

Guided Tour: Benefits

The teacher. The classroom. The library.
And just a mouse-click away

HP LaserJet 3100/3150 Service and Support—Documentation and Training provides an innovative combination of personalized training, product simulators, and product documentation—and includes support and technical sales information for the HP LaserJet 3150 and HP LaserJet 3100 products.

In the past, you sat through a training course, spent hours familiarizing yourself with the hardware and software, and then filled your bookshelves with volumes of product documentation for later reference.

Now, by using Web-based technology, the documentation and training brings all of this information together in one place: your computer. You can quickly find and use all information currently available for the HP LaserJet 3150 and HP LaserJet 3100 products whenever you want to.

Easier and faster information access

The HP LaserJet 3100/3150 Service and Support—Documentation and Training brings you almost everything you need to begin servicing and supporting the product. This suite of product information, completely integrated for fast access, includes:

* Personalized training
* Product simulators
* Product documentation
* Service, support, and technical sales information

Previous Page	Main menu	Next Page
Benefits	Technology	Navigation
Reference	Training	Printing

FIG. 6

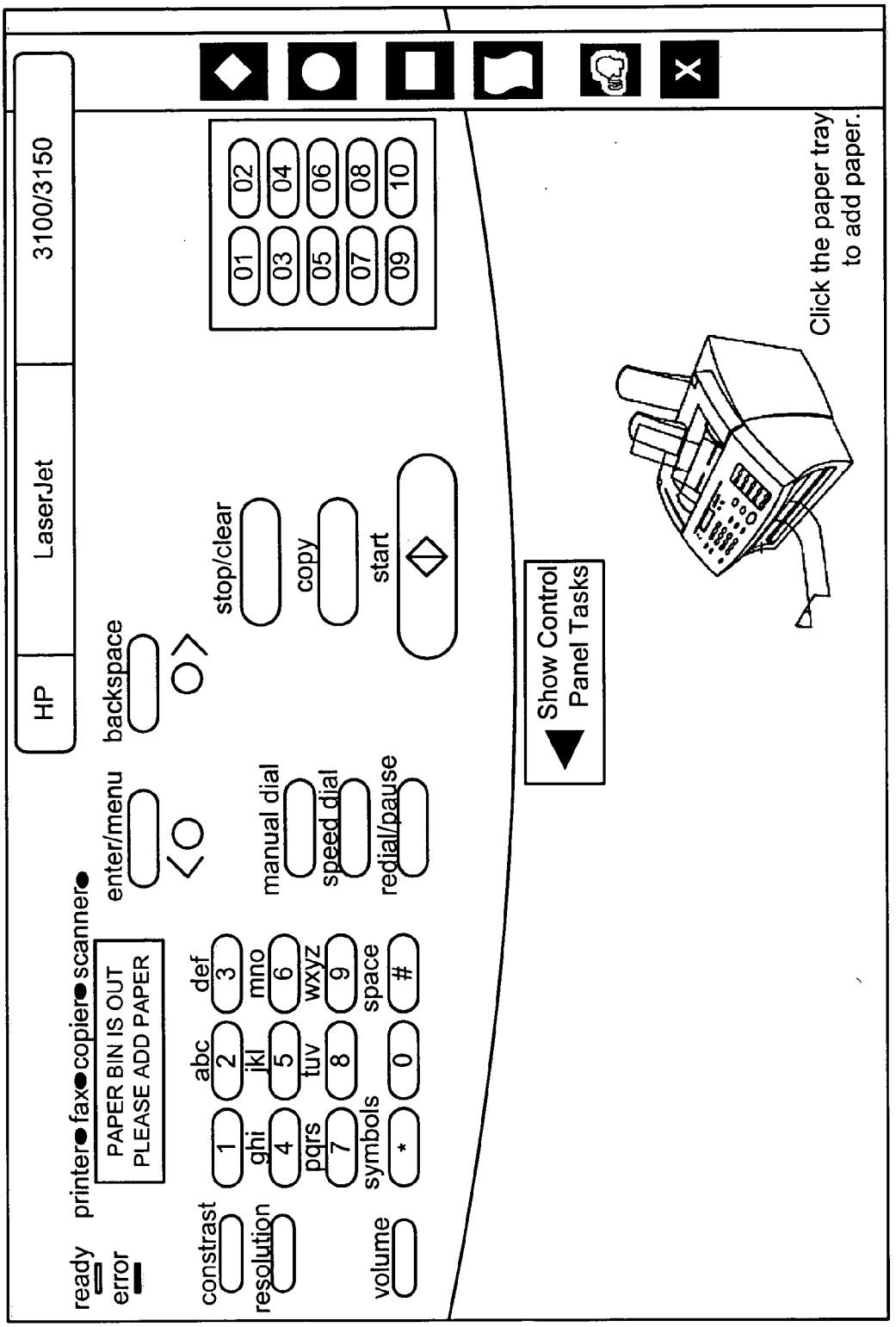

HP
LaserJet
3100/3150
ready
error
printer fax copier scanner
PAPER BIN IS OUT
PLEASE ADD PAPER
enter/menu
backspace
stop/clear
copy
start
manual dial
speed dial
redial/pause
constrast
resolution
volume
symbols
space
Show Control Panel Tasks
Click the paper tray to add paper.

FIG. 7

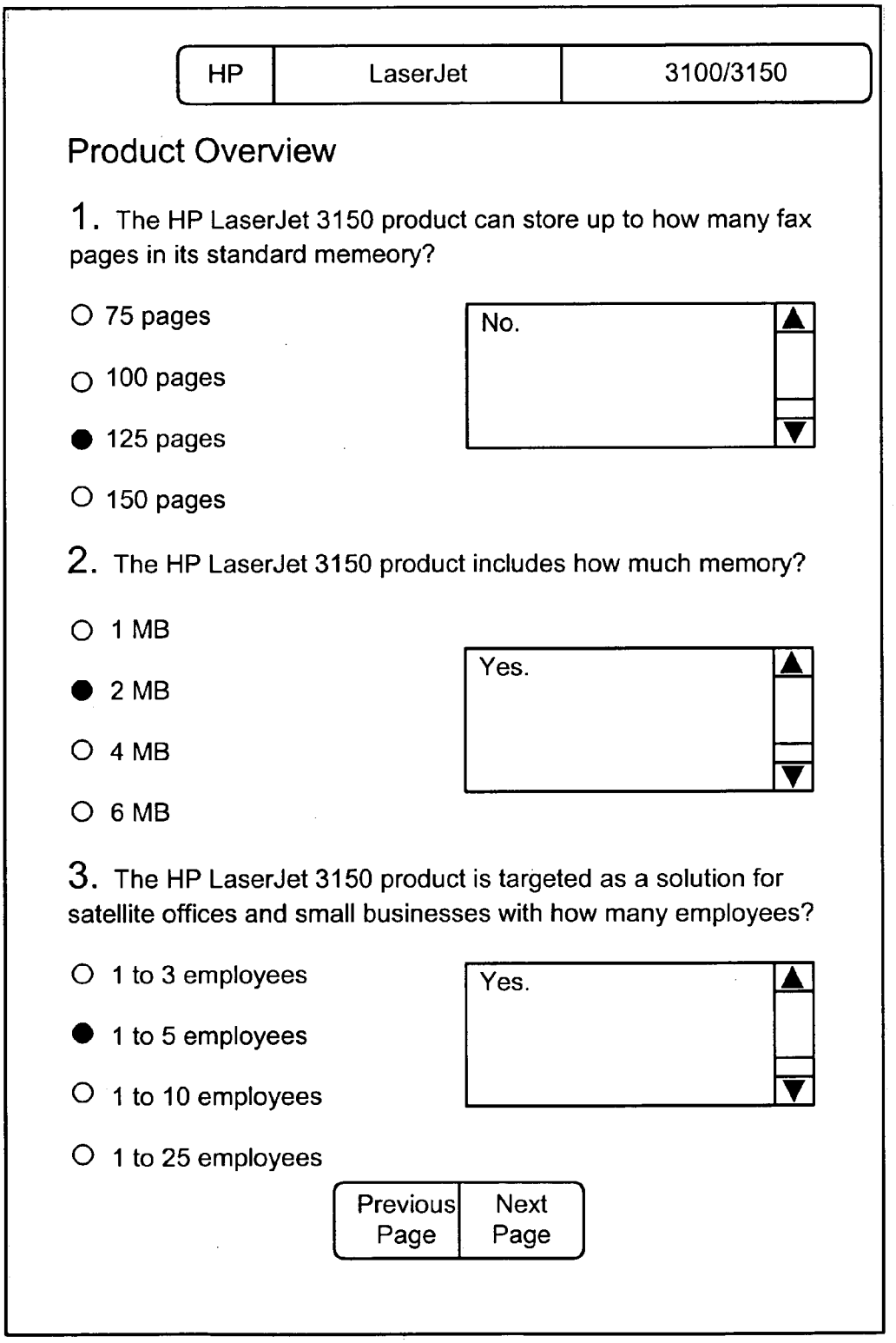

HP
LaserJet
3100/3150
Product Overview
1. The HP LaserJet 3150 product can store up to how many fax pages in its standard memeory?
○ 75 pages
○ 100 pages
● 125 pages
○ 150 pages
No.
2. The HP LaserJet 3150 product includes how much memory?
○ 1 MB
● 2 MB
○ 4 MB
○ 6 MB
Yes.
3. The HP LaserJet 3150 product is targeted as a solution for satellite offices and small businesses with how many employees?
○ 1 to 3 employees
● 1 to 5 employees
○ 1 to 10 employees
○ 1 to 25 employees
Yes.
Previous Page
Next Page

FIG. 8

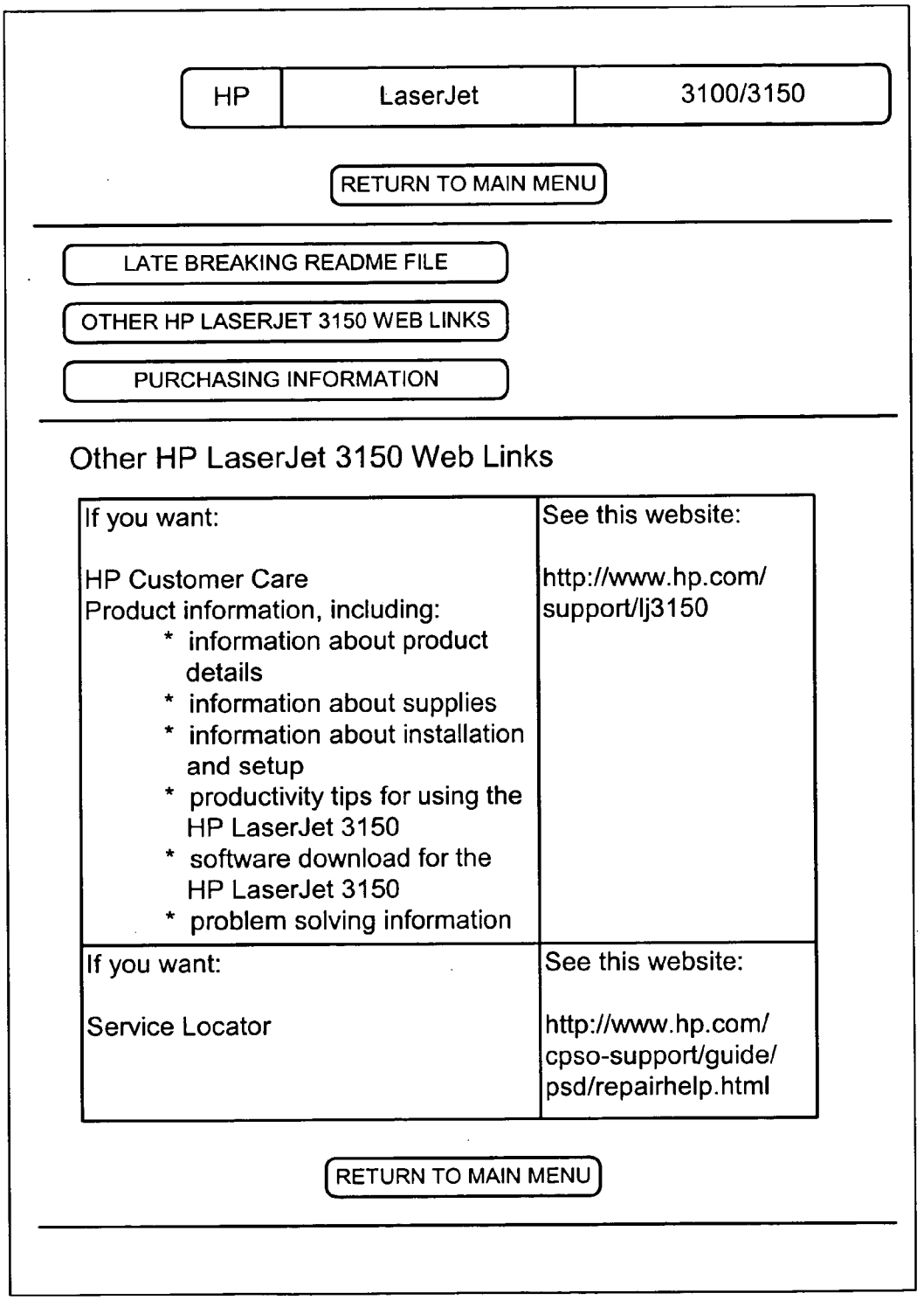

HP
LaserJet
3100/3150
RETURN TO MAIN MENU
LATE BREAKING README FILE
OTHER HP LASERJET 3150 WEB LINKS
PURCHASING INFORMATION
Other HP LaserJet 3150 Web Links
If you want:
HP Customer Care
Product information, including:
* information about product details
* information about supplies
* information about installation and setup
* productivity tips for using the HP LaserJet 3150
* software download for the HP LaserJet 3150
* problem solving information
See this website:
http://www.hp.com/support/lj3150
If you want:
Service Locator
See this website:
http://www.hp.com/cpso-support/guide/psd/repairhelp.html
RETURN TO MAIN MENU

FIG. 9

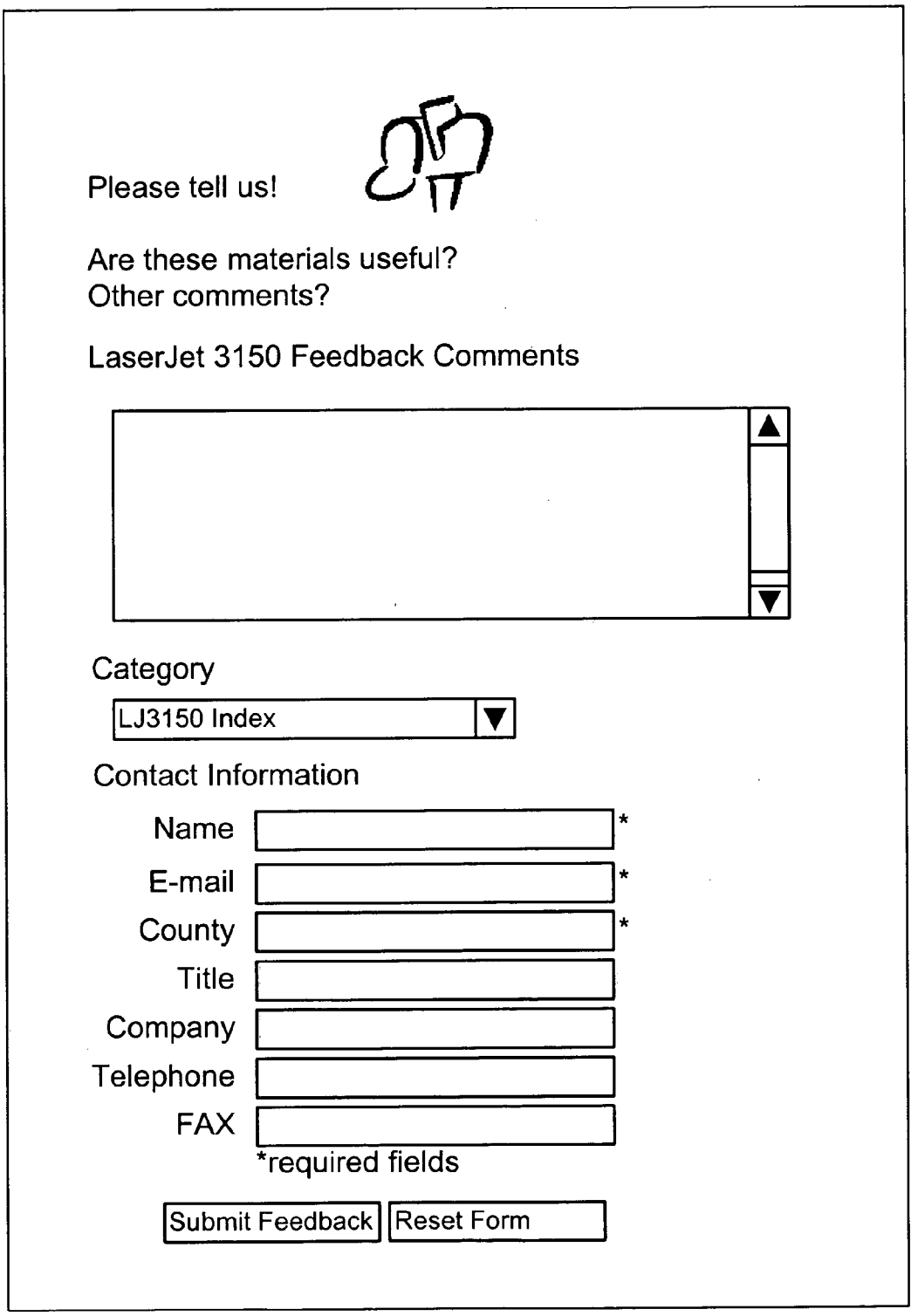

Please tell us!
Are these materials useful?
Other comments?
LaserJet 3150 Feedback Comments
Category
LJ3150 Index
Contact Information
Name
E-mail
County
Title
Company
Telephone
FAX
*required fields
Submit Feedback
Reset Form

FIG. 10

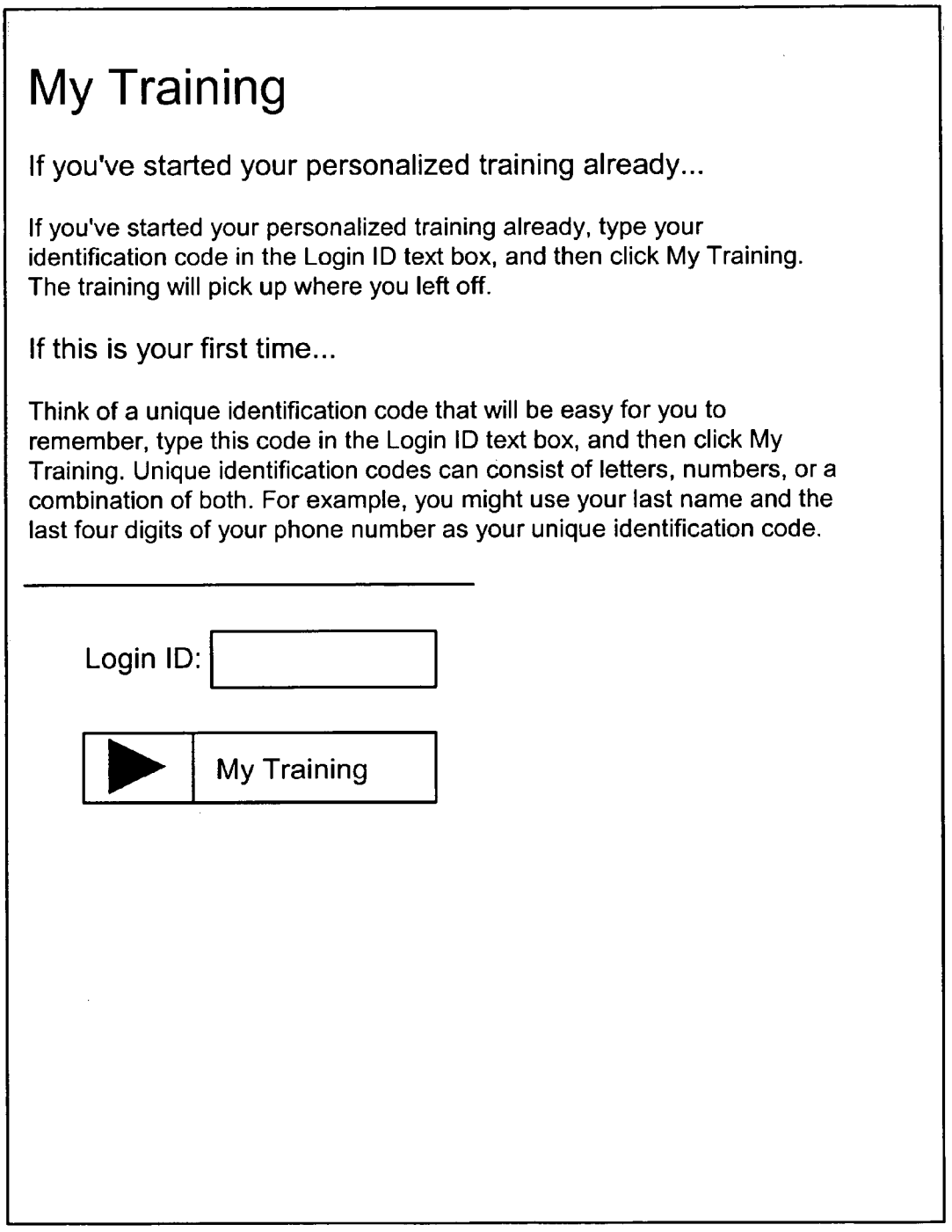

My Training
If you've started your personalized training already...
If you've started your personalized training already, type your identification code in the Login ID text box, and then click My Training. The training will pick up where you left off.
If this is your first time...
Think of a unique identification code that will be easy for you to remember, type this code in the Login ID text box, and then click My Training. Unique identification codes can consist of letters, numbers, or a combination of both. For example, you might use your last name and the last four digits of your phone number as your unique identification code.
Login ID:
My Training

FIG. 11

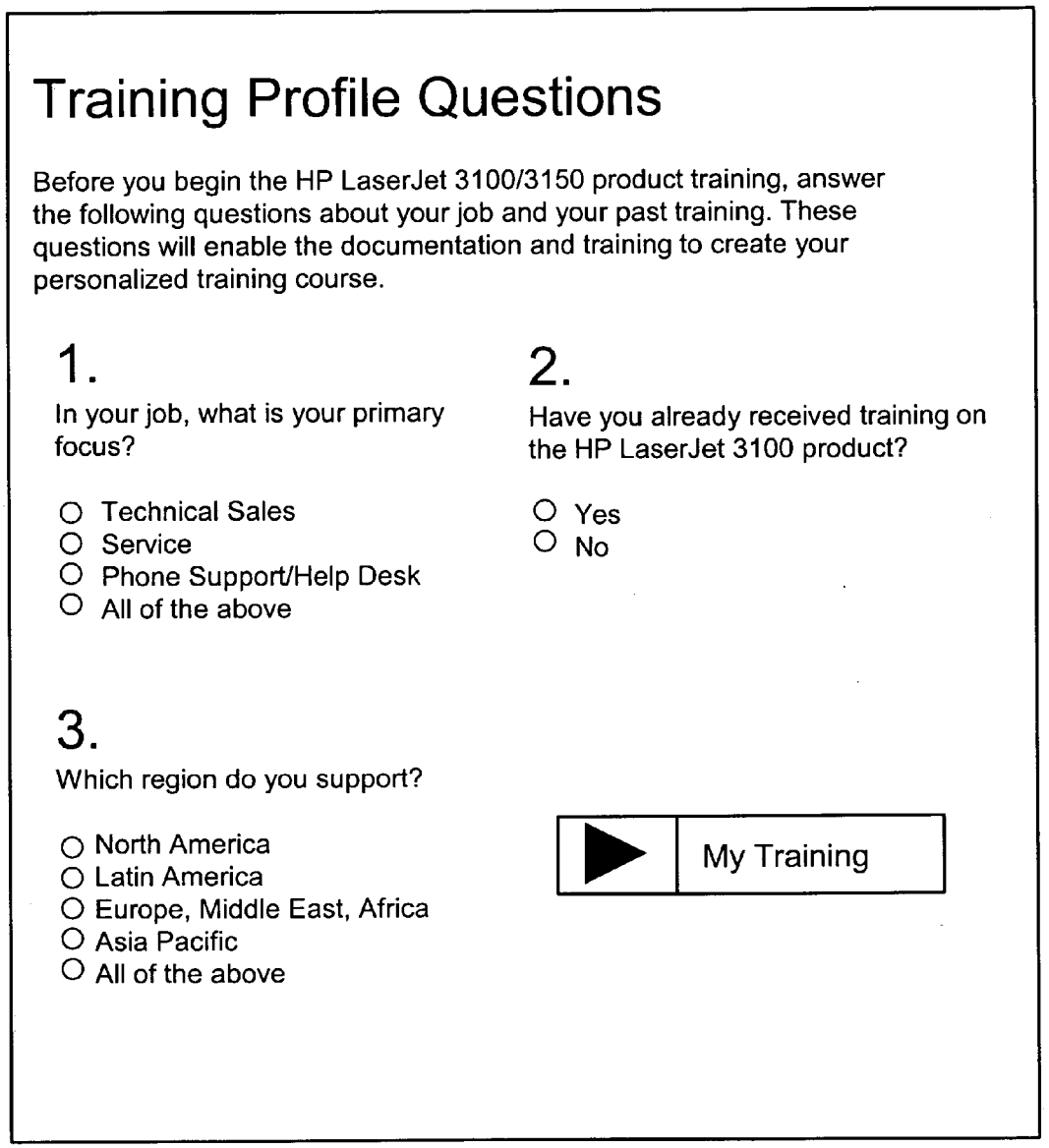

Training Profile Questions
Before you begin the HP LaserJet 3100/3150 product training, answer the following questions about your job and your past training. These questions will enable the documentation and training to create your personalized training course.
1.
In your job, what is your primary focus?
Technical Sales
Service
Phone Support/Help Desk
All of the above
2.
Have you already received training on the HP LaserJet 3100 product?
Yes
No
3.
Which region do you support?
North America
Latin America
Europe, Middle East, Africa
Asia Pacific
All of the above
My Training

FIG. 12

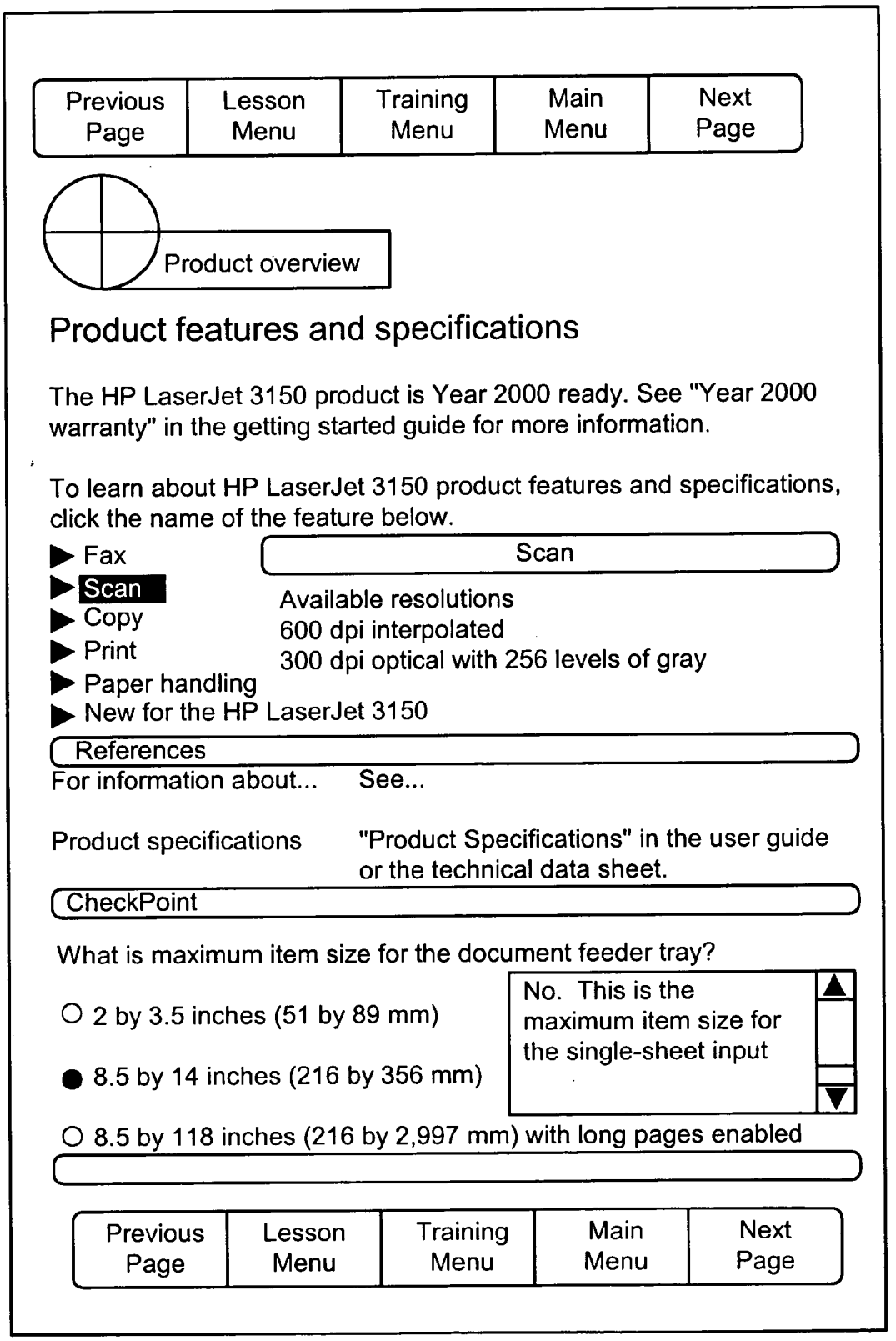

Previous Page
Lesson Menu
Training Menu
Main Menu
Next Page
Product overview
Product features and specifications
The HP LaserJet 3150 product is Year 2000 ready. See "Year 2000 warranty" in the getting started guide for more information.
To learn about HP LaserJet 3150 product features and specifications, click the name of the feature below.
Fax
Scan
Copy
Print
Paper handling
New for the HP LaserJet 3150
Scan
Available resolutions
600 dpi interpolated
300 dpi optical with 256 levels of gray
References
For information about...
See...
Product specifications
"Product Specifications" in the user guide or the technical data sheet.
CheckPoint
What is maximum item size for the document feeder tray?
2 by 3.5 inches (51 by 89 mm)
8.5 by 14 inches (216 by 356 mm)
8.5 by 118 inches (216 by 2,997 mm) with long pages enabled
No. This is the maximum item size for the single-sheet input
Previous Page
Lesson Menu
Training Menu
Main Menu
Next Page

FIG. 13

SYSTEM AND METHOD FOR CUSTOMIZING AN INTERACTIVE TRAINING SEQUENCE

[0001] The present invention generally relates to an improved system and method for customizing an interactive training sequence. More specifically, it relates to a system and method for providing an interactive product service manual that allows for customization of training sequences linked to different login identifications.

[0002] Product service and support manuals are no longer in simple text format. In fact, it is becoming more common for product service manuals to contain a variety of features, such as video simulations and animations. The product service manuals are often quite extensive and complex; this is especially true within the computer industry. Because there is so much information contained in product service and support manuals, it can be difficult to find what the user wants, resulting in waste of valuable time and user frustrations. Furthermore, because technology changes so quickly in the computer industry, these product service manuals require frequent changes and updates.

BRIEF SUMMARY OF THE INVENTION

[0003] The present invention provides an improved system and method for customizing an interactive training sequence. In one embodiment, the present invention includes one or more sets of questions for gathering information from the user, a customization module for customizing the training sequence responsive to the user response to the set of predefined questions, one or more login identifications for uniquely linking the custom training sequence to the user, a training module for playing the custom training sequence in a user understandable format when selected by the user. The custom training sequence is stored as a plurality of digital files, and each digital file is designated by a Uniform Resource Locator.

[0004] In another embodiment, the customization system and method of the invention further provide an interactive product service manual that includes a documentation module for displaying documents of said manual in a user understandable format responsive to user selection, a simulator module for playing at least one interactive animated simulation in a user understandable format responsive to user selection, a customization module for customizing an interactive training sequence responsive to a user response to a set of predefined questions, and a training module for playing said customized interactive training sequence in a user understandable format responsive to user selection.

DESCRIPTION OF THE DRAWINGS

[0005] **FIG. 1** is an exemplary diagram of a network system in which the present invention can be implemented;

[0006] **FIG. 2A-2C** is a flowchart illustrating overall functions of one embodiment of the present invention;

[0007] **FIG. 3** embodiment of the present invention;

[0008] **FIG. 3** is a preferred main menu home page;

[0009] **FIG. 4** is a preferred default page of the documentation module;

[0010] **FIG. 5** is a preferred default page of the guided tour module;

[0011] **FIG. 6** is an exemplary benefit page linked from the guided tour default page shown in **FIG. 5**;

[0012] **FIG. 7** is an exemplary simulation page of the simulator module;

[0013] **FIG. 8** is an exemplary practice exam page of the practice module;

[0014] **FIG. 9** is a preferred information page of the information module;

[0015] **FIG. 10** is a preferred feedback page of the feedback module;

[0016] **FIG. 11** is a preferred login page of the training module;

[0017] **FIG. 12** is an exemplary customization page of the customization module; and,

[0018] **FIG. 13** is an exemplary page of a custom training sequence.

DETAILED DESCRIPTION

[0019] Broadly stated, the present invention is directed to an improved system and method for customizing an interactive training sequence. The present invention allows users to customize their training sequence. The progress of the training sequence can be saved and identified by a unique login identification, which allows users to return to where they left off in the last training sequence. Different modules provide the user a variety of ways to understand the service and setup needs of the product. For example, the users can display documents, simulations and their custom training sequences.

[0020] The present invention preferably utilizes HyperText Markup Language ("HTML"), JAVA scripts, and Shockwave Flash Objects. Because all these selected items can be used on most available web browsers, the selected items are most flexible for the implementation of the present invention. Furthermore, the content of the product service manual is stored in different digital files, and each of these digital files is designated by a Uniform Resource Locator.

[0021] Turning now to **FIG. 1**, an exemplary diagram of a network system is shown. The present invention can be implemented in a variety of ways. The service product manual can be displayed on a computer **10**, which can be any type of computer that has a software program that can display the manual in a user understandable manner. The service product manual can be stored in any medium that the computer **10** has access to, such as a network server **12**, a CD drive **14**, and an Internet server **16**. Because, among other things, the manual can be updated easily and the wide availability of the Internet, the present invention is preferably implemented using the Internet. Although three possibilities are shown as an example, the present invention can be implemented in many different ways, and other implementations are contemplated and within the scope of the present invention.

[0022] A flowchart illustrating the overall functions of one embodiment of the present invention is shown in **FIG. 2A**. A flowchart of the feedback module and the training module with the customization module are shown in greater detail in

FIGS. 2B and 2C, respectively. A main menu is displayed to the user (block **18**), which includes eight (8) options for the user to choose from (block **20**). More specifically, the main menu page includes a documentation module **22**, a guided tour module **24**, a simulator module **26**, an information module **28**, a training module **30**, a practice module **32**, an index module **34**, and a feedback module **36**. The preferred main menu page is shown in **FIG. 3**, and as shown, there are the 8 options. When a user wishes to select one of the options, the user just clicks the selected option on the main menu.

[**0023**] If the user selects the documentation module **22** (block **20**), a hyperlink table of contents of the documents is displayed to the user (block **38**). The user selects a document from the table of contents (block **40**), and the selected document page is displayed to the user (block **42**). The preferred table of contents, shown in **FIG. 4**, provides a list of documents that the user can select by clicking on the selected document. In addition, the 8 options are also included on the left of the table of contents for easier navigation of the product service manual. Again, the user selects another option by simply clicking on the icons provided. In fact, the user will see a label of the icon if the user moves the pointer over the icons without clicking it. As illustrated, a lot of information is provided to the user, but the information is not displayed unless there is an indication that the user is interested.

[**0024**] Similarly, when the guided tour module **24** is selected (block **20**), a default guided tour page is returned and displayed to the user (block **44**). The user selects a guided tour page (block **46**), which is then displayed to the user (block **48**). The preferred default guided tour page is shown in **FIG. 5** as an example. The navigation buttons are located on the lower right hand corner of the page, which can be selected by clicking on them. For example, if a user clicks on the benefit button, the benefit page is displayed to the user (shown in **FIG. 6**). However, there are no limitations in the design and appearance of any of the pages included in the manual as long the function of the page is captured. These other various implementations are contemplated and are within the scope of the present invention.

[**0025**] Again, when the user selects the training module **30** or the simulator module **26** (block **20**), the default practice page (block **50**) or the default simulator page (block **52**) is displayed to the user. The user selects a practice (block **54**) or a simulation (block **56**), and the selected practice (block **58**) or simulation is displayed to the user (block **60**). The index module **34** follows similar steps, except the default index page is a hyperlink index page (block **62**). A link is selected (block **64**) and displayed to the user (block **68**).

[**0026**] An exemplary simulation of a control panel of an HP LaserJet Fax Printer is shown in **FIG. 7**. It is called a simulation because it is not simply text files. In the control panel example, the user can click on any of the buttons shown, and the simulation is designed to react interactively to the clicks depending upon what buttons are pushed. In other words, it reacts just like the real control panel would. Preferably, specific instructions are provided sequentially in order to provide an interactive manual that requires user responses and participation. Therefore, at some point in the sequence, the next sequence will not be displayed to the user unless there is a user response. Again, navigation buttons are provided to the user on the right side of the page for convenience. The practice module, on the other hand, is similar to a test form. An exemplary practice page is shown in **FIG. 8**. In this example, the clicking of each answer choice gives a different message in the box next to the multiple choices.

[**0027**] What remains is the information module **28**, the feedback module **36** and the training module **30**. An information page containing additional information on other links and contacts is displayed (block **70**) when the user selects the information module **28** (block **20**). An exemplary information page is shown in **FIG. 9**. Similarly, a feedback form is displayed (block **72**) when the user selects the feedback module **36** (block **20**), and an example of the form is shown in **FIG. 10**. However, the feedback module includes an additional feature, which continues in **FIG. 2B**. The user first fills out the feedback form (block **74**) and selects send (block **76**). The form is then sent preferably via email to a predefined email address (block **78**).

[**0028**] With respect to the training module, when it is selected (block **20**), a training login page (shown in **FIG. 11**) is displayed to the user (block **80**), and it is determined whether the user has a login ID (block **82**) (see **FIG. 2C**). The user must provide a login ID (block **84**) if the user does not have one (block **82**). Once the user logs in with the login identification (block **82**), it is determined whether the user already has a custom training sequence linked to the login ID provided by the user (block **86**).

[**0029**] If it is determined that the user does not yet have a custom training sequence (block **86**), a set of predefined questions is displayed to the user (block **88**). An example of the predefined questions page is shown in **FIG. 12**. Of course, these questions can be varied depending on the need of the customization. The user must then respond to the predefined questions (block **90**), and a custom training sequence according to the responses from the user is returned (block **92**) and displayed to the user (block **94**). Likewise, if the user already has a custom training sequence linked to the login identification (block **86**), a custom training sequence is returned to the user (block **96**). In this case, the custom training sequence is displayed from the last saved progress (block **94**), such as an exemplary page shown in **FIG. 13**. As shown, a body of text relating to the desired topic is included with one or more test questions, which the user may complete before the next page is shown. Similar to the simulation page, at some point in the training sequence, a user response is required before the next sequence is played to the user. If the user exits a sequence, the last progress of the sequence is saved so that the user can start from the point where the user exited the training sequence, rather than the beginning of the sequence.

[**0030**] While various embodiments of the present invention have been shown and described, it should be understood that other modifications, substitutions and alternatives are apparent to one of ordinary skill in the art. Such modifications, substitutions and alternatives can be made without departing from the spirit and scope of the invention, which should be determined from the appended claims.

1. A system for providing product service and support information to a user, including automatically customizing an interactive training sequence, comprising:

said system presenting at least one set of predefined questions to the user for gathering information about the user;

a customization module for customizing the content of said training sequence responsive to the users'responses to said set of predefined questions;

said system storing at least one login identification supplied by the user for uniquely linking said customized training sequence to the user;

a training module for playing said customized training sequence in a user understandable format responsive to user selection;

wherein said customized training sequence is stored as a plurality of digital files, each designated by a Uniform Resource Locator.

2. Cancelled.

3. A system as defined in claim 1 wherein said training module saves the progress of said customized training sequence linked to said login identification.

4. A system as defined in claim 3 wherein said training module retrieves said customized training sequence according to said last saved progress responsive to user login of said login identification.

5. A method of operating a computer system for automatically customizing an interactive training sequence that provides product service and support information to a user, said method comprising the steps of:

providing a set of predefined questions to the user responsive to the user providing a unique login identification;

the computer system receiving user responses to said set of predefined questions; and,

the computer system returning a customized training sequence according to said user responses from said set of predefined questions;

wherein said custom customized training sequence is linked to said unique login identification.

6. The method according to claim 5 further comprising the step of saving said customized training sequence linked to said unique login identification.

7. The method according to claim 5 further comprising the step of saving the progress of said customized training sequence linked to said unique login identification.

8. The method according to claim 7 further comprising the step of retrieving said customized training sequence according to said last saved progress responsive to user login of said unique login identification.

9. An interactive computer system for providing product service information to a user, the system normally operating without human involvement, comprising:

a documentation module for displaying the product service information in a user understandable format responsive to user selection;

a simulator module for playing at least one interactive animated simulation in a user understandable format responsive to user selection;

a customization module for customizing an interactive training sequence responsive to a user response to a set of predefined questions; and,

a training module for playing said customized interactive training sequence in a user understandable format responsive to user selection.

10. A system as defined in claim 9 wherein said product service information is stored as a plurality of digital files, wherein each said digital file is designated by a Uniform Resource Locator.

11. A system as defined in claim 9 further comprising:

a guided tour module for displaying a series of introductory documents of said product service information in a user understandable format responsive to user selection;

a feedback module for allowing users to send comments;

a practice module for displaying practice exam forms in a user understandable format responsive to user selection;

an index module for displaying a hyperlink index of said service information in a user understandable format responsive to user selection; and,

an information module for displaying additional contact information relating to said service information in a user understandable format responsive to user selection.

12. A system as defined in claim 9 is a web based online product service information.

13. A system as defined in claim 9 wherein part of said at least one interactive animated simulation requires user response before the next sequence is played to the user.

14. A system as defined in claim 9 wherein part of said customized training sequence requires user responses before the next sequence is played to the user.

15. A system as defined in claim 9 wherein said documentation module includes a hyperlink table of contents for said documents included in said documentation module.

16. A system as defined in claim 9 wherein said simulator module includes a hyperlink table of contents for said at least one interactive animated simulation.

17. A system as defined in claim 9 wherein said customization module prompts the user to select a unique login identification and to respond to said set of predefined questions.

18. A system as defined in claim 17 wherein said customization module returns a custom training sequence according to user responses from said set of predefined questions, and said custom training sequence is linked to said unique login identification.

19. A system as defined in claim 18 wherein said customization module saves said custom training sequence linked to said unique login identification.

20. A system as defined in claim 18 wherein said customization module saves all said Uniform Resource Locators for said custom training sequence linked to said unique login identification.

21. A system as defined in claim 18 wherein said customization module saves the progress of said custom training sequence linked to said unique login identification.

22. A system as defined in claim 18 wherein said customization module allows the user to retrieve said custom training sequence with login of said unique login identification.

23. A system as defined in claim 21 wherein said customization module allows the user to retrieve said customized training sequence with login of said unique login identification, and said training sequence will be played according to said last saved progress.

24. A system as defined in claim 11 wherein said feedback module is configured to send comments over the Internet.

25. A system as defined in claim 11 wherein said practice module is configured to indicate whether the user choices for said exam form is correct or incorrect.

26. Cancelled

27. A computer system for providing an interactive product service manual, said system normally operating without human intervention, said system comprising:

means for displaying documents of said manual responsive to user selection;

means for playing at least one interactive animated simulation responsive to user selection;

means for customizing an interactive training sequence responsive to user response to a set of predefined questions; and,

means for playing said customized interactive training sequence responsive to user selection.

28. A method for providing an interactive product service manual having at least one documentation, at least one interactive animated simulation, and at least one training sequence customized by the user, said method being executed by a computer system connected to a LAN and comprising the steps of:

providing hyperlinks to the content of said interactive product service manual;

displaying said at least one documentation responsive to a user selection;

playing said at least one interactive animated simulation responsive to a user selection;

customizing an interactive training sequence responsive to user responses to a set of predefined questions; and,

playing said customized interactive training sequence responsive to user selection.

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