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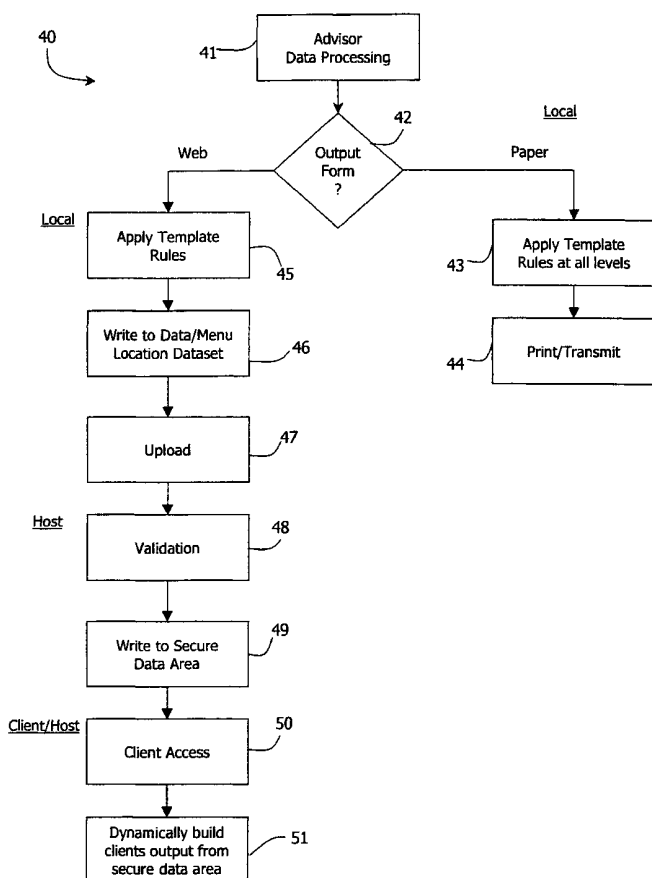
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[Continued on next page]

(54) Title: DISSEMINATION OF DATA



(57) Abstract: An advisor system (1) sets up a virtual server on a host system (15) via the Internet (10). The virtual server is general to the advisor's business, and it also includes secure links to a secure server of the host system (15) in which client data is stored. The virtual server and the secure data areas are set up initially. Data is processed in the advisor system (1, 41) and template rules are applied at a high level such as selection of pages to be included. If the output is ultimately for dissemination via the host system (15), further template rules are applied (45). This involves a cell-by-cell process which determines if the cell content is to be displayed and performs conversion to markup symbols according to display attributes. Subsequently, client access is according to the menus structures previously generated by the advisor.



WO 01/57746 A1



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“Dissemination of data”INTRODUCTION5 Field of the Invention

The invention relates to dissemination of data, such as data generated by professional advisors for their clients.

10 Prior Art Discussion

At present, the offices of advisors such as accountants incur a large overhead of personnel time for providing clients with data pertaining to them. The data is usually provided over the telephone, by letter, by fax, or by email.

15

It is known to provide clients with direct access via a dial-up link to their data in an effort to reduce this overhead. However development of such systems is time-consuming and expensive and the client needs to use software customised for the data link. For these reasons such an approach has been used primarily by relatively large organisations such as Government departments. United States Patent Specification No. US5940834 (Mitel) describes a method for generating a Web page organizational directory. In the method, Web page templates are populated with member data from a directory database. There are member-specific and parent Web pages posted to a Web server. Thus, developments have been made to automate the manner in which data is made available via a Web server. The creation of Web pages is closely linked with provision of the directory data, and the data is posted for general access. This is in principle conventional insofar as the Internet is being used to make data available widely in a simple manner. However, the problem faced by advisors is that of making data available with the real-time, 24-hour, and “pull” beneficial aspects of the Internet without:

30

- (a) allowing access by people other than the relevant clients, or
- (b) affecting their core data processing systems which generate the raw data.

5 The invention addresses this problem.

SUMMARY OF THE INVENTION

According to the invention, there is provided a data dissemination method of making
10 advisor data available to clients, the method comprising the steps of:

an advisor system generating a dataset of data;

15 the advisor system transferring the dataset to a host server to allow access to
the data; and

the host server allowing access to the data upon receipt of data access requests
from remote browsers;

20 characterised in that,

the data is client data for access only by an associated client, and the host
server stores the client data in a secure data area;

25 the host server is pre-configured with client access links for secure client-only
access to the client data;

the host server uses said links to allow access only by a client associated with
the client data.

30

In one embodiment, the advisor system generates a plurality of datasets, each associated with a client, and the host system is pre-configured with separate access links for each client/dataset pair.

- 5 In another embodiment, a plurality of advisor systems generate datasets, and the host system is preconfigured with access links for each dataset/client pair.

In a further embodiment, the method further comprises setup steps of the host server creating a virtual server for the advisor system in response to prompting selection of
10 business-related options by an advisor.

In one embodiment, the advisor selections are used to drive automatic configuration of meta tags, frame properties, applet parameters, and CGI scripts.

- 15 In another embodiment, the step of the host server creating secure access links comprises creating links from the virtual server to the secure client data area in a secure server.

In a further embodiment, the method comprises the further setup steps of the advisor
20 system creating and editing a client menu structure for the client data, uploading said structure to the host server, and the host server storing the structure as part of the virtual server.

In one embodiment, the advisor system generates the dataset by:

25

processing data to determine data content; and

applying template rules to the processed data according to client/host access requirements.

30

In another embodiment, the template rules are applied at a plurality of hierarchical levels.

5 In a further embodiment, the levels include cells, rows, columns, paragraphs, and pages.

In one embodiment, the data processing comprises an initial data processing step including implementation of business rules at a high level, followed by a final data processing step at a low level, and for each item such as a cell:-

10

- determining if the content is to be viewed,
- if so, retrieving a display attribute, and

15

- generating a markup symbol for the item according to the display attribute

In another embodiment, the host server stores the dataset in the secure data area, and subsequently dynamically builds outputs according to the pre-defined menu structure using the uploaded dataset.

20

According to another aspect, the invention provides a host server comprising means for performing data dissemination steps as described above.

DETAILED DESCRIPTION OF THE INVENTION

25

Brief Description of the Drawings

The invention will be more clearly understood from the following description of some embodiments thereof, given by way of example only with reference to the
30 accompanying drawings in which:-

Fig. 1 is a schematic overview showing the context of a data dissemination method and system of the invention;

5 Fig. 2 is a flow diagram illustrating a set-up method carried out by an advisor system and a host system;

Fig. 3 is a flow diagram illustrating data processing in an advisor's office and a method of client access to the data; and

10

Figs. 4 to 10 are sample screen displays illustrating operation of the system.

Description of the Embodiments

15 Referring to Fig. 1, a number of advisor systems 1 each comprising a CPU 2 and a local database 3 are shown. Typically, a conventional PC meets the hardware requirements. The advisor systems 1 access a host system 15 via the Internet 10 to automatically upload client data. Client systems 20 subsequently access the host system 15 to retrieve their data on a 24-hour basis without involvement of staff (or
20 computer resources in real time) at the advisor offices. Also, the client access is via a browser on the client system 20 and so is very convenient.

This is achieved by virtue of software running on the advisor system 1 and on the host system 15, as illustrated in Figs. 2 to 10. In a setup method 30 an advisor
25 system 1 accesses the host system 15 in step 31 using a URL provided to the advisor. In step 32, the advisor interactively creates a general Web site containing general information pertaining to the services provided by the advisor. This is stored in step 33 as a virtual Web server. Thus, advisors who do not yet have a Web site can very easily create one in a very simple and controlled manner and at little cost. Step 33 is
30 very important because it allows an advisor with no knowledge of creating Web sites

to do so in a short period of time. The host system 15 presents the advisor with successive options and dynamically builds the site according to the selected options. The options are presented as business selections such as "What type of services category do you fall within?" or "Select from the following list the professional association of which you are a member". The responses are used to configure a virtual server by setting values and attributes for meta tags, frame properties, applet parameter values, and CGI scripts. Fig. 4 is a sample display screen for selection of options as described above. Fig. 5 is a sample of a page of a virtual server created in step 33.

10

In addition, in step 34 the advisor creates and stores client access links from a page of the virtual server. The host system 15 associates these links with a secure data area in step 37. These links are security-controlled by password and username requirements, and the extent of security is configurable according to the choice of the advisor.

15

In a separate, offline, step 35 the advisor system 1 creates and edits a client menu structure for each client link. The menu structure is totally configurable according to the nature of the client data. An example is shown in Fig. 6. Similarly, a sub-menu structure is created and edited in step 36, and an example is shown in Fig. 7. These operations are controlled by software running on the advisor system CPU 2.

20

Referring now to Fig. 3, a method 40 which includes updating the host system 15 is described. The CPU 2 performs data processing in step 41 to generate data content, such as to generate a set of client accounts. This is the core data which is ultimately required by the client. The data processing rules of step 41 not only generate "raw" data, but also implement client requirements. An example is blanking out pages not required for an abridged set of accounts.

25

The advisor selects an output option in step 42. One option is to output the processed data to paper. In this case, in step 43 template rules are applied at cell, row, column, paragraph, and page hierarchical levels. The template rules are very wide-ranging and involve suppression of printing data at any of these levels according to template rules. The rules of the template apply to all levels of granularity and they implement both business/application requirements and printing/output format technical requirements. The data is then either printed or transmitted by email or fax in step 44.

The other option is to have the data hosted on the system so that the client can have access at any time on a 24-hour, 7-day basis without involvement of the advisors office. In step 45 the CPU 2 applies template rules in a manner analogous to the step 43. The template rules of step 45 are implemented on a cell-by-cell basis. The sequence for each cell is as follows:-

- 15 - is cell content to be viewed?,
- if so, retrieve cell display attribute,
- 20 - generate markup symbol (s) for the cell according to the display attribute.

An example of a template for step 45 is shown in Fig. 8. Each of the alphanumeric strings such as "Turnover" or "362,400" is the content for a cell. The light coloured content is not to be viewed. In this example, all of the right side "1999" column is blanked out. Thus, each area of this display is associated with both content determined in step 41 and with template rules.

This sequential approach involves combining business function rules with presentation/output rules in a very simple manner to achieve both markup symbol conversion and business logic.

The data in the structure outputted by step 45 is cached locally in step 46 as a dataset in a markup format suitable for viewing using common internet tools. This format conforms to generally accepted standards of viewability and markup, be they W3C
5 or ISO ratified, or de facto standards with wide practical support, so as to accurately reflect the content, structure and markup schema of the original. The cached dataset is suitable for uploading to the host system 15, and the upload is performed in step 47.

10 At the host side, in step 48 the host system 15 performs validation before committing to a secure server and in step 40 writes the dataset to the secure data area set up previously.

Subsequently, a client gains access to the host system in step 50 using his or her
15 browser. In response to input of the correct security values, the host system 15 builds data outputs from the secure data area in response to the client inputs. The outputs are dynamically built on-the-fly. The screen of Fig. 9 is an example of how the host system 15 presents the menu created by the advisor in step 35 to the client in steps 50-51. This menu allows client selection of content such as that shown in Fig. 10. It
20 will be appreciated that this is a very convenient form of presentation for the client.

It will be appreciated that the invention allows dissemination of data by advisors in a very simple manner and with little time input. It also allows clients to have very convenient access to their data.

25

The invention is not limited to the embodiments described but may be varied in construction and detail.

Claims

1. A data dissemination method of making advisor data available to clients, the method comprising the steps of:
- 5 an advisor system (1) generating (41-46) a dataset of data;
- the advisor system (1) transferring the dataset to a host server (15) to allow access to the data; and
- 10 the host server (15) allowing access to the data upon receipt of data access requests from remote browsers;
- characterised in that,
- 15 the data is client data for access only by an associated client, and the host server (15) stores the client data in a secure data area;
- the host server (15) is pre-configured (34) with client access links for secure
- 20 client-only access to the client data; and
- the host server (15) uses said links to allow access only by a client associated with the client data.
- 25 2. A method as claimed in claim 1, wherein the advisor system (1) generates a plurality of datasets, each associated with a client, and the host system (15) is pre-configured with separate access links for each client/dataset pair.

- 10 -

3. A method as claimed in claims 1 or 2, wherein a plurality of advisor systems (1) generate datasets, and the host system (15) is preconfigured (34) with access links for each dataset/client pair.

- 5 4. A method as claimed in any preceding claim, wherein the method further comprises setup steps (31-33) of the host server creating a virtual server for the advisor system (1) in response to prompting selection of business-related options by an advisor.

- 10 5. A method as claimed in claim 4, wherein the advisor selections are used to drive automatic configuration of meta tags, frame properties, applet parameters, and CGI scripts.

- 15 6. A method as claimed in claims 4 or 5, wherein the step of the host server (15) creating secure access links comprises creating links from the virtual server to the secure client data area in a secure server.

- 20 7. A method as claimed in any preceding claim, wherein the method comprises the further setup steps (35-36) of the advisor system (1) creating and editing a client menu structure for the client data, uploading said structure to the host server (15), and the host server (1) storing the structure as part of the virtual server.

- 25 8. A method as claimed in any preceding claim, wherein the advisor system (1) generates the dataset is by:

processing (41) data to determine data content; and

applying template rules (45) to the processed data according to client/host
30 access requirements.

9. A method as claimed in claim 8, wherein the template rules are applied at a plurality of hierarchical levels.
- 5 10. A method as claimed in claim 9, wherein the levels include cells, rows, columns, paragraphs, and pages.
11. A method as claimed in claims 9 or 10, wherein the data processing comprises an initial data processing step (41) including implementation of business rules at a high level, followed by a final data processing step (45) at a low level, and
10 for each item such as a cell:-
- determining if the content is to be viewed,
 - 15 - if so, retrieving a display attribute, and
 - generating a markup symbol for the item according to the display attribute
12. A method as claimed in any preceding claim, wherein the host server (15)
20 stores the dataset in the secure data area, and subsequently dynamically builds (51) outputs according to the pre-defined menu structure using the uploaded dataset.
13. A host server comprising means for performing data hosting steps as claimed
25 in any preceding claim.
14. A computer program product comprising software code for performing the steps of any of claims 1 to 12 when executing on a digital computer.

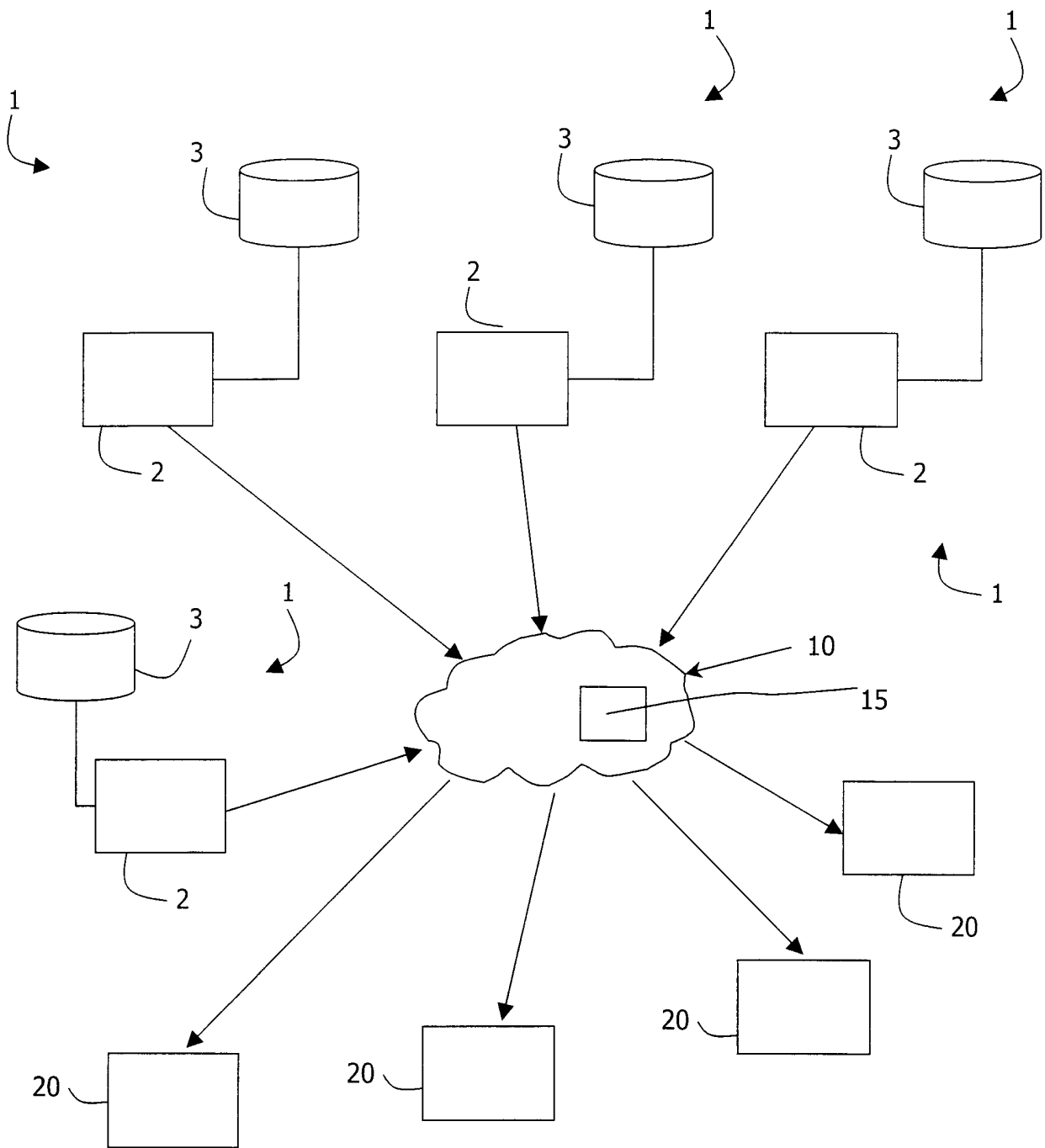


Fig. 1

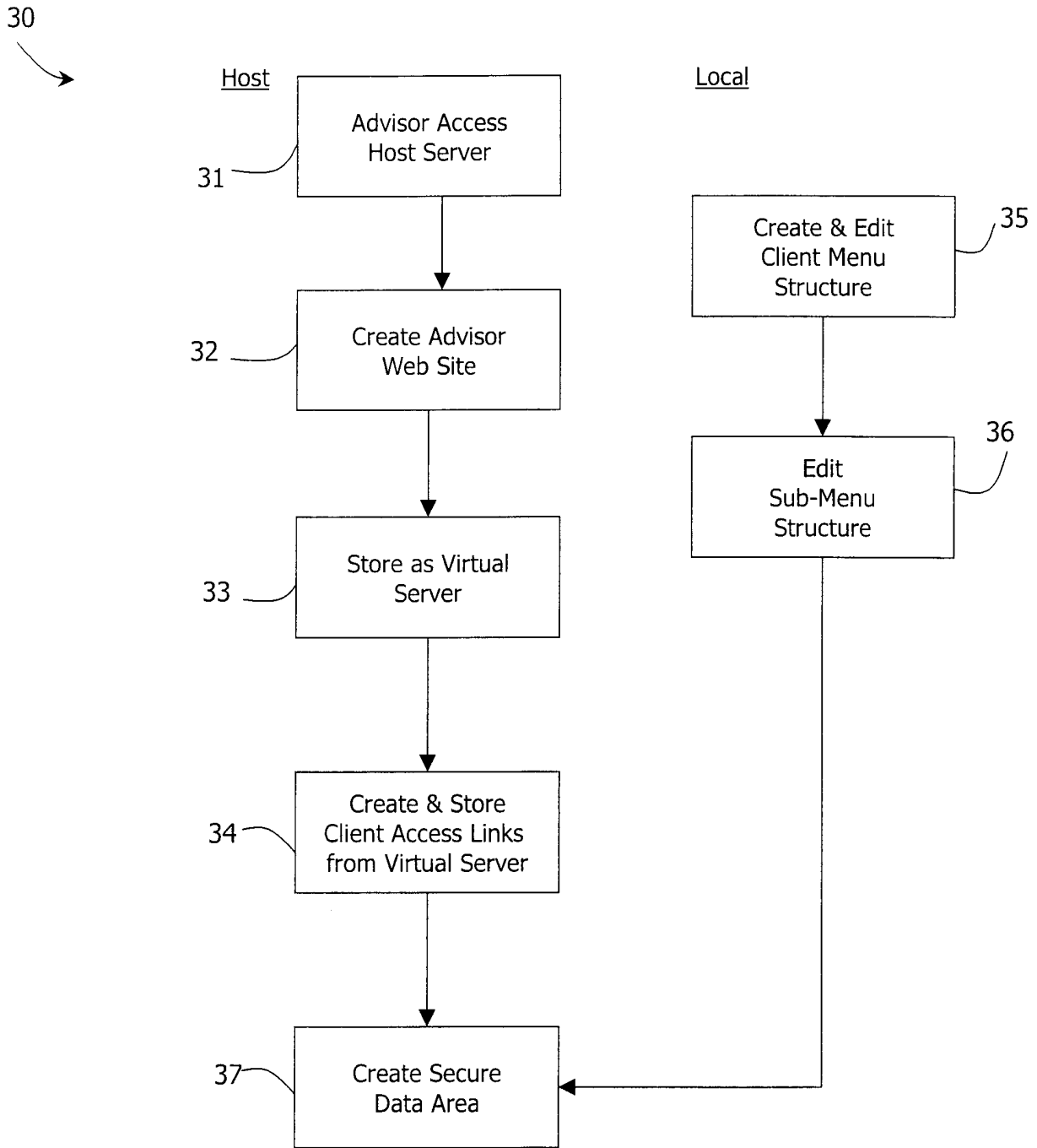


Fig. 2

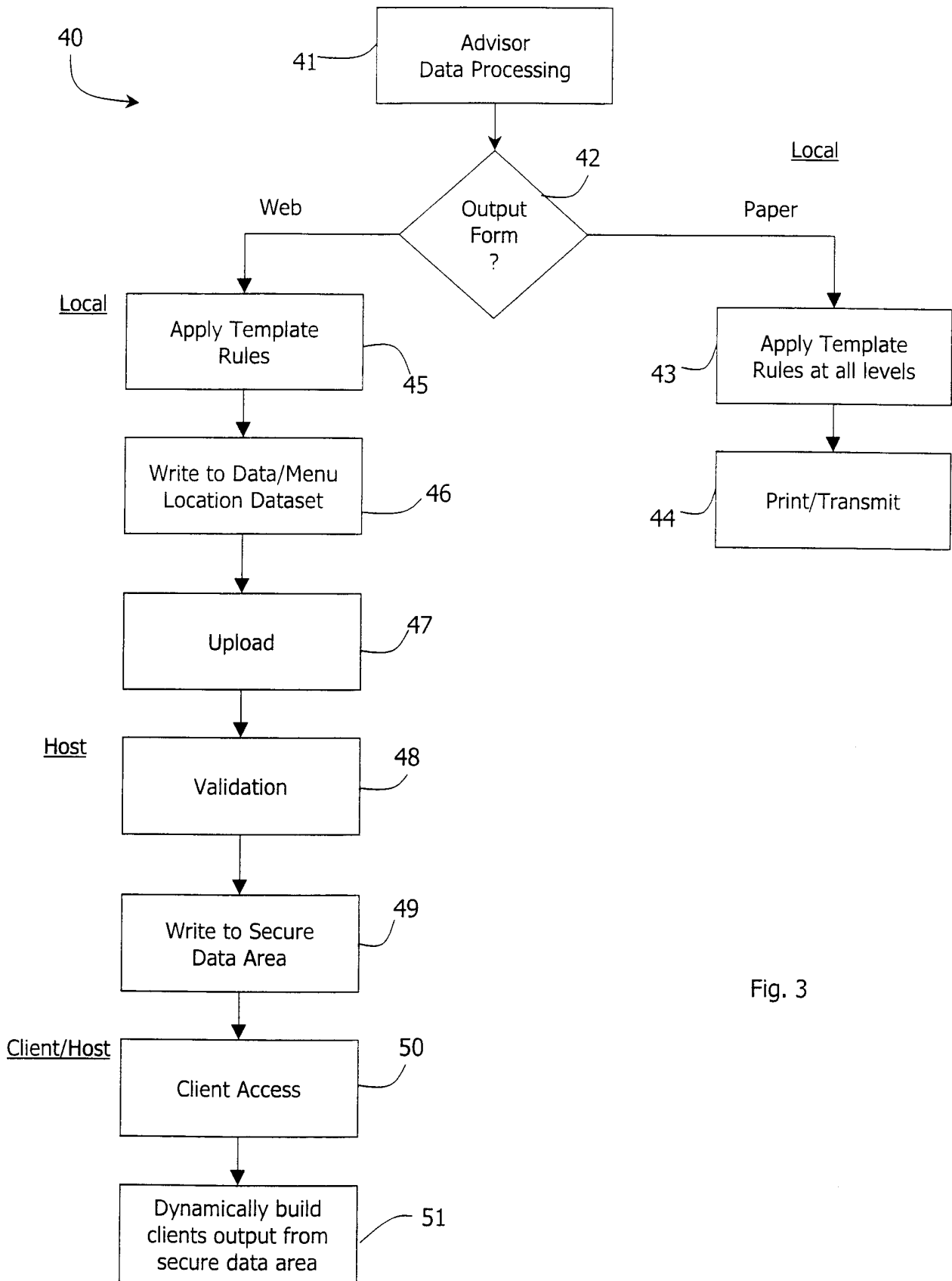


Fig. 3

APEX24 Top Bar Page Information

Please fill in the appropriate boxes relating to your Specialisation.

Title of Your Firm
(e.g. Apex 24 Accountants)
Apex - Demosite

Your Firm's Description
(e.g. Chartered Accountants)
We are an Apex24 We

Your Firms Specialisation
(e.g. Taxation Services)
Our mission is to provide

NEXT PAGE >>>

Top Bar 1/1

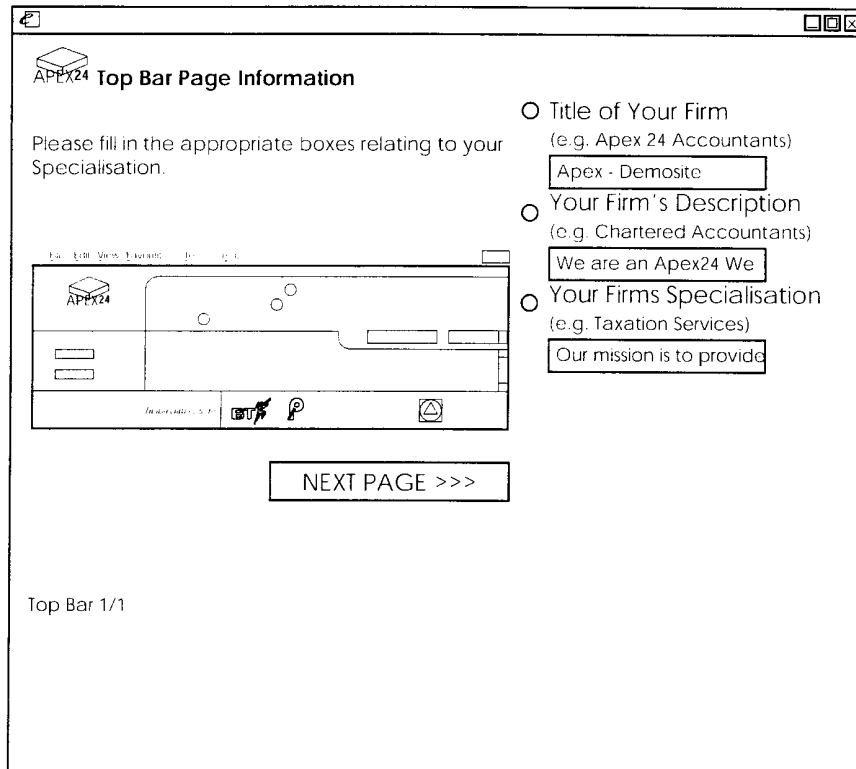


Fig. 4

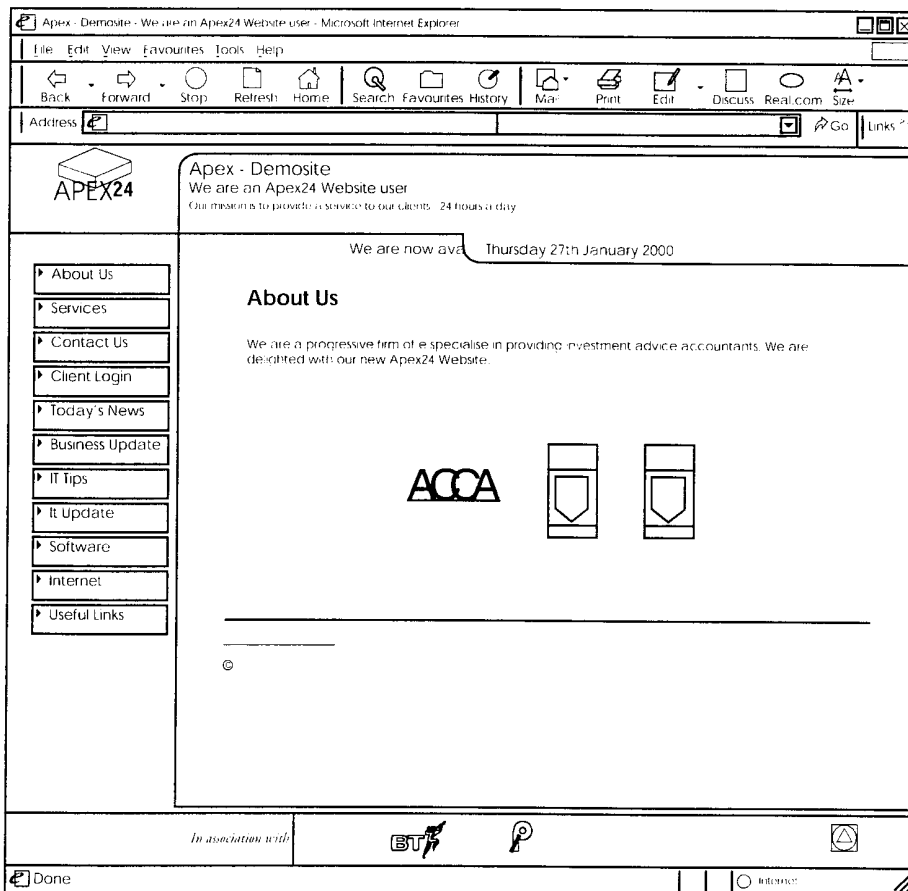


Fig. 5

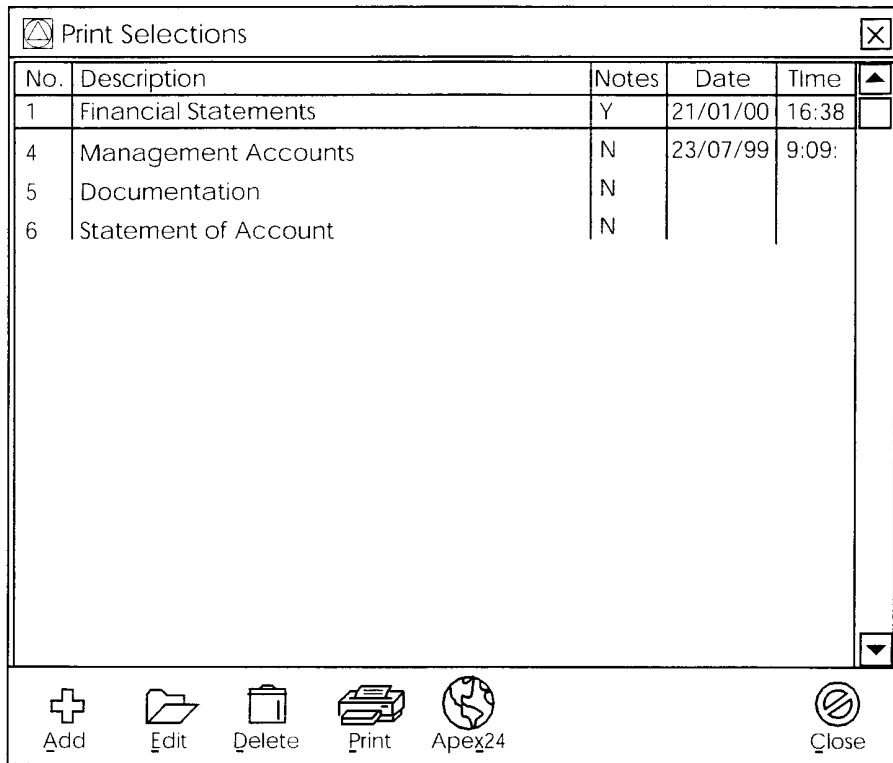


Fig. 6

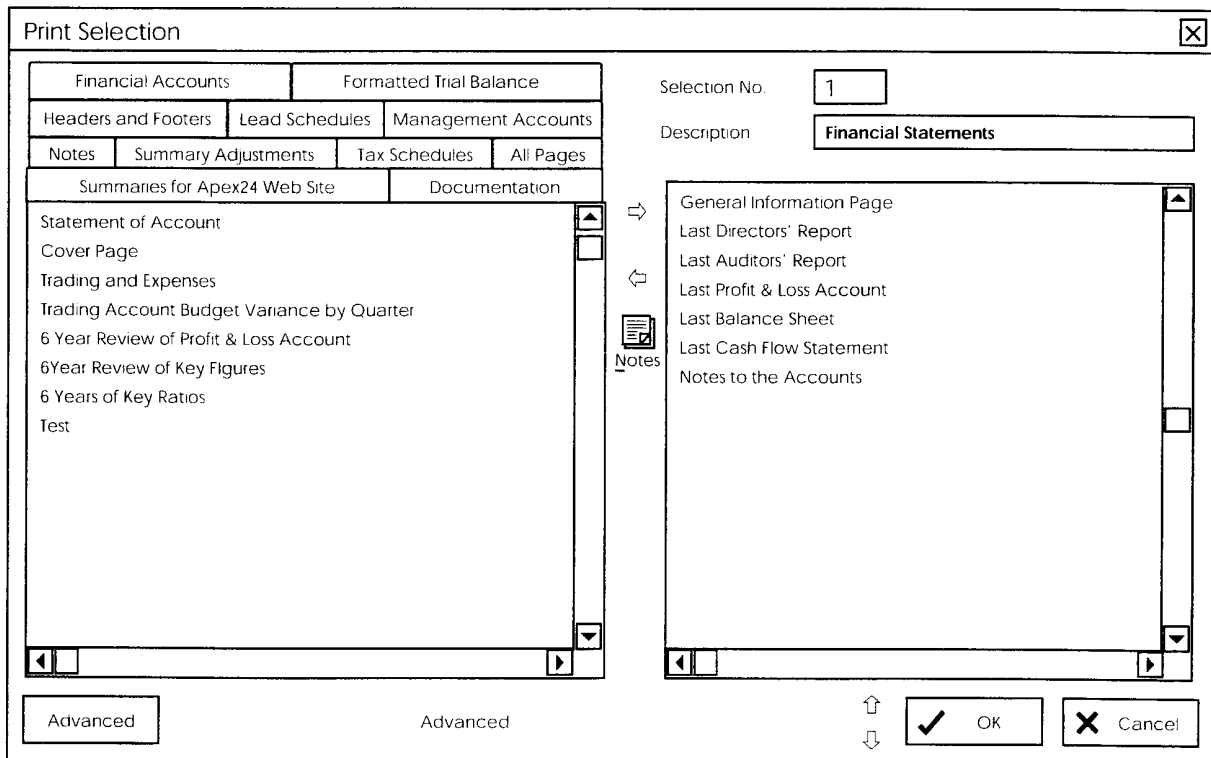


Fig. 7

Last Profit & Loss Account

Client Name, Page Dr

A1 &D.0001

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Web Delivery Services Limited												
2	Profit and Loss Account												
3	for the year ended 31 March 2000												
4	Continuing operations												
5	Continuing operations												
6	Continuing operations												
7	Continuing operations												
8	Continuing operations												
9	Continuing operations												
10	Continuing operations												
11	Continuing operations												
12	Continuing operations												
13	Continuing operations												
14	Continuing operations												
15	Continuing operations												
16	Continuing operations												
17	Continuing operations												
18	Continuing operations												
19	Continuing operations												
20	Continuing operations												
21	Continuing operations												
22	Continuing operations												
23	Continuing operations												
24	Continuing operations												

	Notes	2000 £	1999 £
Turnover	2	362,400	113,994
Cost of sales		(10,816)	(2,501)
Gross profit		<u>351,584</u>	<u>111,493</u>
Gross profit		351,584	111,493
Distribution costs			
Administrative expenses		(287,047)	(77,495)
Other operating income			
Operating profit	3	<u>(64,537)</u>	<u>(33,998)</u>

Fig. 8

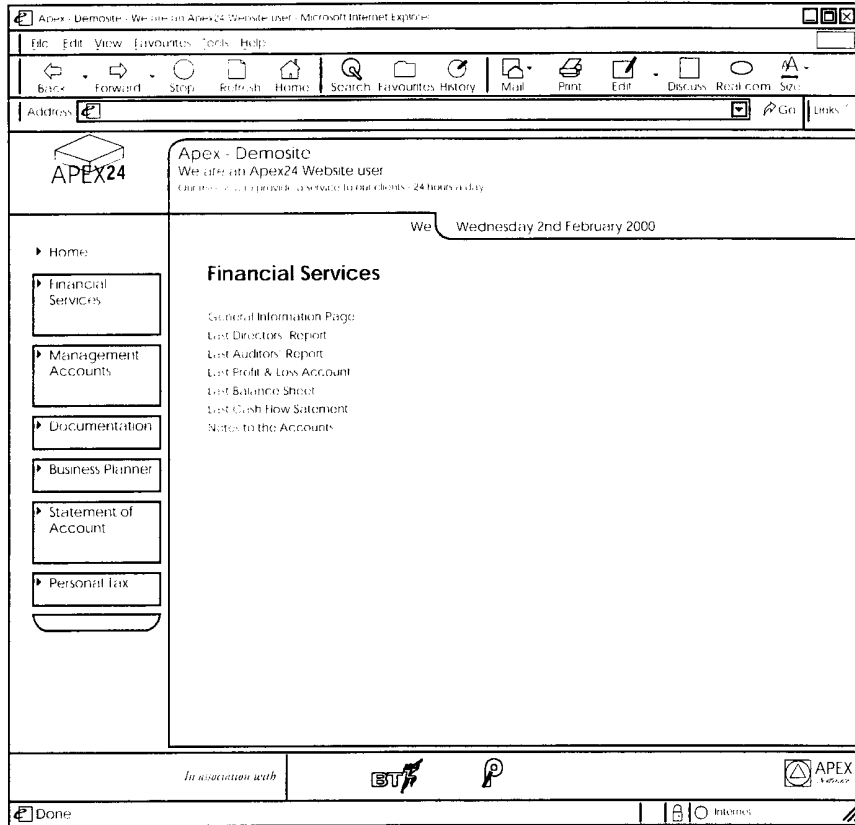


Fig. 9

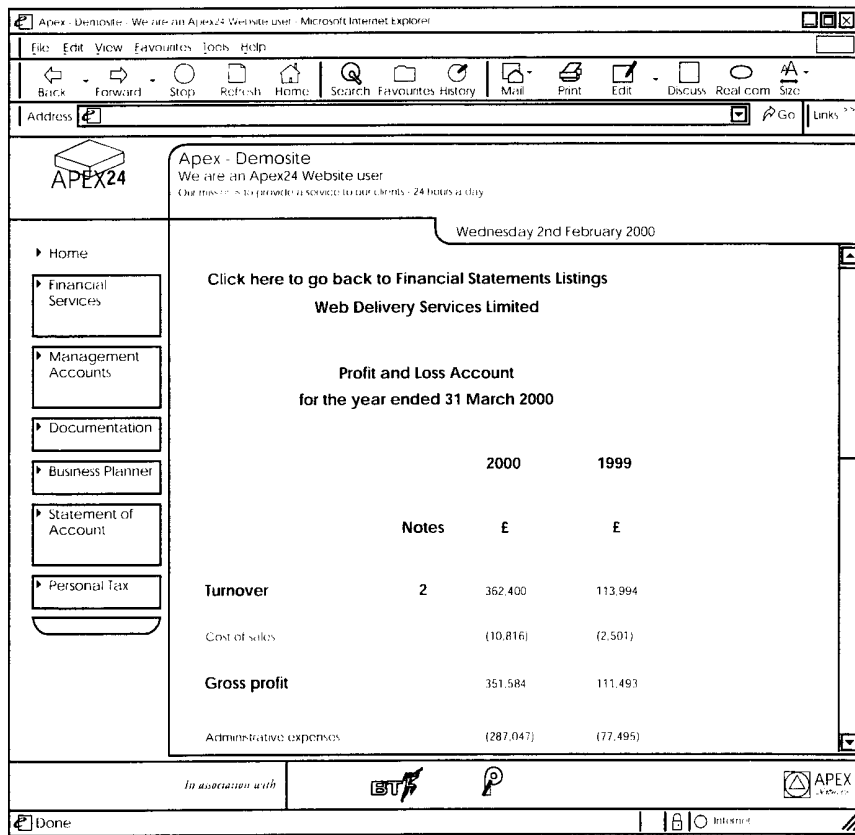


Fig. 10

INTERNATIONAL SEARCH REPORT

International Application No PCT/IE 01/00017

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G06F17/60 G06F17/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
 EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	CA 2 221 026 A (CHANGEPOINT INTERNATIONAL CORP) 22 April 1999 (1999-04-22) abstract page 2, line 5 -page 3, line 15 page 4, line 4 - line 15 page 6, line 6 - line 18 page 6, line 30 -page 7, line 8 page 9, line 4 - line 9 figures 1,3D,3F ---	1-7, 12-14 8-11
Y	EP 0 901 084 A (MATSUSHITA ELECTRIC IND CO LTD) 10 March 1999 (1999-03-10) abstract column 14, paragraph 36 page 15, line 55 -page 19, line 24 figures 3-8 --- -/--	8-11

Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance	*T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
E earlier document but published on or after the international filing date	*X* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	*Y* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
O document referring to an oral disclosure, use, exhibition or other means	* & * document member of the same patent family
P document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 7 May 2001	Date of mailing of the international search report 14/05/2001
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Nicoli, F
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INTERNATIONAL SEARCH REPORT

national Application No
PCT/IE 01/00017

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 940 834 A (PINARD DEBBIE ET AL) 17 August 1999 (1999-08-17) abstract column 1, line 52 -column 2, last line column 3, line 50 - line 58 column 4, line 57 -column 5, line 10 column 7, line 1 - line 32 column 8, line 20 - line 65 figure 3</p> <p style="text-align: center;">---</p>	1-14
A	<p>US 5 761 673 A (BOOKMAN MATTHEW ET AL) 2 June 1998 (1998-06-02) abstract column 2, line 10 - line 26 column 2, line 44 - line 51 column 4, line 17 - line 29 column 5, line 18 -column 6, line 3 figure 4</p> <p style="text-align: center;">---</p>	1-14
A	<p>MATRIX ONE INC.: "MATRIX" MATRIX ONE, 'Online! 1997, XP002111377 Retrieved from the Internet: <URL:Available online in 1997> 'retrieved on 1997! page 1, line 1 -page 4, line 22</p> <p style="text-align: center;">-----</p>	1-14

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No PCT/IE 01/00017

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