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Datasheet for the decision
of 1 July 2016

Case Number: T 0697/11 - 3.5.07
Application Number: 00914261.3
Publication Number: 1222567
IPC: G06F17/21
Language of the proceedings: EN

Title of invention:
Computer system

Applicant:
Knapp Investment Company Limited

Headword:
Computer system/KNAPP INVESTMENT COMPANY

Relevant legal provisions:
EPC Art. 56
RPBA Art. 13(1)

Keyword:
Inventive step - main request, auxiliary request 1a, third auxiliary request (no)
Late-filed auxiliary requests - first and second auxiliary requests - admitted (no)
Decisions cited:
T 1351/04

Catchword:
Case Number: T 0697/11 - 3.5.07

DECISION of Technical Board of Appeal 3.5.07 of 1 July 2016

Appellant: Knapp Investment Company Limited
(Applicant)
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Representative: Grünecker Patent- und Rechtsanwälte
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Decision under appeal: Decision of the Examining Division of the European Patent Office posted on 29 October 2010 refusing European patent application No. 00914261.3 pursuant to Article 97(2) EPC.

Composition of the Board:
Chairman R. Moufang
Members: R. de Man
P. San-Bento Furtado
Summary of Facts and Submissions

I. The applicant (appellant), which at the time was British Telecommunications plc, appealed against the decision of the Examining Division refusing European patent application No. 00914261.3, filed as international application PCT/GB00/01174 and published as WO 00/62195.

II. In the course of the appeal proceedings, the application was transferred to Knapp Investment Company Limited, which thereby obtained the status of appellant.

III. The Examining Division decided that the subject-matter of claims 1 to 7 of the sole request on file lacked inventive step in view of the following document:

D1: US 5890175 A.

IV. With the statement of grounds of appeal, the appellant maintained its sole substantive request.

V. In a communication under Article 15(1) RPBA following a summons to oral proceedings, the Board expressed the provisional opinion that the subject-matter of claim 1 of the sole request lacked inventive step in view of document D1.

VI. With a letter dated 1 June 2016, the appellant replaced its sole substantive request with a main request and first to third auxiliary requests.

VII. In the course of oral proceedings held on 1 July 2016, the appellant filed an auxiliary request 1a and replaced the third auxiliary request with a new third
auxiliary request (labelled "new auxiliary request 3"). At the end of the oral proceedings, the chairman pronounced the Board's decision.

VIII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or, in the alternative, on the basis of the claims of one of the first auxiliary request, auxiliary request 1a and the second and third auxiliary requests.

IX. Claim 1 of the main request reads as follows:

"A method of generating an information page in a computer system, said computer system including a database stored therein, said database having a set of templates and a set of data tables, each table containing a set of data items, the set of templates including a set of first order templates each for defining the overall format of an information page, and a set of second order templates each for defining the format of a part of an information page, wherein the overall format of an information page includes at least one specified area whose format is to be defined by a second order template, and wherein the database has control information associating each table or each data item with at least one second order template, said method including the steps of:

selecting a first order template;

performing a search on said database using at least one input parameter to retrieve a set of data items;
using the control information in the database to select at least one second order template associated with the retrieved set of data items;

retrieving the selected at least one second order template; and

using the first order template and the at least one second order template to create an information page containing a representation of the data items retrieved in the search."

X. Claim 1 of the first auxiliary request differs from claim 1 of the main request in that its steps read as follows:

"selecting a first order template based on a universal resource locator, URL received by the computer system;

performing a search on said database using at least one input parameter based on the URL and the selected first order template to retrieve a set of data items;

using the control information from the selected first order template in the database to select at least one second order template associated with the retrieved set of data items;

retrieving the selected at least one second order template; and

using the first order template and the at least one second order template to create an information page containing a representation of the data items retrieved in the search."
XI. Claim 1 of auxiliary request 1a differs from claim 1 of the main request in that its steps read as follows:

"selecting and retrieving a first order template based on a universal resource locator, URL received by the computer system;

performing a search on said database using at least one search parameter based on the URL and control information in the retrieved first order template to retrieve a set of data items;

using the control information in the database to select at least one second order template associated with the retrieved set of data items comprising extracting the identities of the at least one second order template from control information contained in the data tables of the set of data tables which have been searched;

retrieving the selected at least one second order template; and

using the first order template and the at least one second order template to create an information page containing a representation of the data items retrieved in the search."

XII. Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in that the following text has been added at the end of the claim:

"wherein the tables comprised in the database comprise a first table containing data items belonging to a first class of information, a second table containing data items belonging to a second class of information,
and a table linking the data items in the first table
with the data items in the second table."

XIII. Claim 1 of the third auxiliary request reads as
follows:

"A method of generating an information page in a
computer system, said computer system including a
database stored therein, said database having a set of
templates and a set of data tables, each table
containing a set of data items, said data tables
including a first table containing data items belonging
to a first class of information, a second table
containing data items belonging to a second class of
information, and a table linking the data items in the
first table with the data items in the second data
table, the set of templates including a set of first
order templates each for defining the overall format of
an information page, and a set of second order
templates each for defining the format of a part of an
information page, wherein the overall format of an
information page includes at least one specified area
whose format is to be defined by a second order
template, and wherein the database has control
information associating each table or each data item
with at least one second order template, said method
including the steps of:

selecting and retrieving a first order template based
on a universal resource locator, URL received by the
computer system;

performing a search on said database using at least one
search parameter based on the URL and control
information in the retrieved first order template to
retrieve a set of data items;
using the control information in the database to select at least one second order template and at least one third order template associated with the retrieved set of data items, each third order template being subordinate to an associated second order template and defining the format of a portion of a part of the information page defined by its associated second order template, comprising extracting the identities of the at least one second order template and the at least one third order template from control information contained in the data tables of the set of data tables which have been searched;

retrieving the selected at least one second order template and the selected at least one third order template; and

using the first order template, the at least one second order template and the at least one third order template to create an information page containing a representation of the data items retrieved in the search."

XIV. The appellant's arguments relevant to the decision are discussed in detail below.

**Reasons for the Decision**

1. The appeal complies with the provisions referred to in Rule 101 EPC and is therefore admissible.
2. **The invention**

2.1 The application relates to the generation of "information pages" on a computer and explains that it is known to generate information pages by inserting a set of data items extracted from a database into a fixed template. This method is said to have the disadvantage that it is difficult to produce variations in the layout and form of the information pages thus created.

2.2 The invention proposes generating information pages on the basis of "first order" and "second order" templates. A first-order template defines the overall format of an information page. A second-order template defines the format of a specified area of the information page.

2.3 One example of a first-order template is template 200 shown in Figure 10, which is described in the description on page 18, lines 3 to 31, of the published application. Template 200 defines two areas for second-order templates 202 and 204. The first-order template contains fields 210 and 212 in which the name and a description of a selected product category are to be inserted. The two second-order templates 202 and 204 are for displaying information on two selected products. Each of these second-order templates is selected on the basis of the corresponding product, i.e. the information about each product is formatted in accordance with an individual template. In the example of Figure 10, both second-order templates contain fields 214, 216 and 218 for the name, main feature and price of the respective product.
2.4 The invention may be implemented on a server computer ("catalogue computer") dynamically generating information pages requested by a client browser (see page 3, lines 11 to 14, and page 6, lines 11 to 24). In the main embodiment disclosed in the application, the server computer stores an electronic catalogue comprising data items entered by a vendor (page 5, line 11, to page 6, line 3). In order to create a distinctive appearance for information pages, the vendor may create its own templates (page 6, lines 4 to 10). When a buyer accesses the catalogue to request an information page, the server selects a number of templates, retrieves data items, and creates the requested information page (page 6, lines 11 to 24).

3. **Main request - admission**

Claim 1 of the main request differs from claim 1 of the sole request considered by the Examining Division and initially maintained on appeal only in containing two minor clarifications. The Board therefore admits the main request into the proceedings under Article 13(1) RPBA.

4. **Main request - inventive step**

4.1 Document D1 relates to the creation and display of a catalogue of items via an electronic network such as the Internet (see abstract and column 3, lines 23 to 33). It may be implemented on a server computer running a web server coupled to a database (see Figure 1 and column 3, lines 43 to 61). It is therefore a suitable starting point for the assessment of inventive step.
4.2 Document D1 first describes how a merchant may create a catalogue by entering information into forms (column 3, line 57, to column 4, line 53). Figure 4 shows a group-definition form for defining a "group" page giving information on a group of products. This form includes a template-selection control 41 which allows the merchant to customise the "look and feel" of the catalogue by assigning to each group a particular display template (column 5, lines 22 to 30). The information defining a group is stored as a "group page" in the database-storage system (column 5, line 54 to 56). In addition to groups and subgroups, the merchant may define "product" pages giving information on particular products by means of a product-definition form as shown in Figure 8. This form similarly includes a template-selection control 81 allowing the merchant to customise the "look and feel" of the product definition by assigning to each product a display template (column 6, lines 29 to 32).

4.3 Document D1 then explains that a consumer may access the web server via a URL address, whereupon he is presented with an initial storefront page (column 6, lines 60 to 66, and Figure 11). When the consumer selects a hyperlink on this page corresponding to a group of products, the web server decodes the URL associated with the hyperlink and uses it to select a page stored in the database-storage system (column 6, line 67, to column 7, line 13). If the page is found, content for the page including data items to be displayed and a display template associated with the page are retrieved from the database and a display page is generated (column 7, lines 18 to 40).

Thus, in document D1, selection by the user of a hyperlink on the initial storefront page corresponding
to a particular group of products causes the server to select a ("first order") display template from the database and to perform a search on the database-storage system to retrieve data items corresponding to the selected group page. The display template is used to create an information page containing a representation of the retrieved data items.

4.4 The subject-matter of claim 1 hence differs from what is disclosed in document D1 in that

- the database contains a set of second-order templates for defining the format of specified areas of the information page;
- the database further contains "control information associating each table or each data item with at least one second order template", which is used to select and retrieve at least one second-order template associated with the retrieved set of data items; and
- in the step of creating the information page the retrieved at least one second-order template is also used.

4.5 Compared to document D1, these distinguishing features allow the designer of an information page to customise the format or layout of particular areas of the information page in dependence on the data items to be displayed on the page. One example given in the application is Figure 10, which shows a first-order display template 200 specifying two areas for second-order templates 202 and 204. These two areas are to display information about two products, the information about each product being formatted in accordance with an individual template (see point 2.3 above).
Applying these features to document D1 makes it possible, for example, to customise the display of each of the two product references 141 and 142 included in the group page shown in Figure 14 individually.

In the Board's view, the mere wish for such layout customisation is non-technical and may therefore be used in the formulation of the problem to be solved. The problem to be solved may thus be seen as that of modifying the method of document D1 to give the information page designer this additional flexibility.

4.6 Document D1 already proposes using formatting templates for customising the display of data, including group display templates for customising the display of product groups and product templates for customising the display of product information. Starting from document D1, the skilled person aiming to solve the problem of customising specific areas within an information page, such as areas within a group information page showing information on particular products, would therefore consider providing "second order" templates for formatting those areas. In order to associate those "second order" templates with the data items or data item types to be displayed, he would further provide suitable "control information"; the broad term "control information" is not further defined either in the claim or in the description. He would thereby arrive at the subject-matter claimed without the exercise of inventive skill.

4.7 Referring to decision T 1351/04 of 18 April 2007, the appellant argued that the formatting information of the invention was closely analogous to technical indexing information controlling how a computer conducted a search. The formatting information of the invention was
used to control how the computer obtained the information which it was ultimately going to display to the user.

However, the Board's reasoning in the present case does not rely on particular information such as template or control information being non-technical. Formatting or display templates are known from document D1, and providing some form of "control information" to link data items or data item types to second-order templates is obvious.

4.8 The appellant further argued that, instead of providing second-order templates, the skilled person would pre-generate a number of first-order templates. Compared to that approach the invention reduced storage requirements.

Although it may be feasible to customise particular areas in the information pages of document D1 by providing or pre-generating a large number of versions of each (first-order) display template, each version including customised formatting of the particular areas, the Board considers that the existence of this alternative approach does not detract from the obviousness of the claimed solution. In particular, the fact that the claimed solution avoids the need to store a potentially very large number of pre-generated display templates is one of the foreseeable advantages of dynamically generating information on the basis of (in this case: second-order) templates.

4.9 It follows that the subject-matter of claim 1 of the main request lacks inventive step (Articles 52(1) and 56 EPC).
5. **First auxiliary request - admission**

5.1 Claim 1 of the first auxiliary request contains the following amended features as compared to claim 1 of the main request (amendments underlined):

- selecting a first-order template based on a universal resource locator, URL received by the computer system;
- performing a search on said database using at least one input parameter based on the URL and the selected first order template to retrieve a set of data items;
- using the control information from the selected first order template in the database to select at least one second order template associated with the retrieved set of data items.

5.2 According to the appellant's letter of 1 June 2016, which refers to footnotes on the attached marked-up copy of the first auxiliary request, these amendments are based on page 14, lines 9 to 12, of the published application.

The passage on page 14, lines 5 to 19, indeed discloses that a first-order template is selected and retrieved on the basis of a URL received by the server. But the subsequent database search is performed on the basis of "[t]he URL received ... and control information in the retrieved first order template" as search parameters. In other words, the input or search parameters are not based on the selected first order template as now claimed but, more specifically, on control information in the first-order template.
The same passage further discloses that identities of second-order templates are extracted "from control information contained in the tables which have been searched" and, thus, not from control information contained in the selected first-order template.

5.3 At the oral proceedings, the appellant conceded that the amended features did not correspond directly to those disclosed on page 14, lines 5 to 19, but submitted that the claim might allowably generalise the disclosed embodiment. The search parameter of page 14 was indirectly based on the selected first-order template in that it was based on control information contained in the selected first-order template. Similarly, the passage on page 14 stated that the identities of the second-order templates were extracted from the searched tables, and which tables were searched depended on the control information contained in the selected first-order template.

5.4 The Board has serious doubts that the application as filed provides a basis for such generalisations. In any event, the indications submitted in the appellant's letter of 1 June 2016 are insufficient to verify compliance of the first auxiliary request with Article 123(2) EPC and the new arguments put forward by the appellant at the oral proceedings presented the Board at a very late stage in the proceedings with new issues of considerable complexity. The Board therefore exercises its discretion under Article 13(1) RPBA not to admit the first auxiliary request into the proceedings.
6. **Auxiliary request 1a - admission**

6.1 Claim 1 of auxiliary request 1a contains the following amended features as compared to claim 1 of the main request (amendments **underlined**):

- selecting and retrieving a first order template based on a universal resource locator, URL received by the computer system;
- performing a search on said database using at least one search parameter based on the URL and control information in the retrieved first order template to retrieve a set of data items;
- using the control information in the database to select at least one second order template associated with the retrieved set of data items comprising extracting the identities of the at least one second order template from control information contained in the data tables of the set of data tables which have been searched.

6.2 Since these amendments do reflect what is disclosed on page 14, lines 5 to 19, of the published application and introduce no issues that the Board cannot deal with, auxiliary request 1a is admitted into the proceedings (Article 13(1) RPBA).

7. **Auxiliary request 1a - inventive step**

7.1 Document D1 discloses that a URL received by the server is used to access a table of the pages stored in the database-storage system (column 7, lines 7 to 13). If the page is found, the content fields associated with the page and the corresponding display template are retrieved from the database-storage system (column 7, lines 18 to 31 and lines 58 to 63). Thus, a first-order
template is selected and retrieved on the basis of the received URL.

7.2 If the URL specifies a group page, the database-storage system is queried for the information content to be displayed on the display template and for subgroups and product pages having the corresponding group ID to be displayed on the group page (column 7, lines 34 to 40). Thus, a search is performed in the database-storage system to retrieve a set of data items with search parameters at least partly based on the URL.

7.3 The template selections made for products by means of the display template control 81 in the product definition form (see point 4.2 above) are stored as part of the "product page" in the database-storage system (column 6, lines 12 to 28 and lines 52 to 54). This stored selection may be regarded as "control information" from which the identity of the ("first order") display template associated with a product data item may be extracted. The skilled person wishing to associate a second-order template with a product data item would choose the same solution. The amended feature specifying that the identities of second-order templates are extracted from control information contained in the searched data tables is therefore obvious.

7.4 What remains is the feature specifying that the database search is performed using a search parameter based also on control information in the retrieved first-order template. The Board notes that this control information is to be distinguished from the control information contained in the data tables discussed in the preceding paragraph.
7.4.1 The application does not explain in any detail what kind of "control information" is contained in a first-order template and in what sense this information is used to derive a "search parameter". At the oral proceedings, the appellant submitted that the control information in a first-order template may specify the data tables to be searched for data items to be included in the information page, but no passage of the description confirms this interpretation.

7.4.2 Document D1 explains in column 5, lines 35 to 53, that each field of the display template for a group represents a variable to which the contents of a data input field from the group-definition form can be assigned. Similarly, data items displayed as part of a product page will be in different locations depending on the applicable product display template (column 6, lines 39 to 51). Links such as field numbers exist to link fields (or variables) in the display template to the corresponding fields as entered in the group- and product-definition forms (cf. point 4.2 above). When generating the display page, data fields retrieved from the database are assigned to the corresponding variable in the display template (column 7, lines 41 to 45).

7.4.3 Although document D1 does not explicitly disclose that the links or field numbers linking fields or variables of a display template to database fields are contained in the display template, the Board considers this at least an obvious possibility. Such linking information controls which data fields are to be retrieved from the database to be displayed in a particular location of the template and may thus be regarded as "control information" defining "search parameters".
7.4.4 For the sake of completeness, the Board notes that even if "control information" were interpreted more narrowly in the manner suggested by the appellant, the feature would still not support an inventive step. Although the data tables to be searched for data items to be included in a particular requested information page could be specified in a multitude of ways, for example as part of the URL or, in the context of document D1, in the table of pages discussed in column 7, lines 11 to 13, storing such specification as part of the "first order" display template is a minor implementation detail having only foreseeable advantages and disadvantages.

7.5 Hence, the subject-matter of claim 1 of auxiliary request 1a lacks inventive step (Articles 52(1) and 56 EPC).

8. Second auxiliary request - admission

Since claim 1 of the second auxiliary request contains the amended features of claim 1 of the first auxiliary request, the second auxiliary request is likewise not admitted into the proceedings (Article 13(1) RPBA).

9. Third auxiliary request - admission

9.1 Claim 1 of the third auxiliary request is based on claim 1 of auxiliary request 1a. It includes the following feature that had been added to claim 1 of the second auxiliary request as compared to claim 1 of the first auxiliary request:

- said data tables including a first table containing data items belonging to a first class of information, a second table containing data items
belonging to a second class of information, and a
table linking the data items in the first table
with the data items in the second data table.

It further includes the following amended features
expressing the presence and use of at least one third-
order template:

- using the control information in the database to
  select at least one second order template and at
  least one third order template associated with the
  retrieved set of data items, each third order
  template being subordinate to an associated second
  order template and defining the format of a portion
  of a part of the information page defined by its
  associated second order template, comprising
  extracting the identities of the at least one
  second order template and the at least one third
  order template from control information contained
  in the data tables of the set of data tables which
  have been searched;
- retrieving the selected at least one second order
  template and the selected at least one third order
  template; and
- using the first order template, the at least one
  second order template and the at least one third
  order template to create an information page
  containing a representation of the data items
  retrieved in the search.

9.2 With respect to the feature introducing a database

table linking data items in a first table to data items
in a second table, the appellant conceded that this
feature was not directly linked to any of the steps of
the claimed method and that such linking tables were
well known in connection with relational databases. The
feature had been introduced only to express that the database of the claimed method was a relational database.

In view of this explanation, the Board was satisfied that the inclusion of the feature raised no issues that the Board could not deal with without adjournment of the oral proceedings.

9.3 Although features relating to third-order templates were present only in dependent claim 2 of the appellant's sole substantive request presented with the statement of grounds of appeal, the Board is able to deal with those features too.

9.4 For these reasons, the Board admits the third auxiliary request into the proceedings (Article 13(1) RPBA).

10. Third auxiliary request - inventive step

10.1 Since the feature introducing a database table linking data items in two other tables does not interact with the steps of the claimed method and it is undisputed that such linking tables were well known in connection with relational databases, the only potential contribution of this feature is that it limits the claimed method to the use of relational database technology. At the priority date of the application relational databases were well known in the art and an obvious choice for storing the catalogue data of document D1. Hence, this feature does not add anything inventive.

10.2 With respect to the features relating to third-order templates, the appellant explained that claim 1 did not merely define a hierarchy of templates. The at least
one third-order template was selected and retrieved together with the at least one second-order template and on the basis of the same control information contained in the searched data tables.

10.3 The Board agrees with the appellant's reading of the claim. As far as their selection and retrieval is concerned, third-order templates are not different from second-order templates; in this respect there is no hierarchy between them. Third-order templates are distinguished from second-order templates only in that they are used for customising specified sub-areas within areas of the information page defined by second-order templates. They therefore allow the designer of an information page to customise not only the format of particular areas of the information page but also the format of sub-areas within those areas in dependence on the data items to be displayed on the page. In the example shown in Figure 10 and discussed on page 18, lines 9 to 31, of the application, second-order templates 202 and 204 customise the format of product information, and third-order templates 206 customise, within the areas defined by those second-order templates, the format of a part of the page displaying an image of the respective products.

10.4 The Board again considers the mere wish for such layout customisation to be non-technical (cf. point 4.5 above). The skilled person, starting from document D1 and tasked with the problem of giving the information page designer this extended additional flexibility, would consider providing both "second order" templates for formatting the areas to be customised and "third order" templates for formatting sub-areas within those areas.
10.5 It follows that the features added to claim 1 of the third auxiliary request do not render its subject-matter inventive, so that the third auxiliary request is likewise not allowable (Articles 52(1) and 56 EPC).

11. Conclusion

Since none of the requests admitted into the proceedings is allowable, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

I. Aperribay R. Moufang

Decision electronically authenticated