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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**

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 1 July 2016

Appellant: Knapp Investment Company Limited
(Applicant)   c/o Trident Trust Company (B.V.I.) Limited
                         Trident Chambers, P.O. Box 146
                         Road Town, Tortola (VG)

Representative: Grünecker Patent- und Rechtsanwälte
                         PartG mbB
                         Leopoldstraße 4
                         80802 München (DE)

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 <u>based on a
              universal resource locator, URL received by the
              computer system</u>;
         -    performing a search on said database using at least
              one input parameter <u>based on the URL and the
              selected first order template</u> to retrieve a set of
              data items;
         -    using the control information <u>from the selected
              first order template</u> 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 <u>underlined</u>):

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

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 <u>and at
  least one third order template</u> associated with the
  retrieved set of data items, <u>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</u>, comprising
  extracting the identities of the at least one
  second order template <u>and the at least one third
  order template</u> 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 <u>and the selected at least one third order
  template</u>; and
- using the first order template, the at least one
  second order template <u>and the at least one third
  order template</u> 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