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Datasheet for the decision
of 15 April 2025

Case Number:	T 1650/23 - 3.5.07
Application Number:	17162031.3
Publication Number:	3223166
IPC:	G06F17/21, G06F17/20
Language of the proceedings:	EN

Title of invention:
Information processing system, information processing method, and information processing program

Applicant:
Rakuten Group, Inc.

Headword:
Display of content amount of content item/RAKUTEN

Relevant legal provisions:
EPC Art. 56, 84
RPBA 2020 Art. 12(6), 13(2)

Keyword:
Claims - main request - auxiliary request I - clarity (no)
Amendment after summons - auxiliary request Ia - exceptional
circumstances (yes)
Inventive step - auxiliary request Ia (no) - mixture of
technical and non-technical features - presentation of
information
Amendment to appeal case - auxiliary request II - taken into
account (no)

Decisions cited:
T 0641/00

Case Number: **T 1650/23 - 3.5.07**

D E C I S I O N
of Technical Board of Appeal 3.5.07
of 15 April 2025

Appellant: (Applicant)	Rakuten Group, Inc. 1-14-1 Tamagawa Setagaya-ku Tokyo 158-0094 (JP)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 12 May 2023 refusing European patent application No. 17162031.3 pursuant to Article 97(2) EPC**

Composition of the Board:

Chairman	J. Geschwind
Members:	P. San-Bento Furtado
	R. de Man

Summary of Facts and Submissions

I.   The appeal lies from the decision of the examining
        division to refuse European patent application
        No. 17162031.3, which claims an earliest priority date
        of 24 March 2016.

II.   The following prior-art document, among others, was
        cited in the decision under appeal:
        D1: US 2002/0109709 A1, 15 August 2002.

III.   The examining division decided that the subject-matter
        of the independent claims of the main request and of
        claim 1 of the first to third, fifth and sixth
        auxiliary requests lacked inventive step over
        document D1. Claim 1 of the main request and first to
        seventh auxiliary requests did not fulfil the
        requirements of Article 84 EPC. The main request and
        first to sixth auxiliary requests infringed
        Article 83 EPC. An eighth auxiliary request submitted
        in the oral proceedings was not admitted into the
        proceedings under Rules 116(2) and 137(3) EPC.

IV.   With the statement of grounds of appeal, the appellant
        filed claims according to a main request and auxiliary
        requests I and II corresponding to the main request and
        fourth and eighth auxiliary requests considered in the
        decision under appeal. The appellant requested that the
        decision under appeal be set aside and that a patent be
        granted on the basis of the main request or of either
        of auxiliary requests I and II.

V.   In a communication accompanying a summons to oral
        proceedings, the board raised, among others,
        preliminary objections for lack of clarity against

claim 1 of the main request and claim 1 of auxiliary request I. The board discussed admissibility of auxiliary request II in view of Article 12(6) RPBA. With regard to inventive step, the board considered that a better starting point than document D1 was a conventional information processing system as was notoriously known at the priority date of the present application, for example a system including a web browser as mentioned in paragraph [0002] of the description. The subject-matter of claim 1 of each of the requests did not appear to involve an inventive step over this conventional prior-art system.

VI.   With a letter of reply the appellant filed amended claims to address the board's preliminary objections under Article 84 EPC as a new auxiliary request Ia, positioned between auxiliary requests I and II.

VII.   Oral proceedings were held as scheduled. At the end of the oral proceedings, the Chair announced the board's decision.

VIII. The appellant's final request was that the decision under appeal be set aside and that a patent be granted on the basis of the main request or, in the alternative, of one of auxiliary requests I, Ia and II.

IX.   Claim 1 of the main request reads as follows (itemisation added by the board):
       (a)   "An information processing system capable of accessing storage means (12, 24) configured to store a content item (C5) to be displayed being embedded in a page on a visitor's screen, the system comprising:
       (b)   identification means (101) configured to identify, as a target content item, a content item (C5) that is in a content display area

placed on the page and that is not being
displayed on the screen, while the page is being
displayed on the screen;

(c)   estimating means (102) configured to estimate
a display duration for which the target content
item (C5) will remain displayed on the screen;

(d)   changing means (104) configured to reduce a
content amount of the target content item (C5) to
be displayed on the screen

(d1)   to an amount that enables the visitor to
understand the target content item (C5) within
the display duration,

(d2)   if the display duration estimated by the
estimating means (102) is shorter than a
threshold value; and

(e)   display control means (105) configured to
cause the target content item (C5) whose content
amount has been updated by the changing means
(104) to be displayed being embedded in the page
on the screen;

(f)   the content display area being an area of the
page for displaying the content item;

(g)   wherein the changing means is configured to
reduce a number of characters included in the
target content item or a size of an image
included in the target content item, or to delete
an image included in the target content item."

X.   Claim 1 of auxiliary request I differs from claim 1 of
the main request in that the text (d1) above has been
deleted and in that the text (g) above has been
replaced with the following text:
"wherein
the storage means (12, 24) is configured to store a
content set including a plurality of content items that

are mutually related in display content but mutually
different in content amount,

    each of the content items included in this content
set is stored in association with a display duration
that enables the visitor to understand display content
thereof, and

    the changing means (104) is configured to identify
the content item (C5) associated with the display
duration estimated by the estimating means (102) as the
content item (C5) to be displayed on the screen, from
the content set stored by the storage means (12, 24)."

XI.   Claim 1 of auxiliary request Ia differs from claim 1 of
auxiliary request I in that
-    the text "(S)" has been added after the text "An
  information processing system";
-    the text "(12,24)" has been replaced with "(24)";
-    the text "on a visitor's screen, the system
  comprising" has been replaced with the text
  "on a visitor's screen of a client terminal (2),
  the client terminal (2) being part of the
  information processing system (S), the system
  comprising, as part of the client terminal (2):
      the storage means (24);"
-    the text ", a size of the page being larger than a
  size of the visitor's screen" has been added after
  the text "while the page is being displayed on the
  screen";
-    the text ", wherein the content amount of the
  target content item is an amount the visitor
  visually understands on the display screen" has
  been added after the text "a threshold value".

XII.   Claim 1 of auxiliary request II differs from claim 1 of
auxiliary request I in that text (d1) has been re-
introduced after text (d).

Reasons for the Decision

Invention

1.   The invention concerns controlling the display of
content items provided by a website or an application.
In the system according to the invention, the content
of a content item to be displayed is reduced to an
amount that enables a user "to understand the target
content item within the display duration".

Main request

2.   *Clarity*

2.1   Claim 1 is directed to an information processing system
for accessing a stored content item and displaying it.
The content item is said to be "embedded in a page on a
visitor's screen" (see feature (a) in section IX.
above).

2.1.1 However, it is unclear from claim 1 what the terms
"page" and "visitor" refer to. These terms are usually
used to refer to a web page and a user accessing (i.e.
"visiting") the web page, but the claim is not
restricted to a web browser. Furthermore, it is unclear
from claim 1 how the "visitor's screen" relates to the
information processing system referred to in
feature (a).

2.1.2 In feature (b) it is unclear how "a content item in a
content display area placed on the page", the page
being displayed, is not being displayed. It is also
unclear in feature (e), how the target content item can

be displayed if it is not in view according to
feature (b).

2.1.3   The appellant argued that the skilled person,
attempting to construe the claim in a technically
sensible manner and being aware that (web) pages are
typically larger than the screen, would arrive at the
correct interpretation of the claim.

2.1.4   The board notes, however, that claim 1 does not mention
web technology and specifies very few details of the
technical context of the information processing system.
For the reasons given in points 2.1.1 and 2.1.2 above,
the board is of the opinion that the skilled person can
not clearly identify the matter for which protection is
sought from the wording of the claim alone
(Article 84 EPC).

2.2   In feature (d), the term "content amount" does not have
a clear technical meaning. In the context of the
present application, it is not used to refer to the
amount of data measured in bytes, but to the amount of
cognitive content, which is subjective. Furthermore, it
is unclear, in feature (d1), what "to understand the
target content item" means.

2.2.1   The appellant argued that the term "content amount" was
not subjective because it could be assessed
objectively. The examples in Figures 4A to 4D
illustrated this, since there was no doubt that the
content amount decreased from Figure 4A to Figure 4D.

According to the appellant, the skilled person
recognised that certain pieces of information were more
relevant than others. The skilled person would thus
discard options in which highly relevant content, such
as the specification of the camera "RZC-23", is treated

as less relevant than less information-dense phrases such as "It is priced at", especially when the actual information content appears only in the subsequent expression, e.g. "¥ 10,000".

2.2.2 The board notes, however, that what is relevant depends on the user reading the content and their personal interests at the moment. Furthermore, it is unclear how reducing an image size or deleting an image, as claimed in feature (g), can achieve the result expressed in feature (d1), namely allowing the user ("visitor") to understand the target content item within the estimated display duration. By reducing the content displayed, the user will not be able to obtain the whole original content of the target content item. In the board's opinion, not displaying the whole content item will normally make it harder for the user to fully understand the content item. According to page 29, lines 3 to 9, an image may be deleted because it is unlikely to be understood if displayed. However, not displaying the image at all ensures that it will not be understood (Article 84 EPC).

2.3 For the reasons given above, claim 1 does not fulfil the requirements of Article 84 EPC.

Auxiliary request I

3. *Clarity*

3.1 Claim 1 of the auxiliary request does not overcome the objections raised in points 2.1.1 and 2.1.2 above.

3.2 For the reasons given under points 2.1 to 2.1.4 above, auxiliary request I does not satisfy the requirements of Article 84 EPC either.

Auxiliary request Ia

4.   *Admission*

4.1   Auxiliary request Ia addresses objections under
        Article 84 EPC raised for the first time in the board's
        communication pursuant to Article 15(1) RPBA. Since
        this constitutes an exceptional circumstance under
        Article 13(2) RPBA, the board admits auxiliary
        request Ia into the proceedings.

5.   *Inventive step*

5.1   In the decision under appeal, document D1 was taken as
        starting point for the inventive-step assessment.
        However, the board prefers to start from a conventional
        information processing system including a client having
        a graphical display and running applications based on a
        graphical user interface (GUI) such as a web browser,
        as was notoriously known at the priority date of the
        present application.

        The conventional prior-art information processing
        system supports the display of content items on windows
        or pages of a GUI at a client. For example, "content
        information providing systems" support access to "item
        information, blogs, or articles" provided by a "website
        or an application" (see also the background section of
        the description, paragraph [0002]). In the conventional
        prior-art system, content items may be displayed at the
        client screen on a page. As it is notoriously known, a
        page may be only partially shown on the display screen.
        The area displayed on the display screen ("active
        display area") moves in accordance with operations such
        as e.g. "scroll", "page down" or "page up", performed
        by a visitor of the page. It is also notoriously known
        that such a conventional prior-art system supports

search in a window or page, such search being able to
detect items outside of the active display area, and
displaying found items in a highlighted manner.

5.2   It follows from the above that the conventional prior-
        art system is an information processing system as
        specified in feature (a). The client terminal is part
        of the information system and the visitor's screen is
        the screen of the client terminal, as specified by
        features added by claim 1 of auxiliary request Ia.

        As notoriously known, the client includes storage
        means. Moreover, in the conventional prior-art system,
        a page includes an area for displaying a content item
        (referred to in the claim as a "content display area"),
        and the page size may be larger than the size of the
        client terminal's screen ("the visitor's screen"), as
        expressed in claim 1.

        At a given point in time, at the client of the
        conventional prior-art system there may be a content
        item in a content display area which is not in the
        active display area. In this case, this content item is
        not being displayed while the page is being displayed
        on the screen. This is a "target content item" within
        the meaning of claim 1.

5.3   The client of the conventional prior-art system is able
        to display content items embedded in a page and
        therefore includes "display control means". Since it is
        capable of displaying a target content item when a user
        operation, e.g. scrolling or searching, changes the
        area of the page that is visible to the area of the
        target content item, the conventional prior-art system
        includes also "identification means" configured to
        identify target content items of a page. The
        highlighting of items in accordance with a search is

performed by some changing means, which however do not reduce the content. Therefore, the client of the conventional prior-art system includes identification means for identifying a target content item and display control means to cause the updated target content item to be displayed as specified in claim 1.

5.4   The appellant argued that the skilled person would not have been prompted to design "a size of the page being larger than a size of the visitor's screen". The board is however of the opinion that it is notoriously known that pages can be so large that they have to be scrolled and that in some of those cases the page is larger than the screen.

5.5   In view of the above, the board concludes that the subject-matter of claim 1 differs from the conventional prior-art system in that the client terminal includes the following features:

(i)   estimating means configured to estimate a display duration for which the target content item will remain displayed on the screen;

(ii)   changing means configured to reduce a content amount of the target content item to be displayed on the screen, if the display duration estimated by the estimating means is shorter than a threshold value, wherein the content amount of the target content item is an amount the visitor visually understands on the display screen;

(iii)   the storage means is configured to store a content set including a plurality of content items that are mutually related in display content but mutually different in content amount,

(iv)   each of the content items included in this content set is stored in association with a

display duration that enables the visitor to
understand display content thereof, and

(v)   the changing means is configured to identify the
content item associated with the display duration
estimated by the estimating means as the content
item to be displayed on the screen, from the
content set stored by the storage means.

5.6   The distinguishing features relate in part to the way
information is displayed (i.e. presented) to the user.
Presentation of information is as such not patentable
under Article 52(2) and (3) EPC. According to the case
law of the Boards of Appeal, presentation of
information as such, as non-technical subject-matter,
cannot contribute to inventive step. Where a claim
refers to an aim to be achieved in a non-technical
field, this aim may legitimately appear in the
formulation of the problem as part of the framework of
the technical problem that is to be solved, in
particular as a constraint that has to be met
(T 641/00, Reasons 7).

5.7   The appellant argued that the distinguishing features
related to technical concepts directed at determining
in advance how and which information to provide in
accordance with the display duration. Hence, these
features were directed at the internal processing of
the claimed information processing system and not at
the mere presentation of information. The
distinguishing features achieved the technical effect
of reducing processing loads, quickly changing the
content amount of the target content item, and causing
the target content item to be displayed, as was recited
in paragraph [0043] of the description. By storing in
advance multiple content variants corresponding to

possible display durations, the processing was
improved.

The appellant further argued that all the
distinguishing features contributed to these technical
effects, since they were involved in the steps leading
to the improved processing. They could thus not be
considered to be mere "constraints" included in the
objective technical problem. The objective technical
problem had to be formulated as how to improve the
processing of displaying a target content item,
possibly with the addition of "such that it enables the
visitor to understand display content thereof" to take
into account the board's assessment that the present
invention contained a part that was based on non-
technical considerations.

5.8   The board cannot recognise any improved processing
       compared to the conventional prior-art system, since
       changing the displayed information involves additional
       processing. The only effect of this additional
       processing is in the mind of the user, who is presented
       with different information than in the conventional
       prior-art system.

       The concept of the invention is that of displaying, for
       a display duration below a threshold, a version of the
       target content item with a reduced content amount that
       enables the visitor to visually understand the target
       content item within the display duration. The versions
       to be displayed should be "mutually related in display
       content but mutually different in content amount". This
       concept of the invention is based on non-technical
       considerations about a reduction of the cognitive
       burden of the user. It is thus a non-technical concept

that can be included in the formulation of the
technical problem.

In view of this, the distinguishing features solve the
technical problem of modifying the conventional prior-
art system to display, for a display duration below a
threshold, a version of the target content item with a
reduced content amount that enables the visitor to
visually understand the target content item within the
display duration.

5.9   According to the appellant, the skilled person,
        starting from the closest prior art, was not prompted
        to store various versions of a target content item
        corresponding to different display durations and to
        select the appropriate one. Without any hint in the
        direction of the claimed solution, it would involve
        inadmissible hindsight to consider that the skilled
        person would arrive at the claimed subject-matter in an
        obvious manner.

5.10   The board is, however, of the opinion that the skilled
        person facing the above formulated technical problem
        would immediately recognise the need to estimate the
        display duration and change the version of the target
        content item to be displayed if the estimated display
        duration is below a threshold. The skilled person would
        thus immediately arrive at features (i) and (ii).

        In computer programming it is well known to keep sets
        of precomputed data in storage using commonplace data
        structures, in order to later access the needed data as
        necessary. Regarding the need to present one of
        different "reduced content" versions of the content
        item depending on the duration, the skilled person
        would thus, as an obvious alternative, consider storing
        the different versions of the content item, one version

for each corresponding duration, as a set in a stored data structure. The skilled person would in this way also arrive at features (iii) to (v).

5.11   Therefore, the subject-matter of claim 1 of auxiliary request Ia is not inventive (Article 56 EPC).

Auxiliary request II

6.   Claim 1 of auxiliary request II differs from claim 1 of auxiliary request I in that feature (d1) has been re-introduced after feature (d).

7.   *Admission into the proceedings – auxiliary request II*

7.1   Auxiliary request II was not admitted into the proceedings (as the then eighth auxiliary request) by the examining division. It should thus, in accordance with Article 12(6) RPBA, not be admitted into the appeal proceedings unless the decision not to admit it suffered from an error in the use of discretion or unless the circumstances of the appeal case justify its admittance.

7.2   The appellant argued that auxiliary request II had been filed in view of the remarks under point 6 of the examining division's preliminary opinion of 17 April 2023 indicating that the deletion of feature (d1) was at odds with Articles 84 and 123(2) EPC. According to the appellant, this request should not have been considered late filed as the subject of the proceedings had changed. The examining division had raised the objections for the first time in the preliminary opinion one week before the oral proceedings.

7.3   The board notes, however, that the examining division's
        objections under Articles 84 and 123(2) EPC raised in
        its communication of 17 April 2023 were prompted by
        amendments introduced by the appellant after the
        summons to oral proceedings and could thus not have
        been raised in an earlier communication. Therefore, the
        examining division did not cause a change of the
        subject of the proceedings.

7.4   The appellant also argued that all the objections
        raised had been overcome by this request submitted
        during the oral proceedings. The examining division had
        acknowledged at the oral proceedings that the claimed
        subject-matter was inventive and the objections raised
        in the communication of 17 April 2023 were caused by
        the deletion of feature (d1). They had thus been
        clearly rendered moot by the reinstatement of
        feature (d1).

        This argument is not convincing, since the
        communication of 17 April 2023 was not meant to be
        complete and did not withdraw the objections raised in
        the communication accompanying the summons. Besides,
        reinstating the feature which had been considered
        unclear reintroduces deficiencies.

7.5   Therefore, the examining division's decision not to
        admit did not suffer from an error in the use of
        discretion.

7.6   In view of the above, auxiliary request II is not
        admitted into the proceedings (Article 12(6) RPBA).

Conclusion

8.   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:

G. Nachtigall   J. Geschwind

Decision electronically authenticated