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Datasheet for the decision
of 28 May 2008

Case Number: T 1054/05 - 3.5.01

Application Number: 00120751.3

Publication Number: 1087304

IPC: G06F 17/30

Language of the proceedings: EN

Title of invention:
Information management technique

Applicant:
NEC CORPORATION

Opponent:
-

Headword:
Information management/NEC

Relevant legal provisions (EPC 1973):
EPC Art. 54(1), 56

Keyword:
"Inventive step - synergistic effect (no)"

Decisions cited:
T 0141/87

Catchword:
See point 4.5 of the Reasons

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Case Number: T 1054/05 **-** 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 28 May 2008

Appellant: NEC CORPORATION
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Minato-ku
Tokyo   (JP)

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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted 30 March 2005
refusing European application No. 00120751.3
pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: S. Steinbrener
Members: S. Wibergh
P. Schmitz

Summary of Facts and Submissions

I.   This appeal is against the decision of the examining
        division to refuse European patent application
        No. 00120751.3.

II.   The following documents will be referred to:

        D1: US-A-5 924 096
        D8: WO-A-98/12650.

III.   According to the decision appealed, the method of
        claim 15 and the system of claim 1 did not involve an
        inventive step with respect to D1.

IV.   With the statement setting out the grounds of appeal,
        the appellant requested that the decision be set aside
        and a patent be granted on the basis of claims 1-26
        filed with the same letter. It was argued in particular
        that the new independent claims were directed to a
        pushing model, meaning that updated information was
        actively distributed by a server. D1, on the other hand,
        related to a pulling model.

V.   In a communication, the Board observed that independent
        method claim 14 was largely identical with claim 15
        discussed in the decision under appeal, except for the
        trivial addition that the client device not only
        received an update but also used it. Therefore, the
        examining division's argumentation with respect to
        inventive step, which appeared convincing, still
        applied. Furthermore, document D8 indicated that the
        respective advantages of pulling and pushing were well
        understood.

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VI.   By letter dated 16 April 2008 the appellant filed an
        amended set of claims 1-24.

VII.   Oral proceedings were held on 28 May 2008. The
        appellant filed a new independent method claim 13. This
        claim read:

        "An information management method in a system
        comprising a plurality of network nodes connected to
        each other via a network, wherein the plurality of
        network nodes includes a server device and a plurality
        of client devices, and a gateway server device
        performing protocol conversion between the server
        device and each of the client devices, the server
        device storing a structured document which is a
        hierarchical set of components, which comprises a
        plurality of hierarchical subsets of components, and
        each of the client devices storing a duplication of the
        structured document, the method comprising:
        at the server device,
        a) managing an update of the structured document of a
        minimum subset of components, which is a hierarchical
        subset of components equal to a component immediately
        above an updated component in the structured document;
        and
        b) transmitting to a client device a minimum subset of
        components determined by an updated component of the
        structured document; and
        at a client device
        receiving the minimum subset of components from the
        server device;
        c) updating a corresponding subset of the duplication
        of the structured document stored therein, wherein the

corresponding subset of components corresponds to the
minimum subset of components received; and
at the gateway server device,
e) managing the structured document stored in each of
the client devices;
f) receiving the minimum subset of components from the
server device; and
g) transmitting the minimum subset of components
received from the server device to a client device".

The remaining claims were not modified but the
appellant announced that he would adapt them along the
lines of claim 13 if the Board held this claim to be
acceptable.

VIII.   The appellant requested that the decision under appeal
be set aside and a patent be granted on the basis of
amended claim 13 as filed during the oral proceedings
and claims 1-12 and 14-24 as filed with the letter
dated 16 April 2008.

IX.   At the end of the oral proceedings the Board announced
its decision.

Reasons for the Decision

1.   *Construction of claim 13*

The appellant explained at the oral proceedings before
the Board that claim 13 should be interpreted as
referring to a pushing model, meaning that the server
initiates the update transmissions to the client
devices (cf paragraph [0134] of the description).

Furthermore, feature e), which stated that the gateway
was "managing" the structured document stored in each
of the client devices, should be understood as implying
not only that there was a protocol conversion but also
that the gateway kept a record of all client devices
having a copy of the document to be updated (cf
paragraph [0070] of the description).

For the purposes of the present decision, the Board
will interpret the above claim features in the way
suggested by the appellant.

2.   *The prior art*

The appellant regards the system configuration in fig.1
of the present application as the closest prior art. It
comprises a plurality of network nodes connected to
each other via a network, wherein the plurality of
network nodes includes a server device (S), a plurality
of client devices (T) and a gateway server device (G)
performing protocol conversion between the server
device and each of the client devices. The server
device stores structured documents, which are typically
in HTML, ie consisting of a hierarchical set of
components. Some of the client devices will contain
copies of the structured documents in the server.

3.   *Novelty*

The appellant has identified three main differences
between the invention and the prior art:

1) updates are in the form of minimum subsets of
components,

2) the updates are pushed towards the clients (cf
point 1 above),
3) the gateway manages the structured document stored
in each of the client devices (cf point 1 above).

The Board concurs with this view. Thus the invention is
new (Article 54(1) EPC 1973).

4.   *Inventive step*

4.1   In the Board's view, these differences and their
associated effects may be considered separately since
there is no functional interrelationship that would
lead to a synergistic effect (see point 4.5 below).

4.2   The first difference is that not an entire document is
transmitted but only updates in the form of subsets of
components. The Board cannot see anything inventive in
this idea since it is a matter of common sense that
unchanged information need not be re-transmitted. If
this has nevertheless been done in some prior art
systems, it can only be because enough bandwidth was
available and the principle is simple since it is not
necessary to indicate what parts of the document have
been updated. The appellant does not deny that it is
well known to transmit updates between a server and a
cache (cf eg D1, in particular col.7, l.9-20) but
argues that the skilled person would not have applied
this technique to the kind of server-gateway-client
system to which claim 13 refers. The Board does not
accept this argument. Transmitting updates is too
fundamental a concept ("delta-encoding") to be
restricted to caches, or to be ignored by the skilled
person considering bandwidth restrictions in a server-

client system (or indeed in any data transmission
system). The expression "minimum subset of components"
is taken to mean that the updates should be as small as
possible, something which is obviously desirable.

4.3   The second difference is that a pushing model is used.
        The appellant argues that pushing reduces the load on
        the transmission channels. Previously, clients wanting
        to access a document had to request (pull) the latest
        version from the server storing the original. The
        invention improved on this technique by pushing updates
        to the client devices whenever the original has been
        changed. Data requests were not necessary.

        The Board notes that the pushing technique as such was
        well known. D8 discloses a data distribution system
        consisting of a several layers of servers and a bottom
        layer of client devices. If the master database in the
        top layer is updated, this update is pushed to all the
        lower layers, including the client devices (cf the
        abstract). D8 states that one advantage with the
        pushing model is that unnecessary update requests, ie
        requests for updates which do not (yet) exist, inherent
        in the pulling model, can be avoided (p.3, l.5-8). The
        same advantage is mentioned in the present application
        (cf paragraph [0019]: "Even in the case where a
        document is not updated, a request from the client
        device C may occur"). The Board concludes that the idea
        to switch from a pulling model to a pushing model was
        obvious since the pushing technique was known to solve
        the problem of superfluous update requests.

4.4   The third difference is that the gateway keeps track of
        the client devices having a copy of a certain document.

The Board notes that pushing updates of an original
document can, as a matter of common sense, only be done
in two ways: either to all clients, whether they have a
copy or not, or only to the clients known to have a
copy. If the communication channel is congested,
superfluous messages should naturally be avoided. This
implies keeping a record of the clients having copies.
The Board regards such straight-forward considerations
as well within the capabilities of the skilled person.

4.5   The Board is thus of the opinion that each of the
differences the invention makes with respect to the
prior art was an obvious addition. It remains to
consider whether their combination required an
inventive step. The appellant has pointed out that the
new measures serve the same purpose of reducing the
data load on the system by sending only minimum
document updates, and only to client devices actually
requiring them. This was a combination effect not
rendered obvious by the prior art.

In the Board's view, however, this is not a synergistic
effect. Two features interact synergistically if their
functions are interrelated and lead to an additional
effect that goes beyond the sum of the effects of each
feature taken in isolation (cf eg decision T 141/87,
not published in OJ EPO, reasons, point 3.8). It is not
enough that the features solve the same technical
problem or that their effects are of the same kind and
add up to an increased but otherwise unchanged effect.
In the present case, sending messages in the form of
minimum updates saves a certain amount of data per
message, and sending the messages to fewer clients
saves a certain number of messages. The data reduction

achieved by the invention over the prior art is simply the sum of all the messages and message parts that do not have to be transmitted. Hence, there is no additional effect going beyond what could be expected.

4.6   It follows that the subject-matter of claim 13 does not involve an inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek   S. Steinbrener

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