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Datasheet for the decision
of 15 December 2006

Case Number: T 0315/06 - 3.5.04

Application Number: 99112367.0

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IPC: H04N 1/00

Language of the proceedings: EN

Title of invention:
Device control system

Patentee:
SEIKO EPSON CORPORATION

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 84, 111(1)
EPC R. 67, 68(2)

Keyword:
"Claims - clarity (yes)"
"Decision re appeals - remittal (yes)"
"Decision under appeal reasoned (yes)"
"Reimbursement of the appeal fee (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0315/06 **-** 3.5.04

D E C I S I O N
of the Technical Board of Appeal 3.5.04
of 15 December 2006

Appellant:	SEIKO EPSON CORPORATION 4-1, Nishi-shinjuku 2-chome Shinjuku-ku, JP-Tokyo 163-0811 (JP)
Representative:	Winter, Brandl, Fürniss, Hübner Röss, Kaiser, Polte Partnerschaft Patent- und Rechtsanwaltskanzlei Alois-Steinecker-Straße 22 D-85354 Freising (DE)
Decision under appeal:	**Decision of the Examining Division of the** **European Patent Office posted 07 September 2005** **refusing European application No. 99112367.0** **pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: F. Edlinger
Members: A. Dumont
                 T. Karamanli

Summary of Facts and Submissions

I.   The appeal is against the decision of the examining
      division to refuse European patent application
      No. 99 112 367.0.

II.   The reasons for the refusal were that the independent
      claims according to the main request were not clear and
      their subject-matter was not new with respect to the
      general prior art in the field of networking and
      computers and that the subject-matter of claim 1
      according to the first and second auxiliary requests
      did not involve an inventive step with respect to the
      same general prior art.

III. In the oral proceedings before the board on 15 December
      2006 the appellant withdrew the main request and the
      first to thirteenth auxiliary requests filed during the
      appeal proceedings and submitted claims 1 to 7 of a new
      main request.

IV.   The appellant requests that the decision under appeal
      be set aside, that the case be remitted to the first
      instance for further prosecution and that the appeal
      fee be reimbursed.

V.   The independent claims according to the sole request
      read as follows:

      "1. A device control system for controlling at least
      two devices (34a, 34b, 240, 340), said device control
      system comprising:
          at least two device abstraction units (28a, 28b,
      220, 320) that respectively correspond to the devices

(34a,34b, 240, 340) and transmit data or information to and from the corresponding devices (34a, 34b, 240, 340);

at least two interface units (22a, 22b, 120, 140) that respectively correspond to the device abstraction units (28a, 28b, 220, 320) and are connected to the corresponding device abstraction units (28a, 28b, 220, 320) via respective communications paths (26a, 26b), the interface units (22a, 22b, 120, 140) mediating transmission of data or information between the corresponding device abstraction units (28a, 28b, 220, 320) and an application unit (20, 110), which is constructed by a specified applications program; and

at least two communications path abstraction units (24a, 24b, 210, 180, 310, 190) that are respectively interposed between the corresponding device abstraction units (28a, 28b, 220, 320) and the corresponding interface units (22a, 22b, 120, 140), which mutually correspond to each other,

wherein the device abstraction units (28a, 28b, 220, 320) apparently remove a difference in control procedure due to respective types of the corresponding devices (34a, 34b, 240, 340), so as to provide the application unit (20, 110) with an identical control environment, which does not depend upon the types of the devices (34a, 34b, 240, 340), via the interface units (28a, 28b, 220, 320), and

the communications path abstraction units (24a, 24b, 210, 180, 310, 190) apparently remove a difference in control procedure due to respective types of the communications paths (26a, 26b), which connect the corresponding device abstraction units (22a, 22b, 120, 140) with the corresponding interface units (22a, 22b, 120, 140), so as to provide the application unit (20, 110) with an identical control environment, which does

not depend upon the types of the communications paths
(26a, 26b), via the interface unit (22a, 22b, 120,
140)."

"6. A method of controlling at least two devices (34a,
34b, 240, 340), said method comprising the steps of:

    (a) creating at least two device abstraction units
(28a, 28b, 220, 320) that respectively correspond to
the devices (34a, 34b, 240, 340), transmit data or
information to and from the corresponding devices (34a,
34b, 240, 340), and apparently remove a difference in
control procedure due to respective types of the
corresponding devices (34a, 34b, 240, 340), so as to
provide an application unit (20, 110), which is
constructed by a specified applications program, with
an identical control environment, which does not depend
upon the types of the devices (34a, 34b, 240, 340);

    (b) creating at least two interface units (22a, 22b,
120, 140) that respectively correspond to the device
abstraction units (28a, 28b, 220, 320), are connected
to the corresponding device abstraction units (28a, 28b,
220, 320) via at least two communications paths (26a,
26b), and mediate transmission of data or information
between the corresponding device abstraction units (28a,
28b, 220, 320) and the application unit (20, 110);

    (c) creating at least two communications path
abstraction units (24a, 24b, 210, 180, 310, 190) that
respectively correspond to the interface units (22a,
22b, 120, 140) and apparently remove a difference in
control procedure due to respective types of the
communications paths (26a, 26b), which connect the
corresponding interface units (22a, 22b, 120, 140) with
the corresponding device abstraction units (28a, 28b,
220, 320) further corresponding to the interface units

(22a, 22b, 120, 140), so as to provide the application
unit (20, 110) with an identical control environment,
which does not depend upon the types of the
communications paths (26a, 26b); and

(d) causing the application unit (20, 110) to
control the devices (34a, 34b, 240, 340) via the
interface units (22a, 22b, 120, 140), the
communications path abstraction units (24a, 24b, 210,
180, 310, 190), and the device abstraction units (28a,
28b, 220, 320)."

"7. A computer program product for constructing a
device control system for controlling at least two
devices (34a, 34b, 240, 340), said computer program
product comprising:

a computer readable medium;

a first program code segment that causes a computer
to create at least two device abstraction units (28a,
28b, 220, 320) that respectively correspond to the
devices (34a, 34b, 240, 340), transmit data or
information to and from the corresponding devices (34a,
34b, 240, 340), and apparently remove a difference in
control procedure due to respective types of the
corresponding devices (34a, 34b, 240, 340), so as to
provide an application unit (20, 110), which is
constructed by a specified applications program, with
an identical control environment, which does not depend
upon the types of the devices (34a, 34b, 240, 340);

a second program code segment that causes the
computer to create at least two interface units (22a,
22b, 120, 140) that respectively correspond to the
device abstraction units (28a, 28b, 220, 320), are
connected to the corresponding device abstraction units
(28a, 28b, 220, 320) via corresponding communications

paths (26a, 26b), and mediate transmission of data or information between the corresponding device abstraction units (28a, 28b, 220, 320) and the application units (20, 110); and

a third program code segment that causes the computer to create at least two communications path abstraction units (24a, 24b, 210, 180, 310, 190) that respectively correspond to the interface units (22a, 22b, 120, 140) and apparently remove a difference in control procedure due to respective types of the communications paths (26a, 26b), which connect the corresponding interface units (22a, 22b, 120, 140) with the device abstraction units (28a, 28b, 220, 320) further corresponding to the interface units (22a, 22b, 120, 140), so as to provide the application unit (20, 110) with an identical control environment, which does not depend upon the types of the communications paths (26a, 26b),

wherein each of the program code segments is stored in the computer readable medium."

Claims 2 to 5 are dependent claims.

VI.   As regards clarity, the appellant argues that the concept of abstraction is functionally defined in the claims as consisting in a higher unit being independent from a lower unit in terms of control environment by removing differences in control procedure due to different types of devices and communications paths. The adopted functional definition may be broad but is not unclear.

VII.   As regards novelty and inventive step, the appellant stresses the benefits of the invention for data

transfer between a first and a second device by
activating a single application program.

VIII.   As regards the request for reimbursement of the appeal
        fee, the appellant holds that the argumentation
        relating to lack of novelty and inventive step in the
        appealed decision is unclear and cannot be understood,
        so that a substantial procedural violation results from
        the absence of a reasonable line of argumentation,
        which does not comply with Rule 68(2) EPC. More
        particularly:

        −   The decision neglects to perform a complete feature
            analysis and does not clearly identify the known
            features relevant for the claims.
        −   The decision does not refer to a document of prior
            art but confuses the prior art with the invention by
            citing as prior art features described in the
            context of the device control system according to
            the invention (e.g. by reference to figures 2B, 2C
            and 5 of the application).
        −   The Windows™ computer platform mentioned in the
            decision is a general platform with a variety of
            different software evolving over time, so that it is
            not clear which specific features were already known
            at the priority date of the application.
        −   Models such as COM/DCOM or features such as remote
            procedure calls, stubs and proxies are known per se
            from Windows™ platforms. However, the special use of
            the features to implement the claimed communications
            path abstraction is not addressed in the decision.

Reasons for the Decision

1.   The appeal is admissible.

2.   Amendments

        The independent claims 1, 6 and 7 according to the sole
        request are based on claims 1, 7 and 8 as originally
        filed with the essential difference that they now refer
        to at least two device abstraction units, interface
        units and communications path abstraction units, as
        disclosed for instance in figure 1 and claims 2 and 3
        as originally filed. As a result, the amended claims
        comply with Article 123(2) EPC.

3.   Article 84 EPC

3.1   A device abstraction unit or a communications path
        abstraction unit are specified in the claims as
        removing a difference in control procedure due to a
        type of the corresponding device or communications path,
        respectively. The decision under appeal regards as
        obscure the device abstraction unit because it "does
        not specify in which way an abstraction transmits data
        or information and to what degree", and the
        communications path abstraction unit because "it is
        left open what the abstraction means removes and how
        the control procedure is flattened".

3.2   The functional definition of abstraction in the claims
        ("apparently remove a difference in control procedure",
        "so as to provide the application unit … with an
        identical control environment") and its explanation in
        the description (e.g. "substantially fixed control

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environment" in paragraph [0013] of the published
patent application) is consistent with the meaning of
abstraction commonly accepted in the relevant field of
computer system architecture, in which it consists in
hiding specifics as to the implementation at a lower
level. The expression "apparently remove…" in this
context has to be understood as meaning that a
difference in control procedure is removed by an
abstraction unit so that different types of devices or
communications paths appear to be identical for the
controlling unit.

3.3   The fact that the amended independent claims now define
       at least two (distinct) devices with their respective
       communications paths makes clear that abstraction has
       to be such as to hide the specifics relating to
       different types of devices (e.g. printer vs. scanner)
       and their location (e.g. local vs. remote) from the
       standpoint of the application unit, so as to appear as
       a "composite device" which may be set up in different
       configurations (see e.g. paragraphs [0073] to [0075]
       and [0150] to [0163] of the published application). The
       introductory part of the description (see e.g.
       paragraph [0004]) accordingly sets out that this solves
       the problem of avoiding to "activate the plurality of
       applications programs for supporting the respective
       devices and implement the data transfer between the
       devices…"

3.4   The general definition in the claims is therefore in
       line with both the common meaning of the terms in the
       relevant technical field and with the description of
       the invention, so that the person skilled in the art
       can determine the boundaries of the claimed subject-

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matter. In the judgment of the board, the subject-
matter of the claims also solves the technical problem
described in the application, as set out in point 3.3
above. The claims are therefore supported by the
description.

3.5   As a result, claims 1, 6 and 7 comply with the
        requirements of Article 84 EPC.

4.   Remittal

4.1   The claimed inventions including (at least) two devices
        together with their associated device abstraction units
        and communications path abstraction units define
        features of a composite device with an improved
        operability (see point 3.3 above and point 3.4 of the
        statement setting out the grounds of appeal).

4.2   The decision under appeal explains the mechanism of
        data transmission between a client and a server and
        concludes that there is a lack of novelty or inventive
        step based on general prior art in the field of
        networking and computers. These objections are not
        convincing for the subject-matter of the present claims
        associating (at least) two devices to form a composite
        device, which goes beyond generally known computer
        networks, device drivers and mechanisms provided by
        usual Windows^{TM} platforms. Since the essential features
        for achieving the technical effect, as understood from
        the description, are specified in the claims, an
        objection of lack of novelty or of lack of inventive
        step needs to set out reasons including verifiable
        concrete facts of prior art and arguments which deal

with the features as now claimed and the underlying
problem.

4.3   Since the examining division has not yet had the
        opportunity to present such reasons relating to the new
        claims, the board decides, in accordance with
        Article 111(1) EPC, to set aside the decision under
        appeal and to remit the case to the first instance in
        accordance with the appellant's request, for the first
        instance to examine whether the application as amended
        fulfils the requirements of the EPC.

5.   Reimbursement of the appeal fee (Rule 67 EPC)

5.1   Where the appeal is deemed allowable, reimbursement of
        the appeal fee is possible only if it is equitable by
        reason of a substantial procedural violation. The
        appellant holds in the present case that such a
        violation arises from the absence of a reasonable line
        of argumentation in the decision under appeal,
        depriving him of a reasoned decision as required by
        Rule 68(2) EPC.

5.2   The claims on which the examining division took a
        decision were not restricted to subject-matter relating
        to corresponding units of a composite device as
        supported by the embodiments of the description. The
        board takes the view that the decision under appeal,
        referring to generally known network topologies,
        drivers and Windows^{TM} mechanisms, enables a skilled
        reader to identify the specific features regarded as
        known or obvious by the examining division, for the
        following reasons.

5.3   The decision under appeal relies on figures 2 and 5,
       which are respectively described as block diagrams
       showing typical states of connection and a data
       transfer technique in the device control system
       embodying the present invention. It mentions figures 2B
       and 2C to illustrate a distributed computer network
       with a collection of client nodes that communicate over
       a network with various server nodes and figure 5 to
       illustrate a general protocol stack used to transmit
       data between a client node and a server node in a
       network. Although a reference to the figures is in the
       present case not necessarily conducive to strengthen an
       argumentation based on general knowledge, the person
       skilled in the art seeking to make sense of the
       decision is nevertheless able to identify the
       particular known features the decision associates with
       the cited figures, namely (only) those generally known
       of a data transmission mechanism to a single device in
       a usual basic client/server network architecture. The
       board further notes that the appellant agrees that such
       features are common general knowledge.

       As a result, the decision under appeal merely
       illustrates by reference to figures of the application
       what kind of network topologies are considered as
       generally known and it does not confuse the prior art
       with the invention.

5.4   The decision further mentions "the general prior art
       such as implemented for Windows" and thereby explicitly
       refers to passages in the application as originally
       filed (page 25, line 15 to page 27, line 5,
       corresponding to paragraphs [0088] to [0094] of the
       published application). The cited passages explain the

operation of remote procedure calls (RPC, LRPC), stubs
and proxies, which are stated to be generated by the
mechanism of COM/DCOM normally supported by Windows™
platforms (see paragraph [0088]), so as to apparently
remove a difference in the control procedure ascribed
to the different types of the communication paths (see
paragraph [0094]).

The board recognises that the various versions of the
Windows™ operating system have undergone changes and
evolved over time, and that they are also more
comprehensive and general than the features addressed
in the foregoing paragraph. The decision does not
however rely on a vague reference to Windows™ in
general but refers to specific paragraphs in the
description of the application reflecting particular
models and features implemented in (possibly various
versions of) the operating systems, enabling the person
skilled in the art to identify the features of Windows™
considered by the examining division to be known.

Furthermore, neither during the examination proceedings
nor during the appeal proceedings did the appellant
contest the correctness of the description of the
relevant features of the COM/DCOM model or the fact
that they were known before the priority date of the
present application. There was therefore no need for
the examining division to cite a document as evidence
for that very prior art.

5.5   The appellant also argues that the decision under
        appeal does not discuss the special use of stubs and
        proxies according to the invention. However, as already
        set out above, the claims then on file were not

restricted to subject-matter where stubs and proxies
are used in a special configuration, for instance in a
composite device.

5.6   In conclusion, the board considers that the decision
under appeal enables the appellant to understand, and
to counter, the facts and the essential line of
reasoning put forward by the examining division for the
subject-matter which was then covered by the claims. It
is therefore sufficiently reasoned, as required by
Rule 68(2) EPC. The examining division has thus not
committed a substantial procedural violation. Therefore,
the reimbursement of the appeal fee cannot be ordered.

Order

For these reasons it is decided that:

1.   The decision under appeal is set aside.

2.   The case is remitted to the first instance for further
prosecution.

3.   The request for reimbursement of the appeal fee is
refused.

The Registrar: The Chairman:

D. Sauter   F. Edlinger

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