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# Datasheet for the decision
# of 2 July 2013

**Case Number:**            T 1076/11 - 3.5.05

**Application Number:**     04019314.6

**Publication Number:**     1513057

**IPC:**                    G06F 3/06

**Language of the proceedings:**   EN

**Title of invention:**
Software-aided storage device emulation in a physical storage
device

**Applicant:**
MICROSOFT CORPORATION

**Headword:**
Software-aided storage device emulation/MICROSOFT

**Relevant legal provisions:**
EPC Art. 83, 84, 123(2)

**Keyword:**
"Clarity and support by the description (yes, after
amendment)"
"Extension of subject-matter (no, after amendment)"
"Sufficiency of disclosure (yes)"

**Decisions cited:**
-

**Catchword:**
-

C9094.D
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**Case Number:** T 1076/11 - 3.5.05

**D E C I S I O N**
**of the Technical Board of Appeal 3.5.05**
**of 2 July 2013**

| | |
|---|---|
| **Appellant:** <br> (Applicant) | MICROSOFT CORPORATION <br> One Microsoft Way <br> Redmond <br> Washington 98052    (US) |
| **Representative:** | Grünecker, Kinkeldey <br> Stockmair & Schwanhäusser <br> Leopoldstrasse 4 <br> D-80802 München    (DE) |
| **Decision under appeal:** | **Decision of the Examining Division of the European Patent Office posted 21 December 2010 refusing European patent application No. 04019314.6 pursuant to Article 97(2) EPC.** |

**Composition of the Board:**

**Chairman:**     F. Blumer
**Members:**     P. Corcoran
                 M. Höhn

## Summary of Facts and Submissions

I.     This appeal is against the decision of the examining
       division to refuse the European patent application
       no. 04 019 314.6, publication no. EP 1 513 057. The
       decision was announced during oral proceedings on
       23 November 2010 with written reasons being dispatched
       on 21 December 2010.

II.    The decision under appeal was based on a request
       comprising a set of claims 1 to 6 filed during oral
       proceedings before the examining division on
       23 November 2010.

III.   Claim 1 of said request was formulated as follows:

       "A method in a physical storage device connected to a
       network, the physical storage device having a storage
       capability and a front end capable of receiving network
       communications from a computing system via said network
       and extracting SCSI commands from the network
       communications, for emulating one or more SCSI storage
       devices, such as disk drives, tape drives, read-write
       compact discs or tape changers, each capable of
       responding to SCSI commands, the method comprising the
       following:

       an act of an emulation software component receiving
       (301) a configuration function call via the network
       communication that specifies a device name and
       properties of a storage device of a device type to be
       emulated by the physical storage device, and wherein a
       physical block size and a total byte size necessary for
       the emulation of the storage device are determined from

the specified device name and the specified properties
of the storage device;

in response to having received the configuration
function call, an act of the emulation software
component associating a storage space within the
physical storage device with the emulated storage
device;

an act of the front end receiving (311) a network
communication;

an act of the front end extracting (312) a SCSI command
from the network communication;

an act of the emulation software component receiving
(313) the extracted SCSI command;

an act of determining (314) that the SCSI command is
intended for the emulated storage device; and

an act of the emulation software component using (315)
the properties and the storage space that correspond to
the emulated storage device to fulfill [*sic*] the SCSI
command in a manner that emulates the fulfillment [*sic*]
of the SCSI command on the emulated storage device."

IV.    According to said decision (cf. Reasons for the
       decision, in particular items 3. to 5.), the examining
       division exercising its discretion under Rule 137(3)
       EPC decided not to admit the aforementioned request.
       As a consequence, the application was refused under
       Article 97(2) EPC on the grounds that "the application
       contains no claim (Article 78(1)(c) EPC), and there is

no text of the application which has been agreed by the applicant and allowed by the examining division (Article 113(2) EPC)".

V.      The decision not to admit the request was based on the finding that it "would not, *prima facie*, overcome previously raised objections with respect to Article 83 EPC and Article 84 EPC".

The objections raised with respect to Article 84 EPC related to the feature of the independent claims, in particular claim 1, according to which "a physical block size and a total byte size necessary for the emulation of the storage device are determined from the specified device name and the specified properties of the storage device". According to the examining division, the terms "a physical block size" and "a total byte size" were vague and unclear and left the reader in doubt with respect to the technical features to which they referred (cf. Reasons for the decision, item 2.1).

With respect to the provisions of Article 83 EPC (cf. Reasons for the decision, item 2.2), the decision stated that the application as a whole did not disclose the disputed feature of the independent claims in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

VI.     Notice of appeal was received at the EPO on 18 February 2011 with the appropriate fee being paid on the same date. A statement setting out the grounds of appeal was received at the EPO on 28 April 2011. With the statement setting out the grounds of appeal the

appellant filed a main request comprising claims 1 to 6 and corresponding to the request which had been submitted but not admitted during oral proceedings before the examining division on 23 November 2010.

VII.    In a communication accompanying a summons to oral proceedings to be held on 2 July 2013, the board gave its preliminary opinion that the appellant's main request was not allowable.

VIII.   In its communication, the board noted that it was not inclined to concur with the objections raised by the examining division under Articles 83 and 84 EPC (cf. item V above) and expressed the opinion that, in the given context, the skilled person could recognise the intended meaning of the terms "a physical block size" and "a total byte size" without undue difficulty.

The board expressed the opinion that the skilled person would understand the term "physical block size" as denoting an operational parameter associated with an emulated device, *viz.* the size of the data "blocks" which the device to be emulated uses for performing input/output operations and that the skilled person would understand the term "total byte size" as denoting a further parameter associated with an emulated device, *viz.* the total amount of storage capacity (expressed in terms of bytes) which would be required in order to emulate the device. According to a preferred embodiment of the invention, a file can be used to emulate a storage device. In this case, the "total byte size" would correspond to the size of the file as defined in [0049].

IX. The board nevertheless indicated that it was not satisfied that the appellant's request complied with the requirements of Article 84 EPC.

In this regard, it was noted in particular that the description disclosed a function call (i.e. the "LogicalUnitSize" method) which determined from the device name and the device properties the physical block size and the total byte size needed to properly emulate the storage device and that this function call could be placed through the configuration interface (cf. published application: [0047] and [0048]). The board expressed reservations as to whether it was apparent from the cited passages of the description that the function call "LogicalUnitSize" was intended to be invoked in the context of the "act 301" referred to in [0036] and shown in Figure 3.

The board therefore had doubts as to whether the description provided a clear and unambiguous disclosure of the ensemble of features used to specify the act of the emulation software component designated by the reference sign (301) in claim 1. The board noted that its reservations on this point might give rise to additional objections under Articles 123(2) and 83 EPC.

X. The board also drew attention to the fact that the question of inventive step did not appear to have been discussed during oral proceedings before the department of first instance nor did it appear to be mentioned in the decision under appeal. Accordingly, the appellant was advised that a remittal of the case to the department of first instance for further prosecution was considered to be the most appropriate course of

action should the various issues which had been noted under Articles 84, 123(2) and 83 EPC be resolved in the appellant's favour.

XI.    With a letter dated 31 May 2013, the appellant filed an amended main request comprising claims 1 to 6.

XII.   With a letter dated 25 June 2013, the appellant filed additional submissions addressing the board's observations concerning the question as to whether the function call LogicalUnitSize disclosed in [0047] and [0048] of the published application was intended to be invoked in the context of the "act 301" disclosed in [0036].

The appellant submitted that the description starting with paragraph [0036] and ending in paragraph [0048] was in total related to "act 301" and that this was apparent from the structuring of the description related to Figure 3. On this basis it was argued that all acts and method steps described in paragraphs [0036] to [0048] were related to step 301.

XIII.  Oral proceedings were held as scheduled on 2 July 2013. During the oral proceedings, the appellant submitted an amended main request comprising claims 1 to 6.

XIV.   The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request comprising claims 1 to 6 as submitted during oral proceedings before the board.

XV.    Claim 1 of the appellant's main and sole request reads as follows:

"A method in a physical storage device connected to a network, the physical storage device having a storage capability, a configuration interface, an emulation software component and a front end capable of receiving network communications from a computing system via said network and extracting SCSI commands from the network communications, for emulating a SCSI storage device, such as a disk drive, a tape drive, a read-write compact disc or a tape changer, capable of responding to SCSI commands, the method comprising the following:

an act of the emulation software component receiving (301) a configuration function call via the configuration interface that specifies a device name and properties of a storage device of a device type to be emulated by the physical storage device, and wherein a physical block size and a total byte size necessary for the emulation of the storage device are determined using the specified device name and the specified properties of the storage device;

in response to having received the configuration function call, an act of the emulation software component associating a storage space within the physical storage device with the emulated SCSI storage device;

an act of the front end receiving (311) a network communication;

an act of the front end extracting (312) a SCSI command from the network communication;

an act of the emulation software component receiving
(313) the extracted SCSI command;

an act of determining (314) that the SCSI command is
intended for the emulated storage device; and

an act of the emulation software component using (315)
the properties and the storage space that correspond to
the emulated storage device to fulfill [*sic*] the SCSI
command in a manner that emulates the fulfillment [*sic*]
of the SCSI command on the emulated storage device."

Claim 4 of the request is a further independent claim
which seeks protection for substantially the same
subject-matter as claim 1 in the form of a claim
directed towards a "computer program product".

XVI. At the end of the oral proceedings the chair announced
the board's decision.


**Reasons for the Decision**

1. The appeal is admissible (cf. Facts and Submissions,
   item VI above).

2. *Article 84 EPC*

2.1 The amendments made to the independent claims of the
    main request and the appellant's submissions in this
    regard (cf. Facts and Submissions, item XII above) are
    judged by the board to be sufficient to overcome its
    reservations concerning compliance with the
    requirements of Article 84 EPC.

2.2    In its communication the board expressed doubts as to
       whether the description provided a clear and
       unambiguous disclosure of the ensemble of features used
       to specify the act of the emulation software component
       designated by the reference sign (301) in claim 1 (cf.
       Facts and Submissions, item IX above).

2.3    The board concurs with the appellant's argumentation
       (cf. Facts and Submissions, item XII above) to the
       effect that the disclosure of the function call
       "LogicalUnitSize" for determining the amount of storage
       space required for the device to be emulated (cf.
       published application: [0047]-[0048]) has to be read in
       the overall context of [0036]-[0048] of the published
       application. On this basis, the board is satisfied that
       the invocation of said function call is related to the
       "act 301" referred to in [0036] and that the
       corresponding method steps of claim 1 are supported by
       the description.

2.4    In view of the foregoing, the board concludes that
       claim 1 as amended defines the essential technical
       features of the matter for which protection is sought
       in a manner which is compliant with the clarity and
       support requirements of Article 84 EPC.

3.     *Observations re Articles 123(2) and 83 EPC*

3.1    In its communication, the board indicated that the
       reservations referred to in 2.2 above concerning
       compliance with Article 84 EPC might additionally give
       rise to objections under Articles 123(2) and 83 EPC (cf.
       Facts and Submissions, item IX above).

3.2    Given that the aforementioned reservations concerning
       compliance with Article 84 EPC have been overcome, the
       board judges that the further objections which might
       have arisen in this regard under Articles 123(2) and 83
       EPC are no longer relevant and do not require further
       discussion.

4.     *Remittal*

4.1    Insofar as can be determined from the minutes of oral
       proceedings before the department of first instance,
       the question of compliance with Article 52(1) EPC, in
       particular the novelty and inventive step requirements
       thereof, was not discussed during said oral proceedings
       nor is it mentioned in the decision under appeal. The
       board therefore judges that it would not be appropriate
       for this question to be decided during the present
       appeal proceedings.

4.2    As the appellant has succeeded in filing an amended set
       of claims which, in the board's judgement, overcome its
       reservations concerning compliance with the
       requirements of Articles 83, 84 and 123(2) EPC, a
       remittal of the case to the department of first
       instance for further prosecution is judged to be the
       most appropriate course of action under the given
       circumstances in order not to deprive the appellant of
       the possibility of having all other outstanding matters
       decided by two instances.

**Order**

**For these reasons it is decided that:**

1.      The decision under appeal is set aside.

2.      The case is remitted to the department of first
        instance for further prosecution on the basis of the
        main request as filed during the oral proceedings
        before the board.


The Registrar:                                  The Chairman:




K. Götz                                         F. Blumer