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Datasheet for the decision of 22 June 2016

Case Number: T 1742/12 - 3.5.06

Application Number: 05252240.6

Publication Number: 1662388

IPC: G06F9/46, G06F9/445, H04L29/06

Language of the proceedings: EN

Title of invention:
On-demand instantiation in a high-performance computing (HPC) system

Applicant:
RAYTHEON COMPANY

Headword:
On-demand instantiation/RAYTHEON

Relevant legal provisions:
EPC 1973 Art. 56, 84, 111(1), 112(1)(a), 113
EPC Art. 112a(2)(d)
EPC R. 106

Keyword:

Claims - clarity (yes)
Problem-solution approach - selection of "closest prior art"
Inventive step - main request and auxiliary requests 1 and 2 (no)
Remittal to department of first instance (yes)
Referral to the Enlarged Board of Appeal (no)

Decisions cited:

R 0008/11, R 0017/14, J 0005/81, T 0254/86, T 0603/89, T 0606/89, T 0656/90, T 0710/97, T 0967/97, T 0824/05, T 0021/08

Catchword:

See points 5-10.3

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Case Number: T 1742/12 - 3.5.06

D E C I S I O N
of Technical Board of Appeal 3.5.06
of 22 June 2016

Appellant: (Applicant)	RAYTHEON COMPANY 870 Winter Street Waltham MA 02451-1449 (US)
Representative:	Lawrence, John Barker Brettell LLP 100 Hagley Road Edgbaston Birmingham B16 8QQ (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 24 January 2012 refusing European patent application No. 05252240.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	W. Sekretaruk
Members:	M. Müller
	G. Zucka

Summary of Facts and Submissions

I. The appeal lies from the decision of the examining division, with reasons dispatched by letter of 24 January 2012, refusing European patent application No. 05 252 240.6 for lack of inventive step over document

D1: Cisco, excerpt from the "Cisco LocalDirector Configuration and Command Reference Guide", 78-11760-02, chapters 1 to 3, taken to have been published in 2001.

II. A notice of appeal was filed on 23 March 2012, the fee being paid on the same day. A statement of grounds of appeal was received on 24 May 2012. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of claims 1-21 according to a main request or claims 1-19 according to an auxiliary request, both as filed with the grounds of appeal, in combination with the description and drawings on file.

III. In an annex to the summons to oral proceedings, the board informed the appellant of its preliminary opinion that the claimed invention lacked an inventive step over D1, Article 56 EPC 1973. The board also raised objections under Article 123(2) EPC and Article 84 EPC 1973, and introduced a new document D1a in order to establish the publication date of document D1.

D1a: Cisco, "Release Notes for Cisco LocalDirector Version 4.2.1", April 6, 2001, Retrieved on 22 February 2016 from the Internet at URL http://docstore.mik.ua/univercd/cc/td/doc/product/iaabu/localdir/ldv42/ldrnv421.htm

IV. With its letter of response dated 18 May 2016, the appellant filed additional auxiliary requests 2 to 4 comprising, respectively, claims 1-17, claims 1-17 and claims 1-15.

V. Moreover, the appellant argued that the board had applied the problem-solution approach incorrectly because D1 was not "the closest prior art" as understood in the established jurisprudence of the boards of appeal. In this respect, the appellant cited from the 2013 edition of the "Case Law of the Boards of Appeal of the European Patent Office", section I.D.3.1, and referred to decisions T 254/86, T 606/89, T 656/90, and T 273/92. Acknowledging that there are decisions that have come to a different conclusion, for instance T 21/08, and noting that the Guidelines for Examination G-VII-5.1 refer to that line of reasoning, the appellant requested "that questions of the following form be referred to the Enlarged Board of Appeal":

"1. Where there are multiple pieces of prior art which could be considered to be the closest prior art in the sense required by the problem-solution approach, is it ever legitimate to start from multiple different alleged closest prior art documents, or must a single piece of prior art be identified as the closest?

2. If it is ever legitimate to start with multiple different documents, what criteria should be used to select which are legitimate starting points; is it the case that the legitimate starting points must all be equally as close, or is it permissible to start with any document that would appear to be a suitable starting point for the skilled person?

3. If there exists a first piece of prior art which is demonstrably closer to the claimed invention than a second piece of is proposed to be used, is it legitimate to use that second piece of prior art even if that second piece of prior art would be considered to be a suitable starting point for the skilled person?"

The appellant further introduced a document that had been considered in a related case,

D6: "HP AlphaServer SC User Guide", Internet article, pages 1-38, XP002336777,

and went on to argue that "given the existence of D6, [...] D1 cannot be closest prior art" (page 5, paragraph 2, last sentence) and that, hence, the inventive step assessment had to start from D6.

VI. Claim 1 of the main request reads as follows:

"Logic for on-demand instantiation in a high-performance computing (HPC) system (100), the logic encoded in a computer-readable medium and when executed operable to:

receive a connection request from a client (120) specifying a first port number and a first host name, the first port number and the first host name advertised externally with respect to an HPC server (102) comprising a cluster (110) of nodes (115);

identify a service at the HPC server corresponding to the first port number and the first host name;

determine whether the identified service is available; and

if the identified service is available, instantiate a host providing the identified service at one or more

nodes (115) in the cluster (110), where the host includes an application encompassing the identified service, and instantiating the host comprises using a boot image, a file system, and an operating system (OS) configuration file corresponding to the identified service to boot at least one of the nodes that comprise the host in response to the received connection request."

VII. Claim 1 of auxiliary request 1 is the same as claim 1 of the main request up to the insertion of an "accessing" step and a corresponding modification of the "determining" step. These steps are now specified in the following terms:

"... access a list of services at the HPC server (102) comprising a plurality of entries that each specify a service and one or more rules indicating whether the service is available; and

determine, according to the list of services, whether the identified service is available; ..."

VIII. Claim 1 of auxiliary request 2 reads as follows:

"Logic for on-demand instantiation in a high-performance computing (HPC) system (100), the logic encoded in a computer-readable medium and when executed operable to:

receive a connection request from a client (120) specifying a first port number and a first host name, the first port number and the first host name advertised externally with respect to an HPC server (102) comprising a cluster (110) of nodes (115);

identify a service at the HPC server corresponding to the first port number and the first host name by:

accessing a list of services at the HPC server (102) comprising a plurality of entries that each specify:

a service; and

a port number and a host name internal to the HPC server that correspond to a host that, when executed at one or more nodes in the cluster, provides the service; and

determine whether the identified service is available;

instantiate, according to the list of services at the HPC server, the host providing the identified service at one or more nodes in the cluster by:

accessing a boot image, a file system, and an operating system (OS) configuration file at the HPC server corresponding to the host providing the identified service at one or more nodes in the cluster; and

if the identified service is available, using the boot image, the file system and the OS configuration file to instantiate the host providing the identified service at one or more nodes in the cluster by booting one or more nodes in the cluster using the boot image."

IX. Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that it denotes the HPC server as

"... comprising a cluster (110) of nodes (115) interconnected in a grid ...".

The other independent claims of auxiliary request 3 read as follows. In particular they share the cited new feature of claim 1.

"9. A method for on-demand instantiation in a high-performance computing (HPC) system (100), the method comprising:

receiving a connection request from a client (120) specifying a first port number and a first host name, the first port number and the first host name advertised externally with respect to an HPC server (102) comprising a cluster (110) of nodes (115) interconnected in a grid,

identifying a service at the HPC server (102) corresponding to the first port number and the first host name by:

accessing a list of services at the HPC server (102) comprising a plurality of entries that each specify:

a service; and

a port number and a host name advertised externally with respect to the HPC server that correspond to the service; and

identifying, according to the list of services at the HPC server, the service at the HPC server corresponding to the first port number and the first host name;

determining whether the identified service is available; and

if the identified service is available, instantiating a host providing the identified service at one or more nodes (115) in the cluster (110) by:

accessing a boot image, a file system, and an operating system (OS) configuration file at the HPC server corresponding to the host providing the identified service at one or more nodes in the cluster; and

using the boot image, the file system and the OS configuration file to instantiate the host providing the identified service at one or more nodes in the

cluster by booting one or more nodes in the cluster using the boot image.

17. "A system for on-demand instantiation in a high-performance computing (HPC) system (100), the system for on-demand instantiation in an HPC system (100) comprising:

means for receiving a connection request from a client (120) specifying a first port number and a first host name, the first port number and the first host name advertised externally with respect to an HPC server (102) comprising a cluster (110) of nodes (115) interconnected in a grid,

means for identifying a service at the HPC server (102) corresponding to the first port number and the first host name by:

accessing a list of services at the HPC server (102) comprising a plurality of entries that each specify:

a service; and

a port number and a host name advertised externally with respect to the HPC server that correspond to the service; and

identifying, according to the list of services at the HPC server, the service at the HPC server corresponding to the first port number and the first host name;

means for determining whether the identified service is available; and

means for, if the identified service is available, instantiating a host providing the identified service at one or more nodes (115) in the cluster (110) by:

accessing a boot image, a file system, and an operating system (OS) configuration file at the HPC server corresponding to the host providing the

identified service at one or more nodes in the cluster; and

using the boot image, the file system and the OS configuration file to instantiate the host providing the identified service at one or more nodes in the cluster by booting one or more nodes in the cluster using the boot image."

X. The wording of the claims of auxiliary request 4 is immaterial for the present decision.

XI. Oral proceedings were held as scheduled. During the oral proceedings, the appellant objected under Rule 106 EPC to the board's intention not to refer questions to the Enlarged Board of Appeal - though diverging lines of arguments existed in the case law of the boards of appeal - as an infringement of its right to be heard. At the end of the oral proceedings, the chairman announced the decision of the board.

Reasons for the Decision

D1 is prior art

1. The examining division states in its decision (see Facts and submissions, 2) that D1 was published on 4 April 2001. However, D1 itself does not contain any indication of a publication date.

1.1 The appellant has not challenged this date as the publication date of D1.

1.2 Moreover, and for the avoidance of any doubt, the board notes that Document D1a suggests that version 4.2.1 of Cisco LocalDirector, the version mentioned in D1 (see

page 3.37, last paragraph), was released around April 2001 and therefore well before the priority date of 14 November 2004 claimed for the present application.

1.3 The board therefore accepts that D1 is prior art for the present application.

The invention

2. The application generally relates to high performance computing (HPC) systems. A typical HPC system of interest - as depicted in figure 1 and described on pages 6 to 13 of the description as originally filed - comprises an HPC server (102) which receives job requests from clients (120, 150) and dynamically allocates suitable nodes (115; see also page 7, lines 11-13) for processing them (see page 6, lines 22-28). It is disclosed that "node[s are] generally optimized for nearest-neighbor communications and increased I/O bandwidth", but beyond this, the arrangement of nodes or their connections is disclosed as not being crucial for the invention (page 8, line 23, to page 9, line 4).

2.1 The claimed invention relates in particular to the "instantiation" of "hosts at nodes in response to connection requests from clients" which is described on pages 91, last paragraph, to page 94, first paragraph (see in particular page 91, lines 27-30, and page 92, lines 13-14).

2.2 Each request must indicate a host name and port number, both of which having been "advertised" externally and are mapped to corresponding internal host names and port numbers (see page 92, lines 20-25).

2.3 It is also described that certain services should only be available according to certain "rules, conditions or both", e.g. only at certain times such as during business hours. A request which does not satisfy the rules or conditions will not be served (or not immediately). When the conditions are satisfied, the service may be "instantiated" (page 92, line 25, to page 93, line 6 *et seq*.).

2.4 Responsible for instantiation is an "instantiation manager" that operates based on "instantiation data" (page 92, lines 13-14) which may "include[] one or more file systems for instantiating hosts at nodes to provide services" (page 93, lines 8-10). It is disclosed that the "instantiation manager [...] may boot an available node [...] using a boot image and one or more file systems for the service to initialize a host for the service at a node" (page 93, lines 16-18), and original claim 8 (and present claim 1) further refers to an "operating system (OS) configuration file", all "corresponding to the identified service".

The prior art

3. D1 is a manual for a programmable Cisco device for the distribution of IP services across multiple servers in a "server farm". The main objective of D1 is performance optimization by load balancing (see page vii, "Document Objectives"; page 1-1, "Overview", paragraph 2).

3.1 D1 proposes a generally hierarchical architecture, in which "real servers", defined as the "internal representation of [] physical server[s], are grouped into "virtual servers" vis-à-vis the clients (see page

1-3, "LocalDirector Terminology"). Virtual servers present a single IP address to the user and distribute requests amongst the real servers they represent. The IP addresses of the real servers need not be published.

3.2 There may be several application-specific or client-specific virtual servers (page 1-6 "Client-assigned Load Balancing"; page 1-7, "Server Failure Adjustments").

3.3 Each "real server" can be mapped to a single virtual server or to several of them (see pages 3-5 and 3-8). The LocalDirector contains a mapping of virtual IP addresses and port numbers to real IP addresses and port numbers (see e.g. the tables in figures 3-3 to 3-5 on pages 3-8, 3-10 and 3-12).

3.4 It is disclosed that there may be several "daemons" running on the same real server (see page 1-6, "Port-Bound Servers"). In fact, although the term "real server" is defined initially to refer to physical machines (see page 1-3), it is also used to mean a "service", several of which can run on the same physical machine (see page 3-36, step 1, 2nd paragraph; page 3-35, penultimate paragraph; see also page 3-10 and the cited reference to "daemons" on page 1-6).

4. For this decision the content of D6 is immaterial beyond the fact that this document relates to an HPC high performance computing system.

The problem-solution approach and the closest prior art

5. Article 52(1) EPC provides that European patents shall be granted for any inventions that involve *inter alia* an inventive step, and Article 56 EPC (1973) stipulates

that an invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art.

6. The problem-solution approach is a well-established and successful tool for the assessment of the inventive step requirement as defined in Article 56 EPC (1973).

6.1 The problem-solution approach requires, in its first step, that prior art is identified and that then, in further steps, it is determined whether it would be obvious for the skilled person to modify or adapt the teaching of the selected prior art so as to arrive at the claimed invention. The selected piece of prior art is typically referred to as the "closest prior art".

6.2 The "closest prior art" is often characterised as being the "most promising springboard to the invention" (see in particular T 254/86, OJ EPO 1989, 115, Reasons 15; and T 656/90, Reasons 1.1).

6.3 If a piece of prior art can be identified as the "closest" prior art or the "most promising springboard" and it can be shown that, starting from this prior art, the claimed invention is non-obvious, then the claimed invention can only be even less obvious starting from any other piece of prior art, and therefore a detailed inventive step assessment starting from the other prior art can be dispensed with.

6.4 In the jurisprudence of the boards of appeal, criteria have been developed as to how, in the first step, the "closest prior art" can be selected from the available prior art. In particular, the "closest prior art" is normally that concerned with a similar use which

requires the minimum of structural and functional modifications (see T 606/89, reasons 2).

6.5 It has, however, been acknowledged that the choice of the closest prior art may not always be unambiguous and that, in such a case, the problem-solution approach may have to be repeated starting from other pieces of prior art (see T 710/97, Reasons 3.2.1). It has also been observed that a piece of prior art on the basis of which the claimed invention is considered non-obvious cannot be "closer" than a document on the basis of which the claimed invention appears obvious, because it is evident in this situation that the former does not represent the most promising springboard from which to arrive at the invention (see T 824/05, Reasons 6.2).

6.6 In T 967/97 (Catchword I) and T 21/08 (Reasons 1.2.3) it was found that if the skilled person had a choice of several workable routes, i.e. routes starting from different documents, which might lead to the invention, the rationale of the problem-solution approach required that the invention be assessed relative to all these possible routes, before an inventive step could be acknowledged. Conversely, if the invention was obvious to the skilled person in respect of at least one of these routes, then an inventive step was lacking. In T 967/97 (catchword II) it was further stated that, if inventive step was to be denied, the choice of starting point needed no specific justification.

Choosing the starting point for the present invention

7. The appellant's position can be summarised as follows:

a) The correct application of the problem-solution approach obliges the board to choose the "closest prior

art" as opposed to merely "a suitable starting point" (see letter of 18 May 2016, page 3, paragraph 4, and page 4, paragraph 1).

b) The closest prior art must be suitable for the intended purpose of the claimed invention, which D1 was not, because it did not relate to high performance computing HPC.

c) D6 did relate to HPC and was therefore closer than D1, so that "given the existence of D6, [...] D1 cannot be closest prior art" (page 5, paragraphs 1 and 2).

8. As regards point (a), the board disagrees with the appellant, and rather endorses the cited findings of T 967/97 and T 21/08. The board notes that these decisions are not isolated ones as the appellant seems to suggest but have been followed in several further board decisions (see e.g. the Case Law of the Boards of Appeal, I.D.2).

9. As regards point (b), the board agrees with the appellant that the intended purpose of the claimed invention is relevant in the inventive step assessment and that it may be simpler and more convincing to start this assessment from prior art sharing the intended purpose with the claimed invention. It may also happen that a piece of prior art is so "remote" from the claimed invention, in terms of intended purpose or otherwise, that it can be argued that the skilled person could not conceivably have modified it so as to arrive at the claimed invention. Such prior art might be referred to as "unsuitable". However, in the board's judgment, this does not prohibit the consideration of an inventive step assessment starting from a piece of prior art with a different purpose. To the extent that

the difference in the intended purpose of the claimed invention imposes on it, the problem-solution approach requires it be determined whether it would be obvious to the skilled person to modify the prior art so as to provide these limitations. And it may be found that it would not.

10. As regards point (c), the board points out that the appellant's argument amounts to saying that knowing more can make an invention less obvious to the skilled person.

10.1 During oral proceedings, the appellant agreed to this counter-intuitive consequence of his position but argued that it had to be accepted if the problem-solution approach required it.

10.2 The board firstly disagrees that the problem-solution approach has this consequence and finds itself in agreement with the jurisprudence of the boards of appeal (see the above discussion).

10.3 Secondly, however, the board considers that this consequence is fundamentally unacceptable. If an argument showing that the claimed invention was obvious over some prior art, this argument cannot be refuted merely by the introduction of another piece of prior art. In the board's view, this would be an absurd situation in conflict with Article 56 EPC, and therefore be untenable.

Claim construction and clarity, Article 84 EPC 1973

11. In defining its subject-matter, claim 1 of all requests uses the unusual term "logic". However, the preamble of claim 1 proceeds to specify that the claimed logic

is "encoded in a computer-readable medium and when executed operable to" perform a number of steps. The board accepts the appellant's view that the skilled person would understand this as specifying some sort of computer program on a computer-readable medium, even if it leaves open whether the program is provided in "hardware, software, firmware or a combination of" these (cf. corresponding suggestion in the description on page 9, lines 16-18).

12. The board agrees with the examining division that the fact that port number and host name are "advertised externally" does not have any technical consequence for the claimed "logic". The "advertisement" feature is satisfied by any means external to the claimed logic which makes port numbers and host numbers known or accessible to clients, and the claimed logic is "operable to" receive a connection request containing port number and host name irrespective of where they have been obtained from.

13. All claims specify "instantiation" of a "host providing the ... [service] at one or more nodes in the cluster". While the "nodes" are the individual machines constituting the HPC cluster (see also page 7, lines 11-13, of the description), neither the term "host" nor the concept of its "instantiation" is specifically defined anywhere in the description.

13.1 The appellant argues that the "host is the entity which provides the service" and that it "comprises the nodes that together provide the service" (see letter of 18 May 2016, page 2, paragraph 1). The board agrees in principle but notes that this still leaves open the possibility that the host has no physical existence beyond the nodes it "comprises". In the board's view,

this remains true even though the claims refer to a "host name". According to the claims, the only purpose of the host name, together with the port number, is to identify the requested service. For the client, therefore, the host name and the port number effectively represent the requested service, apart from the fact that the same service might be associated with several pairs of host name and port number.

13.2 In view of the foregoing the board considers that the skilled person would understand that the term "host" in the present claim is merely a convenient manner of referring to the part of the HPC server needed to provide a particular service. The concept of "instantiating a host" would be understood as comprising anything that is needed to start a service on the claimed HPC system, and includes the claimed feature of "using a boot image, a file system, and an operating system (OS) configuration file corresponding to the identified service to boot at least one of the nodes that comprise the host".

13.3 During oral proceedings, the appellant expressly confirmed this interpretation.

14. Finally, all claims refer to an HPC system comprising a cluster of nodes. In the board's view, the term HPC refers to any system in which a number of computers, jointly referred to as a "cluster of nodes", cooperate in parallel to provide a computational service that the individual computers could not provide on their own. In the board's view, no further limitations are implied by the term HPC alone. The claims of the third auxiliary request specify further that the nodes of the cluster are "interconnected in a grid". In the board's view, this implies at least that the individual nodes have

direct communication links between each other (see also the description, page 8, line 23, to page 9, line 4).

15. On the basis of the broad interpretation above, the board accepts the recited terms as being clear.

Inventive step

Main request

16. The examining division assessed inventive step starting from D1.

16.1 The board considers this to be a suitable choice, as explained above even in the presence of document D6 (see points 7-10).

16.2 In the board's judgment, D1 discloses

i) connection requests from clients specifying port number and host name which are "advertised" externally (see the tables in figures 3-3 to 3-5 and point 8 above);

ii) identifying an (on-demand) service at the HPC server - since, as argued above, the "real servers" of D1 are specifically disclosed to encompass services running on physical machines, the services running as applications on nodes of the "server farm system"; and

iii) the possibility that a service may fail (page 1-16, "Port-Bound Servers", bullet point 3).

16.3 D1 does not disclose

I) an HPC as construed above because it does not disclose the server farms to operate in parallel to provide a requested service, and

II) the "boot[ing of ...] the nodes" or the use of "a boot image, a file system, and an operating system (OS) configuration file corresponding to the identified service" in the process.

16.4 The board considers that these differences solve two separate and independent problems: providing parallelism increases throughput and booting a node enables it to provide the requested service.

16.5 *Re I)* In the board's view, it would be obvious in the system of D1 to provide some parallelism between individual real servers, be it to provide certain services faster, be it to provide several services simultaneously. In the board's view, as few as two real servers operating in parallel are sufficient to turn the system of D1 into an HPC system as construed above.

16.6 *Re II)* It would further be obvious to the skilled person to provide the possibility of (re)starting a requested service that may not be available when requested. The board considers that no document is necessary to establish this point, and the appellant did not challenge this assumption. The specifically claimed parameters of the instantiation, the "boot image", "file system" and OS "configuration file" are regarded as obvious potential requirements for starting or restarting the requested service.

16.7 Therefore, the board comes to the conclusion that independent method claim 1 lacks an inventive step over D1, Article 56 EPC 1973. By analogy, this conclusion applies to independent system claim 21 as well.

Auxiliary request 1

17. In the board's judgment, the specification of "rules indicating whether the service is available" is a non-technical issue. This is the case in particular in view of the only example given in the description, namely that there are business hours, outside of which a certain service is not being offered (see description, page 92, line 28 to page 93, line 6).

17.1 That, given the rules, a request is only serviced when the rules are complied with is an obvious requirement and is straightforward to implement.

17.2 Therefore, the board concludes that the independent claims of the auxiliary request 1 also lack an inventive step over D1, Article 56 EPC 1973.

Auxiliary request 2

18. The additional language specifying the "list of services" mapping host name and port number to the available service is, in the board's view, an obvious detail of implementing a mapping such as that known from D1. The appellant has not provided any argument why these differences in particular could support the presence of an inventive step. The board therefore considers that the above argument carries over to show lack of inventive step of claim 1 of the auxiliary request 2 over D1, too, Article 56 EPC 1973.

Auxiliary request 3

19. In the board's view, the modification of the system of D1 to incorporate direct communication interconnections between the real servers would not be compatible with the hierarchical architecture of that system. In the board's view, therefore, it would not be obvious to the skilled person to modify D1 so as to arrange the real servers as a "cluster of nodes [...] interconnected into a grid".

19.1 In other words, the interconnection feature is sufficient to specify a type of HPC, even if still very broadly defined, which the skilled person would not, in the board's view, arrive at by modifying the system of D1.

19.2 While one might also say that D1 is no longer a "suitable" starting point for assessing inventive step, the legal consequence of this finding is that the subject matter of claims 1, 9 and 17 is inventive over D1, Article 56 EPC 1973.

Remittal to the examining division

20. The above conclusion that the claimed invention is non-obvious over D1 alone is insufficient to establish that the invention involves an inventive step over all the prior art to hand. Since inventive step has, up to now, only been considered starting from D1, the board exercises its discretion under Article 111(1) EPC 1973 and remits the case to the examining division for further prosecution, in particular for consideration of the other documents on file.

Referral of questions

21. According to Article 112(1)(a) EPC 1973, the board of appeal shall, in order to ensure uniform application of the law, or if a point of law of fundamental importance arises, refer any question to the Enlarged Board of Appeal if it considers that a decision is required for the above purposes. This means, *inter alia*, that questions should not be referred if the board itself is able to resolve the point in question beyond any doubt on the basis of the Convention (cf. Decision J 5/81, OJ EPO 1982, 155, Headnote; T 603/89, OJ EPO 1992, 230, Reasons 3.10).

22. In view of the reasoning set out above, the board considers that the questions proposed by the appellant must be answered as follows.

Re questions 1 and 3

An inventive step objection does not become invalid merely because it is based on a document which is not or was not established to be the "closest prior art". It is legitimate to start the inventive step assessment from multiple different documents.

Re question 2

It is permissible to start an inventive step objection with any document that appears to be a suitable starting point.

Objection under Rule 106 EPC

23. The board understands the objection under Rule 106 EPC to refer to Article 112a(2)(d) EPC which provides that

a petition for review by the Enlarged Board of Appeal can be based on the ground that a fundamental violation under Article 113 EPC occurred.

23.1 In this regard, the board notes that the issue of whether an inventive step assessment could be based on D1 was discussed with the board during the oral proceedings. In the board's judgment, therefore, the appellant had ample opportunity, orally and in writing, to present its comments on the pertinent question of law, before the board came to its decision. The appellant does not seem to question this.

23.2 The appellant's objection relies on the assumption that the board is obliged to refer questions to the Enlarged Board of Appeal when, on an important point of law, it intends to deviate from an established line of jurisprudence, or where two boards have given different opinions on the matter.

23.3 According to Article 112(1)(a) EPC 1973, the board of appeal shall refer questions to the Enlarged Board of Appeal if it considers that a decision is required for the above purposes. It is therefore up to the board to decide whether a decision by the Enlarged Board of Appeal is required.

23.4 The board also notes that the Enlarged Board of Appeal has decided before that a board's decision not to refer questions to the Enlarged Board of Appeal is not, in itself, a ground for a petition (see, e.g., R8/11, Headnote and Reasons 2.3, and R17/14, Reasons 27).

23.5 Therefore, the objection under Rule 106 EPC is dismissed.

Order

For these reasons it is decided that:

1. The objection under Rule 106 EPC is dismissed.
2. The request for referral of questions to the Enlarged Board of Appeal is rejected.
3. The case is remitted to the examining division for continuation of the examination proceedings on the basis of the third auxiliary request.

The Registrar: The Chairman:

B. Atienza Vivancos W. Sekretaruk

Decision electronically authenticated