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Datasheet for the decision of 8 November 2017

Case Number: T 0523/13 - 3.5.03

Application Number: 02724966.3

Publication Number: 1368954

IPC: H04L29/06

Language of the proceedings: EN

Title of invention:
System and method for operating software in a flight simulator environment

Applicant:
Honeywell International Inc.

Headword:
Flight simulator/HONEYWELL

Relevant legal provisions:
EPC Art. 52(1), 54(2), 56
RPBA Art. 12(4)

Keyword:
Novelty - main request (no)
Inventive step - auxiliary requests 1 and 2 (no)
Admissibility - auxililary request 3 (no)

Decisions cited:
G 0010/93, T 0545/08, T 0980/08

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Case Number: T 0523/13 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 8 November 2017

Appellant: (Applicant)	Honeywell International Inc. 115 Tabor Road Morris Plains, NJ 07950 (US)
Representative:	Houghton, Mark Phillip Patent Outsourcing Limited 1 King Street Bakewell, Derbyshire DE45 1DZ (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 2 October 2012 refusing European patent application No. 02724966.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	F. van der Voort
Members:	A. Madenach
	O. Loizou

Summary of Facts and Submissions

I. The present appeal is against the decision of the examining division refusing European patent application No. 02724966.3, with publication number WO 02/082776 A1. The refusal was, *inter alia*, based on the grounds that the subject-matter of claim 1 of a main request was not new (Articles 52(1) and 54 EPC) having regard to, for example, document D1 and that the additional features of claim 1 of each of auxiliary requests 1 to 3 did not contribute to an inventive step (Articles 52(1) and 56 EPC) in view of the teaching of document D2, where

D1: URL: http://www.protonique.com/plweb/files/ftp-faq.htm [retrieved from the Internet on 1 August 2002]

and D2 consists of the following four documents D2A, D2B, D2C and D2D:

D2A: URL: http://www.archive.org/web/20010112172600/http://www.techsat.com/ads/overview/ov1.html [retrieved from the Internet on 1 August 2002]; "ADS-3000 Product Overview: Product Specification";

D2B: URL: http://www.archive.org/web/20010112172900/http://www.techsat.com/ads/overview/ov2.html [retrieved from the Internet on 1 August 2002]; "ADS-2 Product Overview: Data Acquisition & Analysis";

D2C: URL: http://www.archive.org/web/200012182700/http://www.techsat.com/ads/overview/ov5.html [retrieved from the Internet on 1 August 2002]; "ADS-2 Product Overview: VME Real-Time Computing & I/O"; and

D2D: URL: http://www.archive.org/web/20000823175733/http://www.techsat.com/ads/overview/ov7.html [retrieved from the Internet on 1 August 2002]; "ADS-2 Product Overview: Application Areas".

II. In the statement of grounds of 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, in the alternative, one of auxiliary requests 1 or 2 on which the decision under appeal was based, or, in the alternative, an auxiliary request 3 as filed with the statement of grounds of appeal. As an auxiliary measure, oral proceedings were requested.

III. The board summoned the appellant to oral proceedings. In a communication following the summons to oral proceedings, the board gave its preliminary opinion.

IV. With the letter dated 17 October 2017, the appellant's representative informed the board that he would not be attending the oral proceedings and requested that a decision be taken based on the current state of the file.

V. Oral proceedings were held on 8 November 2017 in the absence of the appellant.

The appellant requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the main request or, in the alternative, one of auxiliary requests 1 or 2 on which the decision under appeal was based, or, in the alternative, an auxiliary request 3 as filed with the statement of grounds of appeal.

At the end of the oral proceedings, the chairman announced the board's decision.

VI. Claim 1 of the main request reads:

"A method of exchanging information between a first computer system (220) and a second computer system (232) in a flight simulator environment, the method comprising:

transmitting (302) in a first network communication format an initial connection string from said first computer system to said second computer system;

transmitting (304) in a second network communication format a first orientation message from said second computer system to said first computer system;

sending (306) in the first network communication format a second orientation message from said first computer system to said second computer system; and

sending (308, 310, 312) in the first network communication format various informational messages from said first computer system to said second computer system."

VII. Compared with claim 1 of the main request, claim 1 of auxiliary request 1 includes the following additional wording at the end of the claim:

"wherein said first computer system (220) communicates in a TCP/IP format;

said second computer (232) system communicates in an ARINC 429 format; and

said method further comprises:

translating information from ARINC 429 format to TCP/IP format prior to sending information from said second computer system to said first computer system; and
translating information from TCP/IP format to ARINC 429 format subsequent to sending information from said second computer to said first computer".

VIII. Compared with claim 1 of auxiliary request 1, claim 1 of auxiliary request 2 includes the following additional wording at the end of the claim:

"wherein
said first computer system is a flight simulator system (220,wherein [*sic*]
said second computer system is a Flight Management System computer (232, [*sic*]
wherein said informational messages (314) comprises [*sic*] data indicating an end of frame comprising a disconnect message is [*sic*] a word sent from flight simulator system to the Flight Management System computer containing a first 32-bit word indicating that 8 bytes is being transmitted and a second 32-bit word containing all zeroes".

IX. Claim 1 of auxiliary request 3 reads as follows:

"A method of exchanging information between a first computer system (220) and a second computer system (232) in a flight simulator environment, the method comprising:
a) transmitting (302) in [*sic*] an initial connection string from said first computer system to said second computer system;
b) building a first message buffer in the said second computer containing a first orientation message

indicating the architecture of the second computer;

c) sending (304) in the [*sic*] a network communication format the first message buffer from said second computer system to said first computer system;

d) building a second message buffer in the said first computer containing a second orientation message indicating the architecture of the first computer;

e) sending (306) in the second orientation message from said first computer system to said second computer system;

f) establishing a first frame comprising a clock message (312) and end frame message (314) delineating the end of the frame, wherein the frame comprises one or more buffers; and

g) building a third message buffer within the first frame in the second computer system containing various informational messages (308, 310);

h) sending said third message buffer to said first computer system thereby establishing the first synchronization frame as time zero;

i) Until [*sic*] a disconnect message is received, the following framed information exchange is repeated:

1. Using a simulated real-time clock or counting the synchronized frames as the frame rate time of the FMS, building one or more message buffers on first computer system consisting of various multiplexed internal aircraft formatted data, (such as ARINC 429, ARINC 629, discrete, SafeBus), targeted positional FMS, and a P_XEND_FRAME,

2. Sending said message buffer(s) to second computer system,

3. Receiving and processing the third message buffer by the second computer system,
4. Building one or more message buffers on the second computer system comprising various multiplexed internal aircraft formatted data (such as ARINC 429, ARINC 629, discrete, SafeBus), sourcing positional FMS, simulated real-time clock, and the P_END_FRAME indicating the end of the data frame. [*sic*]
5. Sending said one or more message buffers to first computer system establishing a subsequent frame period of the simulation. [*sic*]
6. return to b)."

Reasons for the Decision

1. Prior art (Article 54(2) EPC)

1.1 The appellant disputed that documents D1 and D2 had been made publicly available prior to the claimed priority date.

1.2 Since D1 has no bearing on this decision, whether or not it was made publicly available prior to the claimed priority date need not be further examined.

1.3 With respect to D2, the board notes that this document consists of four different internet citations retrieved from web.archive.org. D2A relates to an "ADS-3000" product overview. D2B, D2C and D2D relate to an "ADS-2" product overview.

1.4 It is well-recognised policy of the Internet Archive's Wayback Machine to crawl the Internet and archive crawled web pages using the date and time when the web page was crawled as part of the URL. The board does not see how the URL used by the Wayback Machine for archiving purposes can be considered to be dynamic, as argued by the appellant, nor did the appellant substantiate this argument any further. The board is therefore of the view that the date stamp is established with a sufficient degree of certainty (cf. T 545/08, point 11 of the reasons), unless proven otherwise (*ibidem*, points 12 and 13 of the reasons).

1.5 The board however accepts the appellant's argument that the examining division did not establish a clear link between the documents D2A to D2D. In particular, D2D does not appear, *prima facie*, to be directly related to document D2A, it being noted that D2D does not mention "ADS-3000", nor does D2A mention "ADS-2".

1.6 Since the board will, for the purpose of this decision, only consider D2D as representing the prior art, a possible relation between D2A and D2D needs not be further examined.

2. Main request

2.1 Interpretation of claim 1

The board understands the term "in a flight simulator environment" in a very general sense such that the information exchanged according to the claim contains data relating to a flight simulation. The appellant argued that "in a flight simulator environment"

requires the presence of a replica of a flight deck. The board does not accept this argument, since flight simulators can also be run on personal computers and operated with only a keyboard and a mouse.

Further, any data which might be exchanged in a flight simulator environment and which might comprise, for example, data relating to airplane speed or position or data relating to airplane fuel are indistinguishable from corresponding data relating to different environments, such as a car simulator environment.

Hence, the term "in a flight simulator environment" does not serve to distinguish the claimed method from methods in other environments and, indeed, from methods running on a personal computer, and will therefore be disregarded in the following assessment of novelty.

The various terms "initial connection string", "first orientation message", "second orientation message" and "various informational messages" can only be interpreted as unspecific kinds of data messages.

Further, the board notes that the first and second communication network formats referred to in claim 1 may be identical.

Finally, the use of the different terms "transmitting" and "sending" gives the impression that the two activities are different. It is, however, not clear what this difference could be. Hence, it is assumed that these terms may have the same meaning.

The board notes that the above interpretation of claim 1 was not contested by the appellant.

2.2 Novelty (Articles 52(1) and 54 EPC):

In view of the above interpretation, the claimed method merely defines a sequence of data exchanges between two computers, which can, for example, be understood as a handshake between the first and second computers, before the first computer starts transmitting data. Such a handshake was, however, commonly known at the priority date, as admitted by the appellant during the examination procedure (cf. the letter dated 10 August 2012, page 3, first paragraph, after "Regarding the Main Request").

2.3 The subject-matter of claim 1 thus lacks novelty (Articles 52(1) and 54 EPC).

3. Auxiliary request 1: Inventive step (Article 56 EPC)

3.1 Claim 1 of auxiliary request 1 (see point VII above) essentially adds the features that the first computer communicates in a TCP/IP format, that the second computer communicates in an ARINC 429 format, and that a format translation is performed prior to sending information from the second to the first computer from ARINC 429 into TCP/IP and from TCP/IP into ARINC 429 subsequent to sending information from the second to the first computer.

3.2 D2D discloses an ADS-2 system, which supports tasks involved, *inter alia*, in avionics (second paragraph). Simulations can access ADS-2 through TCP/IP (penultimate paragraph, see also the figure). ADS-2 offers a simulation framework under a common user interface for a number of typical I/O types, among which is ARINC 429 (sixth paragraph). The board understands this to imply that simulations which are

run on a computer (first computer in the terminology of the claim) can access ADS-2 through TCP/IP and, hence, are linked to ADS-2, which, in turn, is linked to a computer (second computer in the terminology of the claim) which uses ARINC 429. It is obvious to the skilled person that a simulation may make use of any I/O type available to the ADS-2 system, including ARINC 429 (sixth paragraph). Hence, it is implied that there is a protocol translation from the simulations running on the first computer which use one format (TCP/IP) to the I/O using the other format (ARINC 429) and vice versa.

D2D does not disclose the claimed sequence of data exchanges, which may be understood as a handshake before the first computer starts transmitting data and which, as such, was admittedly part of the common general knowledge (see point 2.2 above).

In the ADS-2 system of D2D, a kind of initiation procedure, e.g. a handshake, is obviously necessary between the first and second computers before data can be sent. It would therefore have been obvious to the skilled person starting out from D2D to make use of the commonly known handshake procedure.

3.3 The appellant argued that at the time it was not common that two computers communicated using different protocols. The board notes however that this argument is not relevant in relation to the method disclosed in D2D (see point 3.2).

The appellant further argued that the claimed method did not need a user interface like the ADS-2 between the first and second computer as shown in D2D. The board notes, however, that the claimed method does not

exclude that the information exchange is carried out via a user interface of the kind disclosed in D2D.

The appellant further argued that D2D did not suggest to the skilled person to simultaneously use more than one protocol. The board notes, however, that D2D clearly states that simulations can access ADS-2 through TCP/IP, whereas one of the I/O types is ARINC 429. As ARINC 429 is typically used to provide avionic data (page 1, lines 27-32, of the present application), the board understands the disclosure of D2D such that simulations, which access ADS-2 through TCP/IP, can access avionic data via an I/O interface through ARINC 429, in which case both protocols are used simultaneously.

The appellant further argued that the present method required that the translation take place in different computers. However, claim 1 merely requires that a translation from ARINC 429 to TCP/IP take place prior to sending information from the second to the first computer system and that a translation from TCP/IP to ARINC 429 take place subsequent to sending information from the second to first computer. This does not exclude that the protocol translations take place only in the second computer system. In any case, in the board's view, it would have been obvious to the skilled person starting from D2D to place the necessary protocol translations in one or several of the computers involved in ADS-2.

3.4 The board therefore concludes that the subject-matter of claim 1 of auxiliary request 1 lacks an inventive step having regard to the disclosure of D2D and the common general knowledge (Articles 52(1) and 56 EPC).

4. Auxiliary request 2: Inventive step (Article 56 EPC)

4.1 The first set of additional features in claim 1 of auxiliary request 2 (see point VIII above), namely that the first computer system is a flight simulator system and the second computer system is a flight management system computer, is obvious to the skilled person starting out from D2D for the following reasons. D2D discloses that simulations can access the ADS-2 system via TCP/IP. It follows that in D2D a computer running simulations including flight simulations, i.e. a first computer system in the wording of claim 1, constitutes a flight simulator system connected via TCP/IP to the ADS-2 system. Further, since systems using ARINC 29 are typically avionic systems (page 1, lines 27-32, of the present application), it would have been obvious to the skilled person that a computer using this protocol and connected via an I/O to the ADS-2 system may typically be a flight management system.

The second set of additional features specifies that the informational messages comprise data indicating an end of frame. This is, however, a necessary requirement in any digital data transmission. Further, it defines a specific disconnect message to be sent from the flight simulator system to the flight management system computer. However, disconnect messages on the basis of end-of-frame data as such are necessary in any digital data transmission. The particular format and data values defined in the claim are merely a consequence of the format and data values used in the receiving system. Hence, the particular choice of a data word, in the present case a data word containing all zeroes, would have been made by the skilled person according to the given circumstances without the exercise of inventive skill. The board also notes that a data word

containing all zeroes is a typical example of a disconnect message, which was not contested by the appellant.

4.2 For the above reasons, the subject-matter of claim 1 of auxiliary request 2 is obvious to the skilled person starting out from D2D and taking into account the common general knowledge (Articles 52(1) and 56 EPC).

5. Auxiliary request 3: Admissibility (Article 12(4) RPBA)

5.1 Claim 1 of auxiliary request 3, which was filed with the statement of grounds of appeal, differs significantly from claim 1 of any of the preceding requests. New features have been introduced, such as building of first to third message buffers, establishing a clock message and a detailed definition of a framed information exchange - which the board assumes to correspond to the previously claimed various informational messages. At the same time, features relating to the first and second network communication formats and the translation between them, which were all part of the claimed method as discussed so far, are no longer present.

The board is therefore of the view that the subject-matter of claim 1 constitutes a fresh case in that it comprises features which have not been part of any of the previous claims and in that, by removing features which were present in previous versions of the claim, the claimed subject-matter does not converge to subject-matter which is more restricted as compared with the subject-matter of previous versions of the claim.

5.2 According to Article 12(4) of the Rules of Procedure of the Boards of Appeal (RPBA)(Supplementary publication 1 - OJ EPO 2017, pages 41 to 51), the board has the power to hold inadmissible facts, evidence or requests which could have been presented in the first instance proceedings.

5.3 It is established case law that *ex parte* proceedings before the boards of appeal are primarily concerned with examining the contested decision (G 10/93, OJ EPO 1995, 172, points 3 and 4 of the reasons). Since the judicial examination in *ex parte* proceedings concerns the stage prior to grant and lacks a contentious nature, the boards are restricted, in their review of the decision under appeal, neither to an examination of the grounds for the contested decision nor to the facts and evidence on which the decision is based. In T 980/08 (not published in OJ EPO) the board stated that this absence of restriction does not amount to a positive obligation for the boards to consider any request filed in appeal especially when the requests bring about a new case. The appeal proceedings are intended to review the correctness of the decision of the first instance rather than to continue examination by other means.

If it were the intention of the applicant to pursue matter which forms a new case, as is the case here, an appropriate request should and could have been filed before the first instance.

5.4 The board therefore concludes that auxiliary request 3 is not to be admitted into the appeal proceedings.

6. Since none of the admissible requests 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. Rauh F. van der Voort

Decision electronically authenticated