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Case Number: T 2037/07 - 3.5.06

Application Number: 99310077.5

Publication Number: 1022656

IPC: G06F 9/445, H04L 29/06

Language of the proceedings: EN

Title of invention:
Communication system for communication between in-vehicle terminals and center, and in-vehicle terminal employed in communication system

Applicants:
FUJITSU TEN LIMITED
Toyota Jidosha Kabushiki Kaisha
AISIN AW CO., LTD.
DENSO CORPORATION
Panasonic Corporation

Headword:
-

Relevant legal provisions:
EPC Art. 56

Relevant legal provisions (EPC 1973):
-

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 2037/07 - 3.5.06

D E C I S I O N
of the Technical Board of Appeal 3.5.06
of 9 March 2012

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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 7 August 2007 refusing European patent application No. 99310077.5 pursuant to Article 97(1) EPC 1973.**

Composition of the Board:

Chairman: D. H. Rees
Members: S. Krischer
C. Heath

Summary of Facts and Submissions

I. The appeal is directed against the decision, posted on 7 August 2007, of the examining division, to refuse the application 99 310 077.
The reason for the refusal was lack of inventive step, in violation of Article 56 EPC. The following documents had been used:

D3 WO 97 13353 A, 10 April 1997.
D1 WO 97 30575 A, 28 August 1997.
D2 R. Lind et al: "The Network Vehicle - A Glimpse into the Future of Mobile Multi-Media"; proceedings of the 17th AIAA/IEEE/SAE Digital Avionics Systems Conference (DASC) at Bellevue/USA, 31 October - 7 November 1998; pages I21-1 to I21-8; XP10318184.

II. A notice of appeal was received on 5 October 2007. The fee was received on 4 October 2007. A statement of the grounds of appeal was received on 4 December 2007.
Oral proceedings were conditionally requested.

III. The board issued a summons to attend oral proceedings.

IV. In a letter dated 30 January 2012, the appellant announced that he would not to be represented at the oral proceedings.

V. Oral proceedings were held on 9 March 2012. At their end, the chairman announced the board's decision.

VI. The appellant requests to set the decision aside (implicitly requested) and that a patent be granted on the basis of claims 1-4 filed with the grounds of

appeal (identical to those of the sole request refused in the appealed decision). The further text on file is: description pages 1, 4-17 as originally filed; page 2 as filed with the grounds of appeal; page 3 as filed by fax on 4 June 2007; drawings sheets 1-10 as originally filed.

VII. The sole independent claim reads as follows:

"1. A communication system for downloading programs (13) from a center (11) to terminals (21), wherein:

said terminal (21) has a storage unit (23) in which a downloaded program (13) is stored, and a means (24) for transmitting information, which indicates that the program has been downloaded successfully and activated, to said center (11) according to the timing of activating the stored program; and

said center (11) has a means (14) for receiving the information, characterized in that said terminal is provided in-vehicle; and in that said in-vehicle terminal (21) is adapted to judge whether an activation is the first activation or not by checking the number of times the program has been activated, and to transmit said information to said center (11) only when said activation is the first activation."

Reasons for the Decision

1. *Admissibility of the appeal*

The appeal satisfies the requirements of the EPC for admissibility, see sections I and II above.

2. *Inventiveness*

2.1 The invention relates to a communication system for downloading programs (e.g. a navigation program or a game, see description page 1, line 20) from a center to in-vehicle terminals. An information indicating that the program has been downloaded and activated is transmitted from the terminal to the center, but only at the first activation.

2.2 Arguments brought forward

2.2.1 Appealed refusal decision: Document D3 is considered to be the closest prior art to claim 1. The "Base Station Controller" of D3 corresponds to the "center" of claim 1, and the "Base Station" to the "terminal". The following features are identified as differences between claim 1 and D3:

(F_a) the terminal is provided *in-vehicle*;
(F_b) no download/activation information is transmitted to the center *after the first activation* of the downloaded program in the terminal.

Two independent objective technical problems are formulated from these differences:

(P_a) adapt the method of D3 for use in a vehicle;
(P_b) extend the method of D3 to deal with multiple activations.

Solving these problems is obvious: For problem (P_a), merely the use of general knowledge (see document D2 for computing and networking techniques in a vehicle)

would be necessary (refusal, section 13.4, first paragraph).

For problem (P_b), the skilled person would have to make an obvious choice between two straightforward options (to send an indication on *each* subsequent activation, or to send *no* indication on subsequent activations) depending on (possibly non-technical) requirements, such as charging (see claim 4 and the refusal, page 6, paragraph 4,).

2.2.2 Grounds of appeal: In a vehicle, the communication channel is instable, thus a minimisation of the information transmission to only one message, namely at the first activation, diminishes transfer problems (see grounds, page 2, paragraphs 2, 5).

This minimisation of the information transmission represents an adaptation of the method of D3 to vehicles (i.e. to feature (F_a)). Thus there is indeed an interaction between features (F_a) and (F_b); i.e. the problems are not independent.

The problem (P_a) of "adapting the method of D3 for use in a vehicle" formulated by the examining division includes a pointer to a feature of the solution ("in-vehicle"). Therefore, the sole problem of the invention should read (grounds, page 2, last paragraph):

> "in the context of an in-vehicle application, how to improve a system for establishing that a program has been downloaded successfully and activated"

Furthermore, there is no disclosure in D3 (or D1) that only *one* message should be sent at each activation

(grounds, page 3, paragraphs 2, 4). The system of D3 uses two of them, one for acknowledging the completion of the download and one for indicating the activation.

2.3 Now, the question is why the download/activation information is transmitted only once from the terminal to the center. The board notes that there is no processing of that information by the center specified in the system of claim 1. It is only in claim 4 that the transmitted information is used, namely for the *commercial aim of charging* the user of the terminal. This aim is also mentioned on description page 1, line 35 and page 3, last two lines. Furthermore, the idea of selling a program is disclosed on page 2, line 3.

The board could not find any disclosure in the description that this information is used for any *technical reason* (like triggering an automatic reaction of the center to the information). In particular, nothing could be found on page 6, line 20 to page 8, line 20, i.e. in the disclosure of the claimed first embodiment. It is merely said at page 8, lines 16-20 that "the information is analyzed" and that "it is thus checked if downloading the program to the in-vehicle terminal 21 has been completed correctly and if the program 13 has been activated normally", without giving any reason why the center does this.

2.4 Furthermore, the board could not find any mention nor even hint in the description that instable communication conditions are the reason for the restriction to sending a download/activation information only at the first activation, as stated in the grounds of appeal. In fact, there are passages in

the description that deal with an "improper communication state", e.g. on page 10, lines 23 to page 11, line 17. But this passage belongs to the third embodiment which was the base of the original claims 6-8 that were excised for objections of lack of unity.

Furthermore this passage is about a further information sent *during* the download (and not after completion as in claim 1). This further information has the purpose of restarting the download after interruption of the downloading due to communication problems. No such technical purpose could be found in the description for the information of claim 1. It would further appear to the board that the skilled person is more likely to consider an "improper communication state" a problem for downloads, which might well take a long time, than for brief uploaded messages reporting activation. Such messages could simply be sent later, like the message in the third embodiment.

2.5 Thus, the only reason derivable from the application why the download/activation information is sent is that of charging the user. Nor, in the judgement of the board, would the common general knowledge of the skilled person lead him to any other conclusion.

2.6 Even if the board were to conclude that the skilled person would have recognised that sending an activation message only once served a technical purpose in minimising transmissions over an unreliable channel, it would have to be asked whether this was not just adopting a particular business model (i.e. charging only once when the program is first successfully activated, instead of for each use of the program) in

order to avoid, rather than solve, a technical problem (see T 0258/03, OJ 2004, 575, Headnote II).

2.7 The board concurs with the appellant that problem (P_a) of "adapting the method of D3 for use in a vehicle" includes a pointer to the solution ("in-vehicle"). However the problem formulated by the appellant ("in the context of an in-vehicle application, how to improve ...) also contains a pointer to the solution. Therefore, the (sole) objective technical problem should read:

> "how to find an alternative field of application for the system of D3 and how to adapt it to that field"

The are no independent partial problems, since the second part of the problem depends on the first part. As to the solution, feature (F_a) (the terminal being provided *in-vehicle*) solves the first part of the problem, and feature (F_b) (no download/activation information is transmitted to the center *after the first activation* of the downloaded program in the terminal) is the solution of the second part.

2.8 The board agrees with the appealed decision, section 13.4 that it was well-known at the filing date to use any technique from the fields of computing and networking in computing devices in a vehicle (see D2), thus rendering the solution of the first part of the problem obvious.

2.9 As to the solution of the second part of the problem, it seems to the board that the question whether the motivation for choosing feature (F_b) for the solution is

a technical one, as the appellant states (in order to minimise communication in an instable transmission environment of a vehicle), or a commercial one, as the board has concluded, or a mix of both, is not, in the final analysis, crucial: In both cases choosing (F_b) would be obvious for the skilled person to solve the second part of the problem.

In the first case, the field is that of communication with vehicles and it is obvious to avoid unnecessary messages in an instable communication situation in order to adapt the system of D3 to vehicles.

In the second case, the field is charging for downloaded programs and it is obvious to send as many messages as needed for charging purposes. Apparently, the scheme of claim 4 merely charges for the first activation.

2.10 As to the statement in the grounds of appeal that in D3 two messages are sent, one for successful download and one for each activation, whereas in claim 1 only one message is sent (grounds, page 3, paragraphs 2, 4), the board notes that since the only reason why the information is sent is that of charging the user, it is obvious to the skilled person to restrict the messages of D3 to the user's act which is intended to be charged; i.e. to a download acknowledgement message if the download is charged, or to the activation message if the activation is charged (which implies a previous download).

2.11 Even if the appellant had given convincing reasons why the skilled person would see the one message rather than two as having a technical motivation, then the

options of (i) a single acknowledgement at the end of a process and (ii) an acknowledgement at the end of each of two or more stages of a process would be obvious to the person skilled in the field of communications with vehicles and a choice made as a matter of everyday design.

2.12 Thus, the subject-matter of claim 1 is not inventive, in violation of Article 56 EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

B. Atienza Vivancos D. Rees