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Case Number: T 2318/14 - 3.5.03

Application Number: 06019049.3

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Title of invention:
Emergency information prompt report system using a broadcast system

Applicant:
Kabushiki Kaisha Toshiba

Headword:
Emergency information prompt report system/TOSHIBA

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)

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Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 2318/14 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 9 August 2018

Appellant: (Applicant)	Kabushiki Kaisha Toshiba 1-1 Shibaura 1-chome, Minato-ku Tokyo 105-8001 (JP)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 22 May 2014 refusing European patent application No. 06019049.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	F. van der Voort
Members:	K. Schenkel
	O. Loizou

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division refusing European patent application No. 06019049.3 (publication No. EP 1 816 765 A2).

II. The refusal was based on the grounds that, *inter alia*, the subject-matter of claim 1 of each of the main request and the second auxiliary request did not involve an inventive step having regard to the disclosure of D4 (= US 2006/0020992 A1) and taking into account common general knowledge (Articles 52(1) and 56 EPC) and that claim 1 of each of the first and third auxiliary requests was not clear (Article 84 EPC).

III. 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 claims of a main request or, in the alternative, a first or a second auxiliary request, all requests filed with the statement of grounds of appeal. Further, the appellant conditionally requested oral proceedings.

IV. In a communication following a summons to oral proceedings, the board, without prejudice to its final decision, *inter alia* gave its preliminary opinion that the subject-matter of claim 1 of each request and of claim 3 of the main request did not appear to involve an inventive step when starting out from D4 and that claim 1 of each request and claim 3 of the main request was not clear.

V. With its letter dated 17 July 2018, the appellant filed a substantive response together with an amended main request and an auxiliary request, respectively replacing the main request and the first auxiliary

request on file, and withdrew the second auxiliary request.

VI. Oral proceedings were held on 9 August 2018. The appellant requested 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, the auxiliary request, both requests filed with letter dated 17 July 2018.

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

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

"An emergency information report system which reports requested emergency information by utilizing a broadcast system in which a plurality of broadcast stations each broadcast a digital broadcast signal of normal programs, comprising:

sensors (191~193) which sense occurrence of abnormality;

at least one monitoring center (20) which monitors the sensors and sends emergency broadcast request information when at least one of the sensors senses occurrence of abnormality, the emergency broadcast request information specifying the abnormality as to what occurred or what is anticipated, when and where, and who should provide what information to whom being at what place;

an emergency broadcast processing apparatus (21) which receives the emergency broadcast request information from the at least one monitoring center (20), grasps information specified by the emergency broadcast request information to determine a channel of

an appropriate broadcast station (11), and informs the appropriate broadcast station of information necessary for emergency broadcast; and

in-station processing apparatuses (117, 112, 113) which are installed in each broadcast station (11) and are configured to multiplex the information from the emergency broadcast processing apparatus (21) with the digital broadcast signal of normal programs for the determined channel in response to the information from the emergency broadcast processing apparatuses *[sic]* (21)."

VIII. Claim 1 of the auxiliary request differs from claim 1 of the main request in that:

- the third paragraph reads as follows (added or amended text underlined by the board):

"at least one monitoring center (20) which monitors the sensors, determines, when at least one of the sensors senses occurrence of abnormality, a necessity of emergency broadcast depending on an extent of the abnormality, and sends emergency broadcast request information in the event of the determination of the necessity of the emergency broadcast, the emergency broadcast request information specifying the abnormality as to what occurred or what is anticipated, when and where, and who should provide what information to whom being at what place;";

- the fourth paragraph reads as follows (added or amended text underlined by the board):

"an emergency broadcast processing apparatus (21) which receives the emergency broadcast request information from the at least one monitoring center

(20), grasps information specified by the emergency broadcast request information and determines whether it is suitable to broadcast using a certain channel of an appropriate broadcast station (11), and informs the appropriate broadcast station of information necessary for emergency broadcast;"; and

- in the last paragraph, the word "determined" has been replaced by "certain".

Reasons for the Decision

1. Main request - claim 1 - inventive step

1.1 D4 is considered to represent the closest prior art. It relates to the dissemination of emergency broadcast request information ("event information", paragraph [0016], lines 9 to 18) designated for delivery in particular areas, e.g. the New York area (paragraph [0020]), by utilizing a broadcast system ("data network" or "communication network", *ibid.* and paragraph [0018], lines 5 to 9). The broadcast system includes a broadcast station ("program distributor 18", paragraph [0018], lines 9 to 11) which broadcasts normal programs ("... such as television shows and music...", paragraph [0022], lines 4 to 8) in a digital format ("MPEG-2 data stream", paragraph [0023], lines 1 to 4, and paragraph [0038], lines 1 and 2).

In the exemplary embodiment, the broadcast station corresponds to a limited area, namely the New York geographic area (paragraph [0022], lines 8 to 10). This broadcast station transmits data/information to the user homes 24 via a channel ("cable network 20", paragraph [0024], lines 1 to 5, and paragraph [0024], lines 10 to 12, FIG. 1), it being noted that D4

discloses only one channel between the broadcast station and the user homes. Since examples of the source of information include nation-wide operating entities ("National Weather Service" or "National Oceanic Atmospheric Administration", paragraph [0019]), it is implicit that the system includes other broadcast stations which cover other areas.

The emergency broadcast request information ("alert", paragraph [0019], lines 1 to 5) is generated by a monitoring center ("agency", *ibid.*) and transmitted to an emergency broadcast processing apparatus ("information source 12", paragraph [0020], lines 1 to 3) which embeds the information in a data stream (paragraph [0021], lines 1 to 4) and forwards the data stream to the broadcast station ("program distributor 18", paragraph [0022], lines 1 to 4). The monitoring center may be a weather service (paragraph [0019], lines 1 to 5). It is implicit that the weather service requires sensor input to generate information about the weather and, in particular, information about critical weather conditions. Hence, D4 implicitly discloses sensors for sensing occurrence of abnormality.

The data stream forwarded to the broadcast station specifies where the abnormality occurred (paragraph [0021], lines 4 to 7). It may also specify what kind of event is anticipated for what place (paragraph [0026], lines 7 to 11). The described embodiment uses SAME messages ("Specific Area Message Encoding", paragraph [0043], lines 1 to 5) which are used for alerts or, in other words, abnormalities (paragraph [0019], lines 5 to 9). These messages each include an event code, a time/date information and a geographic area code (paragraphs [0014] and [0015]), the geographic code specifying the user's place to which the information is

to be provided (paragraph [0020], lines 12 to 16, paragraph [0021], lines 4 to 7] and the area affected by the abnormality (paragraph [0026], lines 7 to 11).

The broadcast station matches the geographic code in the data stream to the area served by it (paragraph [0023], lines 1 to 7) and, in the case of a matching geographic code, transmits the emergency information to the individual homes via a cable network (paragraph [0024], lines 1 to 3). Thus, the geographic code also specifies which broadcast station or, in other words, who should provide the information. The information may be presented to the user together with the normal program in a picture-in-picture application (paragraph [0041], lines 8 to 10). In the board's view, this corresponds to multiplexing the emergency information with the broadcast signal of the normal programs. The means within each broadcast station for performing this task can thus be considered as constituting an in-station processing apparatus.

1.2 The system of claim 1 differs from the system disclosed in D4 in that the emergency broadcast processing apparatus grasps information specified by the emergency broadcast request information to determine a channel of an appropriate broadcast station and informs the appropriate broadcast station of information necessary for emergency broadcast and in that, accordingly, the in-station processing apparatuses in the broadcast stations are configured to multiplex the information from the emergency broadcast processing apparatus with the digital broadcast signal of normal programs for the determined channel in response to the information from the emergency broadcast processing apparatus.

In other words, the discrimination of the alerts based

on their geographic code is carried out by the emergency broadcast processing apparatus ("information source 12" in D4) rather than in the broadcast station ("program distributor 18" in D4).

1.3 A technical effect of these distinguishing features is that the transmission of emergency information from the emergency broadcast processing apparatus can be limited to the appropriate broadcast station, thereby avoiding data being transmitted to broadcast stations which do not match with the geographic code, which would otherwise result in unnecessary data traffic.

1.4 Starting out from D4, the technical problem underlying the subject-matter of claim 1 may therefore be seen in reducing the amount of transmitted data.

The appellant argued that the above-mentioned technical problem contained a pointer to the solution and that the technical problem was rather to be seen in reducing the complexity of the system. The board notes however that reducing the amount of transmitted data is a common aim in telecommunications industry and, hence, may be used in formulating the technical problem. Further, the board is not convinced that the distinguishing features would solve the problem suggested by the appellant, since system complexity depends, *inter alia*, on the number of emergency broadcast processing apparatuses and broadcast stations, which is independent of whether the above-mentioned discrimination takes place in an emergency broadcast processing apparatus or in a broadcast station. In this respect, the board also notes that D4 discloses multiple emergency broadcast processing apparatuses ("one or more information sources 12", paragraph [0018], lines 5 to 9). The features of claim

1 do not therefore necessarily lead to a reduced complexity.

1.5 In the board's view, since the area served by a specific broadcast station is normally fixed, it would be obvious to the skilled person that emergency information which is sent to a broadcast station with a non-matching geographic code may be suppressed without compromising the alert system. Hence, it would be obvious to the skilled person, starting out from the emergency information report system of D4 and faced with the above-mentioned technical problem, to modify the system of D4 such that the emergency broadcast request information is only transmitted to the appropriate broadcast station, i.e. the broadcast station with the matching geographic code.

Transmitting information to the appropriate broadcast station, namely the one with the matching geographic code, implies determining this broadcast station and, consequently, the channel used by this broadcast station to disseminate its program, since there is only one channel between the broadcast station and the corresponding user homes.

The skilled person, starting out from D4 and faced with the above-mentioned technical problem, would thereby, using his/her common general knowledge, arrive at a system which includes all the features of claim 1, without exercising inventive skill.

1.6 Arguments of the appellant

The appellant argued that in the system of D4 the information source provided the emergency information without discrimination as to the broadcast stations and

that the matching of the geographic code was done in the broadcast stations, whereas in the system of claim 1 the matching was done in an emergency broadcast processing apparatus. D4 did not teach such an upstream shift of the discrimination. Hence, the skilled person would not implement the discrimination in an emergency broadcast processing apparatus, which would also increase its complexity.

The board notes that D4 discloses two embodiments, a first one in which the discrimination is done in the broadcast stations (paragraphs [0023] and [0024]) and a second one in which the discrimination is done at the user's home (paragraph [0042], paragraph [0044], lines 7 and 8, paragraph [0045], lines 3 to 5). Compared to the second embodiment, in which the discrimination is done at the user's location, the first embodiment constitutes an upstream shift of the discrimination. This has the technical effect that the complexity of the user's equipment can be reduced, whilst it is increased at the broadcast stations. D4 thus already discloses two different options for carrying out the discrimination, one being more upstream than the other. Since shifting the discrimination from one stage to another stage merely shifts rather than avoids complexity, in the board's view, there is no reason which would prevent the skilled person from a further upstream shift of the discrimination in order to reduce the amount of transmitted emergency information, as set out in point 1.5 above.

The appellant further argued that according to D4, paragraph [0018], lines 11 to 13, the information source is a satellite network and that satellites could not discriminate between different receiving stations. The skilled person would therefore not shift the

discrimination to the information source. The board however notes that according to paragraph [0020], lines 5 to 9, the information source may also be a cable source which would support differentiating between receiving broadcast stations. Further, the system of D4 generally refers to the dissemination of emergency information over a data network, including a "digital subscriber line" (paragraph [0016], lines 9 to 15) which provides point-to-point connections and therefore would support a discrimination at the origin of the transmitted information.

The appellant further argued that in the system of D4 several programs were generated, one for each alert, and that, if the discrimination were to be shifted to the information source, the number of programs would be increased, which would dissuade the skilled person from shifting the discrimination into the information source. The board, however, notes that in the system of D4 the alerts are encoded in auxiliary fields of the digital data stream (paragraph [0020], lines 9 to 12). The program may therefore remain unchanged until, upon a match of the geographic code, the alert is embedded in the program data which can be seen and heard by the user.

The appellant further argued that in the system of D4 the multiplexing in an picture-in-picture application related to a different embodiment in which the discrimination was done at the user's location. The board notes however that the question of how the alert is embedded in the broadcast signal is not inherently linked to the stage where the discrimination takes place. Hence, the skilled person would not consider the use of a picture-in-picture application at a specific stage only.

1.7 In view of the above, the board concludes that the subject-matter of claim 1 of the main request does not involve an inventive step (Articles 52(1) and 56 EPC). The main request is therefore not allowable.

2. Auxiliary request - claim 1 - inventive step

2.1 Claim 1 of the auxiliary request differs from claim 1 of the main request essentially in that:

(a) the monitoring center is capable of determining a necessity of an emergency broadcast depending on the extent of the abnormality and is capable of sending the emergency information in the case of such a necessity; and

(b) the emergency broadcast processing apparatus is capable of determining whether or not the information is suitable for being broadcast using a certain channel of an appropriate broadcast station.

2.2 Feature (a) adds to the system of claim 1 of the main request the possibility of defining a threshold for the extent of abnormality, beyond which the emergency information is sent. Since the range of, in particular, weather conditions is very broad and it is certainly not appropriate to inform the users about every unusual weather condition, the skilled person would, in order to limit the transmitted alerts to the important ones, include feature (a) in the system of D4 without having to exercise inventive skill.

Feature (b) states, in other words, that it is determined whether or not the information can be

broadcast by a specific channel of an appropriate broadcast station. The board notes in this respect that in the system of D4 the broadcast station uses only one channel via which the normal program and the emergency information can be broadcast (paragraph [0024], lines 1 to 3). Therefore, determining the appropriate broadcast station together with the channel it uses (see point 1.5 above) includes determining whether or not the information is suitable for being broadcast by the channel of the determined broadcast station. Feature (b) therefore does not contribute to an inventive step.

The subject-matter of claim 1 of the auxiliary request does not therefore involve an inventive step (Articles 52(1) and 56 EPC). The auxiliary request is therefore not allowable.

3. There being no allowable request, it follows that 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