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Case Number: T 1248/10 - 3.5.04

Application Number: 00944372.2

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Language of the proceedings: EN

Title of invention:
MULTIMEDIA COMMUNICATION TERMINAL

Applicant:
Hitachi Consumer Electronics Co., Ltd.

Headword:

Relevant legal provisions:
EPC 1973 Art. 56, 84

Keyword:
Claims - clarity - main request (no)
Inventive step - auxiliary request (no)

Decisions cited:

Catchword:

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Case Number: T 1248/10 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 3 February 2015

Appellant: (Applicant)	Hitachi Consumer Electronics Co., Ltd. 2-1, Otemachi 2-chome, Chiyoda-ku, Tokyo 100-0004 (JP)
Representative:	Calderbank, Thomas Roger Mewburn Ellis LLP 33 Gutter Lane London EC2V 8AS (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 19 January 2010 refusing European patent application No. 00944372.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	F. Edlinger
Members:	C. Kunzelmann
	T. Karamanli

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division to refuse European patent application No. 00 944 372.2 under Article 97(2) of the European Patent Convention (EPC).

II. The application was refused on the grounds that the subject-matter of independent claims 1 and 2 of the main request and the auxiliary request then on file did not involve an inventive step (Article 56 EPC) in view of the following prior-art documents:

D1: EP 0 763 944 A2, and
D5: JP 2000032437 A.

III. The applicant appealed and requested that the decision be set aside. With the statement of grounds of appeal, the appellant filed claims according to new main and first auxiliary requests. The claims of the main request on which the decision under appeal was based were maintained as claims of a second auxiliary request. The appellant also submitted arguments concerning the patentability of the claimed subject-matter.

IV. The board issued a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to a summons to oral proceedings dated 13 October 2014. In this communication the board raised doubts as to the clarity of *inter alia* claim 2 of the main and the first auxiliary requests. These doubts arose because the relationship between the plurality of coded bit streams and the plurality of transmitting states did not appear to be clear. The board also indicated that it tended to

agree with the decision under appeal that the subject-matter of claim 1 of the second auxiliary request (i. e. claim 1 of the main request underlying the decision under appeal) did not involve an inventive step.

V. The appellant replied with a letter dated 24 December 2014. It withdrew the main request and filed claims 1 to 3 according to a new main request. It also stated that the new main request corresponded to the first auxiliary request previously on file, but with some corrections to claim 2. Claims 1 to 3 of the previous second auxiliary request (i. e. the claims of the main request underlying the decision under appeal) were re-filed as claims 1 to 3 of a new first auxiliary request. With respect to the issue of patentability, the appellant referred to arguments already submitted with the statement of grounds of appeal and indicated that it would be prepared to discuss this further at the oral proceedings, if necessary.

VI. With letter dated 12 January 2015 the appellant withdrew the request for oral proceedings and indicated that it assumed that the oral proceedings would not take place.

VII. With a communication of the Registry dated 21 January 2015 the appellant was informed that the oral proceedings would take place as scheduled and that the board intended to come to a decision at the oral proceedings.

VIII. Oral proceedings were held by the board on 3 February 2015 in the absence of the duly summoned appellant, in application of Rule 71(2) EPC 1973 and Article 15(3) RPBA. The chairman noted that the appellant had

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 the auxiliary request, both filed with the letter dated 24 December 2014. At the end of the oral proceedings, the chairman announced the board's decision.

IX. Claim 2 of the main request reads as follows:

"A multimedia transmitting terminal adapted to communicate with a multimedia receiving terminal provided with means for receiving a coded bit stream of information transmitted at a predetermined error resilience level from a transmitting terminal, means for decoding and displaying the received bit stream, means for receiving a request of a user in relation to error resilience and means for transmitting the request of the user in relation to error resilience to the transmitting terminal,
the multimedia transmitting terminal comprising:
a server that stores a plurality of coded bit streams different in error resilience of the same contents, wherein:
the plurality of coded bit streams includes at least a coded bit stream having only video information among video information and audio information and a coded bit stream having only audio information among video information and audio information, and
a bit stream is selected among the plurality of coded bit streams according to the request of the user in relation to error resilience and transmitted to multimedia receiving terminal;
wherein the request of the user in relation to error resilience is a request to select a transmitting state of coded bit stream among a plurality of transmitting

states, the plurality of transmitting states comprising:
(i) a first state in which:
• at least two macroblocks per VOP are coded using intra-frame coding;
• a resync marker is transmitted at the first boundary between macroblocks after 480 bits from the preceding resync marker; and
• both image and audio information is transmitted;
(ii) a second state in which:
• at least two macroblocks per VOP are coded using intra-frame coding using intra-frame coding (*sic*);
• a resync marker is transmitted at the first boundary between macroblocks after 640 bits from the preceding resync marker;
• both image and audio information is transmitted;
(iii) a third state in which:
• at least four macroblocks per VOP are coded using intra-frame coding;
• a resync marker is transmitted at the first boundary between macroblocks after 640 bits fr[o]m the preceding resync marker;
• both image and audio information is transmitted;
(iv) a fourth state in which:
• at least four macroblocks per VOP are coded using intra-frame coding;
• a resync marker is transmitted at the first boundary between macroblocks after 640 bits from the preceding resync marker;
• only video information is transmitted.
(v) a fifth state in which:
• only audio information is transmitted."

X. Claim 1 of the first auxiliary request reads as follows:

"A multimedia receiving terminal provided with means for receiving a coded bit stream of information transmitted at a predetermined error resilience level by a transmitting terminal and means for decoding and displaying the received bit stream, comprising:
means for receiving a request of a user in relation to error resilience; and
means for transmitting the request of the user in relation to error resilience to the transmitting terminal,
wherein the request of the user in relation to error resilience is a request to select a transmitting state of coded bit stream among a plurality of transmitting states, the plurality of transmitting states including a first state and a second state, the level of the error resilience of the second state being higher than the level of the error resilience of the first state, the first state being such that the transmitting terminal transmits both video information and audio information, and the second state being such that the transmitting terminal transmits only audio information among video information and audio information."

XI. With respect to claim 1 of the present first auxiliary request (which is claim 1 of the main request underlying the decision under appeal), the reasons for the decision under appeal may be summarised as follows:

Document D1 was considered to be the closest prior art. D1 disclosed in the embodiment illustrated in figure 20 a multimedia receiving terminal provided with means for receiving a coded bit stream of information transmitted by a transmitting terminal, means for decoding and displaying the received bit stream, means for receiving a request of a user in relation to error resilience and means for transmitting this request of the user to the

transmitting terminal as specified in claim 1. The request of the user was a request to select a transmitting state of coded bit stream among a plurality of transmitting states because the user of the multimedia receiving terminal could choose to perform a refresh (in which case the coder at the transmitting terminal was forced to perform intra-frame coding of a frame), could choose to change the criteria for an assessment of the state of the transmission channel (in which case the coder would automatically change the transmission mode depending on the assessed state of the transmission channel), or could choose a transmission mode independent of the state of the transmission channel. With respect to the feature "a request of a user in relation to error resilience", the examining division observed that a refresh control was cited in the description of the present application for the same purpose as in document D1.

Thus, the multimedia receiving terminal of claim 1 differed from that known from D1 in that the plurality of transmitting states included a first state and a second state, the level of the error resilience of the second state being higher than the level of the error resilience of the first state. The first state was such that the transmitting terminal transmitted both video information and audio information, and the second state was such that the transmitting terminal transmitted only audio information.

Thus the problem solved by the present invention could be regarded as the well-known problem of increasing flexibility.

D5 disclosed that, where a signal normally including audio and video was transmitted, the suppression of

video and the transmission of only audio provided the same advantages as in the present application, namely the possibility of increasing error resilience on a transmission channel.

Thus, a person skilled in the art would regard it as a normal design option to include the plurality of transmitting states specified in claim 1 in the terminal known from D1 in order to increase flexibility.

XII. With respect to claim 1 of the present first auxiliary request, the appellant's arguments may be summarised as follows:

Contrary to the analysis of the examining division, there was a fundamental difference between the present invention and document D1. The present invention was based on the realisation that different users might be prepared to accept different levels of corruption at different times and in different situations. It gave the user greater freedom over the transmission mode control than did D1, in particular freer and direct choice amongst the types of data transmission and the error resilience techniques applied to that transmission. The user could also select the type of coding used. The manual control of the transmission mode was at the heart of the invention.

D1 did not allow the user of the multimedia receiving terminal to select among transmission modes. D1 disclosed an automated system which switched between transmission modes depending on the success rate of that transmission. In most embodiments, the switching was determined by the system itself. Users could not know beforehand what effect their changes would have.

In one embodiment the user could change the criteria by which the state of the transmission channel was assessed, but the switching would still be automatic. The only other possibility mentioned was to fix the transmission mode, such that automatic changes depending on the transmission state were prevented.

D5 too disclosed an arrangement with automatic switching between transmission modes, in particular automatic switching between transmission of image and sound data. Thus, even if the arrangement of D5 were implemented in the system of D1 and the transmission modes of D5 were added to or replaced the transmission modes of D1, the switching arrangement would remain an automated one, and the user would not select among the transmission modes.

XIII. The appellant also submitted that the claims of the main request defined more precisely the transmission modes among which the user could freely select. These transmission modes or transmitting states did not correspond to those disclosed in D1 or D5. Moreover, present claim 2 made clear that the expression "a plurality" used twice in the previous version of claim 2 meant the same plurality.

Reasons for the Decision

1. The appeal is admissible.

2. Main request: clarity of claim 2

2.1 Claim 2 refers to "a plurality of coded bit streams" (for instance, "a server that stores a plurality of coded bit streams", "a bit stream is selected among the plurality of coded bit streams") and to "a plurality of transmitting states" (see the states labelled (i) to (v)).

2.2 The only coded bit streams defined in claim 2 are those which are stored on the server. The feature following "wherein:" specifies that these stored and coded bit streams include at least two coded bit streams, one having only video information and one having only audio information. The feature starting with "a bit stream is selected among..." then essentially specifies that the user's request results in the selection of one of these stored and coded bit streams.

2.3 However, the claim also specifies that "the request of the user in relation to error resilience is a request to select a transmitting state of coded bit stream among a plurality of transmitting states". The claim further specifies that the plurality of transmitting states comprises first to fifth states labelled (i) to (v) in the claim.

2.4 The relationship between the five transmitting states and the (at least) two stored and coded bit streams is not defined in the claim. The fourth and the fifth state are specified to be for transmission of only

video information or only audio information and thus are seemingly related to the stored and coded bit streams, one of which is selected and transmitted according to the user request. However, the claim does not explicitly specify any relationship between these two transmitting states and the bit streams which are selected for transmission. Moreover, the relationship between the first to third transmitting states, which are specified to be for transmission of both image and audio information, and the stored and coded bit streams (only video or only audio) remains even more obscure.

2.5 Also taking into account that the server may store further coded bit streams (because of the expression "the plurality of coded bit streams includes at least ..."), and under the assumption that one of these further stored and coded bit streams includes both video and audio information, the relationship of any such further bit stream to the transmitting states is also not defined.

2.6 The appellant's argument that only one plurality was meant does not take into account that claim 2 explicitly refers to different pluralities since the individual transmitting states are not necessarily linked with a specific one of the stored and coded bit streams.

2.7 Nor does the description clarify the relationship between the two pluralities. On the contrary, the description comprises embodiments in which no bit streams are stored but instead the image encoding is executed in real time (see figure 4A and paragraph [0020]). And the detailed example of error resilience control (paragraphs [0027] to [0031]) which explains the first to fifth states recited in claim 2

is neither specific to the embodiments in which bit streams are stored nor does it discuss the relationship between the pluralities of coded bit streams and the plurality of transmitting states.

2.8 In view of the above the board finds that the relationship between the different pluralities mentioned in claim 2 is not clear. Hence the board judges that claim 2 does not comply with Article 84 EPC 1973.

3. First auxiliary request: inventive step (Article 56 EPC 1973)

3.1 It is uncontested that D1 may be considered as the closest prior art for the assessment of the multimedia receiving terminal of claim 1.

3.2 However, the appellant essentially contests that the transmission system of D1 allows receiving and transmitting a request of a user in relation to error resilience as specified in claim 1.

3.3 In the seventh embodiment of D1 (illustrated in figure 20) the user of the receiving terminal (i. e. the moving-picture decoder 1000 in figure 20) may fix the transmission mode by inputting a mode modification command by means of an input device. Exemplary transmission modes are the ACK mode and the NACK mode (see column 25, lines 11 to 17 in conjunction with column 24, lines 12 to 15). The ACK mode and the NACK mode are defined in column 18, lines 7 to 16. These two modes are transmitting states with different levels of error resilience (see column 21, lines 25 to 34). Thus a user fixing the transmission mode (to either ACK or NACK) knows what the transmission mode will be, and the

effects of each transmission mode on the coding are known from D1. The quality of the reconstructed images at the decoder is of course also dependent on the success rate of the transmission.

3.4 In view of this disclosure of D1, the appellant's arguments that D1 did not allow the user to determine the transmission mode actually used and that the user could not know what effect the changes made would produce did not convince the board. Instead, the board finds that the user input in the seventh embodiment (which puts the coder into either ACK mode or NACK mode) is a user request in relation to error resilience as specified in claim 1.

3.5 Hence the determination of the difference between the multimedia receiving terminal of claim 1 and that of D1 given in the decision under appeal is correct. The difference lies in the specific transmission modes ("transmitting states") specified in claim 1.

3.6 The board also accepts the finding in the decision under appeal that the problem solved by these differing features may be regarded as the well-known problem of increasing flexibility.

3.7 It is uncontested that D5 discloses the suppression of video data and the transmission only of audio data in the case of a signal normally including both audio and video. The examining division considered that a person skilled in the art would understand from D5 that this suppression of video data (and transmission only of audio data) was one way of increasing error resilience on a transmission channel. The board agrees with this finding. Also the present application makes clear that stopping the transmission of video information is one

example for changing the error resilience (see paragraphs [0021] to [0025]).

3.8 Thus a person skilled in the art would have considered increasing the flexibility of the known multimedia receiving terminal by offering a user the choice of selecting the transmission of only audio information in circumstances where video quality would be (too) poor anyway. It was therefore obvious to implement the transmitting states known from D5 in the apparatus of D1. Indeed, there are no major technical obstacles to allowing the user of the terminal of D1 to select transmission modes other than the ACK or NACK mode.

3.9 The appellant's argument that D5 discloses a system in which there is automatic switching between transmission modes does not take into account that the difference in error resilience of the transmission modes is independent of how the switching between the transmission modes is triggered (manually or automatically). The effect that can be achieved by transmitting both video and audio or only one of these, namely a reduction in bandwidth which can be used for increasing error resilience, can be achieved also when the user controls the transmission mode, as in the seventh embodiment of D1. The present application too comprises embodiments in which the error resilience level of a bit stream transmitted from the transmitter is automatically adjusted in accordance with a setting by a user of the receiving terminal (see figure 6 and paragraphs [0036] to [0040]).

3.10 In view of the above, the board finds that the multimedia receiving terminal of claim 1 of the first auxiliary request does not involve an inventive step (Article 56 EPC 1973).

4. Since the claims of the appellant's requests do not meet the requirements of the EPC, the decision under appeal cannot be set aside. Instead, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Canueto Carbajo F. Edlinger

Decision electronically authenticated