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**Datasheet for the decision
of 13 September 2017**

Case Number: T 2320/13 - 3.5.03

Application Number: 07705240.5

Publication Number: 1987611

IPC: H04H1/00

Language of the proceedings: EN

Title of invention:

Distribution of data signals from broadcast data receiving means

Applicant:

Global Invacom Ltd.

Headword:

Distribution of data signals/GLOBAL INVACOM

Relevant legal provisions:

EPC Art. 56

RPBA Art. 13(1)

Keyword:

Inventive step (main request) - no

Admissibility (auxiliary requests) - no

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 2320/13 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 13 September 2017

Appellant: Global Invacom Ltd.
(Applicant) Unit 3
Caxton Place
Caxton Way
Potters Lane
Stevenage, Hertfordshire SG1 2UG (GB)

Representative: Wood, Graham
Bailey Walsh & Co LLP
1 York Place
Leeds, LS1 2DR (GB)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 1 July 2013 refusing European patent application No. 07705240.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman F. van der Voort
Members: K. Schenkel
S. Fernández de Córdoba

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division refusing European patent application No. 07705240.5, publication number EP 1 987 611 A, which was originally filed as international application PCT/GB2007/000607 (publication number WO 2007/096617 A).

The refusal was based on the ground that the subject-matter of claims 1 to 15 of a single request did not involve an inventive step (Articles 52(1) and 56 EPC) having regard to the disclosure of:

D2: US 6 122 482 A

and the common general knowledge of a person skilled in the art.

II. With the statement of grounds of appeal, the appellant requested that the decision be set aside and that a patent be granted on the basis of claims 1 to 14 of a single request as filed with the statement of grounds of appeal. Oral proceedings were conditionally requested.

III. In a communication accompanying a summons to oral proceedings, the board, without prejudice to its final decision, raised objections under Article 84 EPC to claims 1 and 14 as well as objections under Article 52(1) EPC in conjunction with Article 56 EPC to the subject-matter of claims 1 and 14, starting out from document D2.

IV. In response to the summons, the appellant filed with a letter dated 14 August 2017 a substantive response

together with a new set of claims for a main request and further sets of claims for auxiliary requests 1 and 2.

V. Oral proceedings were held on 13 September 2017.

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, on the basis of the claims of one of auxiliary requests 1 and 2, all requests as filed with the letter dated 14 August 2017.

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

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

"A broadcast data receiving system, said system incorporating at least one receiving means (12; 201; 203; 205) at a location, one or more decoding means (24) at a plurality of decoding means locations (2; 224) and cable connection means (16, 18, 20; 219) allowing the transfer of data between at least one low noise block (LNB) provided as part of the receiving means and the said decoding means, optical conversion means (249; 213; 243', 243'', 26; 215) by which said data is converted to an optical signal for transfer from the LNB along at least part of the cable connection means to each of the decoding means locations (2) and an interface (22; 221) is provided connected to said decoding means and located so as to be between the cable connection means and said at least one or more decoding means, said interface including an optical receiver (30) and filters (32) to allow the

data from the cable connection means to be provided to the decoding means as data outputs (34) which can be processed by the decoding means (24) and allow substantially all data received by the receiving means to be available at each of the decoding means simultaneously to be available for user selection via the respective decoding means (24) and characterised in that the LNB includes an integrated IF optical converter which includes waveguide probes (249) for vertical and horizontal polarizations of the received data which lead to an IF diplexer (213; 243', 243'') and in turn a laser modulator (26; 215) to change the data received by the receiving means to a single optical signal, [sic] output (28) from the LNB via a single optical cable (16; 219) of the said cable connection means to one or more optical splitters (8,10), located intermediate the receiving means and the said interface, which split the data into a number of data feeds to allow each of the said decoding means locations to be provided with said data."

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

the wording "and characterised in that" before "the LNB includes" has been deleted and, at the end, the following wording has been added:

"characterised in that each of the decoding means is independently controlled by a user and the interface allows the transfer of data to the decoding means from the cable connection means in response to a user selection and in a form to allow the data to be decoded to allow television, radio and/or auxiliary services to be provided via each of the decoding means and the said interfaces include one or more processing means for the

received optical signal from the cable connection means for the user requested data to be converted back into the format in which the data was received at the receiving means".

VIII. Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 in that

the wording "characterised in that" before "each of the decoding means" has been replaced by "," and, at the end, the following wording has been inserted:

"and characterised in that each said interface is connected to a single decoding means and the data is distributed from the LNB to each interface in the said optical signal format".

Reasons for the Decision

1. *Main request - claim 1 - inventive step*

1.1 D2 discloses, using the language of claim 1, a broadcast data receiving system ("satellite dish antenna system", column 4, lines 28 to 34, Fig. 1a), the system incorporating
at least one receiving means ("satellite 12" plus "LNB" plus "head-in ... processor 14a", column 5, lines 20 to 29, Fig. 2) at a location,
one or more decoding means ("satellite receiver 21" and "source 20 (illustrated as a television)", column 6, lines 55 to 60, Fig. 2) at a plurality of decoding means locations,
cable connection means ("single coaxial cable 16a or optionally, via fiber optics", column 6, lines 3 to 8, Fig. 2) allowing the transfer of data between at

least one low noise block (LNB) provided as part of the receiving means and the decoding means (column 3, lines 1 to 11),

optical conversion means by which the data is converted to an optical signal for transfer from the receiving means along at least part of the cable connection means to each of the decoding means locations (the use of fiber optics implies an optical conversion means, column 6, lines 3 to 8, Fig. 2), and an interface ("head-out processor 18a or 18b", column 6, lines 20 to 23, Fig. 2) connected to the decoding means and located so as to be between the cable connection means and the at least one or more decoding means,

the interface including an optical receiver (implicit when line 16a is an optical fiber, column 6, lines 3 to 8) and filters ("LPF1", LPF2" and "HPF" in up- and down-converters used in the embodiment of Fig. 2, column 7, lines 60 to 65, together with Fig. 3a and Fig. 3b) to allow the data from the cable connection means to be provided to the decoding means as data outputs ("lines 22a and 22b", column 6, lines 55 to 60, Fig. 2) which can be processed by the decoding means and allow substantially all data received by the receiving means to be available at each of the decoding means simultaneously to be available for user selection via the respective decoding means (column, 6, lines 50 to 54),

wherein the receiving means includes an integrated IF optical converter (in which the LNB which is part of the receiving means is described as conventional (column 5, lines 21 to 25) and, hence, provides an IF signal which is then transmitted via fiber optics to the "head-in ... processor 14a" (column 5, lines 25 to 29), which implies an optical converter) which includes waveguide probes for vertical and horizontal

polarizations (conventional LNCs comprise waveguide probes for picking up the satellite signals of the different polarizations) of the received data which lead to an IF diplexer ("splitter 34a" combines two signals and thus works as a diplexer, column 5, lines 54 and 55, Fig. 2) and in turn an optical modulator (implied by the optical fiber 16a) to change the data received by the receiving means to a single optical signal output ("single coaxial cable 16a or optionally, via fiber optics. In the fiber optic embodiment, the signals are transmitted simultaneously utilizing a single optical fiber.", column 6, lines 3 to 8, Fig. 4) from the LNB via a single optical cable of the cable connection means to one or more optical splitters ("tap 50a", column 6, lines 20 to 23 and "tap 50b", column 7, lines 33 to 35, Fig. 2), located intermediate the receiving means and the interface, which split the data into a number of data feeds to allow each of the decoding means locations to be provided with the data.

1.2 The system of claim 1 thus differs from the system disclosed in D2 in that according to claim 1:

(i) the optical modulator is a laser modulator; and

(ii) the IF optical converter is included in the LNB.

The appellant agreed that this was the case.

The board notes that feature (i) is a matter of implementation and that a technical effect of feature (ii) is a higher integration of the system components.

1.3 Starting out from from D2, the technical problem underlying the subject-matter of claim 1, may therefore

be seen in implementing the optical modulator and in increasing the integration of the system components.

The board notes that increasing the integration is a basic aim in the art, and this was not contested by the appellant. The formulation of the above technical problem does not therefore contribute to inventive step.

- 1.4 When starting out from D2 and faced with the above-mentioned problem, the skilled person would consider D1, since it also relates to a satellite signal distribution system with a head-end including a fiber optic transmitter (abstract).

In more detail, the system of D1 includes a laser which is located in the head-end and which converts the satellite signals into optical signals (column 2, lines 42 to 45). Further, D1 discloses that the head-end is located close to the LNB (FIG. 1 and FIG. 2). The board further notes that, in order to make full use of the advantages provided by a single optical fiber with its low attenuation compared to a coaxial cable for at least high frequency signals, the skilled person would use the optical fiber in the system according to D2 for as much as possible of the distance between the LNB and the decoding means, which implies locating the optical converter feeding the single optical fiber as close as possible to the LNB.

The skilled person would therefore, starting out from D2, faced with the above-mentioned problem and taking into account his common general knowledge, apply the teaching of D1 to the system of D2 and thereby implement the optical modulator as laser modulator and integrate the head-in processor into the LNB. He would

thus arrive, without exercising inventive skill, at a system which includes all features of claim 1.

- 1.5 The appellant argued that the object underlying the subject-matter of claim 1 was not the integration but how to get all the broadcast data to the decoding means and allow conventional receivers to be used at the same time.

The board disagrees. The distinguishing features, i.e. the use of a laser modulator and the integration of the head-in processor into the LNB, cannot solve such a problem in the board's view. The board further notes that in the system of D2 the head-out processor reconverts the signals provided by the LNB to their original state (column 3, lines 8 to 11, and column 7, lines 2 to 4) and that conventional receivers are used (column 7, lines 58 to 60).

Further, the appellant essentially argued that D2 led the skilled person to the conclusion that an end-to-end purely optical fiber system is required and that D2 did not suggest replacing coaxial cables selectively with optical fibers. The board does not accept this argument, since, firstly, claim 1 does not refer to coaxial cables and, secondly, D2 discloses the selective replacement of a coaxial cable by an optical fiber for the connection "wire 16" between the head-in and the head-out processor (column 4, lines 49 to 52).

- 1.6 The board therefore concludes that the subject-matter of claims 1 of the main request and the first auxiliary request does not involve an inventive step (Articles 52(1) and 56 EPC).

2. *Auxiliary requests 1 and 2 - admissibility*

- 2.1 These requests were submitted at a late stage of the appeal proceedings, i.e. after the summons to oral proceedings had been issued. Amendments to a party's case after filing the statement of grounds of appeal are governed by Article 13 of the Rules of Procedure of the Boards of Appeal.
- 2.2 In accordance with Article 13(1) RPBA, "Any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy."
- 2.3 A well-established criterion used by the boards of appeal for deciding whether to admit late-filed requests under Article 13(1) RPBA is whether the new claims are prima facie allowable.
- 2.4 Claim 1 of auxiliary request 1 (see point VII) has been amended essentially by adding that (i) each of the decoding means is independently controlled by a user, (ii) the interface allows the transfer of data to the decoding means from the cable connection means in response to a user selection and (iii) the interface includes means to convert the user requested data back into the original format.

The board notes that it is implicit in the system of D2 that each decoding means is independently controlled by a user (D2, Fig.2, "satellite receiver" 21a, 21b). Further, the board notes that it is a feature of conventional satellite receivers to select, based on

the user's channel selection, which polarization signal is to be received by the receiver (see also D1, column 4, lines 52 to 58). D2 also discloses that the head-out processor re-converts the signal to its original state (column 7, lines 2 to 4).

- 2.5 Claim 1 of auxiliary request 2 (see point VIII above) has been amended essentially by adding that each interface is connected to a single decoding means and that the data is distributed from the LNB to each interface in an optical format.

The board notes that Fig. 1a, Fig. 1b and Fig. 2 of D2 show that only one decoding means is connected to each head-out processor, i.e. interface, and that Fig. 2 of D2 shows that, where the wire 16 is an optical fiber, it distributes the data to each interface in an optical format.

- 2.6 The board therefore concludes that, *prima facie*, the amendments made to claim 1 according to either of these auxiliary requests do not result in additional features contributing to an inventive step.

- 2.7 Considering that the subject-matter of claim 1 of auxiliary requests 1 and 2, *prima facie*, did not comply with Article 52(1) EPC in conjunction with Article 56 EPC, the board did not admit these requests into the appeal procedure (Article 13(1) RPBA).

3. Conclusion

As there is 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