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**Datasheet for the decision
of 10 December 2024**

Case Number: T 0539/23 - 3.5.04

Application Number: 16172871.2

Publication Number: 3253049

IPC: H04N7/12

Language of the proceedings: EN

Title of invention:

A DIGITAL RADIO FREQUENCY SIGNAL DISTRIBUTION SYSTEM

Patent Proprietor:

Unitron NV

Opponents:

IKUSI, S.L.U.
FAGOR ELECTRONICA, S.COOP.
TELEVES, S.A.U.

Headword:

Relevant legal provisions:

EPC Art. 100(c), 111(1)
RPBA 2020 Art. 11

Keyword:

Granted patent - extension of subject-matter (no)
Remittal - special reasons for remittal (yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0539/23 - 3.5.04

D E C I S I O N
of Technical Board of Appeal 3.5.04
of 10 December 2024

Appellant: Unitron NV
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 4 January 2023**

revoking European patent No. 3253049 pursuant to
Article 101(3) (b) EPC.

Composition of the Board:

Chair	B. Willems
Members:	F. Sanahuja
	G. Decker

Summary of Facts and Submissions

- I. The appeal is against the the opposition division's decision dated 4 January 2023 revoking European patent No. 3 253 049.
- II. In the opposition proceedings, the grounds for opposition under Article 100(a), together with Articles 54(1) and 56 EPC, Article 100(b) and Article 100(c) EPC were raised.
- III. The opposition division revoked the European patent for the following reasons.
- (a) The ground for opposition under Article 100(c) EPC prejudiced the maintenance of the patent as granted because claims 1 and 15 of the main request introduced subject-matter which extended beyond the content of the application as filed.
 - (b) Claims 1 and 13 of auxiliary requests 1, 1A, 1B and 1C introduced subject-matter which extended beyond the content of the application as filed. The same reasons applied to auxiliary requests 2, 2A, 2B, 3, 3A, 3B, 4, 4A and 4B (Article 123(2) EPC).
 - (c) Claims 1 and 13 of auxiliary request 1C were not clear (Article 84 EPC).
- IV. The patent proprietor ("appellant") filed notice of appeal. In its statement of grounds of appeal, it contested each of the opposition division's conclusions identified in point III. above and provided arguments in favour of the patentability of its claim requests. The appellant stated that the claim requests filed with

the statement of grounds of appeal corresponded to the claim requests in the opposition proceedings, with the exception of auxiliary request 1C.

- V. Opponents O2 and O3 (respondents O2 and O3) filed respective replies to the appeal. Opponent O1 (respondent O1) did not file any submissions in the appeal proceedings.
- VI. The board issued summons to oral proceedings and a communication under Article 15(1) RPBA. In this communication, the board gave the preliminary opinion that the ground for opposition under Article 100(c) EPC did not prejudice the maintenance of the granted patent. The board stated that if it found that the ground for opposition under Article 100(c) EPC did not prejudice the maintenance of the patent as granted, the case should be remitted to the opposition division for an assessment of the remaining grounds for opposition.
- VII. In their respective replies dated 8 November 2024, respondents O2 and O3 filed observations on the board's preliminary opinion.
- VIII. The appellant's final requests were that the decision under appeal be set aside and the patent be maintained as granted, i.e. that the opposition be rejected, or alternatively, that the patent be maintained on the basis of one of the auxiliary requests filed with the statement of grounds of appeal. The appellant also requested that the case be remitted to the opposition division for consideration of the grounds for opposition other than those considered in the decision under appeal.

Respondent O2's final requests were that the appeal be dismissed and that the patent be revoked in its entirety. Respondent O2 further requested that if the case were remitted to the opposition division, the remittal should not be limited to the grounds for opposition relating to Articles 54 and 56 EPC, but the remittal should also encompass the ground for opposition relating to Article 83 EPC.

Respondent O3's final requests were that the appeal be dismissed and that the patent be revoked in its entirety.

IX. Claim 1 of the patent reads as follows (including the references to the features adopted in the decision under appeal):

- 1.1) *"A system (10) configured to receive, from two or more terrestrial antennas (30), two or more terrestrial radio frequency (RF) signals*
- 1.1.1) *comprising a UHF frequency range comprising a plurality of UHF channels with different power levels which have been transmitted over the air by different terrestrial broadcasting stations,*
- 1.2) *the system (10) comprising:*
 - *two or more corresponding analog to digital converters (ADC) (121, 122, 123, 124) configured to receive said two or more RF signals (201, 202, 203, 204)*
 - 1.2.1) *such that any of the RF signals is only received by a single ADC,*
 - 1.2.2) *each ADC (121, 122, 123, 124) configured to convert the corresponding RF signal (201, 202, 203, 204) to a digitized RF signal (211, 212, 213, 214) such that it comprises a digitized UHF frequency range comprising a plurality of*

digitized frequency channels corresponding to a plurality of the UHF channels;

- 1.3) *- a digital multi-switch module (130) comprising:*
 - 1.3.1) *- two or more corresponding multi-switch inputs (132) each coupled to a corresponding ADC (121, 122, 123, 124) and configured to receive a corresponding digitized RF signal (211, 212, 213, 214); and*
 - 1.3.2) *- a plurality of multi-switch outputs (134), each configured to be selectively coupled to a selected multi-switch input (132) to output the corresponding selected digitized RF signal (211, 212, 213, 214);*
- 1.4) *- a plurality of digital channelizers (140), each digital channelizer (140) coupled to a single multi-switch output (134) and configured to digitally modify the selected digitized RF signal (211, 212, 213, 214) to a modified digital RF signal (1500)."*

X. Claim 15 of the patent reads as follows (including the references to the features adopted in the decision under appeal):

- 15.1) *"A method of operating the system (10) according to any of the preceding claims comprising the steps of:*
- 15.2) *- receiving, from two or more terrestrial antennas (30), two or more terrestrial radio frequency (RF) signals*

- 15.2.1) *comprising a UHF frequency range comprising a plurality of UHF channels with different power levels which have been transmitted over the air by different terrestrial broadcasting stations,*
- 15.3) *- two or more corresponding analog to digital converters (ADC) (121, 122, 123, 124) receiving said two or more RF signals (201, 202, 203, 204)*
 - 15.3.1) *such that any of the RF signals is only received by a single ADC,*
 - 15.3.2) *- each ADC (121, 122, 123, 124) converting the corresponding RF signal (201, 202, 203, 204) to a digitized RF signal (211, 212, 213, 214), such that it comprises a digitized UHF frequency range comprising a plurality of digitized frequency channels corresponding to a plurality of the UHF channels;*
- 15.4) *- the digital multi-switch module (130) selectively coupling each of the plurality of multi-switch outputs (134) to a selected multi-switch input (132) to output the corresponding selected digitized RF signal (211, 212, 213, 214);*
- 15.5) *- each of the plurality of digital channelizers (140) digitally modifying the selected digitized RF signal (211, 212, 213, 214) to the modified digital RF signal (1500)."*

Reasons for the Decision

1. *Granted patent - extension of subject-matter (Article 100(c) EPC)*

- 1.1 The ground for opposition under Article 100(c) EPC prejudices the maintenance of the European patent as granted if its subject-matter extends beyond the content of the application as filed.

An amendment to a patent application or patent can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, and seen objectively and relative to the date of filing, from the whole disclosure of the description, claims and drawings of the application as filed. After the amendment the skilled person may not be presented with new technical information (see Case Law of the Boards of Appeal of the European Patent Office, 10th edition, 2022, "Case Law", II.E.1.1).

- 1.2 In points 16 to 18 of the decision under appeal, the opposition division found that the ground for opposition under Article 100(c) EPC prejudiced the maintenance of the granted patent.

It was not directly and unambiguously derivable from the application as filed that the plurality of UHF channels could have any different power levels as specified by feature 1.1.1 of claim 1.

Conversely, the opposition division considered that the phrase "*two or more terrestrial radio frequency (RF) signals*" in feature 1.1 of claim 1 did not "infringe 123(2) EPC".

The same reasoning applied, *mutatis mutandis*, to method claim 15.

1.3 The phrase "*different power levels*"

1.4 With respect to the ground for opposition relating to the phrase "different power levels" in feature 1.1.1 of claim 1 and feature 15.2.1 of claim 15, the board addresses the following questions.

- (a) What may be considered to be common general knowledge of the person skilled in the art in the technical field of terrestrial broadcasting?
- (b) How should the phrase "*a plurality of UHF channels with different power levels which have been transmitted over the air by different terrestrial broadcasting stations*" be interpreted?
- (c) Does the text "*with different power levels*" in the phrase "*a plurality of UHF channels with different power levels which have been transmitted over the air by different terrestrial broadcasting stations*" present new technical information to the person skilled in the art?

1.5 (a) *What may be considered to be common general knowledge of the person skilled in the art in the technical field of terrestrial broadcasting?*

1.5.1 Paragraph [02] of the application as filed discloses that differences in broadcasting power, transmission distance and signal interference, among other factors, can have undesirable effects on the received power levels of ultra high frequency (UHF) channels at

different frequencies. It illustrates the background art from which the invention was developed.

It is undisputed that this paragraph reflects the common general knowledge that the received power levels of UHF channels transmitted over the air by different terrestrial broadcasting stations can vary (see point 8.4.2 of the appellant's statement of grounds of appeal, second full paragraph on page 2 of respondent O2's reply and fourth paragraph in section 2.1.1 of respondent O3's reply). Therefore, when different terrestrial broadcasting stations transmit radio frequency (RF) signals comprising a UHF frequency range with a plurality of UHF channels, the UHF channels received by terrestrial antennas will naturally exhibit different power levels.

1.5.2 Broadcast signals may be transmitted at different power levels by different terrestrial broadcasting stations, may be subject to varying interference and may travel different distances to the receiving antennas. Hence, in a broadcast environment the power levels of signals received at the antennas may vary over a wide range (see also second full paragraph on page 2 of respondent O2's reply).

1.6 *(b) How should the phrase "a plurality of UHF channels with different power levels which have been transmitted over the air by different terrestrial broadcasting stations" be interpreted?*

1.6.1 Claims of a European patent application are typically directed to a reader skilled in the field of that application (see Case Law, II.A.6.1).

- 1.6.2 The phrase "*a plurality of UHF channels with different power levels which have been transmitted over the air by different terrestrial broadcasting stations*" must be interpreted on the basis of what the person skilled in the art would understand.

The person skilled in the art, using common general knowledge, would understand that, in such a broadcast environment, due to factors such as differing transmission powers, propagation paths and interference, the received UHF channels will generally exhibit different power levels. Hence, the wording quoted above merely reflects an inherent characteristic of the signals originating from and propagating in the specified broadcast environment.

- 1.7 (c) Does the text "*with different power levels*" in the phrase "*a plurality of UHF channels with different power levels which have been transmitted over the air by different terrestrial broadcasting stations*" present new technical information to the person skilled in the art?

In view of the board's conclusion in point 1.6.2 above, adding an explicit definition of an intrinsic and well-known characteristic of UHF channels transmitted over the air by different terrestrial broadcasting stations to feature 1.1.1 of claim 1 (and to feature 15.2.1 of claim 15) cannot be considered to present new technical information to the person skilled in the art and hence does not introduce subject-matter which extends beyond the disclosure of the application as filed.

- 1.8 Respondents O2 and O3 concurred with the opposition division's finding that the term "*different power*

levels" should be interpreted as covering any magnitude of difference in power levels between the UHF channels transmitted over the air by different terrestrial broadcasting stations (see points 17.2 and 17.3 of the decision under appeal, second full paragraph on page 2 of respondent O2's reply and first paragraph on page 3 of respondent O3's reply).

The board considers that the power levels of the received UHF channels are those which naturally result when terrestrial RF signals are transmitted by different terrestrial broadcasting stations (see features 1.1 and 1.1.1 of claim 1). As known in the art, the power levels of these signals can vary widely, which necessarily leads to widely varying differences in power levels (see point 1.5 above). Therefore, the person skilled in the art will interpret feature 1.1.1 as specifying a plurality of UHF channels which have been transmitted over the air by different terrestrial broadcasting stations and which exhibit generally expected, natural differences in their power levels - including large, small or, in exceptional cases, non-existent differences.

- 1.9 Respondent O2 further argued that the subject-matter of system claim 1 and method claim 15 excluded the possibility of power levels of UHF channels being the same, which was a possibility known to the person skilled in the art. In particular, method claim 15 was limited to performing active steps only on UHF channels with different power levels. The exclusion of signals with the same power levels was not disclosed in the application as filed. Respondent O3 concurred with this view.

In the same context, respondent O3 submitted that the UHF channels were not necessarily received by the system with different power levels, but rather the characteristics of the UHF channels could differ because the antennas, or other elements between the antennas and the system (for example, those elements defined in claim 13), could be configured to process the UHF signals received by the antennas such that the UHF channels received by the system exhibited no difference in power levels. Excluding the reception of UHF channels with the same power level did not have a basis in the application as filed.

- 1.9.1 The appellant submitted that the system of claim 1 was defined by the elements it comprised. The phrase "with different power levels" was simply a representation of the technical domain.
- 1.9.2 The respondents' arguments are not convincing.
- 1.9.3 The person skilled in the art would interpret the phrase "*with different power levels*" as an inherent characteristic of the received UHF channels (see point 1.7 above). It follows that the explicit recitation of such an inherent and well-known characteristic of a claimed feature in either system claim 1 or method claim 15 cannot be considered to introduce new technical information, in particular as a limitation of their subject-matter.
- 1.9.4 The board is of the opinion that neither the claims nor the description of the application as filed support respondent O3's interpretation that the power levels of the UHF channels could be the same when received by the system as a result of signal pre-processing outside the system. Further, the elements defined in claim 13 (a

filter, a low noise amplifier and an automatic gain control module) are located between an input connector and an analog to digital converter, both of which are part of the system, as specified in claims 1 and 12. Hence, these elements cannot alter the power levels of UHF channels received by the system.

- 1.10 Respondent O2 submitted that it would simply be obvious to the person skilled in the art that the system of claim 1 would operate correctly for RF signals comprising UHF channels with small power differences. With reference to sections II.E.1.3.3 and II.E.1.3.4 a) of the Case Law, respondent O2 stated that obviousness was not a criterion for assessing the disclosure of an application. The application as filed did not disclose, either explicitly or implicitly, that the system was configured to receive UHF channels with different power levels, as specified in claim 1.

Further, respondent O2 considered that the phrase "*these RF signals 201 to 204 are terrestrial RF signals received by a terrestrial antenna which have been transmitted over the air by one or more terrestrial transmission antenna*" in paragraph [43] of the application as filed could not provide a basis for the addition of the phrase "*with different power levels*" to feature 1.1.1 of claim 1.

- 1.10.1 The appellant requested that these arguments not be admitted into the proceedings under Article 13(2) RPBA. It further stated that the reference to "*a terrestrial antenna*" should be interpreted in the light of figure 2, referred to in paragraph [43], which showed RF signals received by different antennas. The reference to "*one or more terrestrial transmission antenna*" provided a basis for the reception of signals

from different terrestrial broadcasting stations. According to the appellant, there was no contradiction between the disclosure of paragraph [43] and the subject-matter of claim 1.

- 1.10.2 The board agrees with the appellant that paragraph [43], when referring to figure 2, provides a basis for feature 1.1.1. Because the characteristics of the UHF channels specified in the claims are a natural and inherent consequence of the broadcast environment in which they originate and propagate (see e.g. point 1.6.2), they are directly and unambiguously derivable from the application as filed and not merely rendered obvious by the disclosure of the application.
- 1.10.3 In view of this conclusion, the question of whether respondent O2's arguments can be admitted under Article 13(2) RPBA and, if so, whether they should be admitted can be left undecided.
- 1.11 Respondent O2 submitted that the phrase "with different signal power levels" in feature 1.1.1 of claim 1 not only reflected the inherent and well-known characteristics of the UHF channels, but also specified the intended use of the system of claim 1. The system of claim 1 was conceived - and only made sense - if the difference in power levels between different RF signals was large, as this was the problem solved by the invention. The application as filed referred repeatedly to these large power differences (see e.g. paragraphs [6], [10], [34], [44]).
 - 1.11.1 The board agrees with the appellant that the application as filed contains no indication that the

system is limited to UHF signals with large differences in power levels.

1.11.2 The references to these large differences in the application as filed, as opposed to the power levels of satellite signals from different transponders in paragraph [44], merely describe one expected characteristic of the RF signals which the system should be capable of coping with, but do not invalidate the fact that UHF channels which have been transmitted over the air by different terrestrial broadcasting stations may inherently exhibit large, small, or, in exceptional cases, no differences in power level.

1.11.3 Furthermore, the intended use and problem to be solved apparent from the description may be relevant to the assessment of inventive step. In the case in hand they do not impose any limitations on the characteristics of the received signals and are extraneous to the question of whether the ground for opposition under Article 100(c) EPC prejudices the maintenance of the patent as granted.

1.12 The phrase "*two or more terrestrial radio frequency (RF) signals*"

1.13 The parties made the following submissions regarding the ground for opposition under Article 100(c) EPC relating to the phrase "*two or more terrestrial radio frequency (RF) signals*" in feature 1.1 of claim 1 (and corresponding feature 15.2 in claim 15).

1.13.1 The appellant referred, *inter alia*, to paragraphs [10] and [44] of the application as filed as a basis (see point 11.8 of the statement of grounds of appeal).

1.13.2 Respondents O2 and O3 argued that the limitation to terrestrial RF signals was unallowable because it had been isolated from features of claim 2 or paragraphs [10] and [44] which were disclosed in combination with the claimed limitation, in particular from the feature that the frequency range of the terrestrial RF signal extended up to 1 GHz. Although a UHF range could be regarded as extending up to 3 GHz, the UHF range in the context of the application was limited to frequencies of up to 1 GHz. Since claim 1 covered terrestrial RF signals comprising any frequency range, including a frequency range of up to 3 GHz, feature 1.1 introduced new subject-matter (see section 2.1 of respondent O2's reply, third paragraph on page 3 of respondent O3's reply and section "Feature 1.1" of respondent O2's reply to the communication of the board under Article 15(1) RPBA).

1.13.3 Paragraph [10] describes the system as being able to handle one or more RF signals comprising a UHF frequency range comprising a plurality of UHF channels, such as those used for terrestrial broadcasting. Paragraph [44] provides a similar disclosure. Each of these paragraphs describes a terrestrial RF signal comprising a UHF frequency range which typically or generally extends up to 1 GHz. However, this narrower frequency range is exemplary and thus does not limit the broader disclosure of terrestrial RF signals comprising a UHF frequency range.

Therefore, it is directly and unambiguously derivable from these passages that the system described in the application as filed is configured to receive two or more terrestrial RF signals as defined in feature 1.1 of claim 1.

1.14 In light of the above, the ground for opposition under Article 100(c) EPC does not prejudice the maintenance of the granted patent.

2. *Remittal (Article 111(1) EPC, Article 11 RPBA)*

2.1 In the present case, the opposition division's decision was limited to the issue of unallowable amendments for the patent as granted (Article 100(c) EPC). Hence, the opposition division did not assess the grounds for opposition under Articles 100(a) and (b) EPC.

2.2 The appellant requested that the case be remitted to the opposition division for consideration of the grounds for opposition other than those in the decision under appeal, as the essential function of an appeal was to consider whether the decision issued by the first-instance department was correct (see point 3.16 of the statement of grounds of appeal and point VIII. above).

Respondent O2 requested that, if the case were remitted to the opposition division, the remittal should not be limited to the grounds for opposition relating to Articles 54 and 56 EPC, but should also encompass the ground for opposition relating to Article 83 EPC (see section 1 of respondent O2's reply and point VIII. above).

2.3 Under Article 111(1) EPC the board, in deciding upon the appeal, may exercise any power within the competence of the department which was responsible for the decision appealed or remit the case to that department for further prosecution.

According to Article 11 RPBA, a remittal should be the exception, requiring special reasons for it to be ordered.

Since the main purpose of the appeal proceedings is to give the losing party an opportunity to challenge the opposition division's decision on its merits (see G 10/91, point 18 of the Reasons), remittal in accordance with Article 111(1) EPC has normally been considered by the boards to be appropriate in cases where the opposition division issued a decision on particular issues (e.g. added subject-matter) and left other substantive issues (e.g. sufficiency of disclosure, novelty and inventive step) undecided. This existing practice achieves the primary object of appeal proceedings, which is to review the decision under appeal in a judicial manner, as expressed in Article 12(2) RPBA.

Although the EPC does not guarantee the parties an absolute right to have all the issues in the case considered at two instances, and a remittal would delay the proceedings, it is well recognised that any party may be given the opportunity to have two readings of the important elements of a case. Since the board found that the opposition division erred in its conclusion that the ground for opposition under Article 100(c) EPC prejudiced the maintenance of the patent as granted and the first-instance decision was limited to this issue, the case should be remitted to the opposition division for an assessment of the remaining grounds for opposition.

- 2.4 All these elements constitute special reasons that justify a remittal of the case to the opposition division in accordance with Article 11 RPBA.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chair:



K. Boelicke

B. Willems

Decision electronically authenticated