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Datasheet for the decision
of 15 February 2007

Case Number: T 0737/03 - 3.5.04

Application Number: 94309669.3

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IPC: H04N 5/50

Language of the proceedings: EN

Title of invention:
Television channel memory device and channel programming
method

Patentee:
LG ELECTRONICS INC.

Opponent:
IGR GmbH & Co. KG.

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty (yes)"
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

Case Number: T 0737/03 - 3.5.04

D E C I S I O N
of the Technical Board of Appeal 3.5.04
of 15 February 2007

Appellant: (Opponent)	IGR GmbH & Co. KG. Bahnstraße 62 D-40210 Düsseldorf (DE)
Representative:	Eichstädt, Alfred Maryniok & Partner, Kuhbergstraße 23 D-96317 Kronach (DE)
Respondent: (Patent Proprietor)	LG ELECTRONICS INC. 20, Yoido-dong, Youngdungpo-ku Seoul (KR)
Representative:	McLeish, Nicholas Alistair Maxwell Boult Wade Tennant Verulam Gardens 70 Gray's Inn Road London WC1X 8BT (GB)
Decision under appeal:	Decision of the Opposition Division of the European Patent Office posted 10 June 2003 rejecting the opposition filed against European patent No. 0660603 pursuant to Article 102(2) EPC.

Composition of the Board:

Chairman: F. Edlinger
Members: A. Teale
  B. Müller

Summary of Facts and Submissions

I.   The appeal is against the decision by the opposition
       division to reject the opposition against European
       patent No. 0 660 603. The opposition was based inter
       alia on the ground of lack of inventive step.

II.   Claim 1 as granted reads as follows:

       "A channel memory method comprising
            a first step (101-106) of sequentially inputting a
       user's desired channel information to a channel table
       for each channel position, said channel information
       being a broadcasting station name or a channel number;
            a subsequent second step (107,108) of performing a
       tuning operation;
            a subsequent third step (109-116) of comparing the
       channel information of a tuned channel with said
       desired channel information, sorting so that the tuned
       channel is matched with the channel position of the
       corresponding desired channel information and
       memorizing (111) the corresponding channel information
       on the corresponding channel position; and
            a subsequent fourth step (117) of displaying
       sorted channels."

III.   In its decision the opposition division held that the
       claimed subject-matter showed inventive step in view of
       the following documents, amongst others:

       D1: EP 0 467 108 A2
       D2: EP 0 486 988 A1
       D3: EP 0 561 189 A2
       D4: Funkschau 1991, vol. 19, pages 58 to 60.

IV.   The opponent appealed, requesting that the patent be
        revoked in its entirety. In a subsequently filed
        statement of grounds of appeal the opponent argued
        essentially that the subject-matter of claim 1 was new,
        but not inventive, with respect to D1. The apparent
        simplicity of the claimed solution did not constitute a
        significant difference to that of D1. The sequential
        inputting in the first step, for instance using a
        remote control, was implicit in D1. The program source
        codes in D1 could be regarded as "broadcasting station
        names" in the sense of the patent, since they served
        the same purpose as the broadcasting station names,
        namely to identify each station, albeit in another
        "language". In D1 all program source codes in the
        station location table were compared one after another
        with the program source codes of the transmitter data
        table, constituting a comparison of the channel
        information of a particular channel with the desired
        channel information. D1 also disclosed displaying the
        station name after the sorting step. Moreover a user
        calling up each found channel after having done a
        search would satisfy the displaying step of claim 1.
        According to column 1, lines 49 to 58, of D1, if
        several transmitters were transmitting the same
        programme source code then only the frequency of the
        strongest transmitter was stored. The subject-matter of
        claim 1 only differed from the method disclosed in D1
        in two respects. Claim 1 explicitly stated that tuning
        was performed after the step of inputting the desired
        channel information and that memorizing the
        corresponding channel information was done on the
        corresponding channel position. The difference between
        the indexing known from D1 and the sorting (and

memorizing) specified in claim 1 of the patent was not an inventive one. Regarding the "subsequent second step" of claim 1, the order in which independent pieces of information were entered was trivial. Moreover the claimed order seemed to offer no advantage for the user. The subject-matter of claim 1 also lacked inventive step in view of the combination of D2 with either D3 or D4 and in view of the combination of D1 and D3.

V.   In a response dated 15 March 2004 the respondent patentee presented counter-arguments, requested that the appeal be dismissed and made four auxiliary requests, each containing amended claims.

VI.   In a letter of 26 October 2006 the appellant submitted a change of name and filed a copy of the corresponding excerpt from the German commercial register.

VII.   In an annex to a summons to oral proceedings the board summarized its provisional view on the common ground and stated that the oral proceedings would focus on the inventive step of the claimed subject-matter in view of D1 alone, although D2, D3 and D4 might also be discussed.

VIII.   In a letter dated 19 December 2006 the appellant stated that he would not attend the oral proceedings, but maintained the request that the patent be revoked in its entirety.

IX.   As announced in advance, the appellant did not attend the oral proceedings held on 15 February 2007. The respondent filed an amended description consisting of pages 1, 2, 3 (including insert A), 3a and 4 to 17, and

a new set of claims 1 to 5. The respondent requested
that the patent be maintained in amended form on the
basis of these documents and drawing sheets 10 to 29 of
the patent specification. In the alternative, the
respondent requested that the patent be maintained on
the basis of the claims of auxiliary requests 1 to 4
filed with the letter dated 15 March 2004.

The respondent argued essentially that, as stated on
page 17, last two lines, of the description, the
invention was aimed at providing a simple and easy
channel memory method. The program source codes in D1
could not be considered as broadcasting station names,
since D1 explicitly distinguished between the technical
roles of program source codes and broadcasting station
names. D1 did not disclose sequentially inputting a
user's desired channel information. D1 also did not
disclose tuning subsequent to said inputting step. If a
tuning operation was carried out before entry of the
desired channel information, then this was inconvenient
for the user, since it meant waiting for tuning to be
completed before entering the desired channel
information. If however the user entered the desired
channel information first then the procedure was more
convenient, since the user could then leave the system
to carry out both tuning and sorting. D1 did disclose
something similar to a comparison of tuned channel
information with desired channel information in the
comparison of the program source codes in figures 3 and
5. However D1 disclosed indexing and not the claimed
sorting. Indeed sorting would not be possible in D1 in
view of a lack of correspondence between the
broadcasting station names and the program source codes.
Moreover the patent only mentioned sorting, figure 5C

of the patent containing an error in the right-hand
column where the entries "AFKN" and "MBC" had been
erroneously reversed. Furthermore the "channel
positions" "CP", shown for example in figure 7C of the
patent, were not indices because they never changed.
The table in figure 7C contained an error in the right-
hand "CP" column in not simply containing the numbers
01 (at the top) to 05 (at the bottom). The sorting
described in the patent had a similar result to the
indexing known from D1, but was simpler and saved
memory, an important consideration at the priority date.
In the patent the order of data storage in memory was
important. For instance, received stations were stored
in tuning order. D1 also did not disclose the display
of sorted channels. Indeed, since multiple sweeps were
involved, a point was never reached where such display
could occur.

X.   At the end of the oral proceedings the board announced
        its decision.

Reasons for the Decision

1.   The appeal is admissible.

2.   *The amendments*

        Claims 1 to 5 are the same as granted claims 1 to 5,
        the granted independent apparatus claim 6 having been
        deleted. The description has been amended to adapt it
        to the new claims and to acknowledge D1. The amendments
        consequently satisfy Article 123(2, 3) EPC.

3.   *The closest prior art*

D1 forms the closest prior art on file and concerns a
television signal receiver, such as a television or
video recorder, capable of receiving a signal from a
television "station", in the sense of a content
provider. The television signal is transmitted by one
or more transmitters, the number possibly varying with
time. The receiver is set up primarily by the dealer,
although the user can also play a part. The dealer
enters data into the name abbreviation table of the
receiver; see column 5, lines 22 to 28, and figure 2.
The dealer or user sets up a station location table
(see figure 5) to contain a programme source code for
every station button of the receiver. The receiver
carries out a tuning operation to find stations and
fill a transmitter data table (see figure 3) including
the programme source code contained in each received
signal. The station location table is then filled with
indices referring to transmitters in the transmitter
data table 13; see column 8, line 54, to column 9,
line 2. The abbreviated name of a subsequently selected
station is displayed; see column 11, lines 1 to 20.

4.   *Novelty*

Claim 1 sets out a sequence of four steps: a first
"inputting" step, a second "tuning" step, a third
"comparing/sorting/memorizing" step and a fourth
"displaying" step.

4.1   The common ground

D1 discloses a channel memory method. Regarding the
first step, D1 discloses inputting a user's desired
channel information to a channel table for each channel
position; see the station location table in figure 5
and column 8, lines 48 to 58. Regarding the second step,
D1 discloses a tuning operation (see column 6, lines 22
to 48, and steps s1 to s9 in figure 4). However D1 does
not disclose the inputting step coming before the
tuning step. Regarding the third step, in D1 the
program source codes in the station location table are
compared with those in the transmitter data table to
fill the right-hand column of the station location
table (see step s36 in figure 6 and column 9, lines 38
to 55).

4.2   The contested features

4.2.1   The sequential inputting of a user's desired channel
        information

The passage in D1 relating to inputting user desired
channel information into the station location table
makes no explicit mention of how inputting occurs; see
column 8, line 48, to column 9, line 2. Although the
appellant has speculated as to how this might be
carried out, the appellant has provided no evidence
that <u>sequential</u> inputting of a user's desired channel
information for each channel position is directly and
unambiguously derivable from D1.

4.2.2   The programme source codes being broadcasting station
        names

        Claim 1 specifies two alternatives for the channel
        information: a broadcasting station name or a channel
        number. According to the description, the broadcasting
        station name forms part of the transmitted signal, it
        being in a form understandable to the user, such as
        "MBC", which stands for the "Munhwa Broadcasting
        Corporation" in Seoul; see page 5, lines 12 to 17, and
        page 12, lines 4 to 7. According to the cited passages,
        "MBC" is broadcast on different channel numbers in
        different places. Hence the "broadcasting station name"
        refers to a station in the sense of a content provider,
        rather than a particular transmitter. The channel
        number constitutes channel information which can be
        detected from the decoder as the station name; see
        page 8, penultimate line, to page 9, line 1. For a
        given area the channel number identifies a content
        provider in a similar way to the station name; see
        page 12, lines 12 to 14, page 14, penultimate line, to
        page 15, line 1, and figures 13A and 15A.

        The programme source codes mentioned in D1 are, like
        the broadcasting station names mentioned in the patent,
        a part of the transmitted signal; see D1, column 6,
        lines 4 to 8. However, as the entries in the
        transmitter data table in figure 3 of D1 show, the
        programme source codes in D1 are not always unique
        identifiers of programme content. It is true that where
        only one transmitter broadcasts a particular station,
        such as "3SAT" in the third row of the table, then the
        programme source code "1D1 07" serves as a unique
        identifier of programme content. This is the situation

relied upon by the appellant for the case where only one transmitter is received for each station. The method known from D1 however distinguishes between source codes and broadcasting station names so that it can cope with the more complicated general case where, as for instance shown in the first row of the transmitter data table, a programme source code such as "1D1 29" corresponds to the content providers "SDR", "SWF" and "BW". Hence, in the context of D1 the programme source codes are not unique identifiers of a programme content provider in a given area and so cannot be considered as "broadcasting station names" nor as "channel numbers". It follows that D1 does not disclose channel information in the meaning of claim 1.

4.2.3 Sorting so that the tuned channel is matched with the channel position of the corresponding desired channel information

The sorting referred to in the patent description on page 5, lines 17 to 19, and page 5, last line, to page 6, line 4, and shown, for instance, in step 112 of figure 4b and in figure 5C is concerned with matching the channel information of stations found during the tuning operation with user-entered channel information to establish a logical relationship between the two, as indicated by the rearrangement of tuned channels (see, for example, figure 5B) into sorted channels (see, for example, figure 5C), before storing the matched data in memory; see page 5, lines 14 to 22. The tables shown, for example, in figures 5B and 5C do not purport to show the physical location of data in the memory, but rather their logical relationship. When understood in this context, the term in claim 1 "sorting" refers to

the establishment of a logical ordered relationship
between matching entries and thus covers the
establishment in D1 of a logical ordered relationship
using indices between entries in the transmitter data
table and those in the transmitter location table
having the same program source code. Hence the board
finds that D1 discloses sorting in the meaning of
claim 1.

4.2.4   Memorizing the corresponding channel information on the
        corresponding channel position in the third step

        The use in D1 of the line numbers in the transmitter
        data table as indices in the right-hand column of the
        station location table (see figure 5 and page 15,
        line 22, to page 16, line 10) means that in D1 in
        general a plurality of transmitter indices are stored
        for each station, the storage location being part of
        the logical ordered relationship mentioned above.
        However, since D1 does not disclose channel information
        in the sense of the patent, it does not disclose
        memorizing the corresponding channel information on the
        corresponding channel position.

4.2.5   The fourth step of displaying sorted channels

        Although D1 discloses displaying the currently selected
        station (see steps s57 and s59 in figure 7 and
        column 11, lines 1 to 20 and 35 to 40) there is no
        suggestion to display all the stations stored in the
        station location table, albeit a provisional table on
        account of stations using different transmitters at
        different times. It is moreover not directly and
        unambiguously derivable from D1 that each found station

would be called up and thus displayed after a tuning
operation. D1 consequently does not disclose displaying
sorted channels in the meaning of claim 1.

4.3   Conclusion

The subject-matter of claim 1 is new because D1 does
not disclose the following features:

(a)   sequentially inputting a user's desired channel
       information to a channel table for each channel
       position, said channel information being a
       broadcasting station name or a channel number;

(b)   performing a tuning operation after said inputting
       step;

(c)   comparing the channel information of a tuned
       channel with said desired channel information;

(d)   memorizing the corresponding channel information
       on the corresponding channel position and

(e)   displaying sorted channels.

The board consequently finds that the subject-matter of
claim 1 is new, Article 54(1,2) EPC.

5.   *Inventive step*

The difference features set out above in the claimed
combination solve the objective technical problem as
being derivable from page 17, last two lines, of the
description, namely to ease the selection of channels

by the user. The problem itself is regarded as a usual
matter of design.

The solution lies in the user entering desired channel
information before a tuning operation is carried out,
this having the advantage of increased user convenience
in that the user can first enter the desired channel
information and then leave the system to carry out both
tuning and sorting. The desired channel information is
then memorized, after sorting and matching with the
desired channel position, "on the corresponding channel
position". A subsequent step of displaying sorted
channels completes the sorting and memorizing to
confirm whether the channel information is sorted in
the user's desired order; see, for instance, page 5,
line 1, to page 6, line 5, of the description. Since
the user selects the channels he desires, only the
desired ones need be searched and matched in the tuning
operation and memorized subsequently. Tuning may thus
be quick, and memory space is only needed for the
selected channels (the remaining channel positions of
the memory may however be filled up with non-selected
channels; see figures 7C and 11C).

The teaching of D1 goes in a different direction in
that it starts with automatic tuning establishing a
(complete) transmitter data table (see figure 3,
column 9, lines 22 to 29, and figure 4: s21, s27), in a
similar way to the prior art indicated in the patent
specification. A station location table (figure 5) is
then established by storing pointers to rows of the
transmitter data table. In this context the user may
choose station locations (D1, column 8, line 54, to
column 9, line 2). Since D1 is concerned with the

problem of sorting out, by repeated tuning operations
(D1, column 3, lines 21 to 28), channels with identical
program source codes, the board sees no hint in D1 for
a person skilled in the art to modify this teaching to
start with the sequential inputting of channel
information to a desired number of channel positions
and then to carry out tuning and memorizing based on
this information.

The appellant has not indicated in the appeal
proceedings specific passages in either D2, D3 or D4
which would have led a person skilled in the art to the
claimed subject-matter in an obvious manner. Having
examined these documents, the board finds that they
also do not render the method of claim 1 obvious.

The board finds that the subject-matter of claim 1
consequently involves an inventive step, Article 56 EPC.

6.   *Conclusion*

The respondent's main request is allowable because,
taking into consideration the amendments made by the
proprietor of the patent during the opposition appeal
proceedings, the patent and the invention to which it
relates meet the requirements of the Convention
(Article 102(3) EPC). Consequently the respondent's
auxiliary requests need not be considered.

Order

For these reasons it is decided that:

1.   The contested decision is set aside.

2.   The case is remitted to the first instance with the
        order to maintain the patent as amended in the
        following version:

        Description: pages 1, 2, 3 (including insert A), 3a, 4
        to 17, as submitted in the oral proceedings.

        Claims: 1 to 5, as submitted in the oral proceedings.

        Drawings: sheets 10 to 29 of the patent specification.

The Registrar: The Chairman:

D. Sauter   F. Edlinger