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D E C I S I O N
of 27 October 1999

Case Number: T 0273/93 - 3.5.1

Application Number: 88305354.8

Publication Number: 0298613

IPC: H04N 9/64

Language of the proceedings: EN

Title of invention:
Colour television decoding apparatus

Applicant:
Questech Limited

Opponent:
-

Headword:
Colour television decoding/QUESTECH

Relevant legal provisions:
EPC Art. 54(2), 84

Keyword:
"Novely (yes)"

Decisions cited:
-

Catchword:
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Boards of Appeal

Chambres de recours

Case Number: T 0273/93 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 27 October 1999

Appellant: Questech Limited
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 20 November 1999
refusing European patent application
No. 88 305 354.8 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: P. K. J. van den Berg
Members: C. G. F. Biggio
G. Davies

Summary of Facts and Submissions

I. The appellant (applicant) filed an appeal against the decision of the examining division refusing European patent application No. 88 305 354.8.

The decision under appeal was based on the following application documents :

Claims: 1 to 9 filed with the letter of 05/12/91

Description: pages 3 to 7 as originally filed
pages 1 and 2 with the letter of
5 December 1991

Drawings: sheets 1/5 to 5/5 as originally filed

Claim 1, with features marked (a), (b) and (c) according to the statement of grounds, read as follows:

"A comb fail detection circuit for incorporation in a colour television apparatus, comprising:

(a) means responsive to a vertical transition in a colour television signal detected over a predetermined number of lines of the picture signal, for providing a corresponding comb fail detection signal,

characterized in that the said responsive means comprises

(b) a vertical filter (2-11; 24-32) responsive to the

vertical frequency of the colour television signal
and

(c) arranged to reject frequencies in the region of
baseband luminance and chrominance".

Claims 2 to 6 were dependent on claim 1.

Claim 7 read as follows:

"A comb fail filter detection circuit as claimed in any
one of claims 1 - 3 in combination with a colour
television decoding circuit, comprising a band pass
filter (21) arranged to receive a composite television
signal and provide an output signal comprising
chrominance and high frequency luminance,
first (24), second (25), third (26), and fourth (27)
line delay means coupled to the output of said bandpass
filter (21) and arranged to provide signals delayed by
one, two, three and four line delay periods
respectively,
means (28,29) for averaging the outputs of said
bandpass filter (21) and said fourth delay means (27) ,
first adding means (30) for adding the output signals
of said first (24) and third (26) delay means, first
subtracting means (31) for subtracting the output
signal of said first adding means (30) from the output
signal of said averaging means (29), and second adding
means (32) for adding the output signals of said second
delay means (25)
and said first subtracting means (31) in order to
provide a comb fail signal".

Claims 8 and 9 were dependent on claim 7.

II. The proceedings before the examining division.

First communication of examining division:

The examining division stated that claim 1 was not clear (Article 84) in that it was drafted in functional terms i.e. it indicated the result to be obtained without defining the means necessary for achieving that result; the term "vertical frequency" was considered to be "vague and indefinite".

Independently of the fact that claim 1 was not clear it further did not involve an inventive step with regard to the teaching of D1: EP-A-0 221 769.

Nevertheless, the combination of the features of dependent claim 2 with claim 1 was neither known from, nor rendered obvious by the available prior art. It was suggested therefore that a new independent claim be drafted including these features and avoiding the lack of clarity objected to earlier.

Applicant's Response:

The applicant took account of the examining division's opinion and submitted a combination of claims 1 and 2, renumbering the other claims and amending the description.

Second communication of the examining division

The examining division referred to document D2: US-A-4 050 084 and found new claim 1 to lack novelty having regard to this document. This also

applied to claim 2 (previous claim 3). Claim 4 was not inventive over D2. It was stated that there were no objections against claims 3 and 5 to 9, except that it was not clear to which preceding claims dependent claim 9 related, since claim 8 was not explicitly appended to claim 4. No objection of lack of clarity of claim 1 was made.

Applicant's response to second communication.

The applicant dealt with and argued against the novelty objections based on D2. It did not amend its claims and asked that the examining division contact it over the phone, if there were any further queries.

Thereafter, the examining division issued the decision under appeal.

III. In its decision the examining division referred to D2: US-A-4 050 084, as D1 and rejected claims 1 and 2 for lack of novelty and claim 4 for lack of inventive step with regard thereto. In order to avoid further confusion, document US-A-4 050 084 will be referred to herein as: D2.

In its decision, the examining division reasoned as follows:

D2 did not explicitly mention separated horizontal and vertical filters as disclosed in Figures 1 and 2 of the application. Rather this point was left open by D2. However, a person skilled in the art was immediately aware of the fact that the known filters disclosed in the figure of D2 were split up into a horizontal filter

represented by the bandpass (10) and a "vertical filter" (12-28), this arrangement being preferred because it separated the chrominance and luminance parts in the video signal. Therefore, the separation into a horizontal and a vertical filter was a common technique implicitly disclosed in D2.

The examining division agreed with the appellant (then the applicant) that as to the description of Figures 1 and 2 both a vertical and a horizontal filter were disclosed in the present application, which both served the purpose of eliminating cross luminance. This did, however, not apply to the wording of claim 1, in that these features of horizontal and vertical filtering were not comprised in claim 1, which merely mentioned a "vertical filter".

In summary, document D2 disclosed in its drawing and column 4 , line 1 to column 7, line 13, a comb circuit (10-28) for incorporation in a colour television apparatus, comprising means (10-70) responsive to a vertical transition in a colour television signal detected over a predetermined number of lines (actually 3 lines) of the picture signal for providing a corresponding comb fail detection signal, wherein the said responsive means comprised a vertical filter (10-28) responsive to the vertical frequency of the colour television signal and arranged to reject frequencies in the region of baseband luminance and chrominance.

The function of the vertical filtering defined in the characterising part of claim 1 and relating to the rejection of baseband frequencies of luminance and

chrominance was in the application actually performed by a bandpass filter "1" in Figure 3, the actual "vertical filtering" function being performed by the components (2-11). This also applied to Figure 7 of the application (bandpass (21), components of the "vertical filter" (24-32)).

Such was also the case in D2, figure, wherein bandpass (10) (the bandpass 2.1 to 4.2 MHz) rejected frequencies of luminance and chrominance baseband, the actual vertical filtering being performed by components (12-30).

Thus the definition of the vertical filter claimed in claim 1, when interpreted according to the teachings of the originally filed description, corresponded to the combination of the vertical filter (12-30) preceded by bandpass filter (10) as disclosed in D2.

Although a comb fail was not explicitly mentioned in D2, the skilled person would immediately realize that the circuit of D2 carried out this specific function, namely to generate a signal indicating that a comb filter does not perform properly under certain working conditions, ie a signal representative of a comb fail condition.

This meant that D2 disclosed, in combination, all the essential features defining the circuit of claim 1. Consequently the subject-matter of claim 1 was not novel.

The decision noted that the above resulted from the fact that the claim had been drafted in rather broad

terms, so that no feature clearly distinguishing the circuit claimed from the circuit disclosed in D2 could be identified in claim 1.

Dependent claim 2 was not new either with regard to D2.

The subject-matter of claim 4 lacked inventive step, because D2 disclosed a threshold level detecting circuit.

IV. In the statement of grounds and in its response to a communication of the Board the appellant argued as follows:

Procedural error:

The examining division's second communication taken in conjunction with the examiner's refusal to telephone the applicant's representative, as requested in the representative's letter, could well constitute a substantial procedural violation justifying the refund of the appeal fee.

Firstly, D2 was listed in the European Search Report and should therefore have been considered by the examiner at the time of issuance of the first communication. The citation of this document against a claim (the combination of original claims 1 and 2), previously stated to be allowable, represented an inexplicable reversal of the opinion of the examining division for which no reason was given.

It was therefore not true, as stated at page 2 of the grounds of refusal, that the applicants had had many

opportunities to present arguments and amendments in respect of this objection.

Reasoned arguments against the objection were indeed presented at the first opportunity in the representative's letter of 8 September 1992 and, particularly in view of the request for a telephoned discussion; the mere fact that no amendments had been made to the claims did not justify the examiner's decision to issue a refusal of an application of which some of the claims had already been deemed to be allowable.

Secondly, it was not true, as stated at page 1 paragraph 5 of the grounds of refusal, that the examining division reiterated its objections concerning lack of clarity of the claims in the second communication. Clarity of the claims was not mentioned in that communication and, from the examiner's silence on that point, the applicants were entitled to assume that the previous objections of lack of clarity had been met and that the only issue to be dealt with was lack of novelty having regard to the newly cited document.

If, as now stated in the grounds of refusal, the true objection intended by the examining division was an objection of lack of clarity of the claims, the fact that this was not clearly stated in the second communication denied the applicants the opportunity of dealing with that objection before the application was refused.

In that case it was requested that the application be

remitted to the examining division in order to enable the applicants to deal properly with that objection. In its reply to the Board's communication the appellant accepted the Board's statement that the examining division must be allowed to change its opinion in the course of proceedings and that such a change of mind did not in itself amount to a procedural violation. However, it was submitted that the fact that the refusal of the application included the ground of lack of novelty of the subject-matter of claim 1 with regard to document D2 was not alone sufficient to meet the requirement of Article 113(1) EPC.

It was submitted that for the requirement of Article 113(1) EPC to be fulfilled, not only must the ground of refusal - lack of novelty of the subject-matter of claim 1 with regard to D2 - be the same as that mentioned in the previous communication, but it must be shown that the reasoning of the examining division in the preceding communication is supported without the introduction of new grounds to which the appellant had not had the opportunity to reply.

In the present case not only had the applicant shown in its answer to the preceding communication that the reasoning adopted by the examining division was incorrect, which was confirmed by the Board in its communication, but in the refusal the examiner had introduced a completely new ground of objection - lack of clarity of claim 1 - which had not been mentioned to the applicant in the preceding communication.

Both from the grounds of refusal and from the reasoning by the Board in its communication, it appeared that the

alleged lack of clarity of claim 1 and the consequent difficulty of attributing to the term "vertical filter" the meaning given by the appellant, constituted a primary ground for the rejection of claim 1.

It was axiomatic that where there was a lack of clarity of a claim to the extent that it was given different meanings by the appellant and by the examining division, there could be no meaningful dialogue in relation to lack of novelty or lack of inventive step in the claim, until an agreed meaning of the claim had been determined. In such a case, objection should be raised under Article 84, and until this objection had been dealt with the question of lack of novelty of the claim must remain a secondary issue.

In substance:

The invention comprised a comb fail detection circuit, which was a type of circuit well known in the art.

With regard to feature (a):

A comb fail detection signal was well known as a switching signal used to effect so called adaptive switching of a colour television decoder, when conditions occur in the signal under which a comb filter would fail to operate.

Feature (a) was subject to two conditions, firstly the circuit must respond to vertical signal transitions and secondly it must generate an adaptive switching signal capable of controlling a colour television decoder.

With regard to feature (b):

The vertical frequency of a television signal is the frequency that would be obtained by scanning a television picture in the vertical rather than in the horizontal direction. It is axiomatic that for any given television standard the spectrum of the vertical frequency will extend from zero, when the picture is a single flat colour with no change in luminance, to a maximum of the maximum number of lines in the picture, when the picture information changes on every line. The frequency is thus expressed in cycles per picture height as explained and illustrated on the vertical axis of Figures 1 and 2 of the application.

Thus feature (b) required a filter that received signals from the same horizontal position in a plurality of picture lines of the picture signal.

With regard to feature (c):

As was clear from the description, the vertical frequencies that were to be rejected by the filter were those frequencies on the vertical axes of Figures 1 and 2 that were near the centres of the star shaped areas U, V and Y of Figure 1 and I, Q and Y of Figure 2.

- V. The appellant requested that the decision under appeal be set aside and that the case be remitted to the first instance for further prosecution:

On the basis of claim 1 as refused, because of a procedural violation committed by the examining division with regard to Article 113(1)(main request)

and that the appeal fee be refunded (first auxiliary request)

or because the subject-matter of claim 1 was new with regard to document D2 (second auxiliary request),

or that the case be remitted for further prosecution on the basis of claim 1 as filed by way of "auxiliary submission" with the statement of grounds (third auxiliary request)

or on the basis of claims 1 to 11 as filed on 20 February 1995 (fourth auxiliary request).

Finally the appellant requested oral proceedings in the event that the Board would be inclined to dismiss all the previous requests (fifth auxiliary request).

An amended Figure 2 was filed on 20 February 1995.

Reasons for the Decision

1. The appeal is admissible.
2. *Main request*
 - 2.1 In the decision under appeal the examining division referred to D2: US-A-4 050 084 as D1, and refused claims 1 and 2 for lack of novelty with regard thereto. In part "II. Reasoning", on pages 3 to 7 of the decision under appeal, the only reason given for refusing the application is lack of novelty, on which the applicants had had the opportunity to comment, as

required by Article 113(1) EPC.

- 2.2 Thus, taking into account the proceedings before the examining division, the major occurrences of which are mentioned in the "Summary of facts and submissions" of the present decision, the Board concludes that no procedural violation has been committed, and certainly not a substantial one, as required by Rule 67 EPC for refund of the appeal fee.

Therefore the main request and the first auxiliary request have to be refused.

- 2.3 However, the Board considers it appropriate to comment on the appellant's submissions in more detail as follows:

- 2.3.1 Reversal of the opinion of the examining division.

The reversal of the examining division's opinion between its first and second communications must have been very disturbing to the applicant and presumably not less so to the examining division itself. Of course such a change should be avoided, if possible.

However, it can not be declared unallowable, since it is based on judgement and is not a matter of procedure.

- 2.3.2 The appellant's request for a telephoned discussion

There is no obligation under the EPC for the examining division to ring up a party. Thus it is entirely within the discretion of the examining division, whether they think such telephone calls appropriate under the

circumstances. Oral proceedings are provided for under Article 116 EPC which guarantees each party the right to be heard orally.

- 2.3.3 The appellant's statement that the true objection intended in the decision under appeal was lack of clarity

As indicated above, the only reason given in the decision under appeal for refusing the application was lack of novelty.

The Board has not been able to find in the reasons for the decision under appeal any other ground for the refusal than that and certainly not one of lack of clarity. The examining division only noted in the reasons for the decision that the novelty objection resulted from the fact that claim 1 was drafted in rather broad terms. In the Board's opinion this remark does not mean that the examining division considered the claim to be not clear. If so, the examining division would, in the Board's view, not have been able to decide on the issue of novelty.

However, the Board finds that the appellant is right in declaring that the decision under appeal is erroneous where it states that in the second communication the examining division reiterated its objection as to lack of clarity. The examining division did not do so. In its second communication it only argued why claim 1 was not novel over D2. Objection as to lack of clarity was only made in the first communication.

The fact is that the decision under appeal contains the

statement that in a second official communication the examining division reiterated its objections concerning lack of a clear definition as to the feature of a "vertical filter" and that it was due to the lack of clarity of the functional definition of the "vertical filter" that the scope of claim 1 was such that it could be read on the figure of D2.

The Board notes first of all that, although this statement is qualified as a lack of clarity, it may as well be considered as meaning that the scope of claim 1 is broad, too broad in the view of the examining division. If so, then the claim was nevertheless clear.

The Board notes furthermore that the said statement is found under "I. Facts and submissions" of the decision under appeal and not under its reasons under "II. Reasoning".

Although the Board understands that the situation as a whole remains unsatisfactory to the appellant, the fact that the reason for the refusal given in the decision under appeal is only lack of novelty, is for the Board sufficient ground not to find a procedural violation as already indicated under reason 2.2 above.

3. *Second auxiliary request*

- 3.1 The subject-matter of claim 1 as refused concerns a "comb fail detection circuit " rather than a "comb circuit". It is to be noted that in both expressions "comb" stands for "comb filter".

Thus the claim does not concern a comb filter but a

circuit to be incorporated in a colour television apparatus and which is intended for detecting a failure of the comb filter of that apparatus.

- 3.2 D2 according to its abstract describes a comb filter system for the separation of the luminance and chrominance components of an NTSC colour television signal which analyses the video signal on the television lines and detects luminance and/or colour transitions in the vertical direction, and in response to the presence of such transitions, automatically either modifies or removes the comb filter, to minimize transient distortions in the reconstructed television picture. According to column 2, lines 60 to 67, it is a logic system which is operative to detect luminance or colour transitions and in response thereto to select a filtering algorithm (for the comb filter) most desirable for minimizing transient distortions. This is particularly illustrated by its sole drawing which shows a combination of a video-signal-comb-filter and another circuit which the skilled reader will immediately recognise as performing the function of a comb-filter-fail-detection circuit. Certain electrical components are common to the fail detection circuit and the comb-filter proper. This is also the case in Figure 7 of the present patent application.

Nevertheless, in both documents, i.e. in D2 and in the present patent application, the fail detection circuit and the comb filter perform distinctly different functions, ie the fail detection circuit checks and, if necessary, corrects the proper functioning of the comb filter.

3.3 In D2 the comb-filter proper may be considered to comprise components 12-14-16-18-20-22-28-30-40-74-76, assuming for the moment that band pass filter 10 is not part of the comb filter.

This comb-filter receives its input signals from the output of bandpass filter 10 (indicated as signal B),

The fail detection circuit may be considered to consist of the logic circuits 42-44-46-48-50-54-56-58-52-64-66-68-70, also assuming that band pass filter 10 is not part of the fail detection circuit.

This fail detection circuit receives its input signals from the output of bandpass filter 10 (indicated as signal B), from 1H delay 12 (indicated as signal M) and from 1H delay 14 (indicated as signal T).

Thus, apart from signal B, which is the output signal of bandpass filter 10, the fail detection circuit receives input signals M and T from 1H delay components 12 and 14, which are part of the comb filter proper. Consequently components 12 and 14 may be said to be common to the comb (filter) and to the comb fail detection circuit.

Components 34-36-38 enable the comb filter proper to be corrected by the fail detection circuit.

If it is accepted that delay components 12 and 14 are common to the comb filter and the fail detection circuit, bandpass filter 10 could strictly speaking also be considered as part of either or even both the comb filter proper and the fail detection circuit.

3.4 It follows, using the vocabulary of claim 1 as refused, that from D2 is known:

"A comb fail detection circuit for incorporation in a colour television apparatus, comprising means responsive to a vertical transition in a colour television signal detected over a predetermined number of lines of the picture signal, for providing a corresponding comb fail detection signal".

This corresponds to the prior art part of claim 1.

According to the characterizing part of claim 1, "the said responsive means comprises a vertical filter (2-11; 24-32) responsive to the vertical frequency of the colour television signal and arranged to reject frequencies in the region of baseband luminance and chrominance".

This wording means that the rejection of frequencies in the region of baseband luminance and chrominance is performed by the vertical filter (2-11; 24-32). However, this can only apply to the rejection of baseband luminance and chrominance in the vertical direction.

The Board agrees on this point with the examining division that for the horizontal direction this function is rather to be performed by the bandpass filter 1 (BPF) than by the said vertical filter.

As a consequence, BPF 1 may be considered to be part of the comb fail circuit of claim 1 by implication.

This is also illustrated by the embodiment of the invention according to Figure 3 of the drawings and the corresponding text of the description in column 2, line 43 to column 3, line 22, of the present application, in particular column 2, lines 43 to 50, which reads:

"Referring to Fig. 3 one embodiment of comb fail detector according to the invention employing a vertical transversal filter comprises a horizontal band-pass filter 1 arranged to receive the video signal and to the output of which are coupled a series of one-line delay circuits 2,3,4 and 5 to provide five signals with a line of delay between each".

- 3.5 The Board concludes that claim 1 is distinguished from D2, in that the latter does not disclose, as a "means responsive to a vertical transition in a colour television signal over a predetermined number of lines of the picture signal", a filter that (passes and) rejects predetermined frequencies.

The decision under appeal admits that rejection of frequencies in the region of baseband luminance and chrominance in the vertical direction is not explicitly disclosed in D2, but suggests that it is implicit in D2. The Board does not agree to this and finds support for this view in that the circuit in D2 that delivers the fail detection signal is not an electrical filter, but a logic circuit, as indicated above and pointed out by the appellant on various occasions.

- 3.6 In summary, the subject-matter of claim 1 concerns a comb fail detection circuit which rejects the said

frequencies in the vertical direction.

Rejection of the said frequencies in the vertical direction is not disclosed by D2.

Thus claim 1 as refused is novel having regard to document D2.

4. This being the case, there is no need for the Board to consider the further requests, i.e. the third, the fourth and the fifth auxiliary requests.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance for continuation of the examination in accordance with the second auxiliary request, taking due account of the fact that the Board herewith has decided that claim 1 as refused is novel over document D2.
3. Refund of the appeal fee is refused.

The Registrar:

The Chairman:

M. Kiehl

P. K. J. van den Berg