

Veröffentlichung im Amtsblatt	Ja/Nein
Publication in the Official Journal	Yes/No
Publication au Journal Officiel	Oui/Non

Aktenzeichen / Case Number / N° du recours : T 251/90 - 3.5.1

Anmeldenummer / Filing No / N° de la demande : 85 102 243.4

Veröffentlichungs-Nr. / Publication No / N° de la publication : 0 158 802

Bezeichnung der Erfindung: Digital acquisition system including a high-speed
Title of invention: sampling gate

Titre de l'invention :

Klassifikation / Classification / Classement : H03M 1/12

ENTSCHEIDUNG / DECISION

vom / of / du 07 November 1990

Anmelder / Applicant / Demandeur : TEKTRONIX, Inc.

Patentinhaber / Proprietor of the patent /
Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence :

EPO / EPC / CBE Articles 116 and 56 EPC

Schlagwort / Keyword / Mot clé : "if no request for oral proceedings, then no right
to such proceedings"
"late-filed amended claims (refused)",
"amended claims - inventive step (no)"

Leitsatz / Headnote / Sommaire



Case Number : T 251/90 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 07 November 1990

Appellant : TEKTRONIK, Inc.
Griffith Drive, P.O. Box 500
Beaverton, Oregon 97077
USA

Representative : Eisenführ, Speiser & Strasse
Zweibrückenstrasse 17
D-8000 München 2

Decision under appeal : Decision of Examining Division 2201 of the European Patent Office dated 14 November 1989 refusing European patent application No. 85 102 243.4 pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : P.K.J. van den Berg
Members : R. Randes
G. Paterson

Summary of Facts and Submissions

I. This European patent application was filed on 28 February 1985 including 20 claims, with subject-matter concerning a sampling system with feedback loop. Claims 1 and 2 as filed read as follows:

1. A method of generating a representation of a waveform, comprising the steps of:

producing analog samples proportional to the magnitude of an input waveform at preselected time points therealong;

converting said samples to digital representations thereof;

storing said digital representations in storage locations associated with said preselected time points of said samples; and

selectively converting said stored digital representations to analog values to provide magnitude estimators for use in producing said samples.

2. A method in accordance with Claim 1 wherein said step of selectively converting said stored digital representations to analog values includes retrieving said digital representations from the storage location associated with the next time point to be sampled.

II. On 30 September 1988 the Examining Division issued a communication citing the following documents:

D1: Journal of Electronic Engineering

Vol. 17, No. 161, May 1980, pages 42 to 45

D2: US-A-4 204 198.

The communication began by stating that the subject-matter of independent Claims 1, 4 and 11 does not involve an inventive step in the light of D1 and D2 and reasons for this view were set out as follows:

"Independent Claims 1, 4 and 11 each describe a sampling system with feedback loop. The loop comprises conversion of analog signals to digital values and back to analog signals. Analog to digital and digital to analog conversion is well known in connection with sampling systems (see e.g. D1, page 44). On the other hand, consecutive analog to digital and digital to analog conversion is also well known in closed loops (see e.g. D2, Figure 2). The skilled man would, therefore, regard it a normal design procedure to combine all the features set out in Claims 1, 4 and 11."

Furthermore, specific objections were raised to almost all of the remaining claims that the features contained therein appeared to be trivial, self-evident (Claims 2, 6, 8, 9, 12, 16 and 20) or generally known in connection with samplers (Claims 5, 13 and 17). The communication went on to state that "It is not at present apparent which part of the application could serve as a basis for a new, allowable claim. Should you nevertheless regard some particular matter as patentable, you should substantiate this by indicating in your letter of reply any difference vis-à-vis the state of the art and the significance thereof ...".

- III. In a reply dated 10 February 1989, the claims were amended by combining old Claims 1 and 2, a further feature was added to Claim 4 and it was stated that "It is assumed that the objections of the Examiner will be cleared away by the newly filed claims". In reply to the reasoning concerning lack of inventive step contained in the communication dated 30 September 1988, it was submitted that the D2 devices "teach using rates of changes to estimate a next sample point, whereas the present invention uses the last sample point to estimate the next sample point". The reply contained no suggestion that any other particular subject-matter in the application could form the basis for an allowable claim.
- IV. In response, the Examining Division issued a Decision dated 14 November 1989 in which the application was rejected for lack of inventive step on the same ground as previously set out in the communication dated 30 September 1988, D2 being recognised as the closest prior art. As to the submission in the applicant's reply, dated 10 February 1989, summarised above, the Decision stated that "independent Claims 1, 3 and 10 ("magnitude estimators", "sample estimators") do not reflect such a difference, if any. Moreover, it appears from the description (page 10, lines 10 to 13) that according to both D2 and the application an analog difference signal is formed from the sample and the analog feedback value. This difference is then converted into digital form for further processing. Thus, no substantial difference can be recognised between the subject-matter of D2 and the present application".

The Decision ended by making reference to the "reasoned grounds ... given in the communication dated 30 September 1988 why the dependent claims could not be considered inventive".

- V. A notice of appeal was filed on 24 January 1990 and the appeal fee duly paid. The Statement of Grounds of Appeal filed on 22 March 1989 commenced by expressing surprise that the first Office action was immediately followed by refusal of the application. It was stated that "An oral hearing would have been useful in this case - all the more so since the undersigned representative would have been prepared to take part even at short notice ...".

With regard to patentability, the Appellant continued to rely upon his previous single letter of 10 February 1989 with accompanying amended claims as being "more than sufficient to distinguish over D2", which was again said to teach "using rates of change to estimate the next sample point whereas the present invention uses the last sample point to estimate the next sample point". It was denied that this difference was trivial or obvious and asserted that this difference was fundamental, leading to specified advantages, namely in particular a quicker response to changes in the input signal waveform.

Furthermore, attention was drawn to the fact that a corresponding patent had been granted in the USA, with its Claim 1 in exactly the same form as rejected by the Examining Division. It appears from the US patent that neither D1 nor D2 were cited against the US application, however.

Oral proceedings were requested both in the notice of appeal and in the grounds of appeal.

- VI. A communication was issued on behalf of the Board of Appeal on 9 July 1990, together with a summons to oral proceedings to be held on 7 November 1990. The

communication once more pointed out that the claims did not reflect any difference from what was disclosed in D2 and that the Decision of the Examining Division, therefore, appeared to be correct. Furthermore, the communication pointed out that no clear difference could be seen between the functioning of the loops described in the present application and in D2.

Any written submissions in reply were requested to be filed at least one month before the oral proceedings.

VII. By letter dated 28 September 1990 the Appellant's representative explained that he would not be in a position to file further claims until shortly before the oral proceedings, subsequent to a visit to the Appellant corporation in the USA. An amended set of claims, with independent Claims 1 and 3, together with observations in reply to the communication dated 9 July 1990 were duly filed on 2 November 1990.

The amended Claim 1 reads as follows:

1. A method of generating a representative of a waveform, comprising the steps of:
 - producing a sample of an analog input signal at a preselected time point;
 - retrieving a previous digital sample associated with said preselected time point from a digital memory (32);
 - reconverting said previous digital sample into an analog form;

- computing a difference between said sample and said previous analog sample;
- amplifying said difference;
- converting said difference into a digital form;
- adding said digital difference to said previous digital sample; and
- storing the result in said digital memory (32),

characterized in that,

said previous analog sample and/or said difference are so attenuated that the loop gain (L) is controlled within the range of $0 < L < 2$.

The accompanying submissions explained that the preamble suitably started from D2, which was recognised as "having a lot of features in common with the present invention". However, it was emphasised that in contrast to D2, which only provides an amplifier in the forward path of the circuit, the present claims required the presence of an attenuator in the forward path and/or in the reverse path, both of which could be suitably controlled to obtain any desired convergence.

VIII. At the oral hearing on 7 November 1990 the Appellant initially requested that he should file a further set of claims as his main request and that the claims filed on 2 November 1990 should become an auxiliary request. He also suggested that the case be immediately remitted to the Examining Division for consideration of the further set of claims, since substantive consideration of the appeal might take some time.

After enquiring as to the contents of the further set of claims, the Board decided not to admit these claims for consideration in the appeal.

Thereafter, the Appellant made further submissions in support of the allowability of the claims filed on 2 November 1990 and he also requested amendment of independent Claims 1 and 3 by deletion of "or" from "and/or" in the final sentence of each claim.

At the conclusion of the oral hearing the decision was announced that the appeal was dismissed.

Reasons for the Decision

1. The appeal is admissible.
2. Procedural matters

(a) Conduct of the Examining Division

In the Board's view there is no proper basis for the Appellant's complaint that the first communication from the Examining Division was immediately followed by a Decision rejecting the application. As repeatedly emphasised in previous decisions of the Boards of Appeal, if the applicant fails to make any real progress towards the refutation of objections against grant of a patent set out in the first communication, the Examining Division may in its discretion consider the applicant's observations in reply to that communication as complete and final and immediately issue a decision of rejection (see e.g. Decisions T 84/82 (OJ EPO 1983, 451) and T 300/89 (to

be published). In the Board's view, this was certainly the situation in the present case and the Examining Division was right to issue its Decision when it did.

As to the suggestions that an oral hearing would have been "useful" and that the Appellant's representative would have been ready to attend one, in the Board's view this misses the main point that under Article 116 EPC, as emphasised in Decision T 229/86 (OJ EPO 1988, 88), "the right of a party to have oral proceedings is dependent upon such party filing a request for such proceedings: in the absence of such a request, a party has no such right, and the EPO can issue a decision, whether adverse or not, without appointing such proceedings".

In the present case, no request for oral proceedings was made before the Examining Division issued its Decision and the Appellant's complaint is, therefore, unfounded. Furthermore, for the reasons outlined above, it seems that neither such an oral hearing nor an interview would have been considered useful by the Examining Division.

(b) Late-filed amended claims

It is well established jurisprudence within the Boards of Appeal that if an applicant or patentee desires to submit amendments to the claims in the course of appeal proceedings, this should be done at the earliest possible moment and that late-filed amendments submitted, for example, during oral proceedings, may be disregarded in the exercise of the Board's discretion.

In particular, in Decision T 95/83 (OJ EPO 1985, 75) it was held that "It is only in the most exceptional circumstances, where there is some clear justification both for the amendment and for its late submission, that ... an amendment not submitted in good time before oral proceedings will be considered on its merits in those proceedings ...". Furthermore, in Decision T 153/85 (OJ EPO 1988, 1) it was stated that "a Board of Appeal may refuse to consider alternative claims which have been filed at a late stage e.g. during the oral proceedings, if such claims are not clearly allowable". Both these Decisions refer to and endorse the "Guidance for Appellants and their representatives" first published in OJ EPO 1981, 176 and subsequently republished, most recently in OJ EPO 1989, 395.

In the present case, the Appellant explained during the oral proceedings that the new set of claims which he wished to file were not based upon D2 as the closest prior art, but had been drafted on a different basis, since the Appellant considered that D2 should properly be considered as being in a different technical field from that with which the application is concerned.

Such a submission concerning D2 had never previously been made in the course of the proceedings: the Board does not accept it, but on the contrary considers that D2 is not only relevant prior art, but also the closest prior art.

In the Board's judgement, therefore, it follows from the Appellant's explanation as to the contents of the new set of claims that such claims would clearly be unallowable. For this reason, and following the above

mentioned Decisions, the Board refused to allow the new set of claims produced at the oral proceedings to be filed or admitted for consideration on its merits.

In any event, in the Board's view it is in principle undesirable for new claims containing major amendments, which effectively change their centre of gravity, to be sought to be filed during oral proceedings on appeal. Such a course of conduct places an improper burden on a Board of Appeal if it attempts to examine such new claims for allowability during the course of the oral proceedings. As to the Appellant's submission in the present case that the Board should remit the case to the Examining Division so that they can examine the new claims, while this course may be to the Appellant's advantage in that a possibly adverse decision on the patent application would be delayed for a year or more during further proceedings before the Examining Division and possibly the Board of Appeal, in the Board's view such a course would be very much contrary to the public interest in an expeditious substantive examination of the application and this suggestion was consequently rejected by the Board.

The set of claims filed on 2 November 1990, therefore, constitutes the Appellant's sole request to be considered by the Board. While these claims were only filed shortly before the oral hearing, the justification for such late filing was explained by the Appellant - see paragraph VII above, and their form and content is such that they do at least acknowledge the relevance of D2 as closest prior art and they do at least include a further feature - again see paragraph VII above - which represents an

attempt to meet the objections to patentability so far raised in these proceedings. The Board, therefore, decided to admit this set of claims for consideration as to their allowability. Their novelty is not in issue.

3. Inventive step

3.1 The Appellant has acknowledged D2 as the closest prior art and has delimited both Claims 1 and 3 against that document (Appellant's letter of 31.10.90). The Board agrees with this delimitation, although the method according to D2 does not produce samples because the input signals of the corresponding system are already samples (see the impugned decision, page 3, third paragraph). It is considered as being self-evident for a skilled person to use the known method disclosed in D2 for a method of generating a representation of a waveform as is proposed in the precharacterising part of Claim 1 and to consider this method according to the said precharacterising part as the starting point of the alleged invention.

3.2 The objective problem to be solved is to provide a method of generating a representation of a waveform and an associated system which is capable of providing a fine loop gain control which allows rapid convergence. The system according to D2 does not disclose attenuators in the loop.

3.3 As part of the background to the claimed invention, the application recognizes in its introductory part at page 2, last paragraph that "There are situations in which it is desirable to have a loop gain which is not equal to one."

In the Board's view the subject-matter of Claim 1 does not involve an inventive step. In fact, it appears that the

mere formulation of the said problem would lead the skilled person to a straightforward solution of it - that is, to control the gain of the loop in order to get the desired gain. As is also recognized in the introductory part of the application at page 2, second paragraph - it was customary to arrange attenuators in a conventional sampling loop in order to get a desired gain of the loop. It is, therefore, evident to a skilled person that the method defined in the first part of Claim 1 can be so improved that the loop gain (L) is controlled to be maintained within a certain desired range. Also it is obvious to the skilled person that the said range must be so chosen that the waveform will converge to the value of the input signal, as this is a condition that apparently must be fulfilled if the waveform is to be correctly represented. Also the definition of the numerical range (L between 0 and 2) cannot contribute to an inventive step, as the numerical values follow directly from equation (2) (page 11 in the present description), which is derived from a loop corresponding to the known loop disclosed in D2.

4. It follows from the above that the subject-matter of Claim 1 is a logical technical deduction obvious to the skilled person using common general knowledge in the art when starting from a method according to the preamble of Claim 1 and when trying to solve the posed problem. Claim 1 does not, therefore, involve an inventive step in the sense of Article 56 EPC and is, therefore, not allowable. In this circumstance, the remaining claims of the request do not need separate consideration and fall with Claim 1.

Order

For these reasons, it is decided that:

1. The appeal is dismissed.

The Registrar:

The Chairman:

E. Görgmaier

P.K.J. van den Berg