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Aktenzeichen / Case Number / N^o du recours : T 784/89 - 3.4.2

Anmeldenummer / Filing No / N^o de la demande : 84 113 819.1

Veröffentlichungs-Nr. / Publication No / N^o de la publication : 0 144 026

Bezeichnung der Erfindung: Method of NMR imaging with off-center zoom scan

Title of invention:

Titre de l'invention :

Klassifikation / Classification / Classement : G01N 24/08

ENTSCHEIDUNG / DECISION

vom / of / du 6 November 1990

Anmelder / Applicant / Demandeur : General Electric Company

Patentinhaber / Proprietor of the patent /

Titulaire du brevet :

Einsprechender / Opponent / Opposant :

Stichwort / Headword / Référence : Disclosure of computer-related apparatus/GENERAL
ELECTRIC

EPO / EPC / CBE Art. 123(2) EPC

Schlagwort / Keyword / Mot clé : "Apparatus not disclosed originally (Main request and
auxiliary requests No. 1-5); disclosed (auxiliary
request No. 6)"

Leitsatz / Headnote / Sommaire

Headnote follows

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Case Number : T 784/89 - 3.4.2

D E C I S I O N
of the Technical Board of Appeal 3.4.2
of 6 November 1990

Appellant : General Electric Company
1 River Road
Schenectady New York 12305 (US)

Representative : Schüler, Horst, Dr.
Kaiserstraße 69
D-6000 Frankfurt/Main 1

Decision under appeal : Decision of Examining Division 061 of the
European Patent Office dated 5 July 1989
refusing European patent application
No. 84 113 819.1 pursuant to Article 97(1) EPC

Composition of the Board :

Chairman : E. Turrini

Members : M. Chomentowski
C.V. Payraudeau

Summary of Facts and Submissions

- I. European patent application No. 0 144 026 (84 113 819.1) was refused by decision of the Examining division, because, in particular, the filing of apparatus Claims 14-26, in addition to the original Claims 1-13, which were all directed to a method, was considered as being an unallowable amendment since these claims were not supported by the description and/or drawings of the application as originally filed and, therefore, the amendment introduced additional subject-matter and resulted in new matter for which the protection was not sought initially. In the decision, the Examining division expressed its opinion that the subject-matter of the method claims could be considered as allowable with regard to the available prior art.
- II. The Appellant (Applicant) lodged an appeal against this decision.
- III. In the annex to the invitation to oral proceedings, requested subsidiarily by the Appellant, the Board of appeal expressed its provisional opinion that the apparatus claims introduced additional subject-matter and that the arguments of the Appellant concerning the protection conferred, the clarity of the claims and their support by the description, as well as the sufficiency of disclosure in the original description, were not relevant.
- IV. During oral proceedings, the Appellant requested the grant of a patent based on a main request or on one of the auxiliary requests 1 to 6 or 8 and filed a supplementary auxiliary request 7 for questions of law at the Enlarged Board of Appeal.

Main request**Description:**

Pages 1 to 13 as filed during the oral proceedings of
6 November 1990

Claims:

Nos. 1 to 28 as filed during the oral proceedings of
6 November 1990

Drawings:

Sheets 1/2 to 2/2 as originally filed

Claim 1 of the main request reads as follows.

"1. A method of producing NMR images free of aliasing artifacts, comprising the steps of:

(a) positioning an object to be imaged in a homogeneous magnetic field directed along a first axis of said object;

(b) exciting to resonance a plurality of nuclear spins in a predetermined region of said object;

(c) applying to said predetermined region at least one phase-encoding magnetic-field gradient, having one of a plurality of programmable amplitudes, which gradient is directed along at least one additional axis of said object;

(d) irradiating said object with a selective, inverting RF pulse in the presence of a first magnetic-field gradient to initiate the refocussing of nuclear spins in a portion of said predetermined region;

(e) allowing said nuclear spins in said portion to refocus in the presence of a second magnetic-field gradient to produce a spin-echo signal having a frequency dependence

on position in the direction of said second gradient, said spin echo being phase limited in the direction of said first gradient;

(f) filtering said spin-echo signal to band limit the frequency content thereof to frequencies corresponding to those associated with said second gradient co-extensive with said portion;

(g) sampling said spin-echo signal at a sufficient rate to recover the maximum frequency in the filtered signal, prior to repeating said steps (b)-(f) for a different amplitude of said phase-encoding gradient; and

(h) Fourier analyzing said sampled spin-echo signals to obtain pixel image data for reconstructing an image of said object portion which is free of aliasing artifacts."

Claim 14 of the main request reads as follows.

"14. An apparatus for producing NMR images free of aliasing artifacts, comprising:

(a) means for positioning an object to be imaged in a homogeneous magnetic field directed along a first axis of said object;

(b) means for exciting to resonance a plurality of nuclear spins in a predetermined region of said object;

(c) means for applying to said predetermined region at least one phase-encoding magnetic-field gradient, having one of a plurality of programmable amplitudes, which gradient is directed along at least one additional axis of said object;

(d) means for irradiating said object with a selective, inverting RF pulse in the presence of a first magnetic-field gradient to initiate the refocussing of nuclear spins in a portion of said predetermined region;

(e) means for allowing said nuclear spins in said portion to refocus in the presence of a second magnetic-field gradient to produce a spin-echo signal having a frequency

dependence on position in the direction of said second gradient, said spin echo being phase limited in the direction of said first gradient;

(f) means for filtering said spin-echo signal to band limit the frequency content thereof to frequencies corresponding to those associated with said second gradient co-extensive with said portion;

(g) means for sampling said spin-echo signal at a sufficient rate to recover the maximum frequency in the filtered signal, prior to repeating said steps (b)-(f) for a different amplitude of said phase-encoding gradient; and

(h) means for Fourier analyzing said sampled spin-echo signals to obtain pixel image data for reconstructing an image of said object portion which is free of aliasing artifacts."

Claim 27 of the main request reads as follows:

"27. An apparatus for carrying out the method of Claim 1 producing NMR images free of aliasing artifacts, comprising:

(a) means for positioning an object to be imaged in a homogeneous magnetic field directed along a first axis of said object;

(b) means for exciting to resonance a plurality of nuclear spins in a predetermined region of said object;

(c) means for applying to said predetermined region at least one phase-encoding magnetic-field gradient, having one of a plurality of programmable amplitudes, which gradient is directed along at least one additional axis of said object;

(d) means for irradiating said object with a selective, inverting RF pulse in the presence of a first magnetic-field gradient to initiate the refocussing of nuclear spins in a portion of said predetermined region;

(e) means for allowing said nuclear spins in said portion to refocus in the presence of a second magnetic-field gradient to produce a spin-echo signal having a frequency dependence on position in the direction of said second gradient, said spin echo being phase limited in the direction of said first gradient;

(f) means for filtering said spin-echo signal to band limit the frequency content thereof to frequencies corresponding to those associated with said second gradient co-extensive with said portion;

(g) means for sampling said spin-echo signal at a sufficient rate to recover the maximum frequency in the filtered signal, prior to repeating said steps (b)-(f) for a different amplitude of said phase-encoding gradient; and

(h) means for Fourier analyzing said sampled spin-echo signals to obtain pixel image data for reconstructing an image of said object portion which is free of aliasing artifacts."

Claim 28 of the main request reads as follows:

"28. An apparatus when suitably programmed for carrying out the method of Claim 1 for producing NMR images free of aliasing artifacts, comprising:

(a) means for positioning an object to be imaged in a homogeneous magnetic field directed along a first axis of said object;

(b) means for exciting to resonance a plurality of nuclear spins in a predetermined region of said object;

(c) means for applying to said predetermined region at least one phase-encoding magnetic-field gradient, having one of a plurality of programmable amplitudes, which gradient is directed along at least one additional axis of said object;

- (d) means for irradiating said object with a selective, inverting RF pulse in the presence of a first magnetic-field gradient to initiate the refocussing of nuclear spins in a portion of said predetermined region;
- (e) means for allowing said nuclear spins in said portion to refocus in the presence of a second magnetic-field gradient to produce a spin-echo signal having a frequency dependence on position in the direction of said second gradient, said spin echo being phase limited in the direction of said first gradient;
- (f) means for filtering said spin-echo signal to band limit the frequency content thereof to frequencies corresponding to those associated with said second gradient co-extensive with said portion;
- (g) means for sampling said spin-echo signal at a sufficient rate to recover the maximum frequency in the filtered signal, prior to repeating said steps (b)-(f) for a different amplitude of said phase-encoding gradient; and
- (h) means for Fourier analyzing said sampled spin-echo signals to obtain pixel image data for reconstructing an image of said object portion which is free of aliasing artifacts."

Claims 2 to 13 are dependent from Claim 1 and Claims 15 to 26 are dependent on Claim 14.

Auxiliary Request No. 1

Description:

Pages 1 to 13 as filed during the oral proceedings of
6 November 1990

Claims:

Nos. 1 to 27 as filed during the oral proceedings of 6 November 1990, with Claims 28 to 39 respectively corresponding to Claim 15 to 26 appendent to Claim 27

Drawings:

Sheets 1/2 to 2/2 as originally filed

Auxiliary Request No. 2**Description:**

Pages 1 to 13 as filed during the oral proceedings of 6 November 1990

Claims:

Nos. 1 to 26 as filed during the oral proceedings of 6 November 1990, Claim 27 corresponding to Claim 28 of the main request with Claims 28 to 39 respectively corresponding to Claim 15 to 26 appendent to Claim 27

Drawings:

Sheets 1/2 to 2/2 as originally filed

Auxiliary Request No. 3**Description:**

Pages 1 to 13 as filed during the oral proceedings of 6 November 1990

Claims:

Nos. 1 to 13 as filed during the oral proceedings of 6 November 1990, Claims 14 and 15 corresponding respectively to Claims 27 and 28 of the main request with Claims 16 to 27 respectively corresponding to Claims 15 to 26 of the main request appendent to Claim 14 and Claims 28 to 39 also corresponding to Claims 15 to 26 of the main request, appendent to Claim 15

Drawings:

Sheets 1/2 to 2/2 as originally filed

Auxiliary Request No. 4**Description:**

Pages 1 to 13 as filed during the oral proceedings of 6 November 1990

Claims:

Nos. 1 to 26 as filed during the oral proceedings of 6 November 1990,

Drawings:

Sheets 1/2 to 2/2 as originally filed

Auxiliary Request No. 5**Description:**

Pages 1 to 13 as filed during the oral proceedings of 6 November 1990

Claims:

Nos. 1 to 13 and 15 to 26 as filed during the oral proceedings of 6 November 1990, with Claim 27 of the main request substituted for Claim 14

Drawings:

Sheets 1/2 to 2/2 as originally filed

Auxiliary Request No. 6**Description:**

Pages 1 to 13 as filed during the oral proceedings of 6 November 1990

Claims:

Nos. 1 to 13 and 15 to 26 as filed during the oral proceedings of 6 November 1990, with Claim 28 of the main request substituted for Claim 14

Drawings:

Sheets 1/2 to 2/2 as originally filed

Auxiliary Request No. 7

that the following questions of law be submitted to the enlarged Board of Appeal

1. If an application as originally filed is found to disclose and claim a patentable method and if the application as originally filed also discloses an apparatus by which one skilled in the art can carry out and practice the claimed method according to the teachings in the application, can the applicant subsequently present

- a valid claim to the apparatus for performing the claimed method without contravening Article 123(2) EPC?
2. If an application as originally filed is found to disclose and claim a patentable method and if an apparatus is known whereby one skilled in the art can carry out and practice the claimed method according to the teachings in the application, can the applicant subsequently present a valid claim to the apparatus for performing the claimed method without contravening Article 123(2) EPC?
 3. If an application as originally filed is found to disclose and claim a patentable method and if a prior art document discloses an apparatus whereby one skilled in the art can carry out and practice the claimed method according to the teachings in the application, can the applicant present a valid claim to the apparatus for performing the claimed method without contravening Article 123(2) EPC?
 4. If the answer to any one of questions 1 to 3 is in the affirmative, should or can the apparatus claim be in the independent or dependent form with respect to the method claim?
 5. If the answer to any one of questions 1 to 3 is in the affirmative, can there be more than one apparatus claim having regard to the interpretation of such claims under national law?

Auxiliary Request No. 8

Description:

Pages 1 to 13 as filed during the oral proceedings of 6 November 1990 (without the amendments concerning the apparatus)

Claims:

Nos. 1 to 13 as filed during the oral proceedings of
6 November 1990

Drawings:

Sheets 1/2 to 2/2 as originally filed

- V. In support of the allowability of his requests, the Appellant submitted essentially the following arguments. The NMR imaging apparatus used in the patent application in suit is a well known apparatus operated according to new programs. An explicit disclosure of the apparatus was therefore not necessary and since the mathematical expressions and pulse sequences originally disclosed provide enough information to the person skilled in the art to program accordingly the known apparatus, there was no need to disclose it more completely. The amendments proposed only result in a change of category of the claims, which is admitted by the EPO. Method and apparatus, in the specific field of the NMR imaging technique, are closely related forms of the same technical concept. Since the Examining division had considered the method of the invention as sufficiently disclosed, the apparatus for carrying out the claimed method must also be sufficiently disclosed. The Applicant should be entitled to amend the application so as to obtain the best protection for the invention in the national phase and the EPO should not unduly restrict this right. Moreover, as regards at least the auxiliary request No.3, since the "VICOM" (T 208/84, OJ 1987, 14) form of claims, relating to methods and to the computer set up for operating said method, have been admitted by the EPO, there is no reason to refuse now such claims.

Reasons for the Decision

1. The appeal is admissible.
2. **Main request**
 - 2.1 **Allowability of the amendments**
 - 2.1.1 Claim 14 corresponds to original Claim 1, in which the following amendments have been made:
 - "An apparatus for" is substituted for "A method of" (line 1),
 - "the steps of" is deleted (line 2), and
 - "means for" is inserted at the beginning of each of the disclosed step features (a) to (h).
 - 2.1.2 The application as filed does not disclose explicitly an apparatus for producing NMR images free of aliasing artifacts, comprising the particular apparatus features (a) to (h) of Claim 14. The Appellant has not contested this lack of explicit disclosure in the application as filed.
 - 2.1.3 The NMR imaging technique is a sophisticated technique which, as shown in the available prior art, necessitates means in hardware for implementing the specific method steps (a) to (h) of method Claim 1, for instance the means of step (c) for applying to the predetermined region of the object to be imaged at least one phase-encoding magnetic-field gradient, having one of a plurality of programmable amplitudes, which gradient is directed along at least one additional axis of said object (see also P.3, Paragraph 4 to P.4, Paragraph 2 of the Affidavit submitted by the Appellant with his answer to the invitation to oral proceedings). Therefore, since a method such as a NMR imaging method cannot be carried out without an apparatus, and in particular a NMR imaging apparatus, a NMR imaging apparatus is implicitly disclosed as being used for

carrying out the method of Claim 1, in the application as filed.

- 2.1.4 The application as filed cites a prior art document, US-A-4 297 637, which is mentioned as disclosing a line imaging technique acknowledged as belonging to the relevant prior art, whereby a significant difference between the known line imaging method and the method of the invention is stressed (see page 4, line 24- page 5, line 10). Since technical information concerning the NMR imaging apparatus known from US-A-4 297 637 is available by consulting said prior art document, which is available to the public, the Board is of the opinion that the known apparatus is implicitly disclosed in the application as filed.
- 2.1.5 Concerning the apparatus of the invention, the application as filed recites a plurality of apparatus features which relate to functions which can result from the use of an apparatus, such as RF pulses, magnetic fields, gradients, images, and so on, and also to apparatus features, such as coils, filters, magnets, imaging system, and so on (see in particular page 1, line 22-page 2, line 36; page 4, line 14-17), and a plurality of mathematical expressions and pulses sequences (see in particular page 10-11 and the Figures). Moreover, it is directly derivable from the application as filed that an apparatus such as a computer is also comprised in the NMR apparatus, for instance for carrying out the needed steps of creating pixel information by Fourier transformation (see page 4, line 34- page 5, line 10). Since no specific technical information inconsistent with this could be detected in the available prior art, the Board is of the opinion that these apparatus features and this plurality of mathematical expressions and pulses sequences give sufficient information for the person skilled in the particular art of NMR imaging systems and methods for an

apparatus to be derived from said text locations and from the disclosure of US-A-4 297 637.

2.1.6 The application as filed mentions that there is a significant difference between the line imaging method known from US-A-4 297 637 and the method of the invention (see page 4, line 34-page 5, line 10). It is to be noted that, concerning the distinguishing structural features between the apparatus known from US-A-4 297 637 and the apparatus of the invention, the above-mentioned Affidavit states that the disclosure of the physical principles, signal processing, mathematical expressions and pulse sequences in the patent application as originally filed gives a direct and unambiguous relation between the desired method and any known NMR imaging apparatus or system, and that, in particular, the apparatus described in US-A-4 297 637, when computer 96 is suitably programmed by one skilled in the art, is capable of implementing the desired method (see the last Paragraph of P.3 of the Affidavit). Neither the application as filed nor the available prior art disclose any technical information which could be considered as inconsistent with this technical statement of the Affidavit. Therefore, the Board is of the opinion that the application as filed also implicitly discloses a NMR imaging apparatus, such as the one known from US-A-4 297 637, which, when the necessary computer is suitably programmed, is capable of implementing and practicing the method of the invention as defined in Claim 1.

2.1.7 Thus, since no explicit or implicit disclosure of any other apparatus can be detected in the application as filed, the Board is of the opinion that there are only two apparatus disclosed, implicitly, in the application as filed, i.e. the apparatus of US-A-4 297 637, and the same

apparatus, but when the necessary computer is suitably programmed for practicing the method of Claim 1.

2.1.8 In the Board's opinion, the subject-matter of Claim 14 differs from the implicit disclosure of the apparatus of the invention, i.e. a known apparatus such as the apparatus of US-A-4 297 637, but with the necessary computer being suitably programmed for practicing the method of Claim 1 (see point 2.1.7), in that it does not include said specific feature that the computer of the apparatus claimed is suitably programmed for practicing the method of Claim 1. It is to be noted that "an apparatus for producing NMR images free of aliasing artifacts" is interpreted, in accordance with the general interpretation of claims at the EPO, as being "an apparatus which is suitable for producing NMR images free of aliasing artifacts", and therefore which can produce other effects. Therefore, since the apparatus of Claim 14 may also be programmed for producing said other effects, it differs from an apparatus when suitably programmed for carrying out the method of Claim 1 for producing NMR images free of aliasing artifacts and from the apparatus known from US-A-4 297 637, which are the only apparatuses implicitly disclosed in the original application. Therefore, Claim 14 contains subject-matter extending beyond the content of the application as filed and is consequently not allowable.

2.1.9 The Appellant has first argued that, since the apparatus of Claim 14 only differs from the the apparatus of US-A-4 297 637, or from any of the apparatus known from the relevant prior art, for instance from the documents cited during the examination procedure, in that it is set up to operate according to a new program, it must be concluded that the apparatus of Claim 14 is already sufficiently disclosed in the application as filed by taking into

account the cited US-A-4 297 637 or the relevant prior art. However, the Board does not find this argument convincing since Claim 14, in its present wording, does not mention any computer, does not specify that it is set up to operate according to a new program, and that it carries out the method of Claim 1.

2.1.10 The Appellant has also argued that, since the Examining division has not made any objection about the disclosure of the method in the application as filed, there should be also sufficient disclosure of the apparatus for carrying out said method in the application as filed. This argument is not convincing for the following reasons. Article 83 EPC states that the European patent application must disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. However, Article 123(2) EPC is not concerned with sufficient disclosure of the invention, but with additional subject-matter not disclosed in the application as filed. In the present case, the Board agrees with the finding of the Examining division that the disclosure of the original patent application is sufficiently clear and complete for a person skilled in the art to carry out the invention. However, as indicated above, this does not result in Claim 14, in its present wording, satisfying the requirement of Article 123(2) EPC because a general apparatus for producing NMR images in so far as it was not already known has not been disclosed in the application as filed.

2.1.11 The Appellant has argued that, since the Examining division has not made any objection about the clarity of the method claims and their support by the description, the apparatus claims should also be considered as satisfying the requirements of clarity and of support by

the description of Article 84 EPC. However, as indicated above, Article 123(2) EPC is concerned with additional subject-matter and not with clarity or support by the description. Therefore, said argument is not considered as relevant.

2.1.12 In answer to the argument presented by the Appellant that the Applicant for a patent should have the right to file claims of different categories to ensure an adequate protection for its invention, it is to be noted that this right is not denied and is even written in the EPC (cf. Rule 30 EPC). However, amendments which result in the subject-matter of the application being extended beyond the content of the application as filed are not allowable (Art. 123(2) EPC). Therefore, since Claim 14, with its present wording, discloses subject-matter which goes beyond the content of the application as filed, the argument of the Appellant concerning this right is not relevant.

2.1.13 Similar considerations apply to the argument that the extent of protection, after the grant of the European patent, will depend on the respective national laws and that, therefore, the European Patent Office should allow claims providing the largest possible protection for the invention. The EPC does not provide any regulation concerning the allowability of amendments resulting in a change of the extent of protection during examination proceedings (compare with Article 123(3) EPC, which is concerned with the European patent during opposition proceedings). However, the Boards of appeal have to comply with the provisions of the EPC (Art. 23(3) EPC) and since Claim 14, with its present wording, discloses subject-matter which goes beyond the content of the application as filed, it is not allowable (Art. 123(2) EPC).

3. **Auxiliary requests No. 1 and 2**

Said requests are not allowable since they include Claim 14 of the main request, which is not allowable for the reasons given in Paragraphs 2 to 2.1.13 above.

4. **Auxiliary request No. 3**

- 4.1 Claim 14, which corresponds to Claim 27 of the main request, discloses an apparatus for carrying out the method of Claim 1 producing NMR images free of aliasing artifacts, comprising the apparatus features (a) to (h) which result from the insertion of "means for" in the corresponding method features (a) to (h) of Claim 1. As mentioned in relation to the main request, the Board is of the opinion that the application as filed implicitly discloses a known apparatus which is capable of implementing and practicing the desired method when a computer part of said apparatus is suitably programmed for carrying out said method, i.e. the method of Claim 1. However, an apparatus for carrying out the method of Claim 1 producing NMR images free of aliasing artifacts, comprising the hardware features (a) to (h) of Claim 14, is to be interpreted as an apparatus which is suitable for carrying out the method of Claim 1 producing NMR images free of aliasing artifacts, comprising the hardware features (a) to (h) of Claim 14. It is to be noted that said apparatus, which is suitable for carrying out the method of Claim 1 producing NMR images free of aliasing artifacts, comprising the hardware features (a) to (h) of Claim 14, is also suitable for carrying out other methods, for instance the method of the cited US-A-4 297 637. Moreover, said "apparatus which is suitable for" is not mentioned as being suitably programmed for carrying out

the method of Claim 1. Therefore, the apparatus for carrying out the method of Claim 1 producing NMR images free of aliasing artifacts, comprising the hardware features of Claim 14, can be operated according to the method of Claim 1, but also according to other methods. Said other methods, which are comprised in the subject-matter of Claim 14, are not disclosed in the application as filed and are different from the programs which are disclosed in the application as filed. Therefore, the apparatus of Claim 14 is novel as compared to the apparatus for producing NMR images free of aliasing artifacts suitably programmed for carrying out the method of Claim 1 implicitly disclosed in the application as filed. Therefore, the European patent application has been amended in such a way that it contains subject-matter which extends beyond the content of the application as filed and, therefore, the auxiliary request No.3 is not allowable.

4.2 The Appellant has argued that Claim 14 of auxiliary request No. 3 is of the type considered as allowable by the above mentioned VICOM decision. Indeed, Claim 8 of the VICOM decision is a claim directed to an apparatus for carrying out the method of Claim 1. However, since the teaching of a decision should always be interpreted in relation to the case treated, and since the VICOM decision was not concerned with additional subject-matter, said argument of the Appellant is not considered as relevant.

5. **Auxiliary request No. 4**

Said requests are not allowable since they include Claim 14 of the main request, which is not allowable for the reasons given in Paragraphs 2 to 2.1.13 above.

6. **Auxiliary request No. 5**

6.1 Since Claim 14, which corresponds to Claim 27 of the main request, is identical with Claim 14 of Auxiliary request No. 3, it is not allowable for the same reasons.

7. **Auxiliary request No. 6**

7.1 **Allowability of the amendments**

Claim 14, which corresponds to Claim 28 of the main request, claims an apparatus when suitably programmed for carrying out the method of Claim 1 for producing NMR images free of aliasing artifacts, comprising the apparatus features (a) to (h) which result from the insertion of "means for" in the corresponding method features (a) to (h) of Claim 1. Indeed, as mentioned in relation to the main request, the Board is of the opinion that the application as filed implicitly discloses a known apparatus which is capable of implementing and practicing the desired method when a computer part of said apparatus is suitably programmed for carrying out said method, i.e. the method of Claim 1. Therefore, since the subject-matter of Claim 14 does not differ from the apparatus implicitly disclosed in the application as filed, the European patent application has not been amended in such a way that it contains subject-matter which extends beyond the content of the application as filed and auxiliary request No. 6 is allowable (Art. 123(2) EPC).

7.2 **Novelty**

According to the above mentioned decision T 208/84 VICOM, a computer of known type set up to operate according to a new program cannot be considered as forming part of the

state of the art as defined by Article 54(2) EPC (see the five first lines of Paragraph 14 of said decision). In the present case, the subject-matter of Claim 14 of Appellant's auxiliary request No. 6 differs from the apparatus known from the available prior art, and for instance from US-A-4 297 637, only in that sense that it is suitably programmed for carrying out the method of Claim 1. It is to be noted that the VICOM decision also concerns an apparatus for carrying out the method according to Claim 1 (see the last Paragraph of the Facts and Submissions for the apparatus Claim 8). Therefore, the Board is of the opinion, following the VICOM decision, that the subject-matter of the present Claim 14 can be considered as being novel with regard to the available prior art.

7.3 Inventive step

Since the method according to Claim 1 is not suggested in the available prior art, it can be concluded that the apparatus known from US-A-4 297 637, when suitably programmed for implementing said method, implies an inventive step. Thus, also the subject-matter of Claim 14 implies an inventive step in the sense of Article 56 EPC and, therefore, Claim 14 is allowable (Art. 52(1) EPC). Moreover, since the Board does not see any ground to challenge the statement of the Examining division that method Claims 1-13 are allowable, and since Claims 15-26 are dependent Claims, all Claims of the present case are allowable.

8. Auxiliary requests No. 7 and 8

8.1 Since Applicant's auxiliary request No. 6 is allowable, his subsequent subsidiary requests 7 and 8 need not be further considered by the Board.

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 with the order to grant a patent on the basis of the auxiliary request No. 6 of the Appellant presented at the oral proceedings of 6 November 1990, which reads as follows:

Description: pages 1 to 13 as filed during the oral proceedings:

Claims: No.1 to 13 and 15 to 26 as filed during the oral proceedings, with Claim 28 of the main request substituted for Claim 14;

Drawings: Sheets 1/2 and 2/2 as originally filed.

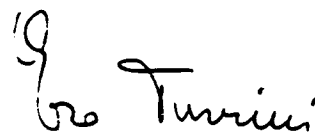
The Registrar



P. Martorana



The Chairman



E. Turrini