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Datasheet for the decision of 18 March 2024

Case Number: T 1304/22 - 3.5.05

Application Number: 16867071.9

Publication Number: 3376950

IPC: A61B5/04, G06F3/048, G06F17/20, G06Q50/22

Language of the proceedings: EN

Title of invention:
Representation of symptom alleviation

Applicant:
Cognifisense, Inc.

Headword:
Pain reduction/COGNIFISENSE

Relevant legal provisions:
EPC Art. 56
RPBA 2020 Art. 13(2)

Keyword:
Inventive step - main and auxiliary requests 1 to 11 (no)
Admittance of claim amendments after notification of board's communication - 1st to 4th auxiliary requests (no): no cogent reasons justifying exceptional circumstances

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Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 1304/22 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 18 March 2024

Appellant: (Applicant)	Cognifisense, Inc. 1271 Lakeside Drive, Suite 3121 Sunnyvale, CA 94085 (US)
Representative:	Margotti, Herwig Franz Schwarz & Partner Patentanwälte Wipplingerstrasse 30 1010 Wien (AT)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 8 December 2021 refusing European patent application No. 16867071.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair	K. Bengi-Akyürek
Members:	E. Konak
	F. Bostedt

Summary of Facts and Submissions

I. The appeal is against the examining division's decision to refuse the present application. The examining division decided that the main request and auxiliary requests 1 to 11 then on file did not comply with Article 56 EPC.

II. In the present decision, reference is made to the following documents:

D2: US 2011/0213197
D5: US 5 546 943.

III. Oral proceedings were held before the board on 18 March 2024, during which the appellant requested that the board remit the case to the examining division and filed new auxiliary requests 1 to 4.

The appellant's final requests were that the decision under appeal be set aside and that a patent be granted on the basis of the claims of the **main request** or on the basis of the claims of one of the **auxiliary requests 1 to 4** filed at the oral proceedings before the board, or on the basis of one of the **auxiliary requests 1 to 11** re-filed with the statement setting out the grounds of appeal.

At the end of the oral proceedings, the board's decision was announced.

IV. Claim 1 of the **main request** reads as follows:

"A system for representing symptoms and symptoms alleviation, comprising:

a processor;

a head mounted virtual reality display; and

a memory operatively coupled to the processor and configured for storing data instructions that, when executed by the processor, cause the system to perform a method, the method comprising:

creating, by the processor, a first digital model for generating a sensory environment comprising first sensory signals, wherein the sensory environment includes an avatar of a user, wherein the avatar represents a body of the user;

causing the head mounted virtual reality display to execute the first digital model to generate the sensory environment;

receiving a description of a symptom, wherein the symptom comprises a chronic symptom, wherein the symptom comprises pain;

creating a second digital model for the symptom, wherein creating the second digital model is based on the description of the symptom, wherein the second digital model causes generation of second sensory signals;

causing the head mounted virtual reality display to generate the second sensory signals within the sensory environment based on the second digital model;

creating a third digital model of an alleviation or removal of the symptom based on the first or the second digital models, wherein the third digital model causes generation of third sensory signals, wherein at least a portion of the second sensory signals and/or third sensory signals change continuously over time to human perception; and

causing the head mounted virtual reality display to generate the third sensory signals within the sensory environment based on the third digital model,

wherein the second or third sensory signals are generated on or within the avatar."

Claim 1 of **auxiliary request 1 filed at the oral proceedings before the board** differs from claim 1 of the main request by the following text (with the additions underlined):

"[...]
creating a second digital model for the symptom, wherein creating the second digital model is based on the description of the symptom, wherein the second digital model causes generation of second sensory signals, and wherein the digital model of the symptom is created based on one or more templates or is created new by the user or a helper;
[...]"

Claim 1 of **auxiliary request 2 filed at the oral proceedings before the board** differs from claim 1 of the main request by the following text (with the additions underlined):

"[...]
creating a second digital model for the symptom, wherein creating the second digital model is based on the description of the symptom, wherein the second digital model causes generation of second sensory signals, and wherein the digital model of the symptom is created based on one or more templates or is created new and drawn free-hand by the user or a helper;
[...]"

Claim 1 of **auxiliary request 3 filed at the oral proceedings before the board** differs from claim 1 of

the main request by the following text (with the additions underlined):

"[...]
causing the head mounted virtual reality display to generate the third sensory signals within the sensory environment based on the third digital model, wherein the second or third sensory signals are generated on or within the avatar,
wherein the digital models are customized to match the user's own experience of the symptom."

Claim 1 of **auxiliary request 4 filed at the oral proceedings before the board** differs from claim 1 of the main request by the following text (with the additions underlined):

"[...]
causing the head mounted virtual reality display to generate the third sensory signals within the sensory environment based on the third digital model, wherein the second or third sensory signals are generated on or within the avatar,
wherein the system is configured to allow the user or a helper to customize different aspects of the digital models based on user input to match the representations of the symptom with the user's experience."

Claim 1 of **auxiliary request 1** re-filed with the statement setting out the grounds of appeal differs from claim 1 of the main request by the following text (with the additions underlined):

"[...]
creating a third digital model of an alleviation or removal of the symptom based on the first or the second

digital models, wherein the third digital model causes generation of third sensory signals, wherein at least a portion of the second sensory signals and/or third sensory signals change continuously over time to human perception, and wherein the third digital model corresponds to one or more of: a reduction in size of, an increase of a distance from, an evaporation of, a recoloring/discoloration of, a dilution of, a diffusion of, a dissipation of, a relocation of, a reduction in frequency of, a distortion of, a disappearing of, a washing or blowing away of, a removal of, a throwing away of, a silencing of, a slowing of, a melting of, a healing of, a stilling of, or a cooling of the symptom; and
[...]"

Claim 1 of **auxiliary request 2** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 1 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined and the deletions ~~struck-through~~):

"[...]
creating, by the processor, a first digital model for generating a sensory environment comprising first sensory signals, wherein the sensory environment includes an avatar of a user, wherein the avatar represents a body of the user, wherein the sensory environment includes a user interface for providing a description of a symptom or selecting from a set of predefined descriptions, wherein the symptom comprises a chronic symptom, wherein the symptom comprises pain;
causing the head mounted virtual reality display to execute the first digital model to generate the sensory environment;

receiving a description of ~~a~~ the symptom via the user interface or receiving the selected predefined description via the user interface ~~wherein the symptom comprises a chronic symptom, wherein the symptom comprises pain~~;
[...]"

Claim 1 of **auxiliary request 3** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 2 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
receiving the description of the symptom via the user interface, wherein the description is for various pain types including one or more of aching, throbbing, sore, stabbing, shooting, cramping, gnawing, splitting, heavy, or burning, or receiving the selected predefined description via the user interface;
[...]"

Claim 1 of **auxiliary request 4** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 1 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
receiving a description of a symptom, wherein the symptom comprises a chronic symptom, wherein the symptom comprises pain, wherein the description is for various pain types including one or more of aching, throbbing, sore, stabbing, shooting, cramping, gnawing, splitting, heavy, or burning;
[...]"

Claim 1 of **auxiliary request 5** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 4 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
receiving a description of a symptom, wherein the symptom comprises a chronic symptom, wherein the symptom comprises pain, wherein the description is for various pain types including one or more of aching, throbbing, sore, stabbing, shooting, cramping, gnawing, splitting, heavy, or burning,
wherein the system allows the user to select from the various pain types and then modify the pain's location, size, intensity, frequency, depth, or saturation;
[...]"

Claim 1 of **auxiliary request 6** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 5 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
creating a second digital model for the symptom, wherein creating the second digital model is based on the description of the symptom, wherein the second digital model causes generation of second sensory signals, the second digital model being customized to match the user's own experience of the symptom;
[...]"

Claim 1 of **auxiliary request 7** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 6 re-filed with the

statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
creating a third digital model of an alleviation or removal of the symptom based on the first or the second digital models, wherein the third digital model causes generation of third sensory signals, wherein at least a portion of the second sensory signals and/or third sensory signals change continuously over time to human perception, the third digital model being selected by the user from a list of symptom alleviation, reduction, or elimination representations, and wherein the third digital model corresponds to one or more of: a reduction in size of, an increase of a distance from, an evaporation of, a recoloring/discoloration of, a dilution of, a diffusion of, a dissipation of, a relocation of, a reduction in frequency of, a distortion of, a disappearing of, a washing or blowing away of, a removal of, a throwing away of, a silencing of, a slowing of, a melting of, a healing of, a stilling of, or a cooling of the symptom; and
[...]"

Claim 1 of **auxiliary request 8** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 7 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
creating, by the processor, a first digital model for generating a sensory environment comprising first sensory signals, wherein the sensory environment includes an avatar of a user, wherein the avatar

represents a body of the user, wherein the sensory environment includes a landscape, a scene, or a room;
[...]"

Claim 1 of **auxiliary request 9** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 8 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
creating a second digital model for the symptom, wherein creating the second digital model is based on the description of the symptom, wherein the second digital model causes generation of second sensory signals, the second digital model being customized to match the user's own experience of the symptom, the second digital model incorporating an object normally used to produce the effect of aching, throbbing, soreness, stabbing, shooting, cramping, gnawing, splitting, heaviness, or burning pain;
[...]"

Claim 1 of **auxiliary request 10** re-filed with the statement setting out the grounds of appeal differs from claim 1 of auxiliary request 9 re-filed with the statement setting out the grounds of appeal by the following text (with the additions underlined):

"[...]
causing the head mounted virtual reality display to generate the third sensory signals within the sensory environment based on the third digital model, wherein the second or third sensory signals are generated on or within the avatar, wherein audiovisual or other multimedia guidance accompanies one or more of the

first digital model, the second digital model, or the third digital model."

Claim 1 of **auxiliary request 11** re-filed with the statement setting out the grounds of appeal differs from claim 1 of the main request by the following text (with the deletions ~~struck-through~~):

"[...]
causing the head mounted virtual reality display to generate the third sensory signals within the sensory environment based on the third digital model~~, wherein the second or third sensory signals are generated on or within the avatar~~."

Reasons for the Decision

1. Request for remittal to the examining division

1.1 The major point of disagreement between the appellant and the examining division in the case at hand was whether "pain reduction" could be recognised as the technical effect of a virtual reality system, i.e. a system providing "presentation of information", and the level of proof required to credibly demonstrate "pain reduction" as a technical effect.

In its preliminary opinion pursuant to Article 15(1) RPBA, the board disagreed with the examining division in this regard. Nevertheless, the board gave a negative preliminary opinion on inventive step starting from document **D2**, which was also used as one possible starting point in the contested decision. In this context, the board referred to a prior-art document

discussed in D2, paragraph [0018], and introduced it as D5 into the appeal proceedings.

1.2 In its letter of reply to the board's preliminary opinion and at the oral proceedings before the board, the appellant requested that the case be remitted to the examining division, arguing that the citation of a new document in appeal proceedings constituted "special reasons" within the meaning of Article 11 RPBA. Referring to the principle that the primary object of the appeal proceedings is to review the decision under appeal (cf. Article 12(2) RPBA), the appellant argued that the only point to be reviewed in the case at hand was supposed to be the question of the technical effect of the invention. Furthermore, although the contested decision had referred to D2, paragraph [0018], it had not considered document **D5** cited in that paragraph. Therefore, the appeal proceedings did go beyond a review of the decision under appeal in the case at hand. As further considerations, the appellant noted that D5 had been introduced eight weeks before the oral proceedings before the board and it was not possible to give "sufficient reaction" to it within this short time frame. Lastly, the appellant argued that it would be left with "the unfortunate burden of filing a divisional application" if the case were not remitted to the examining division.

1.3 The board was not convinced by these arguments. The aim of the amended Article 11 RPBA is to reduce the likelihood of a remittal and thus undue prolongation of the entire proceedings before the EPO. Accordingly, if all issues can be decided without an undue burden, a board should normally not remit the case (cf. the explanatory remarks to Article 11 RPBA, Supplementary publication 2, OJ 2020, 17). From the fact that the

board had already given a preliminary opinion on inventive step based on D2 and D5, it was self-evident that the board could decide on the issue of inventive step without undue burden. The further considerations cited by the appellant do not change this fact. In particular, the appellant had sufficient time to familiarise itself with document D5 and to respond to the arguments put forward by the board in its preliminary opinion. Therefore, the board did not remit the case to the examining division at that stage.

2. Main request - Inventive step (Article 56 EPC)

2.1 Claim 1 of the **main request** includes the following limiting features (board's labelling):

(a) A system for representing symptoms and symptoms alleviation, comprising: a processor; a head mounted virtual reality display; and a memory operatively coupled to the processor and configured for storing data instructions that, when executed by the processor, cause the system to perform a method, the method comprising:
(b) creating, by the processor, a first digital model for generating a sensory environment comprising first sensory signals, wherein the sensory environment includes an avatar of a user, wherein the avatar represents a body of the user; causing the head mounted virtual reality display to execute the first digital model to generate the sensory environment;
(c) receiving a description of a symptom, wherein the symptom comprises a chronic symptom, wherein the symptom comprises pain; creating a second digital model for the symptom, wherein creating the second digital model is based on the description of the

symptom, wherein the second digital model causes generation of second sensory signals; causing the head mounted virtual reality display to generate the second sensory signals within the sensory environment based on the second digital model;

(d) creating a third digital model of an alleviation or removal of the symptom based on the first or the second digital models, wherein the third digital model causes generation of third sensory signals, wherein at least a portion of the second sensory signals and/or third sensory signals change continuously over time to human perception; and causing the head mounted virtual reality display to generate the third sensory signals within the sensory environment based on the third digital model, wherein the second or third sensory signals are generated on or within the avatar.

2.2 The board agrees with the appellant that, among the cited prior-art documents, document **D2**, in particular Embodiment 2 ("Pain Management") disclosed in paragraphs [0047] and [0048], constitutes the most suitable starting point for assessing inventive step. The appellant argued that the distinguishing features of claim 1 over D2 were that a "second digital model" was created for displaying a "symptom" (cf. feature (c)) and that a "third digital model" was created for displaying an "alleviation or removal of said symptom" (cf. feature (d)). It submitted that these distinguishing features had the technical effect of pain reduction and solved the objective technical problem of achieving an improved virtual reality system for reducing chronic pain.

2.3 Although the examining division did not question that pain reduction was in principle a technical therapeutic

effect, it was not convinced that such an effect was credibly achieved in the case at hand. It essentially considered any effect achieved by displaying a virtual reality scene to a patient to be psychological, subjective and speculative, as opposed to the effect of analgesics. It questioned the causal relationship between virtual reality and pain reduction, in particular noting that some patients in the study group did not report any alleviation of their symptoms.

However, it is not surprising that not all patients respond in the same way to a therapy. Nor was there any objective reason to question whether virtual reality could lead to a therapeutic effect, especially in view of the fact that already the prior-art documents cited by the examining division, e.g. D2, disclose the use of virtual or augmented reality systems for therapeutic purposes. Therefore, although claim 1 is silent as to the details of the respective "digital models", the board, in the appellant's favour, accepts the technical effect and the objective technical problem as submitted by the appellant. Thus, the question to be answered next is whether the distinguishing features of claim 1 of the main request were obvious to the skilled person starting from D2.

2.4 The appellant argued that they were not obvious because document D2 principally taught away from displaying a symptom. Instead, the virtual reality system of D2 was designed as a *relaxation* system to *distract* patients from their symptoms.

However, document D2 also gives an overview of known techniques in the prior art, in which it discusses (paragraph [0015] ff.) prior-art techniques using virtual reality for the treatment of various conditions

by *exposure therapy.* In this context, paragraph [0018] of D2 refers to D5 which "*proposes use of a visualization system using a computer to provide a user with a view of their internal anatomy based on medical scan data.* ***The user acts upon the information in an interactive virtual reality environment by using tools or other devices to diminish a visual representation of an ailment.***" (board's emphasis). Thus, although it may not have been the solution preferred by the authors of document D2, it was nevertheless an alternative solution known to the skilled person at the present application's priority date to display a visual representation of a "symptom" and to display its "alleviation or removal" for the therapy of that symptom, the choice of which would have been obvious. As mentioned above, not all patients respond in the same way to a given therapy. For patients who do not respond well to a first-line therapy, it is obvious to resort to alternative solutions which were already known in the prior art.

2.5 The appellant argued that D2, paragraph [0018] (and indeed D5 discussed in that passage) did not refer to the alleviation or removal of a "symptom" but of an "ailment". "Pain" was not an ailment but a symptom and the underlying ailment could even be unknown in some cases. Furthermore, the method of D5 mentioned in D2, paragraph [0018], was not a method for reduction of pain, but a method to stimulate a psychoneuroimmuno-logical response on the patient's side. Therefore, the skilled person would not have considered the alternative mentioned in D2, paragraph [0018] (or in D5). Instead, they would have considered supplementing the therapy with analgesics or substituting the "head-mounted virtual reality display" with hardware of better quality.

The board is not convinced by these arguments. The general distinction that the appellant makes between an "ailment" and a "symptom" may not be incorrect but it is unduly artificial in the context of *self-guided* therapy by virtual reality. In this context, patients seek medical treatment in the first place to end their "symptoms", such as pain. They generally do not know the underlying ailment until they receive a diagnosis and may never even know what their underlying "ailment" is. Document D2, paragraph [0015] ff. preceding paragraph [0018], discuss an *exposure therapy* for the treatment of a broad range of conditions including psychological conditions, phobias, anxiety and mood disorders, without making a distinction such as that suggested by the appellant.

Therefore, the distinguishing features of claim 1 over D2 were in fact already known in the prior art as a readily available alternative, which the skilled person would have used to modify the system of D2 without the need of any inventive activity.

2.6 Hence, the subject-matter of claim 1 of the main request does not involve an inventive step (Article 56 EPC).

3. Auxiliary requests 1 to 4 filed at the oral proceedings before the board - admittance

3.1 Requests filed at the oral proceedings before the board are not to be taken into account unless there are "exceptional circumstances", justified with "cogent reasons" by the appellant (cf. Article 13(2) RPBA).

3.2 In the case at hand, the appellant argued that the citing of a new document, i.e. D5, by the board

constituted an exceptional circumstance. The amendments made in auxiliary requests 1 to 4 filed at the oral proceedings before the board were intended to emphasise the distinction between the subject-matter of the invention and the disclosure of D5.

3.3 However, the board reached the conclusion that the subject-matter of claim 1 of the main request lacked an inventive step also having regard to the disclosure of D2 *alone*. Thus, there are no "exceptional circumstances" justifying the filing of an amendment to the appellant's appeal case.

3.4 Therefore, the board did not admit auxiliary requests 1 to 4 filed at the oral proceedings before the board into the appeal proceedings (Article 13(2) RPBA).

4. Auxiliary requests 1 to 11 re-filed with the statement setting out the grounds of appeal

4.1 Regarding auxiliary requests 1 to 11 re-filed with the statement setting out the grounds of appeal, the appellant stated in its statement of grounds of appeal that the amendments were made to "avoid unintended interpretations" of several features of claim 1 and to "focus on the credible therapeutic effect".

4.2 Therefore, the board noted in its preliminary opinion that it understood the features of claim 1 of these requests, alleged to contribute to an inventive step, to be the same as those of claim 1 of the main request. Since the credibility of the therapeutic effect was not questioned in the present appeal proceedings (see also point 2.3 above), the reasons given for lack of inventive step of the subject-matter of claim 1 of the main request applied also to claim 1 of auxiliary

requests 1 to 11 re-filed with the statement setting out the grounds of appeal.

4.3 Neither in its letter of reply to the board's preliminary opinion, nor at the oral proceedings did the appellant submit any argument as to why the additional features of claim 1 of these requests should involve an inventive step.

4.4 Hence, the subject-matter of claim 1 of auxiliary requests 1 to 11 re-filed with the statement setting out the grounds of appeal does not involve an inventive step either (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

S. Lichtenvort K. Bengi-Akyürek

Decision electronically authenticated