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Case Number: T 0891/17 - 3.5.05

Application Number: 07709904.2

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Title of invention:
SELF-ADAPTIVE CARE PLAN GOAL MODULES

Applicant:
Koninklijke Philips N.V.

Headword:
Goal modules/PHILIPS

Relevant legal provisions:
EPC Art. 56, 84

Keyword:
Inventive step - (no) (Main request and auxiliary requests 1 to 15)
Claims - clarity (no) (Auxiliary requests 16 to 18)

Decisions cited:

Catchword:

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Case Number: T 0891/17 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 25 November 2019

Appellant: (Applicant)	Koninklijke Philips N.V. High Tech Campus 5 5656 AE Eindhoven (NL)
Representative:	de Haan, Poul Erik Philips International B.V. Philips Intellectual Property & Standards High Tech Campus 5 5656 AE Eindhoven (NL)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 8 November 2016 refusing European patent application No. 07709904.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair	A. Ritzka
Members:	E. Konak
	F. Blumer

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division to refuse the patent application for lack of an inventive step (Article 56 EPC) over the following document:

D1: Hegarty, D., "Taking health personally", Philips Research Password, September 2005.

II. In its statement setting out the grounds of appeal, the appellant requested that the decision be set aside and a patent be granted on the basis of the main request of claims 1 to 12 on which the contested decision is based, or auxiliary requests 1 to 3 of claims 1 to 12 or auxiliary requests 4 to 18 of claims 1 to 10, all the auxiliary requests having been filed with the statement setting out the grounds of appeal. Auxiliary requests 1 to 15 are identical to those on which the contested decision is based. The appellant requested oral proceedings as an auxiliary measure.

III. The board summoned the appellant to oral proceedings. In reply to the summons to oral proceedings, the appellant withdrew its request for oral proceedings and requested a decision as the file stands. The scheduled oral proceedings were thus cancelled.

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

"A health management system (10) comprising:

a host center (16) including a server (42), the server being arranged to store

(i) a plurality of goal modules (78, 198, 298), a goal module (78, 198, 298), including one or more content sessions (80, 82, 200, 202, 204, 224, 300, 318) cooperatively directed toward achieving a projected health management goal;

(ii) at least one patient profile (130) indicating at least which goal modules are assigned to a patient profiled by the at least one patient profile;

a patient station (14) coupled to the host center (16) and including a user interface (84), the user interface (48) being configured for presenting the content sessions (80, 82, 200, 202, 204, 224, 300, 318);

at least one feedback path (48, 86, 140, 142, 210, 234, 312, 322, 410) from the patient station to the host center providing at least one input indicative of a trend in a patient progress toward achieving the projected health management goal, wherein the at least one feedback path (48, 86, 140, 142, 210, 234, 312 322, 410) includes a biometric device (86, 312) and a survey, quiz, test, or questionnaire including at least one question presented by the user interface (48), wherein the at least one input including a user response via the user interface (48) and a vital sign measurement acquired by the biometric device; and

a care plan manager (84) included in the server (42), which is arranged to at least one of adds, deletes or modifies at least one of the goal modules (78, 198, 298) and content sessions (80, 82, 200, 202, 204, 224, 300, 318) of the goal modules based at least on the one input and intervention rules so that the patient’s

progress toward the projected health management goal is optimized."

V. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the following text has been added at the end of point (i):

"the projected health management goal including at least one of reducing weight, stopping smoking, learning to self-administer a medical intervention, learning to follow a dietary restriction, learning to follow a dietary requirement, and performing a physical exercise; the content sessions including at least one of pre-recorded audio/video content, textual content, interactive survey, quiz, questionnaire, or test content, pre-recorded step-by-step interactive audio/ video content;"

VI. Claim 1 of auxiliary request 2 differs from claim 1 of the main request, and claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 1, in that the text "so that the patient’s progress toward the projected health management goal is optimized" (at the end of the claim) has been deleted.

VII. Claim 1 of auxiliary request 4 differs from claim 1 of the main request, claim 1 of auxiliary request 5 differs from claim 1 of auxiliary request 1, claim 1 of auxiliary request 6 differs from claim 1 of auxiliary request 2, and claim 1 of auxiliary request 7 differs from claim 1 of auxiliary request 3 in that the following text has been added after the text "at least one feedback path (48, 86, 140, 142, 210, 234, 312, 322, 410) from the patient station to the host center providing at least one input indicative of a trend in a

patient progress toward achieving the projected health management goal,":

"wherein the trend includes one of: a physiological parameter measurement value beyond a predetermined threshold, an answer to the survey which matches a preselected criteria, a physiological parameter measurement value which matches a preselected criteria, and a physiological parameter measurement value beyond a dynamic threshold based on a prior measurement of the physiological parameter;"

VIII. Claim 1 of auxiliary request 8 differs from claim 1 of auxiliary request 4, claim 1 of auxiliary request 9 differs from claim 1 of auxiliary request 5, claim 1 of auxiliary request 10 differs from claim 1 of auxiliary request 6, and claim 1 of auxiliary request 11 differs from claim 1 of auxiliary request 7 in that the last paragraph of the claim reads as follows (with the additions underlined):

"a care plan manager (84) included in the server (42), which is arranged to grade the user response and generate a score indicating how well the patient scored in the survey, and to at least one of adds, deletes or modifies at least one of the goal modules (78, 198, 298) and content sessions (80, 82, 200, 202, 204, 224, 300, 318) of the goal modules based at least on the one input and intervention rules and the score so that the patient's progress toward the projected health management goal is optimized."

IX. Claim 1 of auxiliary request 12 differs from claim 1 of auxiliary request 8, claim 1 of auxiliary request 13 differs from claim 1 of auxiliary request 9, claim 1 of auxiliary request 14 differs from claim 1 of auxiliary

request 10, and claim 1 of auxiliary request 15 differs from claim 1 of auxiliary request 11 in that the following text has been added before the "and" at the end of the penultimate paragraph of the claim:

"wherein the user interface (48) is further being configured for initiating surveys by rules applied to patient physiological parameter measurements and patient responses to subjective questions;"

X. Claim 1 of auxiliary request 16 differs from claim 1 of auxiliary request 13 in that the following text has been added at the end:

"an intervention rules engine (150) configured to control the content sections (80, 82, 200, 202, 204, 224, 300, 318) of the goal modules (78, 198, 298) based on parameters being set to trigger specific actions, wherein the specific actions include, schedule vital sign or other measurement to be taken, schedule questionaire [sic] to be answered, schedule video to be watched, change a schedule of videos to be watched, send message to the patient, increase/decrease a frequency of reinforcement feedback, customize reinforcement messages, schedule assessment to be made by the clinican [sic], notify the clinican [sic] or administrator,

wherein the care plan manager (84) is arranged to treat the response of the patient to vairous [sic] *stimuli,* i.e. interactons [sic] or content, as a dynamical system, and

wherein the care plan manager (84) is configured to adjust at least one of the goal module (78, 198, 298) and content sessions (80, 82, 200, 202, 204, 224, 300,

318) of the goal modules based on a solution to a constrained optimization problem based on approximations predicted by the care plan manager (84) as the dynamical system"

XI. Claim 1 of auxiliary request 17 differs from claim 1 of auxiliary request 16 in that the following text has been added at the end:

"wherein the intervention rules engine (150) is configured to update the interventional rules based on approximations predicted by the care plan manager (84) as the dynamical system"

XII. Claim 1 of auxiliary request 18 differs from claim 1 of auxiliary request 17 in that the following text has been added at the end:

"wherein the approximations predicted by the care plan manager (84) as the dynamical system is performed by finding several constrained, linear approximations and treat the choosing of content as a constrained optimization problem:
prediction(t+1) = state_history(t) statc(t) + stimuli_response(t) stimuli(t)
where the constraints are:
- the elements of stimuli(t) is [sic] either be 1 or 0, indicating the particular content or interaction is delivered at time t
- the desired state, possibly including smoothness or other qualities of the state change through the usual replication in the state vector, is known"

Reasons for the Decision

1. Main request and auxiliary requests 1 to 15

1.1 As auxiliary request 13, among all these requests, is the one having all the features present in various permutations, the contested decision chose to base its assessment of inventive step on auxiliary request 13. The board will do the same.

1.2 The contested decision found claim 1 of auxiliary request 13 to differ from the closest prior art D1 in the following features:

a. "wherein the user interface is further being configured for initiating surveys by rules applied to patient physiological parameter measurements and patient responses to subjective questions;"

b. "a care plan manager included in the server, which is arranged to grade the user response and generate a score indicating how well the patient scored in the survey, and to at least one of adds, deletes or modifies at least one of the goal modules and content sessions of the goal modules based at least on the one input and intervention rules and the score so that the patient's progress toward the projected health management goal is optimized".

1.3 In the statement setting out the grounds of appeal, the appellant argued that, although D1 disclosed the concept of tailoring the information for a specific user at a high level, it was silent on how this tailoring was done. The solution according to the invention combined several parameters to adjust the content of the information presented to the user. The

combined input of parameters had the technical effect that the judgement with regard to the content was more reliable and less error-prone (see the statement setting out the grounds of appeal, in particular pages 11 and 12 relating to the main request. The appellant repeats the same formulation of technical effect for auxiliary requests 1 to 15: cf. page 21, last four paragraphs; page 22, penultimate paragraph to page 23, third paragraph; and page 24, second to fifth paragraphs).

1.4 The appellant's submissions do indeed indicate that the effect of the judgement in claim 1 of auxiliary request 13 is that the cognitive content of the "goal modules", e.g. videos, presented to the user is modified. It is well-established case law that the cognitive content of information is not technical. Therefore, a decision as to which cognitive content should be presented to the user does not have any technical character. What the appellant identifies as technical effects of the distinguishing features, i.e. the reliability of this non-technical decision or its being less error-prone, are not technical effects, but merely indicate the semantic or cognitive suitability of the content of the information to the users' needs, which is not a technical effect.

1.5 As its distinguishing features over the prior art do not have any technical effect, claim 1 of auxiliary request 13 does not involve an inventive step (Article 56 EPC). This conclusion also applies *a fortiori* to claim 1 of the main request and auxiliary requests 1 to 12 and 14 to 15.

2. Auxiliary requests 16 to 18

2.1 Claim 1 of auxiliary requests 16 to 18 comprises features introduced from a brief and unclear passage of the description on page 13, line 10 to page 14, line 6. It is impossible for the skilled person to relate this unclear passage to the rest of the description, since its abstract vocabulary, in particular the terms "stimulus", "response-stimuli model", "constrained, linear approximations" and "constrained optimization problem", is not explained within the context of the invention and does not reappear anywhere else in the description. The formula

prediction (t+1) = state_history(t) state(t) + stimuli_response(t) stimuli(t)

on page 13, line 17 is not explained anywhere and so is unintelligible.

2.2 Therefore, the features introduced from this passage, in particular the expressions "treat the response of the patient to vairous [sic] *stimuli*, i.e. interactons [sic] or content, as a dynamical system", "based on a solution to a constrained optimization problem" and "based on approximations predicted by the care plan manager as the dynamical system" render claim 1 of auxiliary requests 16 to 18 unclear (Article 84 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chair:

K. Götz-Wein A. Ritzka

Decision electronically authenticated