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**Datasheet for the decision
of 15 February 2019**

Case Number: T 2224/15 - 3.5.05

Application Number: 09796859.8

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IPC: G06F3/01, A63F13/02, H04M1/725

Language of the proceedings: EN

Title of invention:
Method and apparatus for generating mood-based haptic feedback

Applicant:
Immersion Corporation

Headword:
Mood-based feedback/IMMERSION

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no)



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Case Number: T 2224/15 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 15 February 2019

Appellant: Immersion Corporation
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Representative: Hofstetter, Schurack & Partner
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 17 July 2015
refusing European patent application
No. 09796859.8 pursuant to Article 97(2) EPC**

Composition of the Board:

Chair A. Ritzka
Members: K. Bengi-Akyuerek
A. Jimenez

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division to refuse the present European patent application for lack of novelty (Article 54 EPC) with respect to the claims of a main request and a first auxiliary request and for lack of inventive step (Article 56 EPC) with respect to the claims of a second, third and fourth auxiliary request. The objections under Articles 54 and 56 EPC were based essentially on the following prior-art documents:
- D4:** C.Y. Chen et al.: "ComSlipper: An Expressive Design to Support Awareness and Availability", Proceedings of the ACM conference CHI 2006, pp. 369-374, April 2006;
- D8:** R.L. Mandryk et al.: "A Continuous and Objective Evaluation of Emotional Experience with Interactive Play Environments", Proceedings of the ACM conference CHI 2006, pp. 1027-1036, April 2006;
- D9:** WO-A-2009/002577;
- D12:** US-A-2006/0066569.
- II. With its statement setting out the grounds of appeal, the appellant re-filed all the claim requests underlying the appealed decision and requested that the examining division's decision be set aside and that a patent be granted on the basis of one of those claim sets.
- III. In a communication annexed to the summons to oral proceedings pursuant to Article 15(1) RPBA, the board gave its preliminary opinion on the appeal. In particular, it endorsed the findings of the decision under appeal as regards novelty and inventive step

(Articles 54 and 56 EPC), mainly having regard to prior-art documents D4, D12, D8 and D9.

IV. With a letter of reply, the appellant submitted amended claims according to a fifth and a sixth auxiliary request.

V. Oral proceedings were held on 15 February 2019, during which the appellant withdrew all its claim requests on file except for the fourth auxiliary request, re-labelled as "new main request".

The appellant's final request was that the decision under appeal be set aside and that a patent be granted on the basis of the "new main request" filed with the statement setting out the grounds of appeal.

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

VI. Claim 1 of the "**new main request**" reads as follows:

"A haptic system (100), characterized in that:
a first portable device (102) comprising
a sensing device (114) comprising sensors configured to sense mood information relating to a user of the first portable device (102) by sensing the user's facial expressions, wherein the user's emotional state is deduced from certain facial expressions in video recordings,
a second portable device (106) remote from the first portable device (102) and in communication with the first portable device (102), the second portable device (106) comprising
a haptic generator (130) configured to generate haptic feedback,

wherein

the first portable device further comprises
a digital processing unit coupled to the sensing device (114) and configured to determine a mood of the user of the first portable device based on the sensed mood information, generate a haptic signal based on the determined mood of the user of the first portable device, and causes the haptic signal to be communicated to the second portable device over a wireless communication network (104),

wherein the haptic generator (130) is configured to generate the haptic feedback in accordance with the haptic signal."

Reasons for the Decision

1. *The present invention*

The present application is concerned with providing haptic feedback in accordance with a user's current mood or emotional state from one portable device to another one via a wireless communication network. The user's mood or state is derived in particular from the user's biometrics data such as heart rate, blood pressure, facial expressions, etc. The alleged technical problem to be solved by the present invention is to provide visual assistance during the operation of the human-machine interface (see paragraph [0004] of the application as filed).

2. NEW MAIN REQUEST

Claim 1 of the new main request is identical to claim 1 of the fourth auxiliary request underlying the impugned

decision.

2.1 *Novelty and inventive step (Articles 54 and 56 EPC)*

The board judges that the subject-matter of present claim 1 is novel but does not involve an inventive step, for the reasons set out below.

2.1.1 The board concurs with the assessment of inventive step of the then fourth auxiliary request as conducted in the impugned decision starting from prior-art document **D12** (see appealed decision, Reasons 16).

2.1.2 In particular, it is apparent to the board that document D12 discloses the following limiting features of present claim 1, as labelled by the board (emphasis added by the board):

A haptic system comprising:

- A) a first portable device ("Alice's phone") comprising a sensing device comprising sensors configured to sense mood information (expressions such as "laugh", "giggle", "hug", etc.) relating to a user of the first portable device (see e.g. paragraph [0070] and paragraph [0071]: "... Alice ... sending a 'laugh' sensation to Bob, e.g., by pressing a key on her mobile phone that is assigned with a haptic code corresponding to a laugh sensation ...");
- B) ~~by sensing the user's facial expressions, wherein the user's emotional state is deduced from certain facial expressions in video recordings;~~
- C) a digital processing unit ("processor 120"; see e.g. Fig. 1) coupled to the sensing device and configured to determine a mood of the user of the first portable device based on the sensed mood

information, to generate a haptic signal ("haptic code") based on the determined mood of the user of the first portable device and to cause the haptic signal to be communicated to the second portable device over a wireless communication network (see e.g. paragraph [0070]: "*... user-interface members ... are each associated with a haptic code ... This allows haptic effects to be transmitted and experienced, e.g., in an interactive conversation ...*");

D) a second portable device ("Bob's phone"), remote from the first portable device, and in communication with the first portable device, the second portable device comprising a haptic generator configured to generate haptic feedback in accordance with the haptic signal (see e.g. paragraph [0071], second sentence: "*This causes a signal to be transmitted from Alice's phone to Bob's phone, and a corresponding haptic effect to be output to Bob's phone ...*").

2.1.3 As to feature A), the appellant argued that D12 did not disclose that mood information is sensed but that it only described receiving information by detecting pressed keys relating to emotions.

The board finds, however, that the handheld communication device 100 of D12 has indeed to "sense", i.e. to detect, the respective key depression and, given that the key depression relates to a mood status (such as "laugh", "giggle", "hug", etc.; see paragraph [0070]), the device - in the absence of any more specific definition in claim 1 - in fact senses a user's mood information, in accordance with feature A) of claim 1.

- 2.1.4 As to feature B), i.e. that the user's emotional state is to be deduced from certain facial expressions sensed by video recordings, the board accepts that it is not directly and unambiguously derivable from the disclosure of D12. Hence, the subject-matter of present claim 1 is considered to be novel over D12 (Article 54 EPC).
- 2.1.5 As to the assessment of inventive step, the board holds that D12 is a suitable starting point, since it is likewise concerned with providing haptic feedback to users of portable communication devices (see e.g. D12, abstract). This was endorsed by the appellant at the oral proceedings before the board. Moreover, document D12 also teaches that haptic signals are transmitted in an "interactive conversation" (see e.g. paragraph [0070], last sentence) and that the haptic signal may also contain video images taken by the user's mobile phone (see e.g. paragraph [0071], third sentence).
- 2.1.6 The appellant argued that claim 1 solved the objective technical problem of "how to apply a more unconscious and less troublesome way of communicating user emotions". However, the board does not consider such a problem to be credibly solved by the features of present claim 1 due to the lack of any information on the extent of user involvement in initiating and terminating the respective sensing and communicating steps. Therefore, the board rather holds that present claim 1, based on distinguishing feature B), relates to the less ambitious objective problem of "how to find alternative ways of determining the user's mood during an interactive conversation in the system of D12".

2.1.7 Starting from the teaching of D12 and tasked with the above objective technical problem, the person skilled in the field of haptic devices would look for viable alternative approaches to the determination of a user's current mood or emotional state and would, for example, consider prior-art document **D8** that is likewise concerned with the derivation of a user's mood information from various parameters relating to the user's physiology such as heart rates or facial expressions in the context of video-game applications (see e.g. abstract of D8).

In particular, it is apparent to the board that D8 teaches that a user's emotional state may be derived from facial expressions (see e.g. page 1028, left-hand column, fourth paragraph: *"Using video to code ... facial expressions ... is a rich source of data ..."*; page 1031, left-hand column, third paragraph: *"... A camera captured both of the players, their facial expressions and their use of the controller ..."*).

From that teaching, the skilled person would deduce that a user's current mood may well be determined by way of recordings of the user's facial expressions. Hence, in the board's view, the skilled person would simply apply video recordings of the communicating user's face by means of the user's mobile phone in D12 (see e.g. paragraph [0071], third sentence: *"... Alice can include a haptic code in an outgoing message (which may also contain a video image ... taken by her mobile phone ...) to be transmitted to Bob ..."*) in order to subsequently derive the user's mood or emotional state (such as "laugh", "hug", etc., in the system of D12). Accordingly, the skilled person would arrive exactly at the solution of present claim 1 without the need of

inventive skills.

- 2.1.8 As regards the teaching of document D8, the appellant argued at the oral proceedings before the board that camera recordings of the user's facial expressions were only performed as a visual *control* in the experimental set-up of the electromyography (EMG)-based facial measurements (referring to D8, page 1031, left-hand column, third paragraph) and not for the purpose of actually detecting the current facial expressions of a user.

The board is not persuaded by this argument. This is because D8 is cited for the mere purpose of demonstrating that facial expressions may indeed be used for deriving a user's mood or emotional state as required by feature B) of claim 1. The actual implementation - whether by means of electromyography or camera-based recordings - of such face-based mood measurements is a different matter which the person skilled in the art would consider, depending on the practical circumstances. Given that in D12 the user may capture video images through the camera of the user's mobile phone, the board holds that the skilled person would certainly opt for video recordings of the user's face, in full accordance with feature B) of present claim 1.

- 2.2 In view of the above, the new main request is not considered allowable under Article 56 EPC, having regard to the disclosures of D12 and D8.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



K. Götz-Wein

A. Ritzka

Decision electronically authenticated