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**Datasheet for the decision
of 1 September 2023**

Case Number: T 2718/19 - 3.4.03

Application Number: 13751928.6

Publication Number: 2819089

IPC: G06Q50/20, G09B7/02, G09B7/04

Language of the proceedings: EN

Title of invention:

METHOD AND SYSTEM FOR PROVIDING EDUCATION SERVICE BASED ON
KNOWLEDGE UNIT, AND COMPUTER-READABLE RECORDING MEDIUM

Applicant:

Knowre Korea Inc.

Relevant legal provisions:

EPC Art. 56
RPBA 2020 Art. 12(8)

Keyword:

Inventive step - (no) - mixture of technical and non-technical
features

Decisions cited:

T 0336/14



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Case Number: T 2718/19 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 1 September 2023

Appellant: Knowre Korea Inc.
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Seoul 137-858 (KR)

Representative: M. Zardi & Co S.A.
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 17 July 2019
refusing European patent application No.
13751928.6 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman T. Häusser
Members: J. Thomas
T. Bokor

Summary of Facts and Submissions

- I. The appeal is against the examining division's decision refusing European patent application No. 13 751 928 on the grounds that the subject-matter defined in the independent claims of the sole request on file did not involve an inventive step (Articles 52(1) and 56 EPC).
- II. The appellant discussed in its statement setting out the grounds of appeal inventive step of the claimed subject-matter on the basis of the application documents underlying the impugned decision and requested that the impugned decision be set aside and oral proceedings if the Board had a different opinion on the issues set out in the statement setting out the grounds of appeal.
- III. In a communication according to Article 15(1) RPBA 2020 the board stated that it assumed that the appellant requested the grant of a patent on the basis of the application documents underlying the decision and presented its preliminary opinion that the claimed subject-matter did not involve an inventive step.
- IV. In a further letter the appellant informed the board that the appellant would not attend the scheduled oral proceedings and that it *"look[ed] forward to receiving the decision of the Boards of Appeal"*.
- V. In response to this letter, the board cancelled the oral proceedings.
- VI. The following document is referred to below:
D1: US 2011/0151425 A1

VII. Claim 1 of the sole request underlying the impugned decision reads as follows:

"A system for providing education service based on knowledge units, the system comprising:

a database configured to store knowledge units and information on a user's achievements for the knowledge units;

a curriculum generation unit configured to generate a curriculum based on the user's achievement for at least one knowledge unit stored in the database, wherein the at least one knowledge unit includes at least one of an interpretative knowledge unit, a formulaic knowledge unit and a computational knowledge unit, and the curriculum includes at least one problem composed based on the at least one knowledge unit;

a knowledge providing unit configured to provide the user with the at least one problem via a user interface, and to provide the user with contents on the knowledge unit associated with the user's response to the at least one problem via the user interface, wherein the at least one problem is composed by a knowledge chain comprised of the at least one knowledge unit and at least one other knowledge unit, and the knowledge chain includes identification information of the at least one knowledge unit and the at least one other knowledge unit; and

a user knowledge analysis unit configured to determine the user's achievement for the at least one knowledge unit based on a feedback that the user provided in response to at least one other problem composed by the knowledge chain, and to reflect information on the user's achievement for the at least one knowledge unit to the database,

wherein the at least one problem is assigned the identification information of the at least one

knowledge unit and the at least one other knowledge unit in the form of metadata [sic], and

wherein the at least one knowledge unit is organized with at least one yet other knowledge unit to form a matrix representing an association between the at least one knowledge unit and the at least one yet other knowledge unit, and the association is identified when the at least one knowledge unit and the at least one yet other knowledge unit constitute another knowledge chain."

- VIII. The appellant's arguments as far as they are relevant for the present decision are summarised as follows:

The subject-matter defined in claim 1 concerned an "educational technology system", so called "Edutech", and therefore concerned the solution of a technical problem. The improvement of an educational technology system using technical means was clearly a technical contribution. The technical means were the knowledge units, the knowledge chain and/or the problem provided to the user and the interaction between these entities such that an improved feedback could be provided to the user according to its knowledge level. This resulted in an improved technology.

Reasons for the Decision

1. Procedural matters

1.1 Relevant request

The appellant has not explicitly indicated on the basis of which documents it requested the grant of a European patent. However, the board has stated this deficiency in its communication under Article 15(1) RPBA 2020 (see

point 3.) and explained why it based its preliminary opinion on the request underlying the impugned decision. Indeed, this request was the only request discussed in the statement setting out the grounds of appeal. Since the appellant did not express any objection to this understanding, the board bases the present decision on the application documents underlying the impugned decision.

1.2 Decision in written proceedings

Following the appellant's statement that neither the applicant nor anyone from the representative's firm would attend at the scheduled oral proceedings before the board and that they "*look[ed] forward to receiving the decision of the Boards of Appeal*", the board cancelled the oral proceedings. The board interprets the appellant's statement as a withdrawal of the request for oral proceedings (*Case law of the Boards of Appeal of the EPO*, 10th edition 2022, section III.C. 4.3.2). In addition, the board finds that all grounds, evidence and arguments for a decision on the request underlying the impugned decision were presented in the communication under Article 15(1) RPBA 2020 on which the appellant did not respond in substance. Consequently, the board considers the case ready to be decided in writing (Article 12(8) RPBA 2020).

2. **Inventive step**

2.1 The features of claim 1 are seen as a combination of technical and non-technical features. Given the presence of technical features, the overall technical character of the claimed invention is not questioned.

- 2.2 The closest state of the art is considered to be a computer system comprising user interfaces and storage means as well as a processor and databases. This closest state of the art is considered notorious and also exemplified by document D1 (see e.g. paragraphs [0036] and [0061] to [0063] and Figures 2 and 4).
- 2.3 The differentiating features concern the education service based on knowledge units and related content like the different knowledge units and the data related to the user's achievement and their interaction.
- 2.4 These differentiating features are based on a combination of standard technical features like notes taken on a piece of paper and stored in a well-known paper folder combined with non-technical features which concern mental acts in relation to a non-technical pedagogical/didactic learning method expected to be designed by a notional, non-technical person like a teacher. These differentiating features are the following:

An educational method based on knowledge units, whereby the knowledge units and information on a user's achievements for the knowledge units are stored for example in a storage location; a curriculum is stored which is based on the user's achievement of at least one knowledge unit stored in the storage location, which includes an interpretative knowledge unit, a formulaic knowledge unit and/or a computational knowledge unit. The curriculum includes at least one problem composed based on the at least one knowledge unit. The user is further provided with at least one problem, and with contents of the knowledge units associated with the user's response to the at least one problem, wherein the at least one problem is composed

by a knowledge chain comprised of the at least one knowledge unit and at least one further knowledge unit. The knowledge chain includes identification information of the at least one knowledge unit and the at least one other knowledge unit. The user's knowledge is analysed in order to determine the user's achievement for the at least one knowledge unit based on a feedback that the user provided in response to at least one other problem composed by the knowledge chain, and to reflect information on the user's achievement for the at least one knowledge unit, wherein to the at least one problem is assigned the identification information of the at least one knowledge unit and the at least one other knowledge unit, and wherein the at least one knowledge unit is organized with at least one yet other knowledge unit to form an association between the different knowledge units, and the association is identified when the knowledge units constitute another knowledge chain.

2.5 The objective technical problem to be solved by the identified differentiating features of the pedagogical/didactic learning method therefore can be formulated as the implementation of this non-technical pedagogical/didactic learning method on a notorious computer system.

2.6 In order to solve this problem, the non-technical pedagogical/didactic learning method is handed over to the technically skilled person, namely a computer programmer, which implements it without any technical difficulty in a straightforward manner on the above mentioned notorious computer system representing the closest state of the art. The technically skilled person, i.e. the computer programmer, implements the storage location(s) which include(s) all information, user's achievement results, knowledge units or

knowledge chains without any difficulty making use of a database of the computer system. In the given context the use of a database must be considered a standard procedure for the computer programmer since databases and their advantageous use were notoriously well-known for dealing with specifically structured data content at the time of filing of the application.

Moreover, apart from automation of the non-technical pedagogical/didactic learning method, no specific technical details concerning the technical implementation of the non-technical method are defined in the wording of claim 1 which could be considered to provide a technical contribution, a further technical effect or any specific technical solution to a particular technical problem. Nothing of this kind can be identified in the wording of claim 1.

The relation and interaction between the different knowledge units, the knowledge chain and the problem provided to the user do not represent a particular technical solution to a technical problem, contrary to the appellant's assertion (see statement setting out the grounds of appeal, page 2, fourth paragraph and page 5, second and seventh paragraphs). These features are related to the design of the non-technical pedagogical/didactic learning method and are as such specified by the teacher (the notional non-technical person). These features are not related to specific technical means which could be considered to derive from an inventive contribution of the technically skilled computer programmer. Neither a "*knowledge chain*" nor a "*knowledge unit*" nor the "*problem provided to the user*" are considered technical features.

Moreover, although the method is defined as relating to the domain of "*educational technology system*" / "*EduTech*", it cannot be concluded that the implemented method necessarily requires a technical solution to a technical problem. As indicated, the technicality lies exclusively in the straightforward implementation of a non-technical method on a notorious computer system.

Merely naming something a "*technology system*" will not automatically put it in a field of technology for the purposes of Article 52(1) and (2) EPC. In the given context, educational training or teaching methods that adapt to the user's level of knowledge are only technically implemented to provide online-learning or computer-based training.

This is also in accordance with and not in contradiction to the explanations in the "*Wikipedia*" article on "*Educational technology*" which the appellant submitted with the statement setting out the grounds of appeal. "*EduTech*" is a technical realisation of the "*theory and practice of educational approaches to learning*" or a means to "*assist in the communication of knowledge, and its development and exchange*" or to provide learning tool. It is therefore the technical realisation of mental, non-technical subject-matter since the roots of "*EduTech*" lie in didactic and pedagogical learning theories.

These non-technical training and learning theories are in the present case computer-implemented in a straightforward manner for computer learning, on-line training and/or e-learning.

2.7 With regard to the decision T 336/14 cited by the appellant, which also concerns a mixed-type invention

comprising technical and non-technical features, the board notes that the subject-matter discussed there is not comparable to the subject-matter of the case at hand. That decision concerned a graphical user interface (GUI) which assisted a mental human process. The potentially excluded subject-matter concerned the presentation of information as such (see point 1.2.5 of the Reasons for the Decision) and was found by the deciding board not to involve an inventive step. Therefore, if this decision is relevant at all to the present application, which the board is not convinced of, it is seen to support the board's position, and not that of the appellant.

- 2.8 In summary, the subject-matter defined in claim 1 relates to a notorious standard computer system on which a non-technical method is implemented in a straightforward and obvious manner (Article 52(1) EPC in combination with Article 56 EPC).

3. Conclusion

Since the subject-matter defined in claim 1 of the sole request does not to involve an inventive step, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



B. Atienza Vivancos

T. Häusser

Decision electronically authenticated