Datasheet for the decision
of 11 January 2011

Case Number: T 1729/07 - 3.4.03
Application Number: 99101317.8
Publication Number: 0933749
IPC: G09B 15/04
Language of the proceedings: EN
Title of invention:
Music lesson system with local training terminal and remote supervisory station
Applicant:
YAMAHA CORPORATION
Opponent:
-
Headword:
-
Relevant legal provisions:
-
Relevant legal provisions (EPC 1973):
EPC Art. 56
Keyword:
"Inventive step (yes)"
Decisions cited:
-
Catchword:
-
Case Number: T 1729/07 - 3.4.03

DECISION
of the Technical Board of Appeal 3.4.03
of 11 January 2011

Appellant: YAMAHA CORPORATION
10-1 Nakazawa-cho
Naka-ku
Hamamatsu-shi
Shizuoka-ken (JP)

Representative: Kehl, Günther
Patentanwaltskanzlei
Günther Kehl
Friedrich-Herschel-Strasse 9
D-81679 München (DE)


Composition of the Board:
Chairman: G. Eliasson
Members: T. Häusser
P. Mühlens
Summary of Facts and Submissions

I. The appeal concerns the decision of the examining division refusing European patent application No. 99 101 317 for lack of inventive step.

II. At the oral proceedings before the board the appellant requested that the decision be set aside and that a patent be granted in the following version:

Claims: 1 to 7 filed at the oral proceedings.
Description: pages 1 to 3 filed at the oral proceedings; pages 6 to 24 as originally filed.
Drawings: Figures 1 to 9 as originally filed.

III. The wording of independent claims 1, 2, 5, 6, and 7 reads as follows:

"1. A music lesson system comprising a trainer terminal (1) and at least one trainee terminal (2), which is communicable with the trainer terminal (1) through a network,

the trainee terminal (2) comprising a storage device (16) that is adapted to store score data of a lesson music piece to be practiced and music data of the lesson music piece, an instrument device (23) that is manually operable by a trainee to generate a sample performance of the lesson music piece, a processor device that is adapted to analyze a training level of the trainee and formulates a curriculum corresponding to the training level, and a display device (17) that is adapted to display at least a lesson score of the lesson music piece according to the score data and a
transmitter device (21) that is adapted to transmit performance data representative of the sample performance to the trainer terminal (1) through the network (5),

the trainer terminal (1) comprising a receiver device that is adapted to receive the performance data representative of the sample performance from the trainee terminal through the network, a processor device that is adapted to be operated by a trainer to evaluate the sample performance according to the received performance data so as to arrange advice information, which could not be arranged by the trainee terminal, and which includes comment data representing a comment made on the sample performance and positional data indicative of a position corresponding to the comment on the lesson score of the lesson music piece, but which is free of score data and music data, and a transmitter device that is adapted to transmit back the advice information to the trainee terminal,

wherein the trainee terminal further comprises a receiver device (21) adapted to receive the advice information including the comment data and the positional data from the trainer terminal through the network, and a processor device (11) that is adapted to control the display device to display an exercise part of the lesson score based on the positional data and the comment on the exercise part based on the comment data, thereby prompting the trainee to play the exercise part according to the comment, and wherein the advice information further includes performance control information including interval positional information for specifying a unit interval in the lesson music piece on which comments are made, repeat reproduction information for repeatedly
reproducing desired unit intervals of the lesson music piece, and part on/off information for controlling sounding of each part of the lesson music piece, and the processor device (11) is adapted to reproduce a part of the lesson music piece according to the performance control information in response to a reproduction instruction."

"2. A local training apparatus (2) communicable with a training center (1) through a network (5), comprising:
   a storage device (16) that is adapted to store score data of a lesson music piece to be practiced and music data of the lesson music piece;
   an instrument device (23) that is manually operable by a trainee to generate a sample performance of the lesson music piece;
   a processor device that is adapted to analyze a training level of the trainee and is adapted to formulate a curriculum corresponding to the training level;
   a display device (17) that is adapted to display at least a lesson score of the lesson music piece according to the score data;
   a transmitter device (21) that is adapted to transmit performance data representative of the sample performance to the training center through the network;
   a receiver device (21) that is adapted to receive an advice information including comment data representing a comment made on the sample performance and positional data indicative of a position corresponding to a comment on the lesson score of the lesson music piece, but which is free of score data and music data, from the training center through the network; and
a processor device (11) is adapted to operate upon receiving the advice information for controlling the display device to display an exercise part of the lesson score based on the positional data and the comment on the exercise part based on the advice information, thereby prompting the trainee to play the exercise part according to the comment data, wherein the advice information includes performance control information including interval positional information for specifying a unit interval in the lesson music piece on which comments are made, repeat reproduction information for repeatedly reproducing desired unit intervals of the lesson music piece, and part on/off information for controlling sounding of each part of the lesson music piece, and the processor device (11) is adapted to respond to a reproduction instruction for reproducing a part of the lesson music piece according to the performance control information."

"5. A central training apparatus communicable through a network with a local training apparatus having a storage device (16) that stores score data of a lesson music piece to be practiced and music data of the lesson music piece, an instrument device manually operable by a trainee to generate a sample performance of the lesson music piece, a processor device for analyzing a training level of the trainee and formulating a curriculum corresponding to the training level, and a display device that is adapted to display at least a lesson score of the lesson music piece based on the score data, the central training apparatus comprising:
a receiver device that is adapted to receive performance data representative of the sample performance from the local training apparatus through the network;

a processor device that is adapted to be operated by a trainer to evaluate the sample performance according to the received performance data so as to arrange advice information, which includes comment data representing a comment made on the sample performance and positional data indicative of a position corresponding to the comment on the lesson score of the lesson music piece, but which is free of score data and music data; and

a transmitter device that is adapted to transmit back the advice information including the comment data and the positional data to the local training apparatus, thereby enabling the local training apparatus to display an exercise part of the lesson score according to the positional data and the comment on the exercise part for prompting the trainee to play the exercise part according to the comment data, wherein the advice information includes performance control information including interval positional information for specifying a unit interval in the lesson music piece on which comments are made, repeat reproduction information for repeatedly reproducing desired unit intervals of the lesson music piece, and part on/off information for controlling sounding of each part of the lesson music piece, and enabling the local training apparatus to reproduce a part of the lesson music piece according to the performance control information in response to a reproduction instruction."
6. A method of using a music apparatus having a storage that stores score data of a lesson music piece to be practiced and music data of the lesson music piece, a display and an instrument manually operable by a user for generating a sample performance of the lesson music piece, and being communicable with a supervisory computer through a network for remotely training the user in matching with a skill level, the method comprising the steps of:

- displaying at least a lesson score of the lesson music piece according to the score data on the display in matching with the skill level so that the user is prompted to render the displayed lesson score by operating the instrument for generating the sample performance;

- transmitting event data representative of the sample performance to the supervisory computer through the network so that the supervisory computer can work to provide a qualitative evaluation of the sample performance according to the event data to thereby arrange instruction data, which includes comment data representing a comment made on the sample performance and positional data indicative of a position corresponding to the comment on the lesson score of the lesson music piece, but which is free of score data and music data;

- receiving the instruction data including the comment data and the positional data from the supervisory computer through the network;

- controlling the display to display an exercise part of the lesson score according to the positional data and the comment on the exercise part according to the comment data; and
reproducing a part of the lesson music piece according to performance control information included in the instruction data in response to a reproduction instruction, the performance control information including interval positional information for specifying a unit interval in the lesson music piece on which comments are made, repeat reproduction information for repeatedly reproducing desired unit intervals of the lesson music piece, and part on/off information for controlling sounding of each part of the lesson music piece."

"7. A machine readable medium for use in a music apparatus having a CPU, a storage that is adapted to store score data of a lesson music piece to be practiced and music data of the lesson music piece, a display and an instrument manually operable by a user to generate a sample performance of the lesson music piece and being communicable with a supervisory computer through a network for remotely training the user in matching with a skill level, the medium containing a program executable by the CPU for causing the music apparatus to perform the method comprising the steps of:

  displaying at least a lesson score of the lesson music piece according to the score data on the display in matching with the skill level so that the user is prompted to render the displayed lesson score by operating the instrument for generating the sample performance;

  transmitting event data representative of the sample performance to the supervisory computer through the network;
receiving instruction data including the comment data and the positional data from the supervisory computer through the network, the instruction data including comment data representing a comment on the sample performance and positional data indicative of a position corresponding to the comment, on the lesson score of the lesson music piece, but which is free of score data and music data;

controlling the display to display an exercise part of the lesson score according to the positional data and the comment on the exercise part according to the comment data; and

reproducing a part of the lesson music piece according to performance control information included in the instruction data in response to a reproduction instruction, the performance control information including interval positional information for specifying a unit interval in the lesson music piece on which comments are made, repeat reproduction information for repeatedly reproducing desired unit intervals of the lesson music piece, and part on/off information for controlling sounding of each part of the lesson music piece."

IV. Reference is made to the following documents:


V. The appellant argued essentially as follows:

None of the documents on file disclosed:

− arranging advice information which includes data representing a comment made on a sample performance and positional data indicative of a position in the score of a lesson music piece corresponding to the comment,

− receiving from the training center through a network the advice information and the positional data and using them to display an exercise part of the score based on the positional data and the corresponding comment, and

− responding to a reproduction instruction for reproducing a part of the lesson music piece corresponding to the exercise part of the score.

It was not obvious to include these features, which had the particular advantage to provide a quick training system, in the apparatus of document D2. The invention therefore involved an inventive step.

Reasons for the Decision

1. Admissibility

The appeal is admissible.
2. Amendments

Claims 1 to 7 are based on claims 1 to 6, 12, and 13 as originally filed and on the description as originally filed (page 2, second paragraph; page 3, first paragraph; page 8, second and third paragraph; page 14, second paragraph; page 18, first paragraph to page 19, third paragraph). Accordingly, the board is satisfied that the amendments comply with the requirements of Article 123(2) EPC.

3. Novelty

3.1 Document D2 discloses a music lesson system (page 902, right-hand column, second paragraph, first sentence) comprising a trainer terminal and a trainee terminal, which is communicable with the trainer terminal through a network (page 902, right-hand column, second paragraph, second sentence).

In the context of a jam server, document D2 discloses furthermore a keyboard (Figure 4 and page 900, right-hand column, last paragraph). However, in the context of music education, only solvège and compositional exercises are explicitly mentioned (page 902, right-hand column, second paragraph, second sentence), from which the presence of an instrument cannot be inferred.

Therefore, document D2 does not disclose - in the context of the music lesson system - the following features of claim 1:

(i) a trainee terminal comprising a storage device that is adapted to store score data of a lesson
music piece to be practiced and music data of the lesson music piece, an instrument device that is manually operable by a trainee to generate a sample performance of the lesson music piece, a processor device that is adapted to analyze a training level of the trainee and formulates a curriculum corresponding to the training level, and a display device that is adapted to display at least a lesson score of the lesson music piece according to the score data and a transmitter device that is adapted to transmit performance data representative of the sample performance to the trainer terminal through the network,

(ii) a trainer terminal comprising a receiver device that is adapted to receive the performance data representative of the sample performance from the trainee terminal through the network, a processor device that is adapted to be operated by a trainer to evaluate the sample performance according to the received performance data so as to arrange advice information, which could not be arranged by the trainee terminal, and which includes comment data representing a comment made on the sample performance and positional data indicative of a position corresponding to the comment on the lesson score of the lesson music piece, but which is free of score data and music data, and a transmitter device that is adapted to transmit back the advice information to the trainee terminal,
(iii) wherein the trainee terminal further comprises a receiver device adapted to receive the advice information including the comment data and the positional data from the trainer terminal through the network, and a processor device that is adapted to control the display device to display an exercise part of the lesson score based on the positional data and the comment on the exercise part based on the comment data, thereby prompting the trainee to play the exercise part according to the comment, wherein the advice information further includes performance control information including interval positional information for specifying a unit interval in the lesson music piece on which comments are made, repeat reproduction information for repeatedly reproducing desired unit intervals of the lesson music piece, and part on/off information for controlling sounding of each part of the lesson music piece, and the processor device is adapted to reproduce a part of the lesson music piece according to the performance control information in response to a reproduction instruction.

The subject-matter of claim 1 is therefore new over document D2.

3.2 Document D1 discloses a computer system 24, which comprises a CPU 2, a removable memory 4 and a memory 6 (Figure 20). The computer system may generate a visual display of the score representing an exercise to be played and receive data representing the playing of a guitar 10. By selecting a button 218 ("Play") the
indicated music is played via the audio output of the computer, whereas actuation of a button 222 ("Eval") causes an evaluation of the musician's playing by comparing it with the displayed exercise (column 4, line 62 to column 5, line 2; column 20, lines 53 to 60; Figures 1 and 17).

Document D1 neither discloses the following feature of claim 1:

(i) a trainer terminal, which is communicable with the trainee terminal through a network, the trainee terminal comprising a processor device that formulates a curriculum corresponding to the training level, and a transmitter device that is adapted to transmit performance data representative of the sample performance to the trainer terminal through the network,

nor features (ii) and (iii) of claim 1 referred to under point 3.1.

The subject-matter of claim 1 is therefore new over document D1.

3.3 The other known documents of the state of the art are not closer to the subject-matter of claim 1 than documents D1 and D2. The subject-matter of claim 1 is therefore also new over these documents.

3.4 Claims 2, 5, 6, and 7 are independent claims relating to a local training apparatus, a central training apparatus, a method of using a music apparatus, and a machine readable medium for use in a music apparatus,
respectively. These claims comprise features corresponding to the features of claim 1 relating to the advice information including comment data, positional data, and performance control information, but being free of score data and music data (see the features (ii) and (iii) mentioned under point 3.1 above).

Claims 3 and 4 are dependent on claim 2 and therefore comprise all features of that claim.

Consequently, the subject-matter of claims 2 to 7 is also new over the known prior art documents.

3.5 In view of the above, the board is satisfied that the subject-matter of claims 1 to 7 is new (Article 52(1) EPC and Article 54(1), (2) EPC 1973).

4. Inventive step

4.1 The purpose of the invention is to provide a music lesson system that brings about lessons at home or other places through a network such as the internet (page 1 of the description, last paragraph). The only prior art document relating to the same purpose is document D2, in which a "virtual classroom" is mentioned, where instructor and pupils are connected via a computer network (D2, page 902, right-hand column, second paragraph). Document D2 is thus regarded to be the closest state of the art.

4.2 The subject-matter of claim 1 differs from D2 in comprising the features (i) to (iii) mentioned above under point 3.1.
4.3 In the decision under appeal it was held that the claim 1 then on file contained non-technical features relating to a pedagogical method of teaching a musical instrument, e.g. the trainer providing feedback in the form of comments or advice information. These features were regarded to be irrelevant for assessing inventive step.

The board agrees that claim 1 contains non-technical features, e.g. the feature that the comment data are "representing a comment made on the sample performance" is defined by the meaning attributed to the comment data and has no technical consequence. Following the jurisprudence of the boards of appeal relating to the assessment of inventive step for inventions consisting of a mix of technical and non-technical features, the relevant skilled person relevant for this purpose is an expert in a technical field, in this case a person skilled in data processing.

In order to formulate the objective technical problem, the effects of the distinguishing features (i) to (iii) have to be considered. By merely including comment data, positional data and performance control information in the advice information, but neither score data nor music data, the advice information may be transferred quickly since the transfer load is reduced (see the description, page 18). Hence the claimed system goes beyond a straightforward transfer of all data in that the transfer speed is improved.

Nevertheless, a sophisticated lesson is provided by allowing the trainee to read the comment at the
appropriate location of the score based on the positional information and to reproduce the model performance of the trainer based on the performance control information (description, page 19). The non-technical features are taken into consideration when formulating the technical problem.

The objective technical problem can therefore be formulated as to implement the given method of providing music lessons in a music lesson system in such a way as to allow to efficiently provide music lessons of substance. The skilled person would as part of the task given to him receive knowledge of the pedagogical concepts: in the present case, the concepts of evaluating the trainee's level and formulating a corresponding curriculum, as well as providing possibilities for the trainer to listen to the trainee's performance and to transmit advice, comments and model performances back to the trainee. It is however left to the skilled person to decide how these pedagogical concepts should be implemented in the music lesson system.

4.4 Document D2 describes the transmission between computers of musical scores and of music data (page 897, right-hand column, first paragraph; page 900 and Figure 4). The skilled person would therefore regard it as obvious to transmit over the network connecting trainer and trainee the score and comment data as well as the music data representing the model performance in order to provide the trainer's comments and model performances to the trainee. He would therefore be led to implement the music lesson system accordingly.
4.5 In the context of a jam server it is mentioned in D2 that round-trip delays between sending a message to the jam server and receiving the same message on a connected device varies between 2.6 milliseconds and a peak of 1.6 seconds (page 901, left-hand column, second paragraph). The length and variability of the delay are regarded to be prohibiting factors for jamming on the web (page 902, right-hand column, fourth paragraph). Such an assessment is understandable as it is crucial in the context of jamming that all musical contributions arrive essentially simultaneously at the jam server in order to combine harmoniously.

In the context of the music lesson system mentioned in D2 the above delay does not appear detrimental as it would merely lead to a slight delay in the reception of the trainer's feedback to the trainee. The skilled person would therefore not be prompted to seek alternatives in order to reduce the delay.

4.6 None of the other known prior art documents describes the transmission of a trainer's comments or model performances or of any such data over a network connecting computers. These documents would therefore not lead the skilled person to the subject-matter of claim 1.

4.7 Claims 2, 5, 6, and 7 are independent claims comprising features corresponding to the features of claim 1 relating to the advice information including comment data, positional data, and performance control information, but being free of score data and music data (see the features (ii) and (iii) mentioned under point 3.1 above).
Claims 3 and 4 are dependent on claim 2 and therefore comprise all features of that claim.

Consequently, the subject-matter of claims 2 to 7 is not considered to be obvious, either.

4.8 Accordingly, the subject-matter of claims 1 to 7 involves an inventive step (Articles 52(1) EPC and 56 EPC 1973).

5. Other requirements of the EPC and conclusion

In order to comply with the requirements of Article 84 EPC 1973, the description has been brought into conformity with the amended claims. Furthermore, the description has been supplemented with an indication of the relevant content of the prior art to comply with the requirements of Rule 27(1)(b) EPC 1973. These requirements of the EPC are therefore also satisfied.

In view of the above the appellant's sole request is allowable.
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 in the following version:

   Claims: 1 to 7 filed at the oral proceedings.
   Description: pages 1 to 3 filed at the oral proceedings; pages 6 to 24 as originally filed.
   Drawings: Figures 1 to 9 as originally filed.

The Registrar:    The Chairman:

S. Sánchez Chiquero    G. Eliasson