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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:
-

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Case Number: T 1729/07 **-** 3.4.03

D E C I S I O N
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)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted 30 May 2007 refusing European application No. 99101317.8 pursuant to Article 97(1) EPC 1973.**

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:

D1:   US-A-5,270,475

D2:   Eliëns A et al: "Jamming (on) the Web", COMPUTER
       NETWORKS AND ISDN SYSTEMS, vol. 29, no. 8-13,
       1 September 1997 (1997-09-01), pages 897-903

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