CLAIMS

1. A method for composing music, characterized in that it comprises:

establishing a note database, wherein the note database comprises at least one standard note and at least one standard audio feature as well as a correspondence between each of the standard note(s) and the at least one standard audio feature;

obtaining tune information produced from a user side;

analyzing the obtained tune information to get at least one current audio feature;

determining a target standard audio feature corresponding to each of the current audio feature(s), from the note database;

determining a target standard note corresponding to each of the target standard audio feature(s), according to the correspondence; and

generating a music score corresponding to the tune information, according to the determined target standard note,

wherein the step of establishing a note database comprises:

obtaining at least one standard audio feature produced by at least one audio source, wherein each of the standard audio feature(s) corresponds to one of the standard notes, wherein the at least one audio source comprises any one or more of musical instruments, singers, and electronic audio devices;

generating the note database according to the obtained standard audio feature(s) as well as the standard note corresponding to each of the standard audio feature(s).

2. The method according to claim 1, characterized in that

each of the standard audio feature(s) corresponds to a sound frequency range as well as a high/low pitch identifier;

wherein the step of determining a target standard audio feature corresponding to each of the current audio feature(s) from the note database comprises:

performing for each of the current audio feature(s):

determining a current sound frequency corresponding to the current audio feature, and searching from the note database to find the sound frequency range corresponding to the current sound frequency;

using the standard audio feature corresponding to the found sound frequency range as the target standard audio feature;

wherein the step of generating the music score corresponding to the tune information according to the determined target standard note comprises:

using the high/low pitch identifier corresponding to the target standard audio feature as the high/low pitch identifier of the corresponding target standard note, for each of the target standard audio feature(s);

generating the music score corresponding to the tune information, according to the target standard note(s) as well as the high/low pitch identifier of each of the target standard note(s).

3. The method according to claim 1, characterized in that

the step of analyzing the obtained tune information to get at least one current audio feature comprises:

analyzing the tune information to get the at least one current audio feature according to the time sequence, and recording a time point of each of the current audio feature(s) corresponding to the tune information;

wherein the step of generating a music score corresponding to the tune information according to the determined target standard note comprises:

determining a time interval between any two adjacent current audio features, according to the recorded time point of each of the current audio feature(s) corresponding to the tune information;

determining a beat corresponding to each of the target standard note(s), according to the determined time interval;

generating the music score according to the determined target standard note(s) as well as the beat corresponding to each of the target standard note(s).

4. The method according to claim 3, characterized in that

the step of generating the music score corresponding to the tune information according to the determined target standard note(s) comprises:

using any one of the target standard note(s) as the current target standard note, and performing steps A1 to A3:

A1: determining an adjacent note adjacent to the current target standard note, according to the time point of each of the current audio features corresponding to the tune information;

A2: determining whether a pause time between the adjacent note and the current target standard note is lower than a preset threshold value, and if so, performing A3;

A3: combining the adjacent note and the current target standard note into a connection group, and using the adjacent note as the current target standard note to perform A1;

determining a starting note and an ending note from the target standard notes in the connection group, according to the time point of each of the current audio features corresponding to the tune information;

using a legato line to connect the starting note with the ending note;

generating the music score corresponding to the tune information, according to the connected starting note and ending note as well as other unconnected target standard note(s).

5. A device for composing music, characterized in that it comprises an establishing unit, an analyzing unit, a determining unit, and a music score generating unit, wherein

the establishing unit is used for establishing a note database, wherein the note database comprises at least one standard note and at least one standard audio feature as well as a correspondence between each of the standard note(s) and the at least one standard audio feature;

the analyzing unit is used for obtaining tune information produced from a user side, and analyzing the obtained tune information to get at least one current audio feature;

the determining unit is used for determining a target standard audio feature corresponding to each of the current audio feature(s) from the note database, and determining a target standard note corresponding to each of the target standard audio feature(s) according to the correspondence; and

the music score generating unit is used for generating a music score corresponding to the tune information, according to the determined target standard note, characterized in that

the establishing unit is used for obtaining at least one standard audio feature produced by at least one audio source, wherein each of the standard audio feature(s) corresponds to one of the standard notes, wherein the at least one audio source comprises any one or more of musical instruments, singers, and electronic audio devices; and generating the note database according to the obtained standard audio feature(s) as well as the standard note corresponding to each of the standard audio

feature(s).

6. The device according to claim 5, characterized in that

each of the standard audio feature(s) corresponds to a sound frequency range as well as a high/low pitch identifier;

the determining unit is used for performing for each of the current audio feature(s): determining a current sound frequency corresponding to the current audio feature, and searching from the note database to find the sound frequency range corresponding to the current sound frequency; and using the standard audio feature corresponding to the found sound frequency range as the target standard audio feature;

the music score generating unit is used for using the high/low pitch identifier corresponding to the target standard audio feature as the high/low pitch identifier of the corresponding target standard note, for each of the target standard audio feature(s); and generating the music score corresponding to the tune information, according to the target standard note(s) as well as the high/low pitch identifier of each of the target standard note(s).

7. The device according to claim 5, characterized in that

the analyzing unit is used for analyzing the tune information to get the at least one current audio feature according to the time sequence, and recording a time point of each of the current audio feature(s) corresponding to the tune information;

the music score generating unit is used for determining a time interval between any two adjacent current audio features, according to the recorded time point of each of the current audio feature(s) corresponding to the tune information; determining a beat corresponding to each of the target standard note(s), according to the determined time interval; and

generating the music score according to the determined target standard note(s) as well as the beat corresponding to each of the target standard note(s).

8. The device according to claim 7, characterized in that

the music score generating unit comprises a connection group determining subunit, a connecting subunit, and a generating subunit, wherein

the connection group determining subunit is used for using any one of the target standard note(s) as the current target standard note and performing steps A1 to A3:

A1: determining an adjacent note adjacent to the current target standard note,

according to the time point of each of the current audio features corresponding to the tune information;

A2: determining whether a pause time between the adjacent note and the current target standard note is lower than a preset threshold value, and if so, performing A3;

A3: combining the adjacent note and the current target standard note into a connection group, and using the adjacent note as the current target standard note to perform A1;

the connecting subunit is used for determining a starting note and an ending note from the target standard notes in the connection group, according to the time point of each of the current audio features corresponding to the tune information; and using a legato line to connect the starting note with the ending note;

the generating subunit is used for generating the music score corresponding to the tune information, according to the connected starting note and ending note as well as other unconnected target standard note(s).