Claims

What is claimed is:

1. A voice recognition system for a robot system, wherein comprising:

a microphone, configured to real-timely receive a voice signal from outside, the microphone is always turned on for real-timely receiving external voice signal without interruption;

a local voice activation detector, configured to detect the voice signal and identify whether the voice signal includes any human voice; wherein, if the voice signal includes the human voice, the local voice activation detector will output a human voice signal;

a local voice recognition module, configured to receive and identify the human voice signal output from the local voice activation detector, so as to determine whether wake-up commands are included in the human voice signal; wherein, if the human voice signal includes the wake-up commands, the local voice recognition module will output the human voice signal including the wake-up commands;

a local voice coding module, configured to code the human voice signal and to output it;

a remote voice decoding module, configured to receive and decode the human voice signal coded by the local voice coding module and output it;

a remote voice recognition module and a remote language processing module, wherein the remote voice recognition module

receives and transforms the decoded human voice signal output by the remote voice decoding module, and transmits it to the remote language processing module; the remote language processing module generates corresponding operating commands based on the human voice signal which has been transformed;

the local voice recognition module according to the invention transmits the human voice signal to the remote voice recognition module via a data stream, the local voice recognition module will initiate the real-time recognition soon after receiving the first frame data, when the voice ends, the result of the recognition of the entire voice has been generated, thus it truly achieves the real-time performance;

an execution module, configured to execute the operating commands from the remote language processing module; the voice recognition system further comprises a multimedia module configured to execute the operating command;

the result of the recognition of the entire voice, as conclusion is transmitted to a behavior strategy system of the robot, the robot decides to play music for the user and sends this decision to the local system, based on the received decision, the local system find music and start to play the music;

the local voice activation detector is a voice detector which is based on the neural network algorithm.

2. The voice recognition system as claimed in Claim 1, wherein the local voice recognition module transmits the human voice signal to the remote voice recognition module via a data stream.

3. The voice recognition system as claimed in Claim 1, wherein the voice recognition system further comprises a wake-up command edit module configured to edit the wake-up command.

4. The voice recognition system as claimed in Claim 1, wherein a processing time, in which the remote language processing module generates corresponding operating command based on the human voice signal which has been transformed, is within the range of 10~20ms.

5. A recognition process, which utilizes a voice recognition system as claimed in any one of Claims 1-4, comprising the process:

utilizing the microphone to real-timely receive a voice signal from outside;

utilizing the local voice activation detector to identify whether the voice signal includes human voice ; if the voice signal includes the human voice, the local voice activation detector will transmit it to the local voice recognition module;

utilizing the local voice recognition module to identify the human voice signal, so as to determine whether the human voice signal includes wake-up commands ; if the human voice signal includes some wake-up command, the local voice recognition module will further transmit it to the local voice coding module;

after the local voice coding module has coded the human voice signal, the local voice coding module will transmit it to the remote voice decoding module;

the remote voice decoding module decodes the received human voice signal, then transmits it to the remote voice recognition module;

utilizing the remote voice recognition module to transform the human voice signal output by the remote voice decoding module and transmit it to the remote language processing module;

the remote language processing module generates corresponding operating command based on the human voice signal which has been transformed;

the execution module is configured to execute the operating command by taking control of the multimedia module.

6. The recognition process as claimed in Claim 5, wherein if the local voice recognition module finds that current human voice signal includes the wake-up command, the local voice recognition module would be

switched off, and the human voice signal would be transmitted to the remote voice decoding module directly, after coded by the local voice coding module; after decoded, it would be transmitted to the remote voice recognition module.