Devices for Polyphonic Audio Signal Prediction & Frame Loss Concealment

Tech ID: 22239 / UC Case 2012-319-0

BRIEF DESCRIPTION

A process that exploits the periodicity and redundant nature of audio signals to predict future periodic components and conceal frame loss in an audio signal.

BACKGROUND

Most audio signals are periodic in nature, which means that the signal carries redundant information. The prediction of audio signals with only one periodic component (monophonic) is a highly researched area with many solutions, while the prediction of polyphonic signals is not. Polyphonic signals contain multiple periodic components and are much more common in systems than monophonic signals. Compression and transmission of polyphonic audio is a fast-expanding field, with applications ranging from streaming music to teleconferencing.

DESCRIPTION

Researchers at the University of California, Santa Barbara have developed novel devices that exploit the periodicity and redundant nature of audio signals to predict future periodic components and conceal frame loss in an audio signal. This method allows for coding schemes and networking systems to compress or store audio information with higher accuracy and efficiency than traditional methods. Higher efficiency audio compression and frame loss concealment can greatly improve the quality of such applications as high-definition teleconferencing and wireless audio streaming.

ADVANTAGES

- Major performance improvement in audio-related applications
- Higher audio compression efficiency and accuracy

APPLICATIONS

- Audio compression, networking, delivery to mobile devices
- High efficiency music storage and distribution
- Wireless audio streaming
- High-definition teleconferencing

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OTHER INFORMATION

KEYWORDS

Polyphonic, Audio Signal Prediction, Compression, Storage, indmedia, indtelecom

CATEGORIZED AS

- **Communications**
  - Other
- **Sensors & Instrumentation**
  - Other

RELATED CASES

2012-319-0

This technology is available for licensing.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,830,920	11/28/2017	2012-319
United States Of America	Issued Patent	9,406,307	08/02/2016	2012-319

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Method and Apparatus for High Quality Video Reconstruction

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