

10 October 2008

By: Filip Truta, Apple News Editor

[Apple Patents Transmitting Audio from Computer to a Client](#)

New invention reported to the US Patent & Trademark Office



UNITED STATES PATENT
AND
TRADEMARK OFFICE

The US Patent &
Trademark Office logo
Techshout

Apple has filed a [patent](#) for synchronized transmission of audio and video from a computer to a client via "an interface." [The US Patent & Trademark Office](#) reveals that [Apple's](#) invention refers to the behavior of devices that use communication over a network.

Specifically, it relates to data flow management between devices transmitting and receiving data at different transmission rates, but even more, to controlling data flow through a buffer by monitoring the buffer and adjusting data transmission based on buffer conditions.

"The present invention controls the transmission of data from a computer to a video client via an interface device that buffers the data frames sent and communicates to the computer and the video client using different protocols," reads Apple's summary of the invention. "In an embodiment, the present invention provides a method of performing data transmission flow control by polling the interface a first time to determine the size of the buffer on the interface; receiving a first buffer size value from the interface; sending a plurality of frames of video and audio data to the buffer on the interface such that a delay period exists between the sending of each frame; polling the interface a second time to determine buffer size after the frames are sent to the interface; and receiving a second buffer size value from the interface."

Furthermore, Apple explains, "the present invention provides a method of performing data transmission flow control..." This would imply "polling the interface a first time to determine the size of the buffer on the interface, receiving a first buffer size value from the interface; sending a plurality of frames of video and audio data to the buffer on the interface such that a delay period exists between the sending of each frame; polling the interface a second time to determine buffer size after the frames are sent to the interface; and receiving a second buffer size value from the interface."

Inventors credited are Giovanni M. Agnoli, Andrew Yanowitz, John O. Abt, Samuel R. Bowman, James A. Delwiche and Jeffrey C. Dillon.