

AUTOMATIC SYNC

TECHNOLOGIES

InstantSync™

InstantSync software automatically detects and marks phoneme events in an audio stream. The output of InstantSync allows for automatic lip synchronization in real time for streaming audio applications. InstantSync allows an animated character's lip movements, facial expressions, and gestures to be automatically aligned and synchronized to its voice track. Applications for InstantSync include:

- Streaming lip-sync'ed animated characters for communications, providing content, advertising, or greeting cards;
- Adding facial animation to multi-player games where each user's character is visible to other players in the play space;
- Bringing life to avatars in a two-way chat application;
- Animating personal agents for assistants, sales reps, or service reps;
- Streaming live broadcast audio content to an animated character representation such as a live sportscaster;
- Facial capture for real-time motion capture systems.

Benefits

- Provides accurate mouth positioning for real-time audio streams.
- Allows synchronization for two-way chat applications, and other applications involving live voice data.
- In media where manual synchronization is prohibitive, this technology can bring previously static characters to life!
- Allows better and faster reuse of graphic assets by simplifying the process needed to introduce new audio content for a given character.
- Results are substantially more realistic than simple mouth-flap approaches.

Quotes

- *“InstantSync provides amazingly accurate, low latency phoneme recognition, with an extremely small memory footprint that allows great flexibility in deployment. We've obtained great results with InstantSync in our real-time applications, producing eerily realistic lip-synching of our characters!”* [Jeff Bell, Twitch Media Inc.]

- *“Realistic-looking and -sounding characters, whether human, animal or completely alien, will increasingly deliver the information consumers receive on the Web. From training and customer service/support to entertainment and commerce, online environments populated by virtual characters continue to proliferate. It’s critical that those characters maintain a sense of realism that only the highest-quality lip-synching technology can ensure, and Automatic Sync Technologies gives us that.”* [Mark Yahiro, President of Pulse Entertainment Inc.]
- *“The integration of Instant Sync into our real time animation products realized our mission of true peer-to-peer 3d character animation driven by human voice. Automatic Sync has the fastest and most accurate lip synchronization tools on the market.”* [Todd Griffith, CEO of 3DME, Inc.]

Specifications

- C API for Windows, Mac, and Linux operating systems. Alternative OS can be supported as requested.
- Acceptable audio input is 8kHz, 11kHz, 16kHz, 22kHz, or 44kHz .wav files using 16 bit samples. Alternate input formats can be supported.
- No limit on the length of the audio input stream.
- Output time resolution is 10 ms.
- Extremely low latency: 50ms.
- Very fast: less than 3% of the CPU on a 3 GHz P4.
- Executable footprint is as small as 150k.

Customization

This technology is provided as a C API which can be incorporated into your own application. Tradeoffs for footprint, speed, audio input format, and output format can be custom designed around your application’s requirements.

Automatic Sync Technologies

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