

Jacoti **lola** SDK

Low-latency multi-peer audio streaming. Allows for bi-directional high-quality audio streaming over Wi-Fi.

Overview

Jacoti Lola SDK is a new Wireless Protocol implemented with the goal of having Low Latency Audio Communication applications work effectively on off-the-shelf devices and network infrastructures; hence allowing to bring this technology for a fraction of the price of other equivalent technologies without compromising latency, quality or signal-to-noise ratio.

The Jacoti Lola software development kit (SDK) is especially suited for applications running on connected devices located in small to medium sized venues with the aim of facilitating the communication of audio–speech and CD quality music–between the users of such devices.

Jacoti Lola SDK enables low latency high-quality audio transmission thus being especially adequate for conference rooms, classrooms and other situations where there is one person speaking to many, all of them physically present. In such situations, Jacoti Lola ensures that audio is not too delayed with respect to the lip movement of the speaker so the listeners can have a comfortable experience. It also features bi-directional communication that allows the listeners to speak up and make themselves be heard by the lead speaker and fellow listeners.

Patented methods:

[Method to handle problematic patterns in a low latency multimedia streaming environment, Method and device for latency adjustment](#)

LOLA (LOW LATENCY AUDIO COMMUNICATION) API

Communication

Control Data Transmission

Audio Transmission*

Data processing

Audio Codec

Network Latency Control

Packet Loss Concealment

Noise Reduction

*Algorithmic Latency: 2.5ms

Key features

Jacoti HearingKit®

Jacoti Lola SDK leverages Jacoti HearingKit® signal processing algorithms to provide noise reduction and sound limiting (higher possible output without distortion in the signal).

Real-time Audio Encoding

Jacoti Lola SDK uses the Opus codec, which is unmatched for interactive speech and music transmission over the Internet, and it is standardized by the Internet Engineering Task Force (IETF) as RFC6716.

Low and adjustable latency

Jacoti Lola SDK provides end-to-end (from the speaker's mouth to the listener's ear) communication in less than 30 milliseconds*. Jacoti Lola SDK adjusts the latency automatically according to the network performance.

* On the iPhone 5 (and later), iPad (4th gen), iPad mini (2nd gen) and later and iPod touch 6th over an 4ipnet EAP767 WiFi Access Point network.

Device discovery

Jacoti Lola SDK features device discovery so it allows creating minimal yet very usable graphical user interfaces which make Jacoti Lola SDK enabled products very easy to use.

Bidirectional communication

Jacoti Lola SDK supports bidirectional communication that allows M-to-N audio transmission.

Main benefits

- Easy integration for faster deployment
- Predictable performance (such as latency) across multiple devices
- Automatic device discovery, which facilitates the development of easy-to-use applications.

Products with Jacoti Lola SDK

Jacoti Lola SDK currently powers the Jacoti Lola app, the wireless audio communication solution for in-room situations.

Written in C++

Wi-Fi devices

Mac OS X and iOS Support

Works with 5GHz band routers (802.11n, 802.11ac)

Algorithmic Latency: 2.5ms

Compression ratio: 1:12

Data Rates: 128 kbps

Audio Format: 32-bit 24kHz (CDQuality)

Frequency Response: 10Hz to 24kHz

Access points: We recommend using the EAP767 WiFi AP from 4ipnet (tested with up to 16 devices). Apple Airport Extreme and other mid-high end routers are also known to work well.

Jacoti

HEARING WITHOUT BARRIERS

Jacoti's hearing solutions can be deeply embedded in consumer electronics devices such as headphones and earbuds. Our technology enhances audio experiences tailored to every customer's individual needs & preferences.

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