



VoIPS

DIGITAL SIGNATURE FOR VoIP COMMUNICATION

Voice over IP (VoIP) is the standard technology for voice telephony. VoIP builds the bridge between usual telecommunication and world-wide data transfer via IP networks (like the internet). This enables telecommunication companies to develop new business forms and functionalities for voice communication. Moreover, there are possible applications for IT security, including saving voice communication as a way of preserving evidence as done in telephone banking.

For the realm of digital voice recording, Fraunhofer SIT has developed the software VoIPS (VoIP Signatures). With VoIPS telephone conversations can be archived to guarantee their legal evidential value. Additionally, discussion participants can enter into legally watertight contracts by using the software.

VoIP-Signature

The process used is technologically based on a digital signature. With this changes to recorded telephone conversations cannot go unnoticed. Attempts at manipulation can be proved with mathematical exactness. VoIPS is based on IP-telephony SIP/RTP/SRTP standards and adapts perfectly to existing voice-over-IP environments, for example IP telephone systems and unified communications systems.

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Archival Function

VoIPS can be used in all situations where businesses or government agencies record voice communication and would like to tamper-proof their storage in order to rule out future legal uncertainties. This is the case for telephone banking as well as customer meetings with insurance or other service-providing companies. It is also possible for both parties to sign the telephone call using the software.

Authentication of Discussion Participants

In many use cases of legally watertight voice recording, the combination with authentication of the discussion participants is sensible. For this VoIPS can be combined with common processes, e.g. for authentication via password, smartcard, the new ID signature function, or bio-metrically distinguishing features. VoIPS can also easily be connected with common public key infrastructures (PKI).

What Fraunhofer SIT Offers

VoIPS is the first solution for the use of electronic signatures in VoIP communication. The patented process has already been realized using a demonstration. Fraunhofer SIT strives for a fair integration into existing VoIP hard and software solutions. VoIPS can also be combined with other media, like video-over IP.