inmote

VOIP and SIPS
for 3G video consults

Inmote has setup its own secure video teleconsulting services, specifically targeted at the healthcare market.

The service is based on a hosted OpenSIPS environment using Ubuntu.

To provide optimum performance over 3G networks, Inmote developed a video conferencing solution completely based on open source products. This provides us with the best options to control the exact behaviour of the software in every possible network coverage scenario.

Using PJSIP for the mobile client (e.g. iOS and Android), we are able to split audio and video traffic and ensure that the audio stream is handled with higher priority than the video stream, in case of insufficient bandwidth. We use encrypted SIP traffic for call setup and encrypted RTP traffic during the call.

Having complete control over the software stack, we can switch between back and front cameras on the smartphone as well as capture video frames from the video stream during the video conference call. This single video frame can be captured in high resolution - the original resolution of the camera – and is not compromised by the regular H.264 video compression. Next, the high resolution picture can be sent separately via mobile e-mail or in a binary SIP message.

Our engineers are capable to troubleshoot VOIP traffic and NAT traversal problems using WireShark.

Technologies used:

- *Video consult via 3G*
- *WireShark for SIP tracing*
- *PJSIP, SIPS , OpenSSL, RTP*
- *OpenSIPS*
- *Codecs: H.263, H.264, AMR*

The video teleconsulting services of Inmote can be delivered as a branded-on premise solution or can be hosted by Inmote.

The mobile client software can be integrated within other Android or iOS applications. Also, the software can be ported to other devices running embedded Linux, like a baby monitor or other medical device. In this way we can add video conferencing capabilities to many healthcare solutions.