

PhoneWorld VoIP – What’s the difference

BACKGROUND

Good to know: Internet telephony networks are based on digital technologies. VoIP, in contrast to PSTN (Public Switched Telephone Networks), uses what is called packet-switched telephony. Using this system, the voice information travels to its destination in countless individual network packets across the Internet. This type of communication presents special challenges because the Internet was not really designed for the kind of real-time communication a phone call represents.

Individual packets may – and almost always do – take different paths to the same place. It’s not enough to simply get VoIP packets to their destination. They must arrive through a fairly narrow time window and be assembled in the correct order to be intelligible to the recipient. VoIP employs encoding schemes and compression technology to reduce the size of the voice packets so they can be transmitted more efficiently.

THE NEW WORLD OF VOICE OVER IP

From a security point of view, the ISDN telephony has never been encrypted ie anyone who had the right equipment could eave-drop into a conversation. It seemed the general public never had a security problem with this.

Now comes “VoIP” and users think “everything becomes unsafe”. However, we have to qualify since **VoIP is NOT VoIP**.

When 2 parties communicate via SIP (Session Initiation Protocol), another word for VoIP if you wish, the communication will go directly into the internet (just like Skype, Whatsapp, WeChat etc.)

This type of communication is totally unsafe and business is discouraged to use them.

HOW PHONeworld’S VOIP IS DIFFERENT

PhoneWorld VoIP calls travel via the internet **ONLY** to switch/servers in Zuerich – these are 2 or 3 small steps within our internet circuit.

Once the call reaches the computer/server centre in Zuerich the call goes, like before, into the telephone network to reach the “B” line (end user anywhere in the world)

A PRACTICAL EXAMPLE

A user in Geneva calls via PhoneWorld VoIP to London.

The call travels – via direct DSL connection – to our internet partner’s switch in Zuerich who in turn sends signals into the larger networks (Swisscom, France Telecom, Colt, Deutsche Telecom etc.) into the standard PSTN telephony system (Public Switched Telephony Network)

Needless to say, the call to London does NOT travel via the internet but via the “old” PSTN network.

You may ask “why not encrypt the SIP/VoIP call”. This would not make a lot of sense since it takes large computer power and a likely delay (echo). Under encryption, the called user would of course receive the conversation encoded (consequently must be on same platform to receive the call)

THE BOTTOM LINE

SIP/VoIP calls are just as “safe” (or unsafe) as the previous analog and ISDN technology. In the old days, the conversation also went unencrypted from the user to Swisscom Carrier Preselection. From a security point of view there is zero difference.

Importantly we should note that it is against the law to encrypt telephony on our servers since the Government – on Court Order – must at any time be allowed to monitor calls between parties.