

Geo-distributed conferencing system created by Lindenbaum

Lindenbaum has created a geographically-distributed conferencing system for an international customer.

When a company has international operations, or is on the path towards international expansion, then an internationally-available conferencing system will sooner or later become a central tool for achieving professional communication. After all, communication with colleagues around the world, with business partners, supplier and customers, needs to be just as professional as the products and services a company supplies. This means specifically: the company needs excellent service and the best in terms of quality.

Lindenbaum designed such a geographically-distributed conferencing system – at an intercontinental level – for an international customer and supplied and installed it ready-for-use. Using the system it is just as easy to hold a small conference call with just a few participants as it is to hold one with several hundred. Indeed, the total number of simultaneous participants is almost limitless.

The task at hand was not just to build a conferencing system on each continent, but to guarantee a faultless service between the continents using the shortest physical connection possible.

Because we currently find ourselves in a transition phase in terms of telephony quality, and will continue to do so for some years, Lindenbaum has provided a hybrid conference system that supports both the TDM and VoIP standards.

Lindenbaum know-how

Lindenbaum provides carriers with ready-to-use systems, including both software and hardware, as well as local technical installation no matter where it is required. This is especially important as the coding of calls can differ depending on the country in question. This is when Lindenbaum can bring in its own know-how and expertise. In the aforementioned project we developed our own software solution for E1-T1 conversion, as is required for calls to the USA. This solution avoids the need for any upstream installation of special converters, as

would commonly be the case.

Moreover we understand the unique natures of different local networks. It was considerably more convenient for our customer that we were able to take care of local installation ourselves without the need for a further interface as part of the implementation process.

Lindenbaum quality

The voice quality of conference calls is key to our customers and for justifiable reasons: If, during a conference call, the tone of speech is essential, or, during a briefing, nuances are to play a role, then a break in communication, even if it is solely down to the technology, may provide your dialogue partner with the completely wrong impression. A short disruption in data can be interpreted as hesitation. Such risks can be avoided if conference systems can guarantee a high and stable voice quality. Such problems occur (at present) most commonly with VoIP conversations, and it is for this reason that our current conference system is compatible with TDM and this will continue to be the case for the foreseeable future.

Lindenbaum and VoIP

In the not-too-distant future, telephony using data networks, so-called VoIP, will replace the standard fixed and mobile networks, and will be used for the transfer of voice and data between partners. VoIP is cost-effective and different service providers are already able to offer uncomplicated access to such services. Particularly when used for personal needs, or to connect two participants, VoIP is already a more than sufficient option.

Yet VoIP does have some significant drawbacks at present. Using VoIP our calls are converted into a series of ones and zeros, condensed, packaged and trans-

ferred over the IP network. If, however, there is insufficient bandwidth in the carrier's backbone (or insufficient bandwidth in the dial-up lines for the internet), then the bandwidth will be reduced for the individual callers. Depending on the level of reduction, the quality of the call may also suffer. Of course, there is some room for loss in voice transfer and 100 % accuracy is not required. To a certain extent this does not affect the voice quality of the call. Currently, however, the compression of high-load situations can lead to unacceptable losses in quality.



„The quality of a conference call is measured by the ability of its participants to conduct their work without them noticing the technology behind it.“ Dr. Ralf Nikolai, Managing Director at Lindenbaum

Lindenbaum and TDM

Hence VoIP is not yet able to achieve the expected quality of conference telephone calls for business purposes. It is expected to be another 4-6 years before there is sufficient bandwidth available to all for a stable service. In the meantime we are pursuing our own course with TDM, which at first glance may appear somewhat anachronous, but will mean we can ensure excellent quality even on large-scale telephone conferences.

We will provide the TDM standard for as long as it is requested by customers and have reflected this in our latest generation of products. Many operators appreciate this as they know themselves that they will have to work with TDM for another 4-6 years. Yet at the same time we have no problems in terms of compatibility: Of course, one can convert TDM to IP, as is already the case in many situations, yet from a quality point of view this is (still) a waste of time.

This remains, however, a minor aspect in the design of a geographically-distributed conferencing system. Regardless of how long it takes for sufficient bandwidth to become available for IP telephony, our customers will have no problem in making the conversion when the time comes. Using our hybrid conferencing systems they already have the advantage today – no matter the technology, the country, or its level of maturity – that they require no additional gateways to

integrate TDM and VoIP in their systems. What matters to our customers most is that: the intercontinental link between offices is created and they can use their conference time productively.

Lindenbaum GmbH

The product portfolio of Lindenbaum GmbH, telephone and web conferencing services and virtual dialogue, covers the whole range from a single source – from consultation and development, planning and configuration, hard and software, to customer service and support during operational usage. The business unit Communications was spun off on 02.03.09 from the company disy Informationssysteme GmbH and simultaneously changed its name to Lindenbaum GmbH. This step highlights the company's growth in the market for telephone and web conferencing services and virtual dialogue.

Lindenbaum creates locations for social gatherings. The name „Lindenbaum“ is synonymous with „oak tree“ in English and, for centuries, this tree was the place where meetings, negotiations and the exchange of news took place. Festivals and other social occasions were also celebrated under the oak tree.

„We chose the company's name as an example of a place for socializing in today's world of the Internet and Web 2.0“ explains Dr. Ralf Nikolai, managing director of Lindenbaum GmbH.

Furthermore, Telekom Deutschland GmbH, a long-standing customer of Lindenbaum, relies on our geographically distributed conferencing system as well.



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