

## VoIP meets DECT

N. Rohrer, F. Kettler, C. Landauer

Strong marketing activities can currently be observed from nearly all network providers to promote integrated VoIP communication for private customers. IADs (Integrated Access Devices) provide voice and data access over IP together with digital ISDN S<sub>0</sub> interfaces or analog telephone adapters for users to connect their accustomed private telephone. A typical interaction problem arises: analog or digital DECT phones often do not provide a sufficient echo attenuation. These have not been “really” disturbing in the past when this telephone was connected to the public switched telephone network because relatively low delays occur in these connections. If parts of the connection are now substituted by VoIP links with its typical long delays, significant echo disturbances now arise even both subscribers still use their common telephone set as they did before. Echo cancellation implemented in IADs is not capable to cancel these acoustical DECT echoes. The processing window length can often not cover the DECT delay. This aspect is of particular importance and can not be ignored by operators and manufactures: about 90% of telephone users in Germany use DECT phones. These interaction problems are discussed using typical test results.