

Signaling Compression

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Wired line networks have been used for a long time, thus applied techniques and protocols are well tested and widely implemented so the early difficulties have already been solved. The rapid development of mobile phones exposes an increased data exchange between mobile and wired line networks.

Due to these reasons third generation mobile phones have been planned to be able to use the well known protocols of wired line networks. Beside the similarities, there are several differences between wired and mobile networks. The most important one is bandwidth, and it is also the bottleneck of mobile core systems. If present systems which apply the new protocol were used without changes, there would be unbearable time-lags in data traffic. Certainly, there are several solutions to this problem.

During a Nokia founded project in 2002-2003. one of the possible solutions was examined. The basic idea is that messages are compressed, thus the required time can be reduced. The method is Signaling Compression (SigComp), and it defines a new layer directly below the Application. This subject is relatively new, as the final version of SigComp was accepted in 2003. The method has several advantages, as it is planned to be able to use a number of compression algorithms. We presented the early results two years ago and this time we will describe the structure of SigComp first, afterwards the new compression algorithms and their efficiency in our work.