FAQ - Synchronisation planning

Valid for:	~~N610~~	N670	N870	N870E	Embedded Integrator	Virtual Integrator

Synchronisation planning

Base stations that combine to form a DECT wireless network must synchronise with one another to ensure a smooth transition of the handsets from cell to cell (handover). No handover and no (overload) balancing is possible between cells that are not synchronised. In the event of loss of synchronisation, the base station stops accepting calls once all ongoing calls that were being conducted on the asynchronous base station have ended and then it re-synchronises the asynchronous base station.

The synchronisation within a cluster takes place in a master/slave procedure. This means that one base station (sync master) defines the synchronisation cycle for one or more additional base stations (sync slaves).

The synchronisation needs some kind of synchronisation hierarchy with the following criteria:

1. There must be one single and common root source for the synchronisation in the hierarchy (sync level 1).
2. With synchronisation over LAN there are just two levels needed (LAN-Master and LAN-Slave).
3. DECT synchronisation usually needs more than two levels and just one hop, because most base stations won't be able to receive the DECT signal from the root source of the synchronisation (sync level 1). DECT signal providing reference timer synchronisation is relayed along a chain of multiple base stations, until it finally synchronises the last base station in a sync chain.
4. The number of hops along any branch of DECT synchronisation tree should be minimised, because any hop can introduce jitter in the synchronisation timer and could so lower the quality of the synchronisation.