



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Serial Connection



RDM

E1 Communicator

Is management of remote Cellular base stations becoming a problem?

LAN Network

TCP-IP/UDP

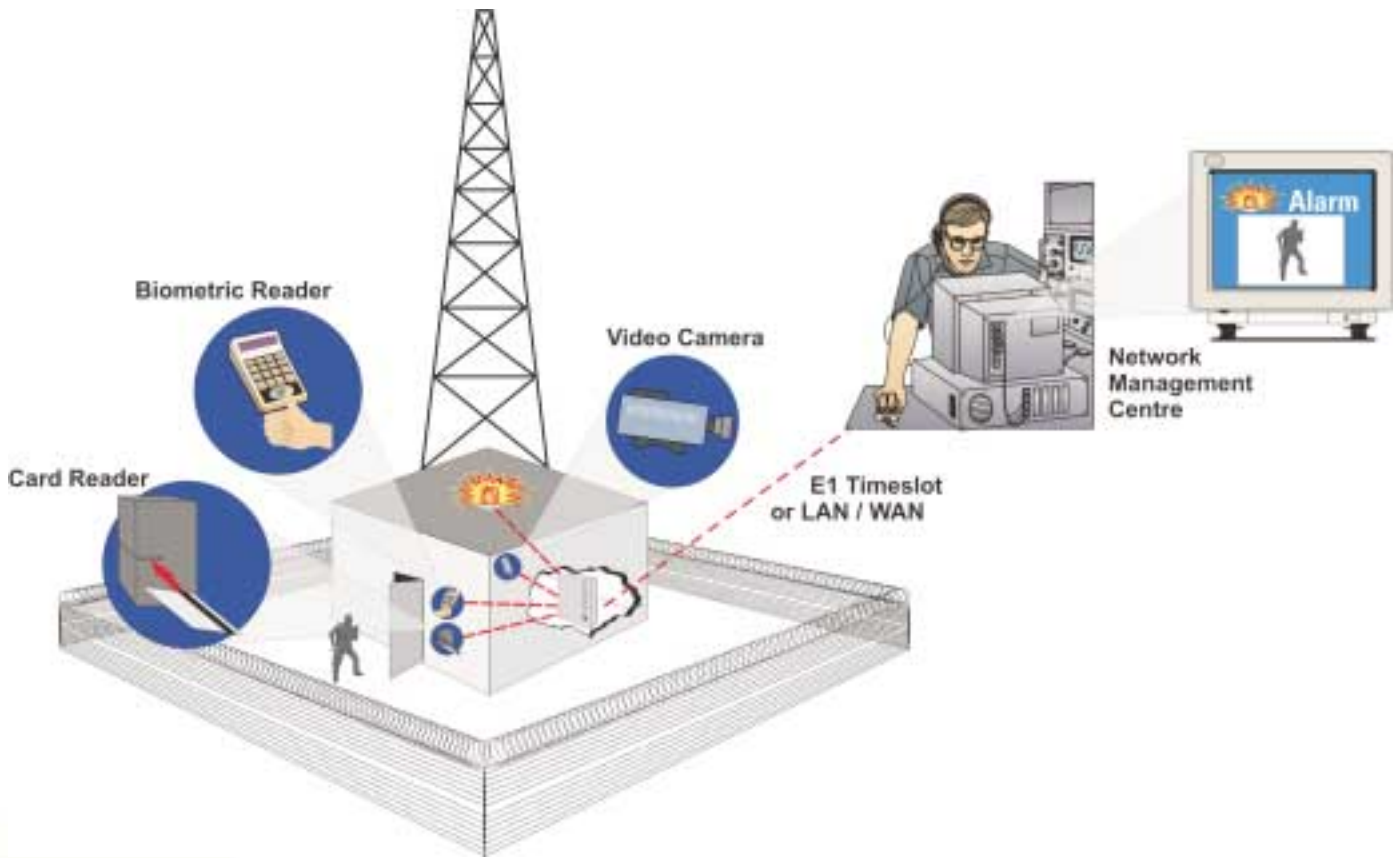
TCP-IP/UDP



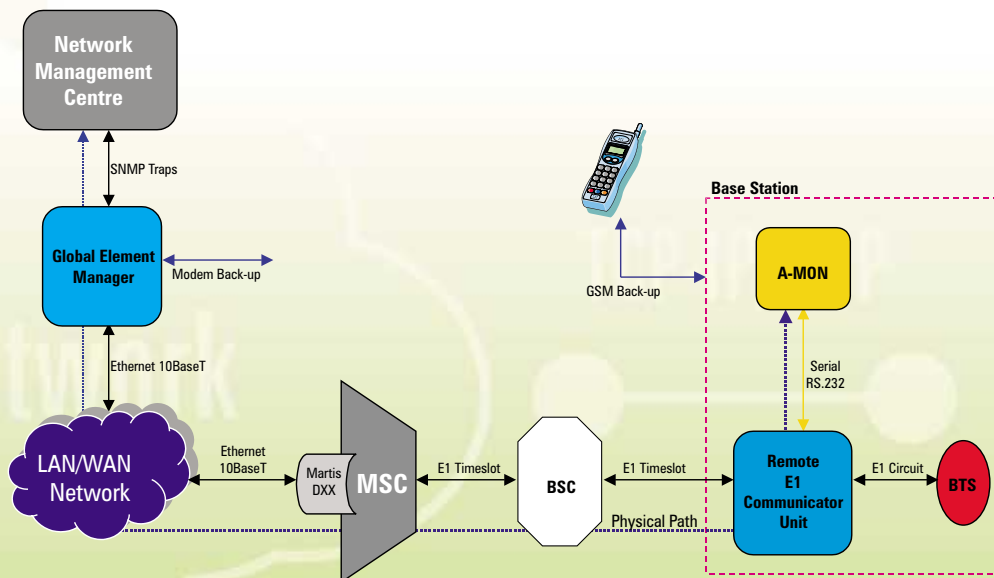
Quality of Service is the issue

Today, in a competitive telecommunications industry, the efficient management of remote cellular Base Stations requires an integrated approach that will address optimal use of assets such as environmental controllers and rectifiers while also considering security issues and the early detection of possible malfunction.

The E1 Communicator has been designed with just that in mind in order to provide cost-effective device management and alarm monitoring in even the most complex cellular Base Station while retaining the flexibility to be adapted to changing conditions far into the future.



Complete BTS management through existing E1 infrastructure



Continuous in-service real-time BTS Management

Management information travels together with the voice traffic over the E1 link between the Network Management Centre (NMC), the Mobile Switching Centre (MSC), the Base Station Controller (BSC) and the Base Station (BTS).

The management is performed utilizing the existing E1 connection to the BTS through using a nailed up connection. This connection could be a dedicated 64Kbit/s timeslot, 16Kbit/s sub-slot or 4Kbit/s SA-Bit or multiple of any.

The automatic bypass mechanism of the E1 Communicator provides dependable and failsafe operation of the E1 service during power or failure conditions.

The E1 Communicator consists of an E1 management controller and two serial ports. The E1 management controller is used for the purpose of extracting and inserting management data to and from the secondary managed devices and the Network Management Centre. Due to the E1 circuit being used as the primary communications medium, it is automatically monitored. Real time E1 alarms according to ITU-T M.2120 and continuous performance data according to ITU-T G.826 are reported as an when it occurs, according to user programmable pre-defined filters.

The serial ports are used for managing or monitoring secondary devices such as environmental controllers, access control units, rectifiers etc. Optionally the E1 Communicator can be equipped with an additional serial or RS.485 port and a LAN port, for remote LAN/WAN network access from the remote BTS site location.

Features

- Continuous in service alarm event reporting
- Complete network management
- Nailed-up connection
- Secondary communication path
- Bypass protection
- LAN connectivity
- Common infrastructure
- Improved bandwidth utilization
- Management means reduction in site visits
- Expandability and flexibility.

Benefits

- Preventative fault management and immediate reaction to problems, with minimum disruption to transmission
- Continuous updated view of the entire monitored network at all times
- One or more timeslots, sub-slots or SA-bits are used for management of the chain of sites
- Should the primary E1 communications medium fail, a secondary GSM path could optionally be used
- Unit failure results in the E1 circuit being bypassed with no loss to voice traffic
- The optional LAN port provides LAN/WAN network access from the BTS
- No need for optional communications infrastructure due to the use of the existing E1 circuits, thus reducing costs
- By using a timeslot or multiple timeslots, management becomes more cost effective
- Due to reduction in unnecessary site visits and call-outs it would result in a significant cost saving
- Various optional expandable interfaces are available, such as RS.232, LAN and RS.485

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