Expository Statement

Indoor Mini-BTS SCBS-1900M1A

The Indoor Mini-BTS (**B**ase **S**tation **T**ransceiver) is a 1.9GHz CDMA spread spectrum transceiver providing a radio interface and call processing functions to mobile subscribers, and a metallic T1 interface that flows via various switched into the POTS. The Mini-BTS may be operated in any of three antenna configurations from Omni-sector (single antenna), Dual-sector (two antennas), or Tri-sector (three antennas).

The BTS consists of transmitting/receiving antennas (all antennas provided by customer), transceiver, amplifiers, antenna front-end units, mod/demo circuitry, and a T1 interface which is used for bi-directional phone traffic and control-signals. In addition, the Mini-BTS is equipped with a GPS receiver for network synchronization of the CDMA network.

Power is delivered to the Mini-BTS via customer supplied rectifiers operating on the secondary side at a nominal 27VDC. The Indoor Mini-BTS is designed to be operated in a controlled environment.

Major Functions of BTS

1. **Radio Frequency Interface to Mobile Subscriber**
   The radio transmission characteristics including radio channel interval, modulation method, output power characteristics, spurious emission power, and receiving band emission power shall meet the requirements of JSTD-008, SP-3383, SP-3385 (IS-95 Up-Band CDMA).

2. **T1 Metallic Interface**
   The Mini-BTS to BSC (**B**ase **S**tation **T**ransceiver to **B**ase **S**tation **C**ontroller) bi-directional T1 interface transmits and receives traffic and control packets.

3. **BTS Resource Management and Operation/Maintenance Function**
   BTS provides the following functions for operation and maintenance functions.
   - Detects system errors and reports the results to the BSC.
   - Collects statistics information related to call processing and reports it to the BSC.
   - BTS device self automatic function test
   - Forward/backward link performance test

4. **GPS Receiving Function**
   This function receives the time information and clocks of GPS, and generates reference signal, system clock and even_sec.