SAMSUNG PRODUCT BULLETIN

TITLE: HDSL2 Service for the DCS and DC 400si Systems DATE: April, 2000 ISSUED BY: Product Department BULLETIN NO: NO. OF PAGES: 1 of 4

Recently, many dealers have been interested in connecting two DCS 400si systems together and/or connecting one or more DCS systems to a DCS 400si system via T1 E&M Tie Trunk circuits. Since the DCS 400si system provides tandem tie trunk operation, this provides a good way to interconnect the Samsung systems even though the DCS 400si does not currently provide "Networking" capabilities. As long as the physical distance between systems is short, this does not present a problem since a simple shielded two pair cable can be used (i.e., with the transmit and receive pair shielded from each other to avoid crosstalk problems). When longer distances are required, a T1 span line must be purchased from the Telephone Company. However, this can be expensive since the T1's cost is distance sensitive.

Now, how would you like to connect to two Samsung digital systems together via a T1 using only a single twisted pair (i.e., without loading coils and without having to remove bridge taps) for distances up to 12,000 feet on 24AWG wire without a repeater? This is what can be done using an HDSL2 circuit facility.

Samsung Telecommunications America (STA) has been in contact with Pair Gain Technologies, a prominent leader in the development of xDSL technology, and have found one of their products, the HiGain SOLITAIRE H2TU-C (local unit) and H2TU-R (remote unit) units compatible with the DCS and DCS 400si product's T1 capabilities. These two units form a pair and basically convert a T1 DSX stream (i.e., the output of a DCS T1 card or a DCS 400si T1/PRI card) into HDSL2 format and back again.

The units are powered via -48 volts and the H2TU – C unit can feed power to the H2TU – R unit over the connecting cable pair.

In laboratory tests at STA, connections between two DCS 400si systems and a DCS and a DCS 400si system were set up using T1 E&M tie trunks (wink start). Also, an ISDN Primary Rate Interface (PRI) circuit was connected to the Pair Gain units and sent into the T1/PRI card of a DCS 400si. All arrangements worked well during our testing. The PRI testing arrangement assumes that the H2TU-C unit or equivalent (Note: currently HDSL2 is in the process of becoming an ANSI standard) is located in the Telephone Company, CLEC, etc. Central Office and the H2TU-R unit is located on the customer premises.

Please review Figures 1 and 2 which graphically show typical applications configuration examples of HDSL2 arrangements.

The units can be obtained from:

Pair Gain Technologies, Inc. 14402 Franklin Avenue Tustin, California 92780-9922

Tel: (714) 832-9922 Fax: (714) 832-9924

Each unit's price is approximately \$300. This makes the units attractive with a short payback period relative to the installation and monthly service costs for a T1 facility.

The specific ordering information for these units is:

1) H2TU-C-319 L1 HDSL2 LU
2) H2TU-R-402 L1A HDSL2 RT

Pair Gain provides various indoor and outdoor enclosures to mount these units (circuit cards) in. STA used an HHS-319 three slot Horizontal shelf to mount the H2TU-C unit and an HRE-420 L1 (one slot) Remote Enclosure to mount the H2TU-R unit.





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