Enterprise Technology Support

Collocation Line Sharing Guidelines

Document Title:	Collocation Line Sharing Guidelines
Document Number:	SBC-002-316-010, Issue 7.0 Also Appendix G for the Interconnectors Collocation Services Handbook for Physical & Virtual Collocation
Issue Date:	Issued November 20, 2000
Target Entity:	SBC ILEC & CLEC Personnel that Engineer, Design, Order and Install Line Sharing services within SBC Local Exchange Carrier Central Offices
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Description:	Presented in this document are the methods and procedures to implement ILEC/CLEC Line Sharing Equipment and Layouts
Cancelled Documents:	Supercedes Issue 5.0 & 6.0.1

This document may be found as Appendix G of the Interconnector's Collocation Services Handbook for Physical & Virtual Collocation located on the external web site **https://clec.sbc.com**

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1.0 Reasons for Reissue

Issue 7.0, Section 2: Deleted Shelf-at-a-time for SBC-Ameritech/Illinois.

Issue 7.0, Section 3.2: Deleted.

Issue 7.0, Section 4.1: 100-pair complement groups will be tagged.

Issue 7.0, Section 4.1: Blue Box: wire wrap only on main distributing frames.

Issue 7.0, Section 4.1: Corning Cable Systems card with direct test access is available.

Issue 7.0, Section 4.1: Corning Cable Systems contacts are updated.

Issue 7.0, Section 4.2:New Section on the Cable Testing for CLEC or ILEC placed cable.

Issue 7.0, Section 4.2-4.4 renumbered to 4.3-4.5.

Issue 7.0, Section 4.3: Box updated to reflect Cabling in Michigan is ILEC responsibility.

Issue 7.0, Section 5.3: Reference to ILEC specification removed.

Issue 7.0, Section 5.3: ILEC management of assignment is removed in this section.

Issue 7.0, Section 5.3: Test access for both ILEC and CLEC.

Issue 7.0, Section 5.4: Test access for both ILEC and CLEC.

Issue 7.0, Section 5.5.2: Removal of Idiosyncrasy paragraph and picture.

Issue 7.0, Section 6.1: Updated in its entirety.

Issue 7.0, Section 6.1: Deleted.

Issue 7.0, Section 6.2: Deleted.

Issue 7.0, Section 6.3: Deleted.

Issue 7.0, Section 6.4: Deleted.

2.0 General Overview and Network Serving Arrangement

This document currently covers the following SBC Local Exchange Carriers comprised of Southwestern Bell Telephone, Nevada Bell, Pacific Bell, Ameritech and Southern New England Telephone.

FCC Report and Order 99-355 instructed the Incumbent Local Exchange Carriers that the local loop to the end user customer will become unbundled in a Line Sharing Arrangement. The frequency spectrum of the cable pair will be divided into two distinct uses. The order does not specify specific frequency ranges and a particular division point has not been specified. Ultimately when standards are ascertained, this would permit one company to provide the narrow band (dial tone) and another could provide the broadband technology (DSL) over the same pair. This arrangement is only available when the SBC Local Exchange Carriers (ILEC) are providing the voice/narrow band service. If this is not the case, the Competitive Local Exchange Carrier (CLEC) is required to purchase a separate Unbundled Network Element (UNE). The FCC recognizes that SDSL can not be line shared and requires a separate UNE. Other xDSL services are candidates and the burden of proof of any claims of incompatibility or interference with POTS services rests with the incumbent LEC.

For the purposes of the first deployments of Line Sharing between SBC Communications Inc. and the CLEC Community [recognized as Data Local Exchange Carriers (DLEC's)], the splitter architecture has been determined through a joint effort of the ILEC's and DLEC's:

- ILEC (SBC) will provide POTS-SPLITTERS on a line-at-a-time basis for all CLECs based upon CLEC Forecasts. The Bay will be placed in the Collocation Area and will be accessible and testable by both CLEC and ILEC.

- The CLEC/DLEC may provide POTS-SPLITTERS in their own Collocation Area (either Caged or Cageless) in either a Virtual or Physical manner within the Collocation Common Area. These units may be either Integrated or Non-Integrated with the Data Cabling dedicated directly to that CLEC by shelf. The Bay will be accessible and testable by both CLEC and ILEC.

The ILEC will be required to provide the interconnection of the CLEC to any facility, whether a pair gain technology (i.e.: Litespan/UMC 1000) or twisted copper pair. Mutual Test access for both the CLEC and the ILEC is required as a part of the order. The order indicated that the ILEC "may provide" the technology but it must not impede or induce additional costs to the CLEC.

Line Sharing is being offered within SBC under the Product Name – High Frequency Portion of the Loop" (HFPL).

The following services are incompatible with Line Sharing:

SDSL/HDSL.	ISDN
Repeatered T1.	56 Kb/s DDS

The following network architectures are not technically feasible to unbundle the upper frequency spectrum using a ***non-integrated*** POTS-SPLITTER:

Fiber to the Curb (FTTC). Litespan/UMC1000 Subscriber Line Carrier
Fiber to the Home (FTTH). SLC96, SLC Series 5, DISC*S
Copper loops containing load coils. Digital Added Main Lines (DAMLs)

3.0 POTS-SPLITTER Provisioning

3.1 ILEC POTS-SPLITTER Deployments

Corning Cable Systems will operate through the authorized distributor as follows and provide POTS-SPLITTERs for the ILEC provisioned equipment;

Vetco Sales Incorporated
3312 Seaton Court
Flower Mound, TX 75028

Office, Direct Line, 972-724-4507
Customer Service, 800-485-7198
Fax, 507-334-8926

The Primary Point of Contact is Troy Murphy.

The manufacturer is listed below:

Corning Cable Systems
PO Box 489
Hickory, North Carolina 38603-0489
(800) SIECOR5
(800) 743-2675
FAX (828) 327-5973
http://www.corning.com

The Corning Cable Systems Sales Account Manager: Clint Blundon, 636-978-2889

4.0 Service Architecture, Infrastructure & Network Components

4.1 Central Office POTS-SPLITTER

The POTS-SPLITTER has been **Approved for Use** on Product Approval Notice 20001017, dated March 2000. The products will be loaded into PICS-DCPR via a HECI and CPR code. The Corning Cable Systems COSF00S2R007 shelf has mounting ears that are adjustable for 5-inch, 2-inch or flush front set out. When 5-inch front welded guard boxes are used on 7-foot racks, we will want to use the 5-inch set out. The Chassis has a GRD lug for external grounding. Due to the fact that the equipment does not require AC or DC power, the ground functionality will be provisioned via the existing shelf mounting to the Bay. The external GRD wiring is not necessary in this case. With the backplane mounting, only one of the two screws may be used to provide a secure mounting, As a result, we will need to attach a Tie Wrap to the Chassis Backplane Cable Tie Clamp placed on each Amp termination. Following the documentation set forth in the ADSL Methods and Procedure for the Central Office, the cabling between the POTS-SPLITTER and the MDF for Data and Line (Combined ADSL & Dial Tone), Voice (Dial Tone) and ADSL (Data Only) will be provided over Single Ended Shielded 25-pair AMP 90° Slope Cable (such as the TSI/TeKontrols CA4XXXX101TSD1 Single Ended, 24 AWG shielded 25 pair) for SBC provided POTS-SPLITTERS. **DO NOT USE 180-degree Slope Cable Connectors.** The CA4XXXX101T002 single Ended, 24 AWG non-shielded 25 pair cable can be used for the MEOE (OE) cable placement to the POTS-SPLITTER. (This will reduce the need for shielded cable by one third.) When the POTS-SPLITTER is provided by the CLEC, Lucent 1249-025C (26 AWG, 25-pair shielded) cable (or equivalent) can be provided for all cabling including "Voice", "DATA" and "DATA over Voice" transmissions. At the local discretion, the 1249-025A (26 AWG, 25-pair non-shielded) cable (or equivalent) can be provided for the voice (OE/MEOE) sections of cable. PBAS or Lucent 609C 25-pair 22-gauge Tinned Shielded w/Drain wire Cable may be substituted for the above listed 25-pair cable.

100 or 50-pair cable may be used in lieu of 25-pair cabling providing that binder groups are properly marked and grounding of same is performed. Insure that all grounding is performed on the head end (POTS-SPLITTER equipment) side of the cable only. Ground terminations of both sides of the cable will result s in the creation of an antenna.

100-pair cable 24-gauge Tinned Shielded w/ Drain wire Cable may be used in lieu of 25-pair shielded cable under the following requirements (1) This is used in conjunction with this document, (2) cabling must be single ended (connectorized only), (3) The appropriate cable type for the left or right cable route on each side of the bay must be used, (4) use only factory installed connectors, (5) properly dress the cable on the rear tie bar, (6) all four connectors must be provisioned to terminate on the other end to the same connector block and (7) each connector must be staggered in length to permit the correct cable length across the Splitter panel.

*****NOTICE***** Due to Industry-wide shortages of raw materials and lengthened Originating Equipment Manufacturers (OEM) delivery dates on cable products, SBC will procure cable from a varied number of sources that meet SBC specifications for use in Collocation cable placements. This cable may be 22, 24 or 26 gauge and may vary from 25 to 100 pairs per cable sheath. It is recommended that the CLEC provide a Point of Termination panel the termination of the copper facilities. This will eliminate the potential of field connectorization issues from developing.

Each CLEC/DLEC desiring to place and own a POTS-SPLITTER in a new bay must request minimum of a 10 square foot area for the placement of one standard bay and request for the cable handoffs in a virtual or physical cageless arrangement covered in the *Interconnector's Collocation Services Handbook*. A CLEC may place a CLEC owned POTS-SPLITTER in an existing collocated bay. A POTS-SPLITTER shelf may be placed in an existing CLEC bay providing that the equipment meets the standard bay and equipment dimensions described in the above listed documents. The cable handoff to the CLEC will follow standard CLEC Guidelines and will reflect tagged cable in 100 pair groups (or equivalent) of cable without connections in the CLEC designated space.

Building Blocks for the POTS-SPLITTER Deployment are be prepared for Ameritech and other locations that are currently using the Turf Vendor Program.

Standard Operating Procedure on SBC Frames dictates that all permanent installation cabling will use the wire wrap method on main distributing frames. The use of Amphenol or other multi-pair connectors on the SBC Frames are not authorized or supported due to the higher incidence of service outages and reduced overall reliability.

4.2 Cable Testing for CLEC or ILEC installed cable

All cabling, x-connects, terminal blocks and mounting locations shall follow already established procedures. This document addresses in detail various frame configurations found in Central Offices throughout SBC's territory. Per an SBC accessible letter (Nov 00), SBC will permit a CLEC's "SBC-13STATE Telco Approved Vendor" now has the ability to perform acceptance/connectivity testing between the CLEC's equipment within their Collocation footprint and SBC 13-STATE's frame termination points (MDF, FDF and/or DSX frames) where the CLEC's interconnection cabling terminates. The following conditions apply:

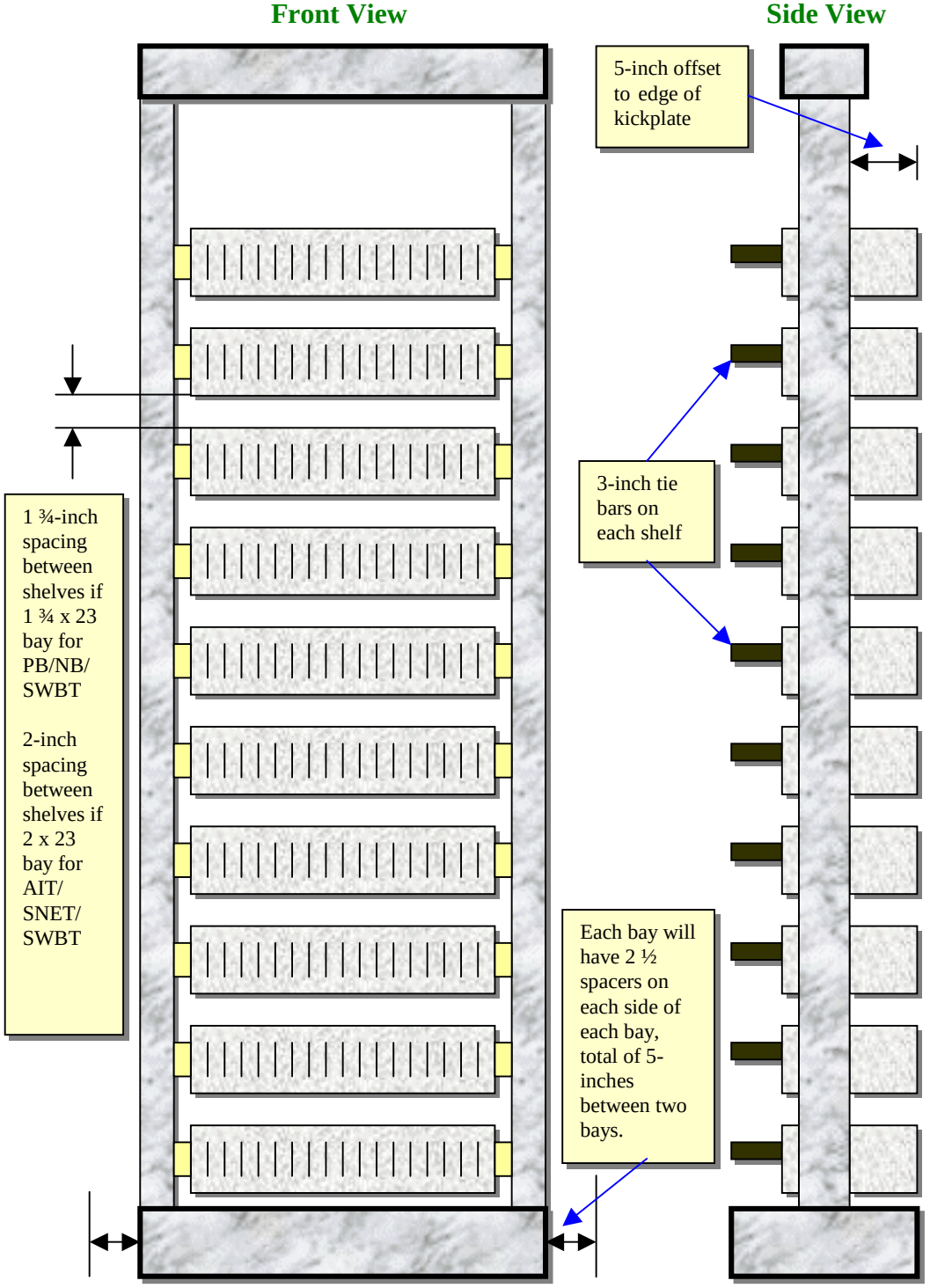
1. Only "SBC 13 STATE "Telco Approved Vendors" will have access to SBC-13STATE's MDF, FDF and/or DSX frame terminations to perform this testing. "SBC-13STATE Telco Approved Vendors" are those vendors that have been approved to perform transport work throughout the SBC 13 STATE's common spaces. Other approved vendors such as "Collocation Vendors" are not permitted to have access to SBC 13 STATE's frames to perform any testing.

2. The CLEC may direct their "SBC-13STATE Telco Approved Vendor" to perform this connectivity testing both during the installation phase and/or anytime thereafter. However, the CLEC must adhere to SBC's Installation Guide (TP 76300MP) when scheduling this testing. The CLEC shall use a written Method of Procedure (MOP) document to detail how, when and where installation work (including acceptance/connectivity testing) is to be performed on the equipment in SBC-13STATE's central offices. A MOP is required to minimize the possibility of a service interruption. TP76300MP, Section D, outlines the process and format for preparing a written MOP.

   This policy does not permit the CLEC's or their SBC-13STATE's Telco Approved Vendor to access the SBC frame to test the local loop or frame cross-connects. This policy only permits the CLEC to direct their SBC-13STATE Telco Approved Vendor to test connectivity between SBC 13-STATE's frame and the equipment within the Collocation footprint during or after installation.

3. Within 30 days of the CLEC's space turnover, when SBC-13STATE has been responsible for the wiring, the CLEC may elect to contact the SBC-13STATE Collocation Project Manager to address any wiring problems discovered during their connectivity testing verification. SBC 13-STATE will investigate and respond to the CLEC within 10 days.

Pictorial View of the Fully Deployed POTS-SPLITTER Bay

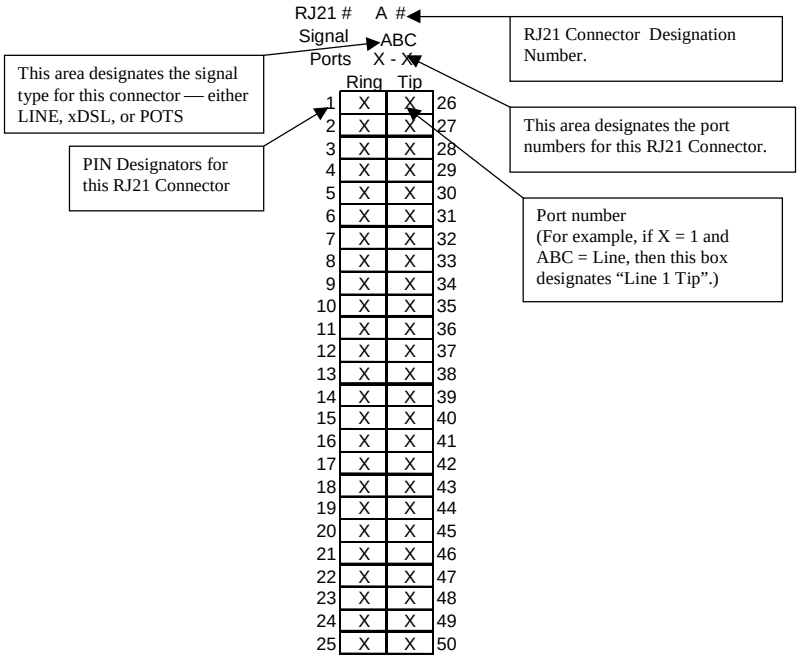


4.3 Cabling of the ILEC Provided POTS-SPLITTER Shelf

Each POTS-SPLITTER will have twelve 25-pair cables (or equivalent) routed to the conventional IDF for traditional MEOE and MECP 100-pair terminations. The cabling on the Connector Blocks will be 1-96 sequentially without any breaks in the line count. The last 4 pairs will not be used in the terminations. Three blocks will be placed adjacent to one another for each POTS-SPLITTER, these being CP, DATA and OE. Each will have only the 25-pair counts terminated for that function in sequence. The cabling between the POTS-SPLITTER and the connecting blocks will be as follows (refer to Section 5 for the connecting block frame sequence on the frame):

Cable Type	Count on Cable	Block Termination
Line/CP	1-25	MECP Block
xDSL/DATA	1-25	MEDT Block
POTS/OE	1-25	MEOE Block
Line/CP	26-50	MECP Block
xDSL/DATA	26-50	MEDT Block
POTS/OE	26-50	MEOE Block
Line/CP	51-75	MECP Block
xDSL/DATA	51-75	MEDT Block
POTS/OE	51-75	MEOE Block
Line/CP	76-96	MECP Block
xDSL/DATA	76-96	MEDT Block
POTS/OE	76-96	MEOE Block

Notice the picture amphenol arrangement above. The AMP connections alternate Line, xDSL, POTS for OE, DATA, CP terminations. The count is sequential 1-96 on the frame blocks.



The above layout shows the RJ21 Pinout of the 50-pin (25-pair) connector.

In Ameritech, the cabling for CLEC requested POTS-SPLITTERS will be installed by the CLEC on ILEC labeled and placed connector blocks except in Michigan where it is now the ILEC responsibility. Where the POTS-SPLITTER is installed by the ILEC (Ameritech) all cabling will be performed by the ILEC. Ameritech will stencil the blocks. All other Local Exchange Carriers within SBC Corporation will place all cabling for CLEC or ILEC for Line Sharing.

4.4 Cabling of Different Manufactures and Layouts of POTS-SPLITTERS

It is expected that some CLECs may elect to deploy their own POTS-SPLITTER from another manufacturer and cable layout on their equipment. Each POTS-SPLITTER will have eight 25-pair cables (or equivalent capacity) routed to the conventional IDF for traditional MEOE and MECP 100-pair terminations. It shall be emphasized here the following requirements:

On a going-forward basis (after 4/12/00), all terminations on an SBC frame will follow the 1-100 sequential standard for block placements on all integrated CLEC provided POTS-SPLITTERS. (The arrangement on ILEC POTS-SPLITTERS is 1-96 sequential). **The SBC Frame grouping OE and Cable Pair terminations will be on separate and distinct connecting blocks.**

- Where embedded facilities are being used from a previous (prior to 4/12/00 grandfathered) Telco Provided DSLAM, these services will be required to be restenciled to conform with SWITCH assignments along with TIRKS.

- Some CLECs may desire to have existing CFA assignments cabling that is unused. This may be reterminated or reused for their POTS-SPLITTER terminations in 50 pair sequential count blocks. These 50 pair count grandfathered groups must be separated so that the MEOE and MECP terminations counting in a sequential order will be in different connecting blocks. The CFA terminations will be required to be managed by SWITCH and as a consequence will require restenciling of connecting blocks for Line Sharing. This will be performed by the ILEC (not CLEC). On a Going-Forward basis, all OE and CP terminations will be placed in 100 pair terminations on separate connecting blocks, per bay.

- The CLEC POTS-SPLITTER will be required to have a "Make Before Break" cut through point for POTS services to insure POTS services are maintained when the Data card is removed. The POTS-SPLITTER must be accessible for both CLEC and ILEC personnel.

- Any CLEC testing of the retail-POTS service must be non-intrusive unless utilizing Mechanized Loop Testing (MLT). Prior to a CLEC utilizing MLT intrusive test scripts, the CLEC must have established data service on that loop and have specifically informed the customer that service testing will interrupt both the data and voice telephone services served by that line. CLEC may not perform intrusive testing without having first obtained the express permission of the end user customer and the name of the person providing such permission. CLEC shall make a note on the applicable screen space of the name of the end user customer providing permission for such testing before initializing an MLT test or so note such information on the CLEC's trouble documentation for non-mechanized tests.

- The CLEC may use intrusive testing on its non-integrated DATA-only sections within its equipment. The retail POTS service must be continuous and cannot be opened by the CLEC.

- CLEC hereby agrees to assume any and all liability for any such testing it performs, including the payment of all costs associated with any damage, service interruption, or other telecommunications service degradation or damage to SBC-13STATE's facilities and hereby agrees to release, defend and indemnify SBC-13STATE, and hold SBC-13STATE harmless, from any claims for loss or damages, including but not limited to direct, indirect or consequential damages, made against SBC-13STATE by an end user customer, any telecommunications service provider or telecommunications user relating to such testing by CLEC.

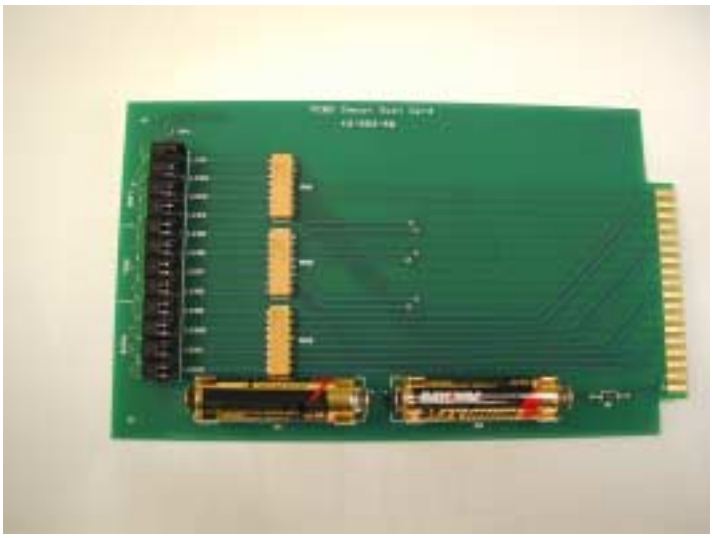
- Per accessible letters date in July, the CLEC may request to have the ILEC inventory "embedded" Line Sharing interconnection cabling assignments (CFA) in both SWITCH/FOMS and TIRKS OSS databases. In addition, the ILEC will provide additional stenciling to reflect both OSS identification nomenclature on the CFA connecting blocks. This letter covers requests made on or before August 31, 2000 at which time SBC will stencil/restencil up to 400 pairs maximum per CLEC per Central Office within 30 days.

4.5 Continuity Testing of Cabling and Shelves

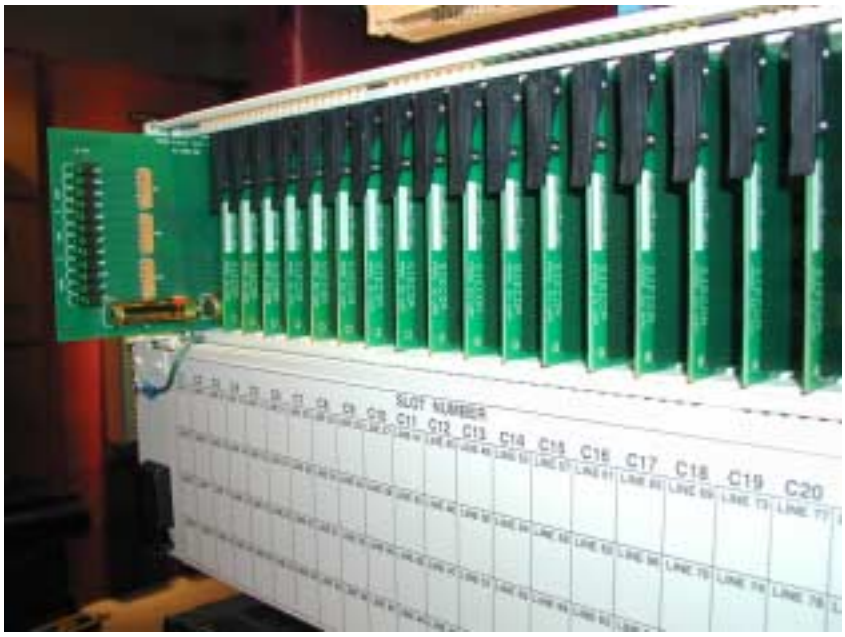
Upon the completion of all cabling between Connector Blocks on the Frame and the POTS-SPLITTER Shelf, it will be necessary to perform a end-to-end test through the POTS-SPLITTER. Each lead will be tested for continuity by shorting the Tip and Ring of each pair at the connecting block with another employee observing a set of lights flashing on the POTS-SPLITTER Test Card.

> The Continuity Test for the POTS-SPLITTER is a required test for both ILEC and/or CLEC installed POTS-SPLITTERS. Significant wiring issues will be resolved in the amphenol plug that is attached to any POTS-SPLITTER. (Steve, we probably need to discuss implementation of this item)

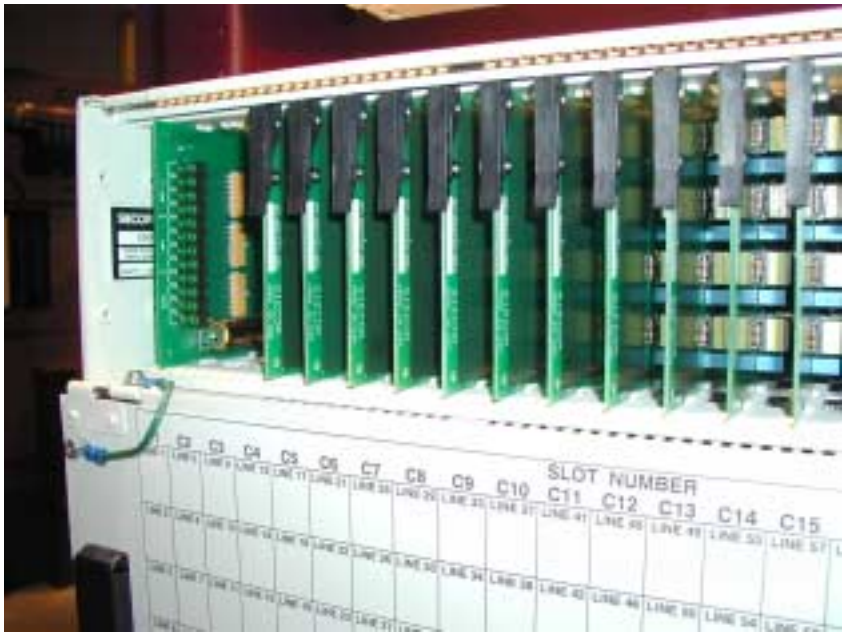
The new ADSL Pots Splitter "Streaker" Test Card, P/N COSK0PT20000, is compatible with the 96-position splitter shelf, P/N COSF00S2R007, mounted within the standard 23" NEBS equipment rack.



The "Streaker" test card uses two standard "AA" batteries (included with the card) to power the LED's during testing. No external power source is required.



The “Streaker card uses one LED for each Tip and another for Ring on each of the four circuits contained on the circuit card. A total of 24 LED’s address the T/R for each of the four “LINE”, “xDSL” and “POTS” circuits.



Siecor will provide direct field support to this deployment program by dedicating the best resources to assist with any questions that may develop: **Chad Kerr** will serve as the primary point of contact for deployment of on-site support. **Reach: (817) 329-6619**, **Richard Morris** will provide overall Product Engineering Support, **Reach: (817) 431-7667**.

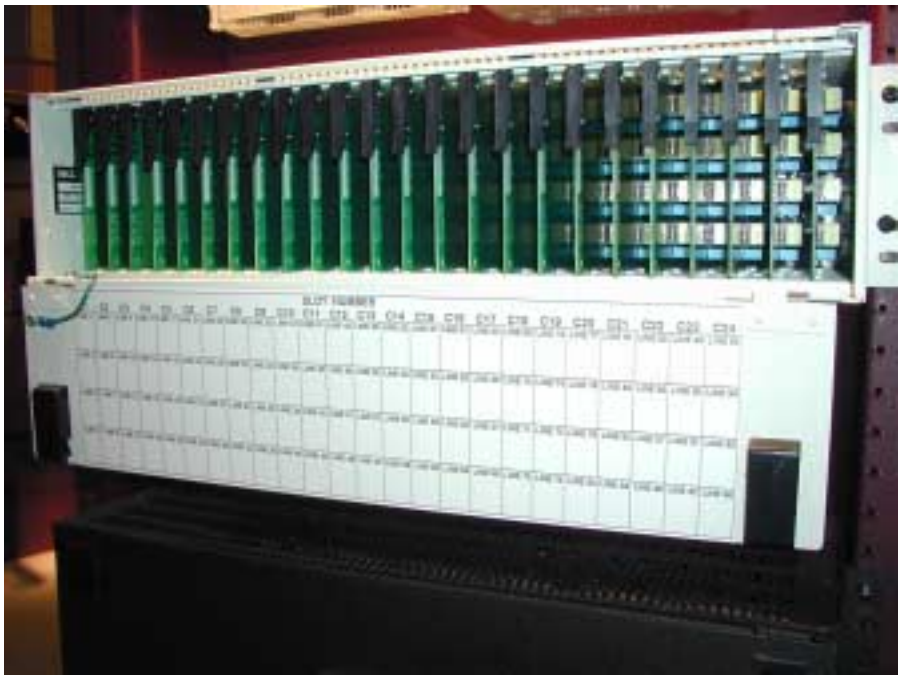
The procedure for testing the ADSL pots splitter shelf connections is as follows:

1. Complete the RJ21 connector installation on the back of each shelf, total of 12 connector positions, four each for the "line", "xDSL" and "Pots".
2. Insert the batteries into the "Streaker" test card.
3. Fully insert the "Streaker" card into the first card position in the pots splitter shelf. (If cards have been previously installed in the shelf, they will need to be removed and re-inserted after testing is completed.)
4. Using a standard test cord, ground each of the "Tips' and "Rings" on the first four pairs of MDF mounted terminal block for "Line", this will light up the Streaker test card mounted LED. Then repeat the step for the "xDSL" and "Pots" to complete the continuity test for the entire shelf.

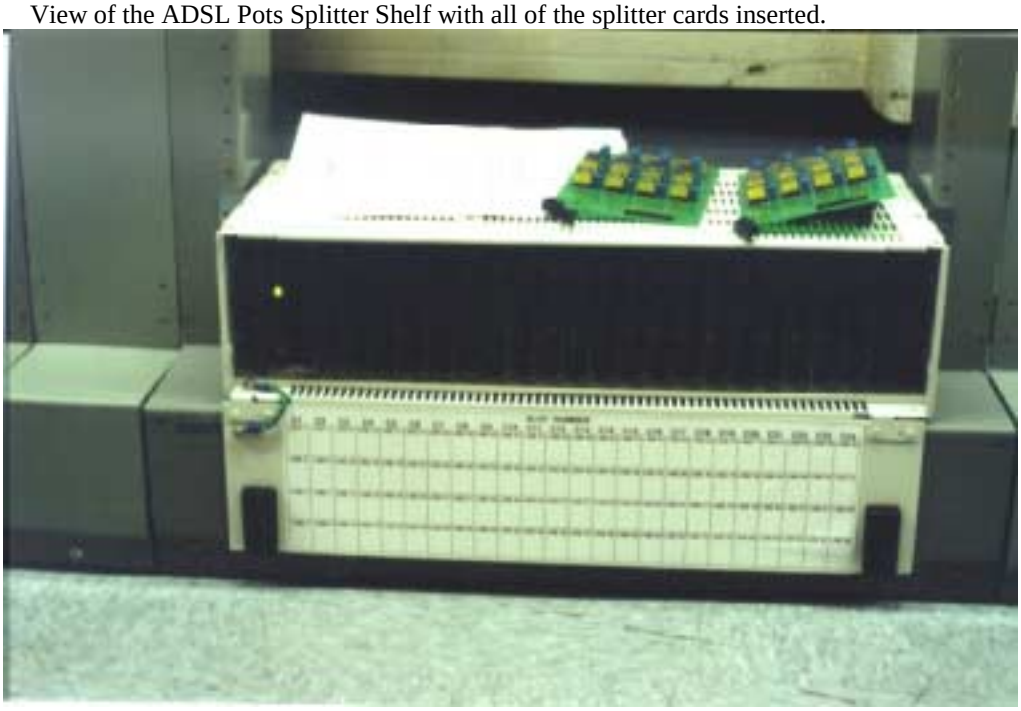
Caution: The Streaker card has been designed to operate in an environment without any working voice or data services. The unit uses a 6-volt battery operated circuit for the testing of opens, short and grounds. Do not apply foreign battery or high voltage/current services to the line or you will overload the battery-operated circuit and burn out the LEDs. Do not ground the TPI pin on the Streaker card.

5. After the four pairs associated with the current card position being tested is completed, remove the "Streaker" test card and insert it into the next card position within the shelf. Continue steps 4 & 5 until the shelf is finished.
6. Correct all anomalies and retest.
7. Re-insert all cards within the shelf to complete testing process.

(Refer to the Siecor (Corning Cable Systems) recommended Practice, SRP # 200-214.)

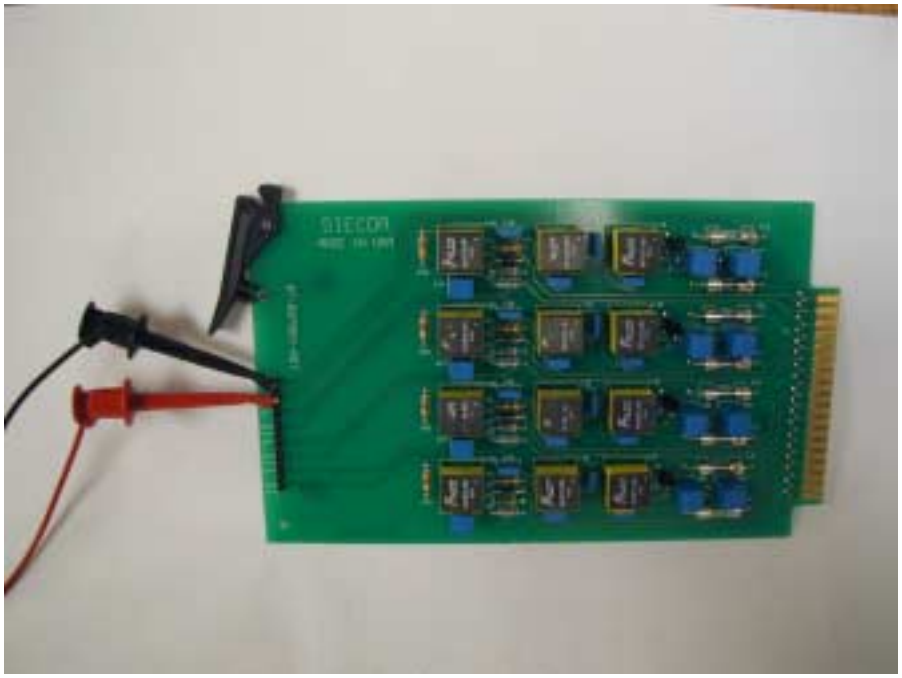


View of the ADSL Pots Splitter Shelf with all of the splitter cards inserted.



Front View of the 96-port POTS-SPLITTER Shelf with the Streaker Test Card Inserted. LED Lit during test.

View of the ADSL Pots Splitter Shelf with door closed.



Siecor (Corning Cable Systems) Mini Test Cord, included with the "Streaker" test card, is used with the test access pins located on the ADSL Pots Splitter Card.

ADSL Splitter card shown with test cord attached to the card mounted test pins. Each ADSL Splitter card is equipped with a separate test pin for "Tip" and "Ring" (one each) for each of the

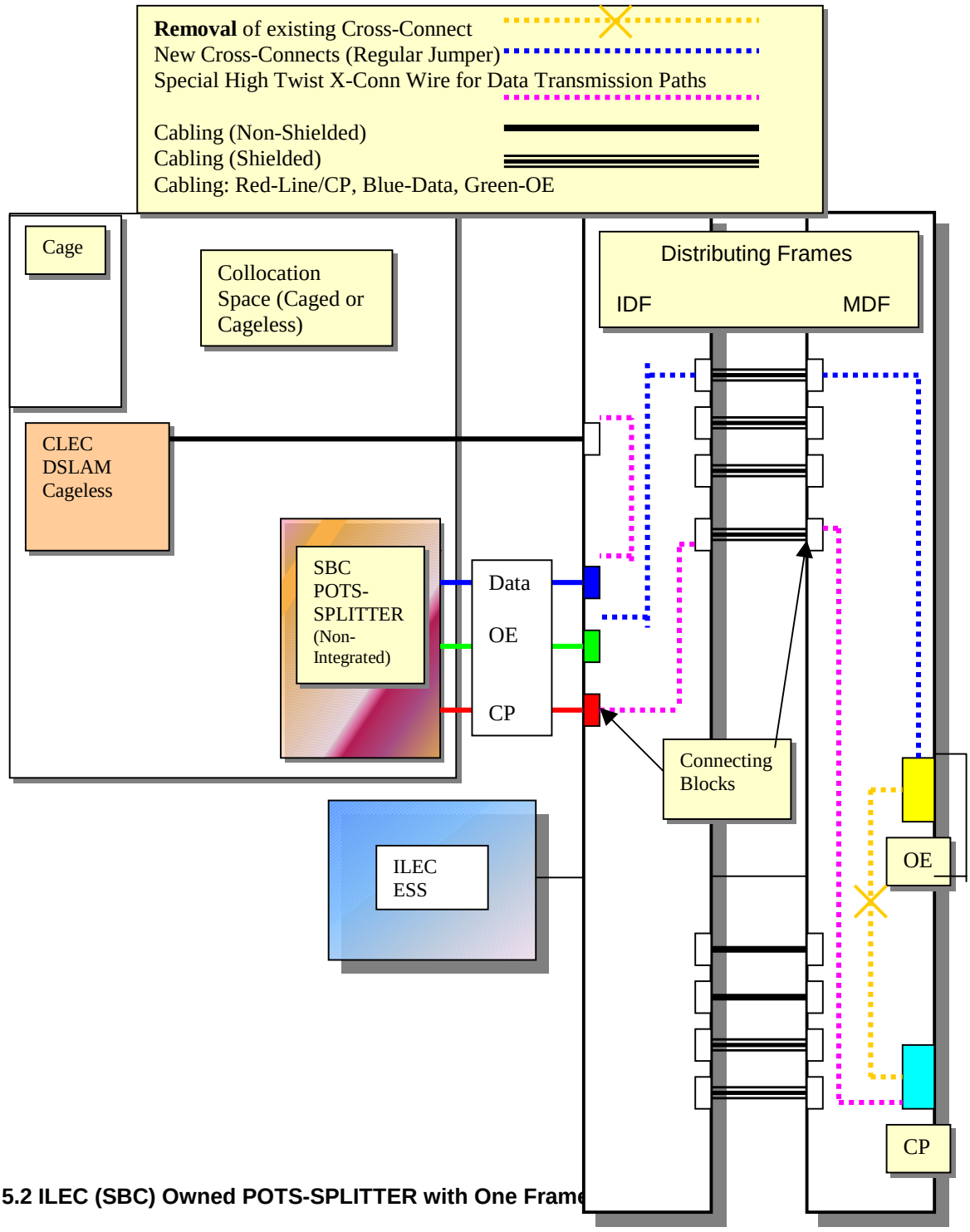
four circuits contained on the card (total eight pins). These pins can be used to bridge onto the Loop port of the ADSL POTS-SPLITTER.

5.0 Pictorial View of Product and Cross-Connect Placements

POTS-SPLITTERS Connecting Blocks will be placed on the horizontal side of a Conventional Frame. The Connecting Blocks for each unit will be terminated adjacent to one another in the following format (Left to Right): MEDT, MEOE, and MECP. These blocks are generally placed at a point on the frame located away from the block and jumper placement of 1.544 Mb/s, ISDN, HDSL, 56 Kb/s DDS services. If these blocks are placed haphazardly on the frame, it may become prematurely blocked to due Spectrum Interference issues.

5.1 ILEC (SBC) Owned POTS-SPLITTER with Double Frame

Per Line Collocation Arrangement: Physical or Virtual

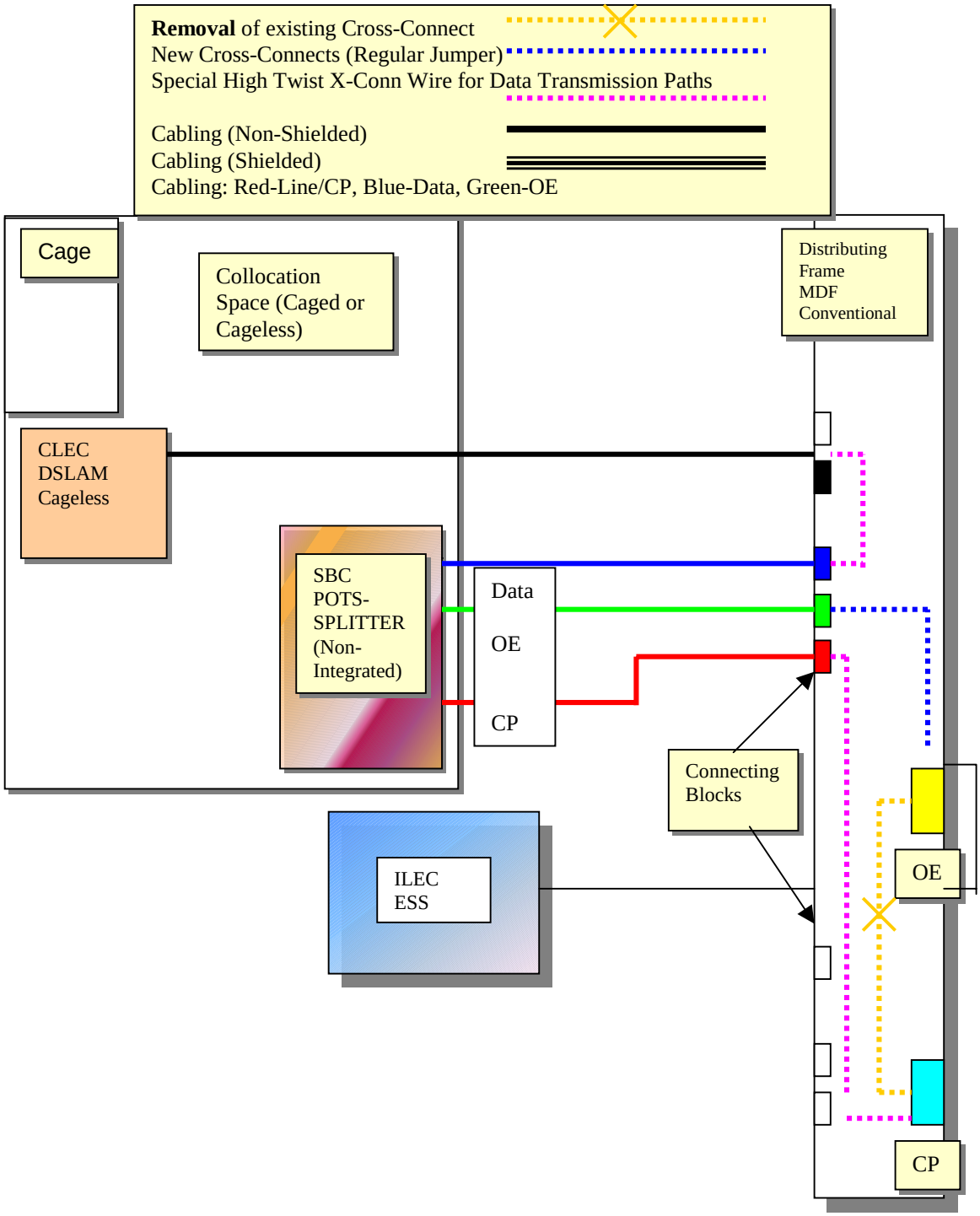


5.2 ILEC (SBC) Owned POTS-SPLITTER with One Frame

The ILEC shall be allowed to specify the splitter vendor of its choice. The splitters are to be physically located in an equipment bay in a Collocation Area. Test access is to be provided to the

DLEC at the splitter bay through test access points on each line card. The ILEC has the responsibility for maintaining, inventorying and assigning each individual splitter port.

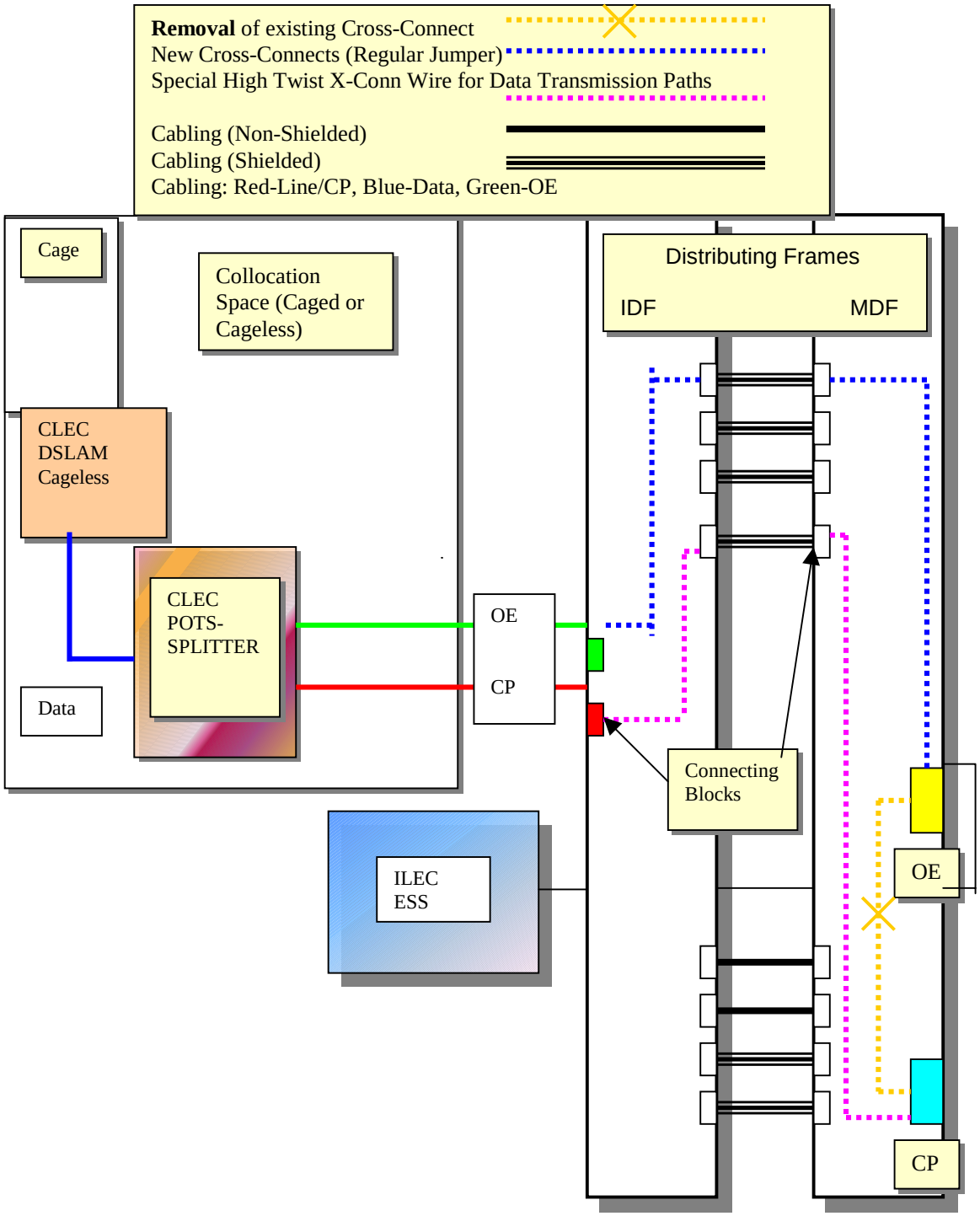
POTS-SPLITTER – SBC Owned, Single Frame – MDF only: Per Line
Collocation Arrangement: Physical or Virtual



5.3 DLEC/CLEC Owned Non-Integrated or Integrated POTS-SPLITTER

When the DLEC chooses to purchase its own splitter, the DLEC shall collocate a bay at a time in the ILEC's central office. The DLEC/CLEC will have test access at the splitter bay for both ILEC and CLEC. The DLEC/CLEC has the responsibility for maintaining, inventorying and assigning each individual splitter port and subsequently providing the MEOE and MECP assignments for the ILEC to place in the SWITCH/FOMS database. The splitters are to be physically located in an equipment bay in a Collocation Area. Test access is to be provided to the DLEC at the splitter bay through test access points on each line card.

POTS-SPLITTER – DLEC/CLEC Owned, Double Frame – IDF/MDF: Per Line
Collocation Arrangement dedicated by shelf: Physical or Virtual

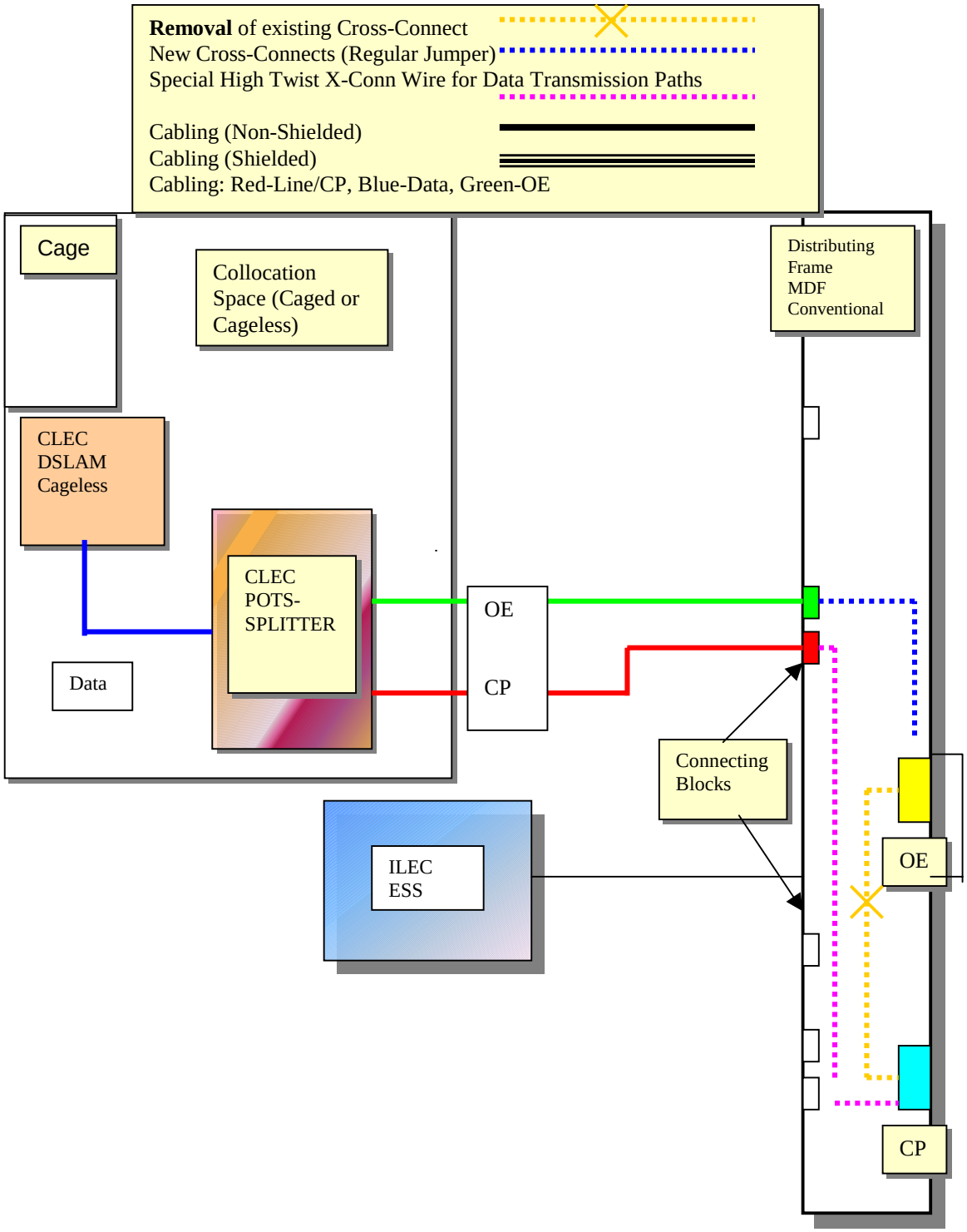


5.4 DLEC/CLEC Owned Non-Integrated or Integrated POTS-SPLITTER, Single Frame

When the DLEC chooses to purchase its own splitter, the DLEC shall collocate a bay at a time in the ILEC's central office. The DLEC/CLEC will have test access at the splitter bay for both ILEC and CLEC. The DLEC/CLEC has the responsibility for maintaining, inventorying and assigning each individual splitter port and subsequently providing the MEOE and MECP assignments for the ILEC to place in the SWITCH/FOMS database.

The DLEC shall be allowed to specify the splitter vendor of its choice providing for all NEBS Level 1 and T1E1 standards. The splitters are to be physically located in an equipment bay in a Collocation Area. Test access is to be provided to the DLEC at the splitter bay through test access points on each line card. The DLEC has the responsibility for maintaining and inventorying each individual splitter port.

POTS-SPLITTER – DLEC/CLEC Owned, Single Frame – MDF only: Per Line Collocation Arrangement dedicated by shelf: Physical or Virtual



5.5 MDF Terminations

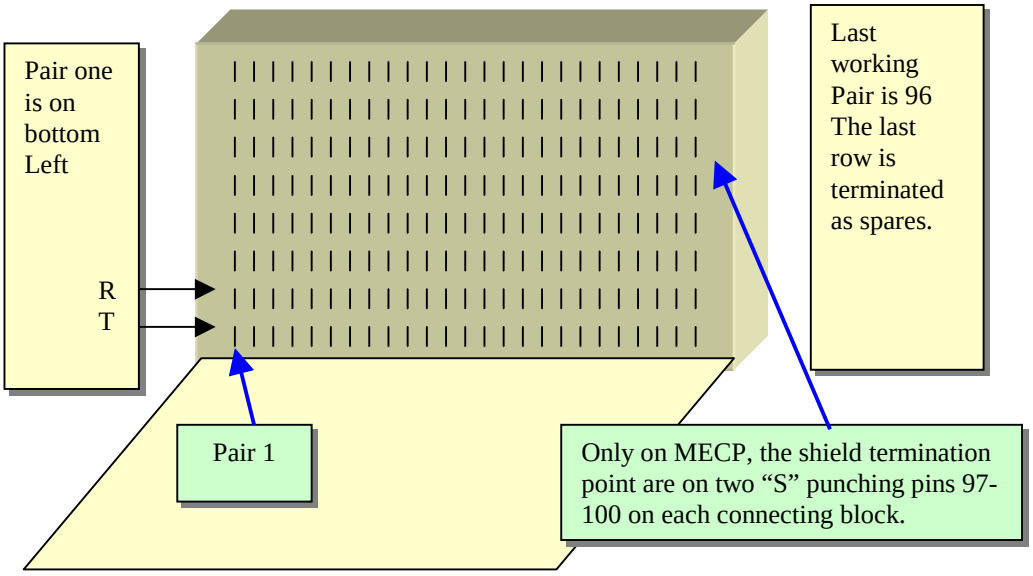
5.5.1 ILEC provided POTS-SPLITTER Terminations

The twelve 25-pair POTS-SPLITTER (or equivalent) cables will be terminated in the following manner using the below listed connecting blocks:

Corning Cable Systems (Siecor) Terminal Connecting Block 100 pr. 8x25 SWW, Non-CONN. Beige (or equivalent as provided by Procurement through authorized PANs	139-N0100R012B	SBC PID 300137205 SNET PID 9508267 (replaces Lucent 89F1F100) POTS-SPLITTER requires three connecting blocks per 96-port shelf

IMPORTANT: Due to the field limitations with SWITCH, all connection block counts must start with 001 and with each successive block must also have the count begin with the label 001. Counts of such as 301-400 should read 001-100. SWITCH has a three digit limit on pair assignments.

Connecting Blocks will be labeled reflecting the application (MEDT, MEOE, MECP), including the OWNER and the Relay Rack where the equipment is located. Follow the attached pictures for labeling requirements on the Connecting Blocks:

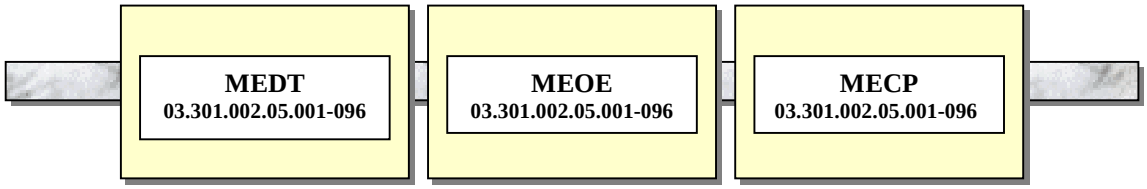


The Connecting Block layout with cover opened. This arrangement follows established pin designations originally specified in BSP 800-610-153, Section 2.11.

The last 4 pins on the MECP connecting block for each POTS-SPLITTER will be the connection point for the shielded cable. Ensure that all Tie Cables between frames use this pin for extensions of the ground through the tie cable. When the Tie Cables are being relabeled, it is not necessary to change the existing ground.

The Pair Counts for each block will be labeled and shown in SWITCH/FOMS as follows:

- The Voice/OE Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R/T** for each pair on the Connecting Block.
- The Line/Cable Pair Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R1/T1** for each pair on the Connecting Block.
- The Data Transmission Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R2/T2** for each pair on the Connecting Block.



This reflects a SBC (ILEC) Owned POTS-SPLITTER with all three types of terminations placed directly on the IDF (or equivalent) with the equipment placed in (Collo Area Floor)(Aisle)(Bay)(Shelf)(Ports) This example, Floor 03, Aisle 301, Bay 002, Shelf 05, 96 Ports on POTS-SPLITTER. MEDT=Data connection to POTS-SPLITTER, MEOE= OE/Voice connection to POTS-SPLITTER, MECP=Cable Pair connection to POTS-SPLITTER. (Refer to Section 8 for more information).

Important Note: Insure that all ILEC POTS-SPLITTERS are labeled on the face plate as to the location of the connector block terminations on the ILEC main frame using the format (Floor)(Frame Number)(Horizontal Level)(Vertical cross-reference). For a Frame located on the second floor, pseudo frame number 4, Horizontal Level K, Vertical cross-reference is 137)

Ex: 03.P04.K.137

5.5.2. CLEC provided POTS-SPLITTER Terminations

The CLEC may be providing one of may types and configurations of POTS-SPLITTERS for deployment within their collocation cage, space or bay. In any case, the POTS-SPLITTER will be provisioned in an integrated mode and will terminate on the ILEC frames in a standard sequential format using separate blocks for the MEOE and the MECP. The MEDD and MEDT will not be provisioned on the ILEC frames. The data cabling portion of this arrangement will be direct cabled between the CLEC POTS-SPLITTER and the CLEC DSLAM.

The CLEC may elect to have existing spare terminated CFA (grandfathered) capacity reterminated and/or restenciled on the ILEC frame to perform the function of the POTS-SPLITTER termination point. These arrangements will be in 50 pair complements (or multiples of same) and will be assigned such that the MEOE and the MECP terminations will not reside on the same 100 pair connecting block.

All new POTS-SPLITTER cabling and terminations will be placed in 100 pair compliments on 100 pair connecting blocks on the ILEC frame. The assignments will be provisioned in order that the MEOE and the MECP terminations will not reside on the same 100 pair connecting block.

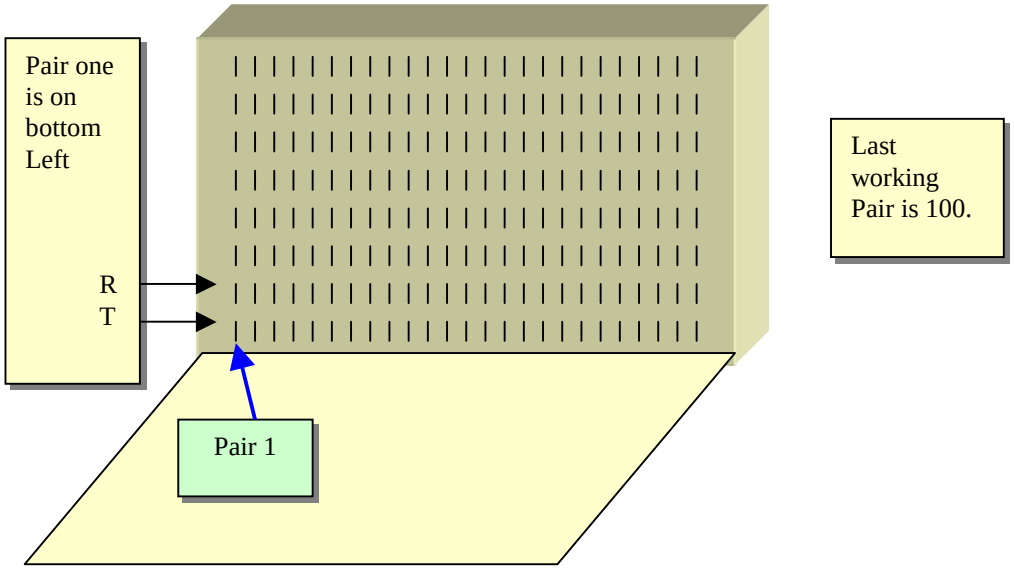
IMPORTANT: Due to the field limitations with SWITCH, all connection block counts must start with 001 and with each successive block must also have the count begin with the label 001. Counts of such as 301-400 should read 001-100. SWITCH has a three digit limit on pair assignments.

The CLEC will be solely responsible for all assignments and will be required to reference the connecting block connection points on all service orders, trouble reports and correspondence in the manner that the ILEC has the documentation loaded into the mechanized Operational Support Systems.

The typical 100 pair connecting block used for all new POTS-SPLITTER terminations on the ILEC frame is shown as follows (or its equivalent):

Corning Cable Systems (Siecor) Terminal Connecting Block 100 pr. 8x25 SWW, Non-CONN. Beige (or equivalent as provided by Procurement through authorized PANs	139-N0100R012B	SBC PID 300137205 SNET PID 9508267 (replaces Lucent 89F1F100) POTS-SPLITTER requires three connecting blocks per 96-port shelf

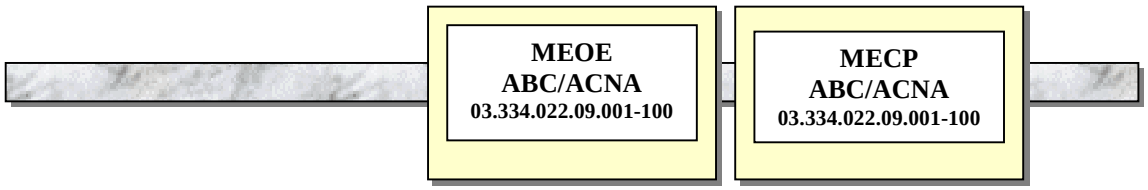
Connecting Blocks will be labeled reflecting the application (MEOE, MECP), including the OWNER and the Relay Rack where the equipment is located. Follow the attached pictures for labeling requirements on the Connecting Blocks:



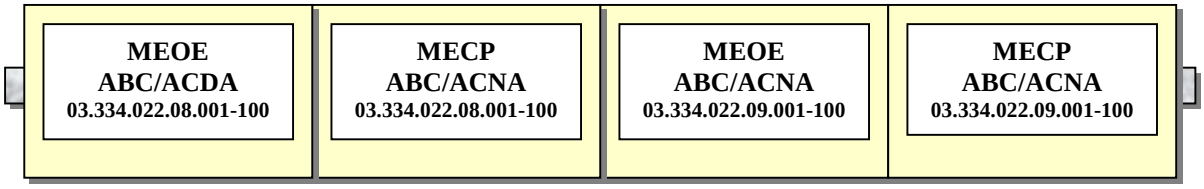
The Connecting Block layout with cover opened. This arrangement follows established pin designations originally specified in BSP 800-610-153, Section 2.11.

The Pair Counts for each block will be labeled and shown in SWITCH/FOMS as follows:

- The Voice/OE Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R/T** for each pair on the Connecting Block.
- The Line/Cable Pair Connecting Block cabled to the POTS-SPLITTER will use the pair terminology **R1/T1** for each pair on the Connecting Block.



This drawing reflects a ABC (CLEC) Owned POTS-SPLITTER with only the LINE/CP and the POTS/OE connection points being placed on the IDF. The DATA/xDSL cabling is pulled to the CLEC Physical or Virtual Collocation site. The POTS-SPLITTER panel is dedicated to this CLEC. This example shows the CLEC space at Floor 3, Aisle 334, Bay 22, Shelf 9, 100 Ports on POTS-SPLITTER.



The illustration above reflects a 400 pair layout for CLEC POTS-SPLITTERS for a maximum capability of 200 Line Sharing provisioned customers. This example shows the CLEC space at Floor 3, Aisle 334, Bay 22, **Shelf 8 and 9,** 100 Ports on POTS-SPLITTER.

The CLEC may elect to request the termination of their Line Sharing cables to a Point of Termination Panel called the QCP-W10X20-5 (PID: 300027349) which permits the termination of up to five 100-pair complements for the CLEC use. The CLEC may interconnect this equipment on to their POTS-SPLITTER. The panel is a 6" x 23" x 4" panel that is intended for twisted pair and xDSL terminations and includes ground wire pass through terminations.

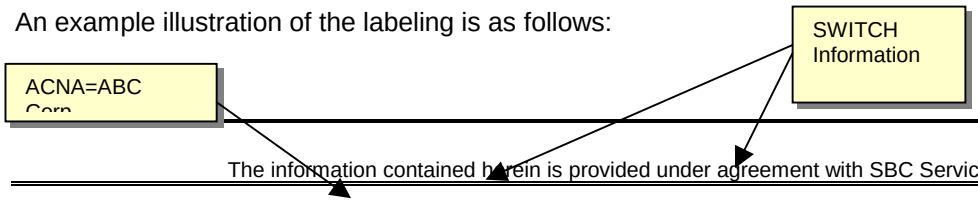
5.5.3 Embedded Dual CFA Assignments

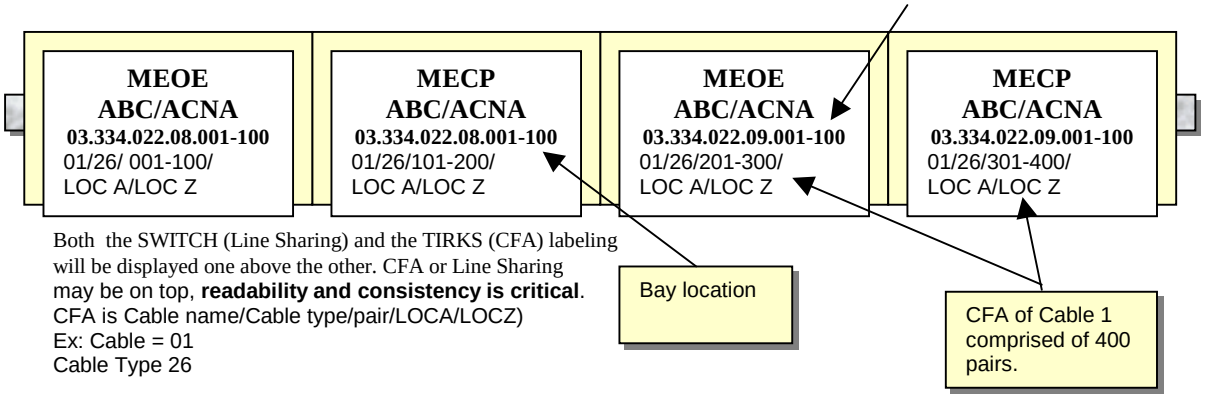
Embedded Line Share Pairs

Embedded pairs are defined as any DS0 pairs requested for Line Sharing on a Collocation Application submitted before the effective date of the Accessible Letter (7/6/00). The modified Collocation Application to request dual inventory of the DS0 pairs can be submitted through 8/31/00.

The application to request dual CFA inventory will identify the MEOE, MECP, or MEDD and CFA pairs the CLEC wants available for dual use. The installation interval to provide the dual capability is 30 days from the receipt of the application and the CLEC can request up to 400 pairs. Refer to Section 8 for written details.

An example illustration of the labeling is as follows:





Labeling of ILEC connecting blocks will follow Methods and Procedures outlined above. Label variations will not be permitted. In addition, relabeling and augmentations by CLEC Tier 1 SBC approved vendors will not be authorized except under specific ILEC approval provided on a Collocation Application.

5.6 Testing Requirements & Capabilities

SBC Corporation is provisioning test access pins on every ILEC provisioned non-integrated POTS-SPLITTER card. Each card has bridged test access pins for the Tip and Ring (T/R) for each pair physically located on the drop side of the circuitry (toward the cable pair). The CLEC provided POTS-SPLITTER may not provide this feature but must provide the ILEC the capability to perform the same level of testing through their unit. The following information is provided by Corning Cable Systems (the manufacturer of the ILEC deployed POTS-SPLITTER):

TEST ACCESS CAPABILITY

Corning Cable Systems (Siecor) T1.413 ADSL splitter equipped with test access points.

PURPOSE

This document describes the intended functions and capabilities provided by the Siecor T1.413 ADSL splitter equipped with test access points.

BACKGROUND

Included in Figure 1 below is a reference model for xDSL which highlights the location of the test access point on the central office splitter in reference to the location of other xDSL equipment in the network. The test access point is placed on the network (outside plant) side of the splitter so as to provide a bridging point for unfiltered access to the entire range of frequencies on the tip-ring pair.

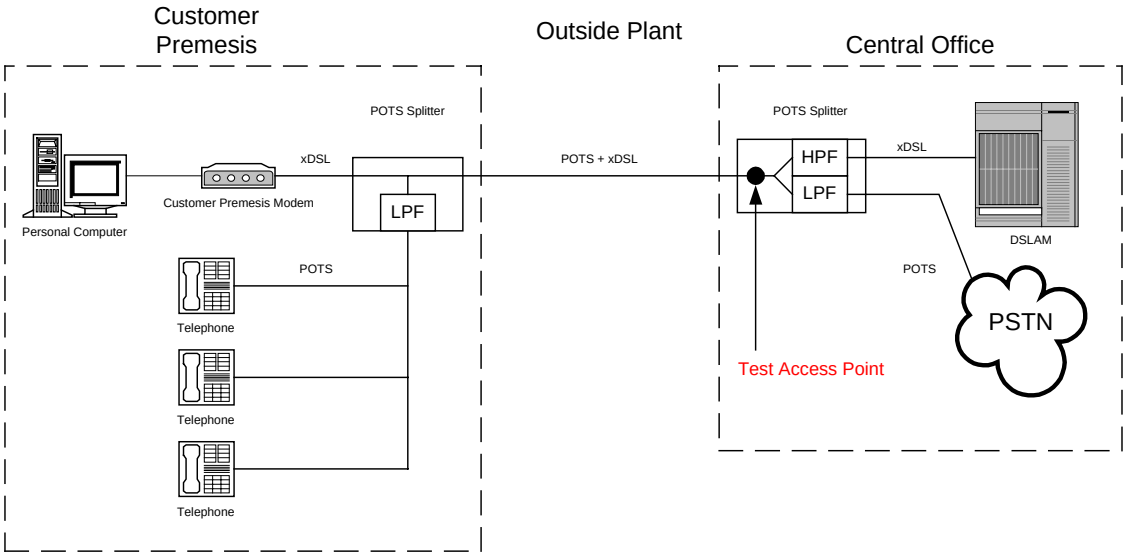


Figure 1: xDSL network reference model showing test access location

USE OF TEST ACCESS POINTS

The test access points on the splitter allow the user to "bridge" onto the tip and ring of a twisted pair. This allows the user to:

1. Test the twisted pair with a standard "handset/buttset" for existence of dialtone and voice services.

2. Measure DC and AC voltages between tip and ring.

3. Test the DSL modem on either end with a modem or modem-emulation test equipment.

USING A TELEPHONE HANDSET WITH THE TEST ACCESS POINT

A standard buttset or telephone handset may be used to test the twisted pair for voice service. Clip the tip and ring connections of the buttset to the test access tip and ring connections provided. If you place the buttset into an "off hook" mode, one of three things can result, depending on line and voice service conditions:

1) If no voice traffic is present, the buttset or handset will pull dialtone from the central office switch. In this condition the buttset acts like a customer premises handset. If the buttset is placed into an off-hook mode, then dialtone will be present at the buttset and calls can be made as if the buttset were a customer premises phone. A customer taking a customer premises handset off-hook will hear all traffic on the buttset as if it were another phone in the customer premises. Depending on what the operator is doing with the buttset at the time, the customer may not be able to place a call. The access point will permit the same operations as currently present from the premises, such as ANI, etc. The tester cannot break the circuit but will act like a party line attached to the customer line.

2) If a voice call is already present, the buttset can be used to bridge onto the line as if it were another handset at the customer premises. The customer will probably be aware that another party has bridged onto the line, as the received voice power will drop, and any sound transferred by the buttset onto the line will be audible at the customer premises on both ends of the call.

3) If no voice service is present, the buttset will not pull dialtone when taken off-hook.

Measuring DC and AC voltages with the test access point.

A standard multimeter (or any equipment with high impedance input) may be used to measure DC or AC voltages between tip and ring. Clip the leads of the multimeter to the test access tip and ring connections provided. High impedance inputs are recommended to prevent service disruptions. If sufficiently high-impedance inputs are used, services may be monitored without service disruption or degradation.

1) DC voltages between tip and ring may be checked by setting the multimeter (or other test equipment) to the appropriate DC measurement mode. DC or "CO battery" voltage may be checked using this method.

2) AC voltages between tip and ring may be checked by setting the multimeter (oscilloscope or other test equipment) to the appropriate AC measurement mode.

3) An extension of AC measurements is to measure AC voltages at various frequencies or a range of frequencies of interest. Common signals may include active voice calls, DSL services, ambient noise or ingress signals. The location of the test access points ensures access to the full unfiltered frequency range of the outside plant twisted pairs. All traffic and noise on the twisted pair will be visible at the test access point, regardless of frequency. Using this method, active services and/or disturbers may be identified. Pieces of test equipment common used for this purpose are typically called spectrum analyzers or make claims to be able to measure "wideband noise".

VERIFYING DSLAM OR CUSTOMER PREMISES MODEM OPERATION USING THE TEST ACCESS POINT

Some test equipment and modem manufacturers offer a modem or modem feature in their test equipment intended for use in qualifying services in the field. Some of this equipment has the ability to emulate a CO modem, others the customer premises modem, while others still may be able to emulate both in the same package. Clip the leads of the modem or test equipment to the test access tip and ring connections provided.

If the operation of the DSLAM is what is to be tested, the test equipment must be configured to act as a remote modem, and should use a similar technology as the DSLAM (i.e. ANSI T1.413 Issue 2 DMT), and the DSLAM should be on and the pair in question configured and enabled. If a modem is present at the customer premises, it should be disconnected for the purposes of this test. **NOTE: some equipment may not establish a link with the DSLAM, as the outside plant pair will act as an enormous bridged tap.**

If the operation of the remote modem is what is to be tested, the test equipment must be configured to act as a CO modem, and should use a similar technology as the DSLAM (i.e. ANSI T1.413 Issue 2 DMT), and the customer premises modem in question should be configured and enabled. If a DSLAM is present, it should be either disconnected or disabled for the purposes of this test. Coordination between the ILEC and DLEC will be required should the DLEC determine its tests must be performed on a loop containing no battery. Since voice switches introduce battery on the line, the ILEC will need to have procedures in place for removing the battery while the DLEC performs these tests. Voice service is disrupted during this time, so the cooperation and approval of the end user customer is also needed.

Changes to the existing mechanized loop testing (MLT) procedures will not be required. It is anticipated that MLT tests will not be adversely affected by POTS-SPLITTER placements.

6.0 Operational Support Systems

6.1 Collocation Process

Collocators that want to order services in an unbundled line sharing arrangement will need to place a Collocation Application (new or augment) through Industry Marketing Collocation Service Center (CSC). If they place an Augment Collocation Application, the collocator will need to specify if they will use existing shielded DS0 interconnection pairs (cable name and pair range) or are ordering new interconnection DS0 cable for line sharing and UNE capability.

In order to provide line sharing a POTS-SPLITTER must be installed in the Central Office where the line sharing services are requested. There are three options and types of splitters. The collocator will need to specify from the following:

- Physical/Virtual Integrated or Non-Integrated CLEC Owned
- Physical Non-Integrated ILEC Owned
- Physical Integrated (ILEC owned) to CLEC

The Collocator/CLEC is requested to refer to the Application for Physical/Virtual Applications found in Appendix A of the CLEC on-line Web Site: **https://clec.sbc.com**