## 1. CUSTOM VIRTUAL NETWORK

### A. GENERAL

1. Description

   Custom Virtual Network (CVN) is a switched telecommunications network service which enhances intraLATA and interLATA calling.  It provides multi-location companies with private network capabilities using the switched network.  Standard CVN service includes a custom dialing plan.

   The custom dialing plan provides inter-location dialing through the use of two or more digits.  Customers must identify locations that will be included in the CVN Network.  All CVN customers must purchase the custom dialing plan in order to purchase the optional features as described within this Guidebook.  CVN standard and optional features are only available with Centrex and SuperTrunk®/1/ service.                                                                              (C)

   For Regulations, Rates and Charges for Centrex service, refer to applicable Parts and Sections of this Guidebook.  For Regulations, Rates and Charges for SuperTrunk®/1/, refer to Part 6 Section 7.   (C)

2. Regulations

   Regulations set forth in this Guidebook are in addition to rules and regulations set forth in Schedule CAL.P.U.C. No. A2. For Network and Exchange services.  Custom Virtual Network is offered as follows:

   a. CVN service is available on Centrex and SuperTrunk®/1/ service only.  CVN standard and       (C)
      optional features are only available on Centrex stations and SuperTrunk®/1/ facilities.        (C)

   b. CVN is only available on BTNs billed to the customer of record.

   c. CVN must include at least two Billed Telephone Numbers (BTNs) in order to form a network.

   d. CVN is available where local facilities and operating conditions permit.

   e. CVN cannot be used with ISDN service out of DMS switches.

/1/  Effective June 30, 2016, SuperTrunk service is Grandfathered.  See Part 20, section 4.          (N)

1.  CUSTOM VIRTUAL NETWORK (cont'd)

A. GENERAL (cont'd)

   2. Regulations (cont'd)

   Regulations set forth in this Guidebook are in addition to Rules and Regulations set forth in Schedule Cal.P.U.C. No. A2. for Network and Exchange Services.  Custom Virtual Network is offered as follows: (cont'd)

    f.  CVN services and features as contained herein are not available on residence exchange lines.

    g.  All CVN service customers must subscribe to the standard custom dialing plan.

    h.  CVN customers are responsible for notifying the Company of any adds, moves or changes to their CVN service.

    i.  CVN dialing plan can include noncustomer telephone numbers as terminating numbers.

  B.  DIRECTORY ASSISTANCE

   1. Directory Assistance Charges apply for calls placed to Directory Assistance per Guidebook, Part 11, Section 2.

   2. Express Call Completions service charges apply per Guidebook, Part 9, Section 1.

1  CUSTOM VIRTUAL NETWORK (cont'd)

C.  CVN SERVICE

  1.  GENERAL

  Custom Virtual Network service charges include both recurring, non-recurring charge elements.
  Recurring charges consist of a flat rate monthly charge.  Non-recurring charges are the installation
  charges for CVN components.  Usage charges apply to all completed calls.  Usage rates and charges
  are found in the appropriate Guidebook and are in addition to the CVN service charges.

  2.  STANDARD CVN SERVICE

  The charges for establishing basic service include both a flat monthly rate and an installation charge.
  The standard CVN service must include at least two Billed Telephone Numbers (BTNs) in order to
  form a network.   Standard CVN service is comprised of a dialing plan that is charged non-recurring
  charge on a per line basis, plus monthly recurring charge per line.  CVN dialing plan can include
  noncustomer telephone numbers as terminating numbers.   The total number of noncustomer
  telephone numbers selected as terminating numbers cannot exceed the total number of CVN lines.

1  CUSTOM VIRTUAL NETWORK (cont'd)

C.  CVN SERVICE (cont'd)

3. OPTIONAL FEATURES

Centralized route and carrier selection directs intraLATA and interLATA calls based on the call destination to private or public facilities terminated at a centralized location.  Up to three alternative routes may be specified by the customer.  CVN customers may select different routes and carriers to be used at different times of the day and days of the week.

a. Centralized Route Selection

Centralized route selection allows CVN customers to specify private network facilities, (e.g. private lines, FEX, etc.).  CVN is capable of providing up to three routes for calls between designated customer locations:  a primary route, an alternate route, and a second alternate route.

b. Centralized Carrier Selection

Centralized carrier selection allows CVN customers to specify carriers for their traffic.  CVN will provide carrier selections according to customer specifications.  CVN is capable of providing up to three interLATA and three intraLATA carriers, including the AT&T switched network, for calls between designated customer locations:  a primary carrier, an alternate carrier, and a second alternate carrier.

## 1. CUSTOM VIRTUAL NETWORK (cont'd)

### D. RATES AND CHARGES

The following rates and charges are in addition to all other rates and charges that may be applicable for other services which operate in conjunction with Custom Virtual Network service. Rates and Charges for CVN in association with SuperTrunk®/1/ may be found in Guidebook, Part 6, Section 7.                                    (C)

1. CUSTOM DIALING PLAN

| | Nonrecurring Charge | Monthly Rate | USOC |
|---|---|---|---|
| - Per Dialing Plan Number<br>per line | $7.60 | $1.75 | VNS |

2. CENTRALIZED CARRIER SELECTION

| | | | |
|---|---|---|---|
| -Carrier selection<br>per line | 2.85 | .75 | VNSPF |

3. CENTRALIZED ROUTE SELECTION

| | | | |
|---|---|---|---|
| - Route selection<br>per line | 5.70 | 1.25 | VNSRS |

4. CVN MODIFICATION CHARGES

| | | | |
|---|---|---|---|
| - Add/Change new dialing plan<br>access code<br>per line | 7.12 | | VNSC3 |
| - Change dialing plan configuration<br>per line | 7.12 | | VNSC4 |
| - Change route selection feature<br>per location, per line | 7.12 | | VNSC5 |
| - Change carrier selection feature<br>per location, per line | 7.12 | | VNSC7 |
| - Add/Change dialing plan number<br>per location, per line | 7.12 | | VNSC9 |
| - Miscellaneous change charge<br>per line | 7.12 | | VNSCC |

/1/ Effective June 30, 2016, SuperTrunk service is Grandfathered. See Part 20, section 4.                                    (N)

2. PACIFIC BELL LOCAL AREA NETWORK

   A. DESCRIPTION

   Pacific Bell Local Area Network (PB LAN) is a data communications network service providing for the interconnection of customer-provided data devices and for the transmission of data between such devices.  PB LAN is provided from specially equipped Company premises and utilizes data switching, digital and/or analog transmission facilities, and Centrex facilities to provide switched data transport at speeds to 19.2 Kbps.

   The primary component of PB LAN is the data switch located in the customer's serving central office.  PB LAN Service will support asynchronous data terminals and host computers and is capable of switching PC to PC, terminal or PC to host computers, and host computer to host computer.  The standard features included with PB LAN are Auto Connect, Session Hold, Closed User Group, Directory Display, Host Autobaud, Message of the Day, Round Robin Hunt Groups and Terminal Autobaud.

   PB LAN also provides access to the telecommunications network via an optional modem pooling arrangement.  The standard feature included with Modem Pooling is Dial-in Port Password Capability.  For customers served by more than one central office, data networks connecting PB LAN's may be established by using internodal trunks.

   B. DEFINITION OF TERMS

   ASYNCHRONOUS MULTIPLEXED HOST ACCESS

   The Multiplexed Host Access is provided at each separate customer host computer location.  A single multiplexed host access common equipment arrangement may serve one or more host computers within 125 feet from the PB LAN host multiplexer's Network Interface.

2.  DIAL SWITCHING SYSTEMS (cont'd)

2.  PACIFIC BELL LOCAL AREA NETWORK (cont'd)

   B.  DEFINITION OF TERMS (cont'd)

      ASYNCHRONOUS TERMINAL/HOST ACCESS

      The Asynchronous Terminal/Host Access is the switch interface module, local area network
      common equipment and the Integrated Voice/Data Multiplexer (IVDM) in the Central Office.  It
      permits the transmission of asynchronous protocol data communications via exchange type
      facilities between the PB LAN data switch on the Company's premises and customer-provided data
      equipment designated as peripheral equipment. (e.g., data terminals, personal computers, printers
      or, when used as individual host port access, central data processing equipment and host
      computers).

      DATA SWITCH

      Provides asynchronous switching capability at speeds up to 19.2 Kbps.  The switch data base
      provides the capability to define data access capabilities for specific groups.  Access to hosts,
      printers, modem pools, and network facilities is allocated by user groups.

      INTEGRATED VOICE/DATA MULTIPLEXER (IVDM)

      The IVDM allows for the simultaneous transmission of both voice and data over a Centrex line.

      INTERNODAL TRUNKING

      Supports Digital Services and High Capacity Digital Service connections to a non-colocated Local
      Area Network switching facility.

      MODEM POOLING

      A modem pool is one or more modems arranged in a group for a customer's use for either
      incoming or outgoing PB LAN data transmission via Centrex station lines.  Modem pools are
      located on the Company's premises.

2.  PACIFIC BELL LOCAL AREA NETWORK (cont'd)

   B.  DEFINITION OF TERMS (cont'd)

   MULTIPLEXED PORT

   A derived channel termination at the network interface where customers connect their equipment,
   i.e., host computer.

   MULTIPLEXER INTERFACE

   The Multiplexer Interface is provided between the C.O. Multiplexer and the HCDS or the DS.
   Included is the Drop/Insert (D/I) Multiplexer on HCDS, the Multiplexer Interface Unit (MIU) on DS
   and the connecting wire.  This equipment is required to support the Multiplexing of data signals
   between PB LAN and another location, either a multiplexed host access or Internodal trunking to a
   non-colocated local area network.

   C.  REGULATIONS

   1.  Pacific Bell Local Area Network can only be provided from central offices equipped for Local
       Area Network Service subject to the technical limitation of such equipment and availability of
       suitable facilities.  The local loop range (distance) for a particular loop may vary depending on
       electrical connection requirements.  Not all AT&T serving Central Offices will be equipped.

   2.  PB LAN service requires that the customers provide all IVDM units located on their premises.
       The customer provided equipment (CPE) must also be compatible with the Company provided
       PB LAN services under the technical guidelines of such services.

   3.  Host location is defined as a location not more than 125 feet from AT&T's host multiplexer's
       Network Interface.

   4.  When terminal access via IVDM is used with a key telephone set, a RJ31X must be installed.  A
       one time labor charge will be charged for installation.  See Guidebook, Part 8, Section 8.

2. PACIFIC BELL LOCAL AREA NETWORK (cont'd)

   C. REGULATIONS (cont'd)

   5.   Modem pool members are dedicated to a specific customer for access by the customer's
        designees only.  For each modem, the customer must also purchase a Centrex station line.

   6.   In addition to the PB LAN rates and charges, the customer is also responsible for all exchange
        service rates, local usage, toll and private line channels as well as all other applicable rates,
        charges and regulations.

   7.   On and after January 9, 1993 the effective date of Advice Letter No. 16375, the offering of PB
        LAN will only be furnished to the same customer of record on the same premises until August 1,
        1993, at which time the service will be discontinued.  Supersedures and additions are
        prohibited.

   8.   Service Charges as set forth in the Company's tariff Schedules will be waived from
        the effective date of Advice Letter No. 16375 until August 1, 1993, for customers
        who convert their existing PB LAN service to an alternate Company service such as,
        but not limited to, Centrex IS, Public Packet Switching[1] with Data Over Voice[2]                  (N)
        access.

   D. SERVICE

      PB LAN is comprised of three basic rate elements:  PB LAN Centrex station line, terminal access
      and host access.  Modem Pooling and Internodal Trunking features are offered as options.

      PB LAN will provide the customer with the ability to transmit integrated voice and data over the
      existing Centrex local loop for the purpose of switching the data to a host, modem, network facility
      or another terminal access.

   1.  Basic

      a. PB LAN (Centrex) Station Line

         PB LAN (Centrex) Station Line is provided via Centrex primary station line, see Guidebook
         Part 8, Section 10.

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[1]  Frozen/Grandfathered Service effective October 12, 2004.  See General Regulations, Schedule
     Cal.P.U.C. No. A2.1.2,A.4.
[2]  Frozen/Grandfathered, Digital Data Over Voice (DDOV), effective April 20, 2012;                         (N)
     To be withdrawn effective July 1, 2012.                                                                 (N)

2.  PACIFIC BELL LOCAL AREA NETWORK (cont'd)

    D.  SERVICE (cont'd)

      1. Basic (cont'd)

        b. Terminal/Host Access

          Terminal/Host Access provides the customer with the capability to integrate voice and data on the customer's Centrex line and to transmit data over the local loop at speeds up to 19.2 Kbps.

          Customer interface is provided via RS232 for the data equipment.  The customer is responsible for standard jacks conforming to Part 68, Subpart F, of the FCC's Rules and Regulations for single line and key telephones.

        c. Multiplexed Host Access

          Multiplexed Host Access is provided via Special Access High Capacity Digital Services (HCDS), see Schedule Cal.P.U.C. No. 175-T, Section 7.5.8,(C) or Advanced Digital Network Service, 56Kps. only, see Schedule Cal.P.U.C. No. 175-T, Section 7.5.8,(B).

      2. Optional

        a. Internodal Trunking

          Internodal trunking provides the customer with the capability to link data switches together. Channels as set forth in Schedule Cal.P.U.C. Nos. 175-T, Section 7.5.8(B) & (C), or FCC Tariff 128, are used as the interoffice facility.  Transmission speeds up to 1.544 Mbps may be used.

        b. Modem Pooling

          Modem pooling provides the capability for the user to exit from the LAN to the public switched network and the ability for a user outside of the LAN to access the LAN.

          Network usage charges, if applicable, will be assigned to the Centrex line associated with the modem.

          Access to the data switch from the public switched network is available through a similar modem arrangement.

2.  PACIFIC BELL LOCAL AREA NETWORK (cont'd)

  E.  RATES AND CHARGES

|  | Nonrecurring Charge | Monthly Rate | USOC | |
|---|---|---|---|---|
| 1. PB LAN (Centrex) Station line | | | | |
| - each [1], [7], [8] | $ RR | $ RR | RXOW+ | (C) |
| - each [1], [7], [8] | RR | RR | AAF | (C) |
| | | | | |
| 2. Terminal/Host Access | | | | |
| per port [2], [7], [8] | | | | (C) |
| - 1.2 Kbps | 90.24 | 20.90 | COB12 | |
| - 2.4 Kbps | 90.24 | 20.90 | COB24 | |
| - 4.8 Kbps | 90.24 | 20.90 | COB48 | |
| - 9.6 Kbps | 90.24 | 20.90 | COB96 | |
| - 19.2 Kbps | 90.24 | 22.80 | COB19 | |
| | | | | |
| 3. Multiplexed Host Access [3], [6], [7], [8] | | | | (C) |
| - Common equipment, per location | NO | 474.96 | COBHA | |
| - Each multiplexed port | 42.75 | 8.55 | HAUNL | |
| - Multiplexer/HCDS Interface | 474.96 | 474.96 | COBML | |
| - Multiplexer/DS Interface | 237.48 | 237.48 | COBDS | |
| - Switch/HCDS Interface [4] | RR | RR | 1ECT1 | (C) |
| - Switch/DS Interface [4] | RR | RR | 1ECDS | (C) |
| | | | | |
| 4. Modem Pooling | | | | |
| per Modem [5], [7], [8] | | | | (C) |
| - Dial In Access | 66.49 | 23.75 | COBDC | |
| - Dial Out Access | 66.49 | 23.75 | COBDO | |
| | | | | |
| 5. Internodal Trunking [6], [7], [8] | | | | (C) |
| - Switch/HCDS Interface | 474.96 | 474.96 | 1ECT1 | |
| - Switch/DS Interface | 237.48 | 237.48 | 1ECDS | |

3.  RESERVED

/1/ Rate applicable to Centrex primary station line rate as defined in Guidebook, Part 5, Section 1, D.4.a     (C)
/2/ In addition, one RXOW+ is required per port.
/3/ Terminal Access ports may be used as Host Access.
/4/ Rate applicable to E.5 Internodal Trunking.
/5/ In addition, a Centrex station line is required.
/6/ In addition, either an HCDS or ADN channel is required.
/7/ See Guidebook, Part 5, Section 1 Centrex Payment Plans.
/8/ See Regulations C.7. and 8. preceding.