U S WEST Communications, Inc. Information Publication

Acronyms, Glossary, Ordering Information, and Trademarks

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1. Introduction

1.1 General

This information publication describes the Acronyms, Glossary of Terms, Trademarks and Ordering Information that is included in U S WEST Publications.

1.2 Reason For Reissue

This is a new publication. If it is reissued, the reason will be noted in this paragraph.

1.3 Scope

The information provided in this document includes Definitions for the Glossary of Terms and Acronyms. U S WEST has also included Trademarks and the Ordering Information of documentation used by U S WEST and its customers. This information will be updates as required.

Questions regarding U S WEST Technical Publications may be referred to:

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2. Acronyms

OTLP Zero Transmission Level Point

A/D Analog to Digital

ABS Alternate Billing Service

ac alternating current
AC Access Customer

ACA Account Customers Address

ACAT Additional Cooperative Acceptance Testing

ACCS Automated Calling Card Service

ACD Automatic Call Distributor

ACE Automatic Cable Experience

ACNA Access Customer Name Abbreviation

ACR Abnormal Condition Report

ACS Advanced Communication Services

ACSE Association Control Service Element

ACTL Access Carrier Terminal Location

AD Amendment; for example, ISO 8327 AD2

AD4 Advanced D4

ADD Aggregate Design Data
ADM Add/Drop Multiplexer

ADSI Analog Display Services Interface

ADSR Administration of Designed Service Review

ADTS Automated Digital Terminal System

AGC Automatic Gain Control

AIC Automatic Intercept Center

AIS 1) Alarm Indication Signal

2) Automated Intercept System (Minicomputer

Functions)

AL Acceptance Limit

ALITT Automated Line Insulation Tests

AM Amplitude Modulation

AMA Automatic Message Accounting

AMA/DDD Automatic Message Accounting/Direct Distance Dialing

AMI Alternate Mark Inversion
AML Actual Measured Loss

AMMS Advanced Material Management System

AMP Application Management Package

AMPS Advanced Mobile Phone Service

AMR Accelerated Maintenance Request

ANI Automatic Number Identification

ANI/OE Automatic Number Identification/Order Entry -- product -- USW

provides for cable companies (pay per view)

ANSI American National Standards Institute, Inc.

AO Audio Options - the umbrella name for all audio products

AOTT Automatic Outgoing Trunk Test

AP Audio Program

APMS Air Pressure Monitoring System

APOP Alternate Point of Presence
APOT Actual Point Of Termination

APP Application Date

APS Automatic Protection Switching

APTOS Automated Pricing, Terminals, Options and Services

AQCB Auto Quote and Contract Billing

AR Automatic Routing

ARS 1) Audio Response System

2) Automatic Route Selection

ARSB Automatic Repair Service Bureau

ARU Audio Response Unit

ASCS Alarm Scanning and Control System (Scan-Alert)

ASN.1 Abstract Syntax Notation One

ASOG Access Services Ordering Guide

ASR Access Service Request

AT 1) Access Tandem

2) Advanced Technologies

AT&T American Telephone and Telegraph

ATB All Trunks Busy

ATI U S WEST Advanced Technologies Division

ATM Asynchronous Transfer Mode

ATMS Automatic Transmission Measurement Systems

ATR Alternate Traffic Routing

ATT/C American Telephone and Telegraph/Communications

AT&T Communications

ATT/IS AT&T Information Systems

ATTC Automatic Transmission Test and Control Circuit

ATTCOM AT&T Communications

AUI Attachment Unit Interface

AUIC Attachment Unit Interface Cable

AUTODIN Automatic Digital Network
AUTOVON Automatic Voice Network

AVD Alternate Voice-Data

AWC Alternate Wire Center

B8ZS Bipolar with 8 Zero Substitution

BANCS Bell Administration Network Communications System

BASE Base document; for example, ISO 8327

BATS Bits Access Test System

Bc Committed Burst Size

BCC Business Control Center

BCD Binary Coded Decimal

BCF Billion Conductor Feet

BCP Bell Company Practice

BCR Bell Communications Research

BCSC 1) Bell Customer Service Centers

2) Business Customer Service Center

BCSC/MAC Business Customer Service Center/Major Account Center

BDAC Business Dispatch Administration Center

BDC Building Distribution Cable

BDFB Battery Distribution Fuse Board

BDTVS Broadcast Digital Transport Video Service

Be Excess Burst Size

BECN Backward Explicit Congestion Notification

Bellcore Bell Communications Research, Inc.

BER 1) Basic Encoding Rules for ASN.1

2) Bit Errored Ratio3) Bit Error Rate

BERT Below Ground Electronics Remote Terminal

BES Burst Errored Second

BIS Business Information Systems

BISCUS/FACS Business Information System-Customer Services/Facilities

Assignment and Control System

BISDN Broadband ISDN

BISYNC Binary Synchronous Protocol

BIT Binary Digit
BL Bridge Lifter

BLV Busy Line Verification

BnZS Binary n-Zero Substitution

BOC Bell Operating Company

BOC/WIS Bell Operating Company/WATS Information System

BOCS Bell Operating Companies

BOS Bell Operating System

BOSS Billing and Order Support System

BPNRZ Bipolar Non-Return to Zero

BPRZ Bipolar Return to Zero

bps Bits Per Second (Now bit/s)
BPSS Bell Packet Switching Service

BPV Bipolar Violation

BRA Basic Rate Access

BRI 1) U S WEST Business Resources, Inc.

2) Basic Rate Interface

BRS Business Radio System

BSA Basic Serving Arrangement

BSC Business Service Center

BSCL Bell System COMMON LANGUAGE®

BSCTE Bell System Center for Technical Education

BSE Basic Service Element
BSP Bell System Practice

BTN Billing Telephone Number

BTS Bell Tri-Co Services
BTV Buffer Threshold Value

BW Bandwidth

C, I&M Construction, Installation & Maintenance

C/N Carrier to Noise
C1 Use TIRKS®-C1

C1/CDS Use TIRKS®-C1/CDS C1/DAC Use TIRKS®-C1/DAC

C1/DIST TIRKS®-Circuit Layout Distribution Module

C1/INV Use TIRKS®-C1/INV C1/MDS Use TIRKS®-C1/MDS

C1/PREP TIRKS®-Circuit Layout Preparation Module

C1/REF Use TIRKS®-C1/REF C1/TAS Use TIRKS®-C1/TAS

CAA Circuit Administration Area

CABS 1) Carrier Access Billing System

2) Customer Access Billing System

CAC 1) Circuit Administration Center

2) Circuit Access Code

3) Contract Administration Center

CAD 1) Computer Aided Design

2) Computer Assisted Design3) Computer Aided Drafting

4) Connect Aerial Drop

CAE Computer Aided Engineering

CAE/IFS Computer Aided Engineering/Interoffice Facility System

CAE/MEMS Computer Aided Engineering/Mechanized Engineering Management

System

CAE/MTPS Computer Aided Engineering/Messenger Trunk Planning System

CAE/RICS Computer Aided Engineering/Reuse Inventory Control System

CAE/SPOS Computer Aided Engineering/Switched Plan and Order System

CAL COMMAND A LINK

CAMA Centralized Automatic Message Accounting

CAMIS Construction Activities Management Information System

CAMIS J/S CAMIS Job Scheduler

CAPS Cable Analysis and Provisioning System
CAROT Centralized Automatic Reporting On Trunks

CAROT2 Centralized Automatic Reporting On Trunks-2

CATLAS Centralized Automatic Trouble Locating and Analysis System

CAU Customer Access Unit

CB Channel Bank

CBAC Construction Budget Administration Center

CBD Connected Buried Drop

CBDB Construction Budget Data Base

CBS&A Construction Budget Summary & Analysis

CC Came Clear

CCA Customer Credit Allowance
CCC Clear Channel Capability

CCI Corporate Communications, Inc.

U S WEST Corporate Communications, Inc.

CCIS Common Channel Interoffice Signaling

CCIS/SO Common Channel Interoffice Signaling/Signaling Office

CCITT Consultative Committee on International Telephone and Telegraph

(Now International Telecommunications Union [ITU])

CCN Corporate Communications Network
CCNA Customers Carrier Name Abbreviated

CCO Circuit Control Office CCON Customer Contact

CCR Customer Controlled Reconfigurability

CCS Common Channel Signaling

CCS7 Common Channeling Signaling (System) 7
CCSAC Common Channel Signaling Access Service

CCSS Common Channel Signaling System

CCTV Closed Circuit Television

CCUAP Computerized Cable Upkeep Administration Program

CCUAP II Computerized Cable Upkeep and Administration Program II

CD 1) Call Distribution

2) Circuit Details3) Circuit Data

CDAC Centralized Dispatch Administration Center

CDC Corporate Data Communications

CDLR 1) Confirming Design Layout Record

2) Confirming Design Layout Report

CDLRD Confirming Design Layout Record Date

CDM Cost Distribution Module

CDO Community Dial Office

CDR Customer Digit Receiver

CDS Circuit Design System

CDVM Central office Data/Voice Multiplexer

CEC Cellular Exchange Carrier

CECO Civil Enforcement Consent Order

CEI Comparably Efficient Interconnection

CEM 1) Construction Equipment Management

2) Construction Engineering Memorandum

CENTREX Centralized Exchange for Business Customer Services

CENTREX/CENTRON Centralized Exchange for Business Customer Services

CEO/EAEO Conforming End Office/Equal Access End Office

CEV Controlled Environmental Vault

CFA 1) Connecting Facility Assignment

2) Carrier Facility Assign

Cl Channel Interface

CI II Computer Inquiry II (Two)

CI III Computer Inquiry III (Three)

CIB Centralized Intercept Bureau

CIC Carrier Identification Code

CIMAP Circuit Installation Maintenance Assistance Package

CIMAP-INE CIMAP - Intelligent Network Elements

CIMAP/CC CIMAP/Control Center

CIMAP/SSC CIMAP/Special Services Center

CIN Customer Identification Number

CIR Committed Information Rate

CIS Customized Intercept Service

CIU Craft Interface Unit

CKL Circuit Location

CKLT Circuit Location Telephone Company Wire Center

CKTID Circuit Identification

CLASS SM Custom Local Area Signaling Service

CLB Circuit Layout Bureau

CLCI™ Common Language® Circuit Identification

CLEI™ Common Language® Equipment Identification

CLEO™ Common Language® Equipment Order

CLF Creation Load Factor

CLFI™ Common Language® Facility Identification

CLI Calling Line Identification

CLLI™ Common Language® Location Identification

CLO Circuit Layout Order

CLONES COMMON LANGUAGE® ONline Extract System

CLR Called Line Report

CLRC Circuit Layout Record Card

CLS 1) A COMMON LANGUAGE® Circuit Identifier

2) COMMON LANGUAGE® Circuit Serial Number

CMC 1) Cellular Mobile Carrier

2) Construction Management Center

3) Change Management and Control

CMI Control Mode Idle

CMIP Common Management Information Protocol

CMISE Common Management Information Service Element

CMO 1) Cable Management Organization

2) Cable Management Office

CMRF Circuit Maintenance Record File

CMS Circuit Maintenance System (Also see CMT)

CMS 1 Circuit Maintenance System 1
CMS 3A Circuit Maintenance System 3A
CMS-1 Circuit Maintenance System-1
CMS 3A Circuit Maintenance System 3A

CMSMC Circuit Maintenance System Maintenance Center

CMT Circuit Maintenance System (Also see CMS)

CMTS Centralized Maintenance Test System

CN 1) Circuit Number

2) Change Notice3) Completion Notice

CNA Communications Network Architecture

CND Calling Number Delivery

CNDB Calling Number Delivery Blocking
CNM Customer Network Management

CO Central Office

COAM Customer Owned And Maintained

COC 1) Circuit Order Control

2) Circuit Order Center

3) Central Office Connection

COCC 1) Central Office Connecting Channel

2) Central Office Cross Connect

COCE Central Office Circuit Equipment

COCS Circuit Order Control System

COCTX Central Office CenTreX

COE 1) Central Office Equipment

2) Customer Owned Equipment

CORD Customer Order Retrieval and Display

COSMOS Computer System for Mainframe Operation

COT 1) Central Office Termination

2) Central Office Technician

CP Communications Processor

CPC 1) Circuit Provisioning Center

2) Cable Pressure Contactors

CPE Customer Provided Equipment
CPIW Customer Provided Inside Wire

CPN Calling Party Number

CPR Continuing Property Record

CPS Cycles Per Second

CRAS Cable Repair Administrative System

CRC Cyclic Redundancy Check

CRC-6 6 bit Cyclic Redundancy Check

CREG Concentrated Range Extender with Gain

CRIS 1) Customer Records Inventory System

2) Customer Record Information System

CRO Critically Related Order

CRSAB 1) Centralized Repair Service Attendant Bureau

2) Centralized Repair Service Answering Bureau

CS Class of Service

CSC Complex Services Center

CSDC Circuit Switched Digital Capacity
CSDN Corporate Shared Data Network

CSG Controlling Service Group

CSMA/CD Carrier Sense Multiple Access with Collision Detection

CSO Carrier Service Order

CSP Customer Systems Pricing

CSP Carrier Selection Parameter

CSS Controlled Slip Seconds
CST 3 Circuit Switched Trunk 3

CSU 1) Channel Service Unit

2) Customer Service Unit

CSW Customer Service Wire

CT Channel Termination

CTEC Circuit Transmission Engineering Center

CTNN Cable Trouble Ticket Number

CTS Clear To Send

CTX Centrex

CU Channel Unit

CUS Customer Code

CV 1) Code Violation

2) Coding Violations

CVTS Corporate Video Teleconferencing Service

CWG Construction Work Group

CWL Circuit Work Location

CXR Carrier

DA Directory Assistance

DACS Digital Access Cross-connect System (AT&T)

DATH Display, Abbreviate Trouble History

dB decibel

DBM Dynamic Bandwidth Management

dBrnC Decibel Reference Noise C-Message Weighting

dBrnC0 dBrnC referred to 0 TLP

dBv Decibels Relative to voltage

dc direct current

DCC Data Communications Channel

DCE Data Circuit-Terminating Equipment

DCPR Detailed Continuing Property Record

DCS Digital Cross-connect System

DCSO Display Completed Service Order

DCTTN Display Cable Trouble Ticket Number

DD Due Date

DDAL Direct Digital Access Line
DDD Direct Distance Dialing
DDJ Due Date Jeopardy
DDN Digital Data Network

DDOV Digital Data Over Voice

DDS 1) Direct Dialing Service

2) Digital Data Service

3) Dataphone Digital Service

DE Discard Eligibility

DID Direct Inward Dialing

DILEP Digital Line Engineering Program

DLC Digital Loop Carrier

DLCI Data Link Connection Identifier
DLCS Data Line Concentrator System

DLETH Display Long Extended Trouble History

DLR 1) Design Layout Record

2) Display Line Record

DLRD Design Layout Record Date

DM Delayed Maintenance
DOD Direct Outward Dialing

DOJ Department of Justice (U S Federal Government)

DOP Dedicated Outside Plant

DOPAC Disk Oriented Property and Cost Accounting system

DQDB Distributed Queue Dual Bus
DRI Design Related Information

DS0 Digital Signal Level 0 (64 kbit/s) (1 voice channel)

DS1 High Capacity 1.544 Mbit/s Service

Digital Signal Level 1 (1.544 Mbit/s)

DS2 Digital Signal Level 2 (6.312 Mbit/s)

DS3 High Capacity 44.736 Mbit/s Service

Digital Signal Level 3 (44.736 Mbit/s)

DS4 Digital Signal Level 4 (274.176 Mbit/s)

DSAS DATAPHONE® Select-A-Station

DSOC 1) Digital Systems Operations Center

2) Digital Services Operations Center

DSR DCE Ready

DSS Digital Switched ServicesSM

DSU 1) Digital Service Unit

2) Data Service Unit

DSX Digital Signal Cross-connect

DSX-1 Digital Signal Level 1 Cross-connect
DSX-3 Digital Signal Level 3 Cross-connect
DTAU+ Heikemian Digital Test Access Unit +

DTE Data Terminal Equipment

DTMF Dual Tone MultiFrequency

DTN Data Telephone Number

DTR DTE Ready

DUV Data Under Voice

DVA Designed, Verified and Assigned

DVJ Designed, Verified and Assigned Jeopardy

DX Duplex Signaling

E-911 Enhanced 911 Services

E/M Electromechanical
E1 Use TIRKS®-E1

E1/REF Use TIRKS®-E1/REF E1/TAS Use TIRKS®-E1/TAS

EA Equal Access

EADP Equal Access Deployment Plan

EAS Extended Area Service

EC Exchange Carrier

EC CO Exchange Carrier Central Office

ECD Estimated Completion Date

ECO Electronic Central Office

ECP-1 Use TIRKS®-ECP-1
ECP-1A Use TIRKS®-ECP-1A
ECP-1B Use TIRKS®-ECP-1B

ECRS Enhanced Call Receipt System

EDIMS Electronic Documentation Information Management System

EDS Extended Digital Service

EDSX Electronic Digital Signal Cross-connect EEC-FAC Equipment Engineering Center-Facilities

EFAR Economic Feeder Administration and Relief
EFRAP Exchange Feeder Route Analysis Program

EFRAP/CFT Exchange Feeder Route Analysis Prog/Cumulative Fill Tab
EFRAP/TICS Exchange Feeder Route Anal Prog/Time-Share Cable Size
EFRAP/TIFS Exchange Feeder Route Anal Prog/TICS Input File System

EFS Error Free Seconds

EIA Electronic Industries Association

EICT Expanded Interconnect Channel Termination

ELAC Equipment Location Access Code

ELEPL Equal Level Echo Path Loss

EM Electronic Mail
EO End Office

EPIC (EEPS) Engineering and Planning Interface Construction (Budget)

EPL Echo Path Loss

EPOC Engineering Point of Contact

EPRC Engineering Property Records and Contracting

EPROM Erasable, Programmable, Read-Only Memory (Chip)

EPS Engineering and Planning System

ERL Echo Return Loss

ERMA Engineering Records Maintenance and Administration System

ERW Engineering Right-of-Way

ES Errored Second(s)

ESF Extended Superframe

ESP Enhanced Service Provider

ESPD Equalizer Selection Program for Data

ESSEX ESS Centrex Service

ESSX Electronic Switching System Exchange

ESS® Electronic Switching System
ETN Electronic Tandem Network

ETV Educational Television

EU End-User

EU-POT End-User Point Of Termination

EWO Engineering Work Order

EXACT™ Exchange Access Control and Tracking System

F1 Use TIRKS® - F1

FAB 1) Facility Assignment Bureau

2) Field Assistance Bureau

FACS Facility Assignment and Control System

FACTS Force And Cost Tracking System
FAD Functional Accounting Distribution

FADS Force Administration Data System

(SSFS) Forecaster's Analysis and Decision Support

FAP Facility Analysis Plan

FAX 1) Facilities

2) Facsimile

FC Function Code

FCC Federal Communications Commission
FCC Federal Communications Commission

FCD Frame Continuity Date
FCO Foreign Central Office
FCS Frame Check Sequence

FDDI Fiber Distributed Data Interface
FDM Frequency Division Multiplexing

FDP Fiber Distribution Panel

FDX Full Duplex
FE Front End

FECN Forward Explicity Congestion Notification

FEDC Facilities Engineering Design Center

FEP Facility Equipment Planning

FEPS Facility and Equipment Planning System

Use TIRKS®-FEPS

FEPS/PWS TIRKS®-FEPS/Planning Work Station

FEX Foreign Exchange

FG Feature Group (A, B, C, D)

FG 'A' Feature Group A

FG 'B' Feature Group B
FG 'C' Feature Group C
FG 'D' Feature Group D

FGTS Federal Government Telecommunications Services

FID Field Identifier

FLEXCOM[™] Flexible Network Control (Formerly FLEX-NET)

FM Frequency Modulation

FMAC Facility Management and Administration Center

FMS-F Force Management System-Facilities

FNPA Foreign Numbering Plan Area

FOC Firm Order Confirmation

FOT Fiber Optic Terminal

FR Facility Request

FRC Field Reporting Code FRS Frame Relay Service

FSI Facility System Interface

FTAC Fiber Technical Assistance Center
FTS Federal Telecommunication System

FTTC/H Fiber To The Curb/Home

FV Flexible Video

FWG Facility Work Group FX Foreign Exchange

GAB Group Access Bridging

GAC Group Access Code

GCR Generic Circuit Record

GDMO Guidelines for the Description of Managed Objects

GES Government and Education Services

GHz Gigahertz

GNM Generic Network Model

GOC Generic Order Control (Use TIRKS®-GOC)

GPS Global Positioning System

GS Ground Start

GSA General Services Administration

GTT Global Title Translations
HCCD Hub Cross-Connect Device

HCDS High Capacity Digital Service

HCOM Host Communication Facility for FLEXCOM
HCTDS High Capacity Terrestrial Digital Service

HDLC High Data Link Control

HECIG Human Equipment Catalog Item Group Code

HECI™ Human Equipment Catalog Item Code

HERTZ Cycles per Second

HICAP High Capacity Signal (or HI-CAP)
HSSDS High Speed Switched Digital Service
Hz 1 Hertz (formerly 1 cycle per second)

I&M Installation and Maintenance

IABS Integrated Access Billing System

IAD Inventory Availability Date
IAL Immediate Action Limit
IAM Initial Address Message
IBP Integrated Business Plan

IC 1) Integrated Circuit

2) Interexchange Carrier (or IEC)3) Interexchange Common Carrier

IC POP Interexchange Carrier Point of Presence
IC POT Interexchange Carrier Point of Termination

IC/IEC Interexchange Carrier
ICB Individual Case Basis

ICL Inserted Connection Loss

ICO Independent Company Office

ICOCS Use TIRKS®-ICOCS

ICSC 1) Interexchange Carrier Service Center

2) Interexchange Customer Service Center

ID Identification

IDC Information Distribution Company

IDDD International Direct Distance Dialing

IDLC Integrated Digital Loop Carrier

IEC 1) Interexchange Carrier (or IC)

2) Interexchange Common Carrier

IEEE Institute for Electrical and Electronic Engineers

IFCPC 1) Interoffice Facilities/Equipment Current Planning

Center

2) Interoffice Facilities Circuit Provisioning Center

IFEC Interoffice Facilities Engineering Center

IFPC Interoffice Facilities/Equipment Planning Center

IGRP Interior Gateway Routing Protocol

IM Investment Management

IMO 1) Investment Management Operations (PICS)

2) Investment Management Organization

IMTS Improved Mobile Telephone Service

INC Integrated Network Corporation

INE Intelligent Network Element or Equipment

interLATA interLocal Access and Transport Area intraLATA intraLocal Access and Transport Area

INWATS Inward Wide Area Telephone Service

IOC Inter-Office Channel
IP Internet Protocol

IPX Internetwork Packet Exchange

ISDN Integrated Services Digital Network

ISDNUP Integrated Services Digital Network User Part

ISI Industry Support Interface

ISO International Standards Organization
ISSN Integrated Special Services Network

ISUP 1) Integrated Services (Digital Network) User Port

2) Integrated Services Digital User Port

ITS Integrated Test System

ITU International Telecommunications Union (formerly CCITT)

ITU-T ITU-Telecommunications sector

IX Interexchange

kbit/s kilobits per second (1,000 bit/s)

KCJO Keep Cost Job Order

kHz Kilohertz (1,000 Cycles Per Second)

L2_PDU Level 2_Protocol Data Unit
L3_PDU Level 3_Protocol Data Unit
LAC Loop Assignment Center

LAM Loop Assignment and Makeup

LAN Local Area Network

LAP Link Access Procedure

LAPB Link Access Procedure-Balanced

LAPD Link Access Procedure D

LASER Light Amplification by Stimulated Emission of Radiation

LATA Local Access and Transport Area

LATAWATS Local Access and Transport Area WATS Provide

LBO Line Build Out

LBS Large Business Services

LC Local Channel

LCAMOS (TRACKER) Loop Cable Administration & Maintenance Operations

System

LCAMOS (PRED) Loop Cable Administration and Maintenance Operations

Systems/Predictor

LCAP Loop Carrier Analysis Program

LCIE Lightguide Cable Interconnect Equipment

LCON Location Contact

LDC Local Distribution Channel

LDMC Loop Data Maintenance Center

LDSX Loop Digital System Cross Connect

LDV Local Distribution Vendor

LEAD Loop Engineering Assignment

LEC 1) Local Exchange Carrier

2) Loop Electronics Coordinator

LED Light Emitting Diode

LEIM Loop Electronics Inventory Module

LEIP Loop Electronics Inventory Program

LEIS™ Loop Engineering Information System

LEN Line Equipment Number

LEWIS Loop Electronic Warehouse and Installation Service

LFACS 1) Loop Facilities Assignment and Control System

2) Loop Facility Administration Control System

LIDB Line Information Data Base

LIN Loop Inter Shelf
LL Local Loopback

LMCS Land Mobile Communications Satellite

LMI Local Management Interface

LMOS Loop Maintenance Operation System

LMOS/MLT Loop Maintenance Operations System/Mechanized Loop Testing

LMS Local Measured Service

LOC Location

LONAL Local Off Network Access Line

LPC Loop Provisioning Center

LRAP Long Route Analysis Program

LS Loop Start

LSO Local Serving Office

M23 M23 multiplexer application
M & P Methods and Procedures

Ma Milliamperes (one thousandth of an ampere)

MAC Major Account Center

MAN Metropolitan Area Network

MARC Material Accountability Requisition Control

MAU Medium Attachment Unit

Mbit/s Megabit per Second

MBL Mini-Bridge Lifter

MC Maintenance Center

MCI Microwave Communications Inc.

MCO Maintenance Control Office

MCP (TIRKS®) Mechanized Circuit Provisioning
MCTAP Mechanized Cable Trouble Analysis Plan

MD Manufacture Discontinued

MDF 1) Main Distributing Frame

2) Main Distribution Frame

MDI Medium Dependent Interface

MDS Message Design System

MEC Maintenance Engineering Center

MF Multifrequency

MFJ Modification of Final Judgment
MFS Metropolitan Fiber Systems, Inc.

MFT Metallic Facility Terminal
MIC Machine Interface Code
MJU Multipoint Junction Unit

MLAC Mechanized Loop Assignment Center

MLT Mechanized Loop Testing

MMA Mechanized Mapper Assigner

MODEM MOdulator/DEModulator

MPGP Mechanized Pair Gain Planning

MPOP 1) Minimum Point Of Presence

2) Main Point of Presence

MR Maintenance Request

MRSELS Microwave Radio & Satellite Engineering License

MSAU MultiStation Access Unit

MSC Maintenance of Service Charge

MSCR Mechanized Screen
MSG Media Service Group

MTAS Mechanized Trouble Analysis System

MTBF Mean Time Between Failure

MTF Metallic Terminal Frame
MTO Message Trunk Order
MTP Message Transfer Part
MTR Material Transfer Report

Chapter 2 Acronyms

MTSO Mobile Telephone Switching Office

MTTR Mean Time To Repair

MTU Maintenance Terminating Unit

MU Market Unit
MUX Multiplexer
NA No Access

NAC Network Administration Center
NANP North American Numbering Plan

NB Narrowband

NBD Normal Business Day

NBEC Non-Bell Exchange Carrier

NC Network Channel

NCEO Non-Conforming End Office
NCI Network Channel Interface

NCTE Network Channel Terminating Equipment

NE Network Element

NEAT Network Evolution Analysis Team

NECA National Exchange Carrier Association

NED Network Electronic Documentation

NEXT Near-End Crosstalk
NF Network Facilities
NI Network Interface

NM Network Management

NMA Network Monitoring and Analysis

NMS Network Management System

NNI Network-to-Network Interface

NOC Network Operations Center

NOCC National Operations Control Center

NOF Network Operations Forum

NPA Numbering Plan Area

NPC Network Produced Causes

NPIAC Network Plug-In Administration Center

NRC 1) Network Report Center

2) National Release Center

NSEP National Security/Emergency Preparedness

NSM Network Service Manager

NST Nonscheduled Testing

NTAC National Technical Assistance Center

NTE Network Transport Element

NTEC Network Terminal Equipment Center

NTF No Trouble Found

NUI Network Unit Inventory
NXX Numeric Numbering Plan

OAM&P Operations, Administration, Maintenance and Provisioning

OC Optical Carrier

OCO/CCO Overall Control Office/Circuit Control Office

OCS 1) Official Company Services

2) Operations Communications System

OCU Office Channel Unit

ODAP Order Design Assign and Provision

OEC Other Exchange Carrier

OLTE Optical Light Terminating Equipment
OLTM Optical Light Terminating Multiplexer

OLTS Optical Loss Test Set

ONA Open Network Architecture
ONAL Off Network Access Line

ONI Operator Number Identification
OPS Operations Processing System

OPS/INE Operations Processing System/Intelligent Network Element

OR Office Repeater

OSI Open System Interconnection

OSP/CPR Outside Plant/Continuing Property Record

OSPDBS Outside Plant Demand and Facility Data Base System

OSPE Outside Plant Engineer

OSS Operations Support System

OSSGR Operator Services Systems Generic Requirements

OTC Operating Telephone Company

OTDR Optical Time Domain Reflectometer

P&E Planning and Engineering

PAD Packet Assembler/Disassembler

PAM Pulse Amplitude Modulation

PBX Private Branch Exchange

PC Phone Call

PCL Product Classification Listing

PCM Pulse Code Modulation

PDD Post Dial Delay

PDN Packet Data Network

PDU Protocol Data Unit

PEDITE Use TIRKS®-PEDITE

PF Program Function

PG Pair Gain

PIA Pair Gain Administrator

PIC Primary Interexchange Carrier

PICS Plug-In Inventory Control System

PID Product Identification

PIR 1) Plug-In Request

2) Plug-In Requirement

3) Plug-In Requisition

PL Private Line

PLAR Private Line Automatic Ringdown

PLAT Private Line Access Tariff

PLCP Physical Layer Convergence Procedure

PLDS Private Line Digital Services

PLNSC Private Line Network Service Center

PLS Private Line Service

PLTS Private Line Transport Service (Special Access)

PM Phase Modulation

PM-TA Performance Monitoring and Test Access

PMOC Project Management Operations Center

POI Point Of Interface

POP Point Of Presence

POS Point Of Sale

POT Point Of Termination

POTS Plain Old Telephone Service

PPSN Public Packet Switched Network

PREMIS Premises Information System Premis Information/Loop Assignment

Center

PRI Primary Rate Interface

PRM Performance Report Message

PROCDS Programmable Circuit Design System (TIRKS®)

PROMDS Programmable Message Design System (TIRKS®)

PRS Primary Reference Signal

PSC Protection Switching Count

PSD Protection Switching Duration

PSDS Public Switched Digital Services

PSI Packet Switching Interface

PSN Public Switched Network

PSTN Public Switched Telephone Network

PTD Plant Test Date

PVC Permanent Virtual Connection

PVN Private Virtual Network

PWS Planning Work Station

QRSS Quasi Random Signal Source

RAND Rural Area Network Design

RASIR RAdio Systems Information Resource

RBOC Regional Bell Operating Company

RCC 1) Radio Common Carrier

2) Regional Control Center

RCF Remote Call Forwarding

RCMAC Recent Change Memory Administration Center

RDN Relative Distinguished Names

RDT Radio Digital Terminal

RDVM Remote Data/Voice Multiplexer

REC Radio Engineering Center
REG Range Extension with Gain

REGIS Requisition Entry and Generalized Inventory System

RF Radio Frequency

RFC Request For Comments

RFS Request for Service
RID Record Issue Date

RIP Routing Information Protocol

RMA Request for Manual Assistance

RMN Return Material Notice

RMS Root-Mean-Square

RMS-D AT&T Remote Measurement System Digital
RMS-M AT&T Remote Measurement System Metallic

ROSE Remote Operations Service Element

RNMC Regional Network Management Center

RP Restoration Priority

RPC Remote Procedure Call
RPL Restructure Private Line

RPMS 1) Radio Performance Monitoring System

2) Radio Protection Monitoring System

RR Relay Rack

RRO Responsible Reporting Office

RSA Repair Service Attendant

RSC 1) Remote Switching Center

2) Residence Service Center

RSS Remote Switching System

RSU Remote Switch Unit
RT Remote Terminal

RTA Remote Trunk Arrangement

RTS Request To Send

S&E Service and Equipment

S/N Signal to Noise

SAL Service Acceptance Limit
SAP Service Access Point

SARTS Switched Access Remote Testing System

SARTS/RTS Switched Access Remote Testing System/Remote Test System

SAS Switched Access Service
SBS Satellite Business Systems

SC Secondary Channel

SCA Secondary Request-To-Send (Received Channel)
SCB Secondary Clear-To-Send (Transmitted Channel)

SCC Switching Control Center

SCCP Signaling Connection Control Part

SCP Service Control Point

SCS Scheduling and Coordination Systems

SDC System Design Center

SDH Synchronous Digital Hierarchy
SDDS Switched Digital Data System
SDLC Synchronous Data Link Control
SEFS Severely Errored Frame Seconds

SES Severely Errored Second

SF 1) Single Frequency (Signaling)

2) Superframe

SHARP Self-Healing Alternate Route Protection

SHNS Self-Healing Network Services

SHS Self-Healing Services
SID Scheduled Issue Date
SIE Short Interruption Event

SIEC Short Interruption Event Count

SLC Subscriber Loop Carrier

SLM Subscriber Loop Multiplexer

SMAS Switched Maintenance Access System

SMASE System Management Application Service Elements

Chapter 2 Acronyms

SMDS Switched Multi-megabit Data Service

SME Subject Matter Expert

SMETDS Standard Message Trunk Design System

SMI Structure of Management Information

SMS Service Management Systems

SN56 SwitchNet 56

SNA System Network Architecture
SNI Subscriber Network Interface

SNMP Simple Network Management Protocol

SOAC Service Order Analysis and Control

SOEC Service Order Entry Center

SOEC-SS Service Order Entry Center-Special Services

SOEC/SS Service Order Entry/Special Services

SOG Service Ordering Guide

SOLAR Service Order Logistics and Reference System

SONET Synchronous Optical Network

SOP Service Order Processing

SOPAD Service Order Processing and Distribution

SPOC Single Point of Contact

SR Service Request

SRDM Subrate Data Multiplexing

SRL Singing Return Loss

SRM Selective Ringing Module

SRMX Subrate Multiplexer

SS Special Services

SS7 Signaling System 7

SSC Special Service Center

SSDAC Special Service Dispatch Administration Center

SSF Special Services Forecast

SSN Switched Service Network

SSO Special Service Order

SSP Service Switching Points

SSSD Segmented Special Services Design

STARS Satellite Terrestrial Automated Radio System

STM Synchronous Transfer Mode

STN Station

STP Signal Transfer Points

SUN Simplified Uniform Network

SVB Serving Bureau

SVC Switched Virtual Circuit

SVDS Simultaneous Voice Data Service

SWC Serving Wire Center

SWD Single Word

SYNTRAN Synchronous Transmission
TAG Technical Advisory Group

Tc Measurement Interval

TC Transport Channel

TCAP Transaction Capabilities Application Part

TCC Trunk Control Center

TCIC Trunk Circuit Identification Code
TCM Time Compression Multiplexing

TCP Terminal Control Protocol

TCP/IP Transmission Control Procedures/Internet Protocol

TCU Trunk Coupling Unit

TDM Time Division Multiplexing

TD-n e.g., TD-2. Long Distance Microwave Relay Transmission System

TEC Transmission Engineering Center

TEM Transmission Engineering Module

TEO Telephone Equipment Order

TES Terminal End-Section

TEWS Telecommunications Engineering Work-Bench System (TIRKS®)

TFP Transfer Prohibited

TGAC Trunk Group Access Code

TGN Trunk Group Number

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TGSN Trunk Group Serial Number

TIA Telecommunications Industry Association

TIC Tandem Inter-LATA Connection

TIRKS® Trunks Integrated Record Keeping System

TL 1) Transmission Level

2) Tie Line

TLP Transmission Level Point
TLS Transparent LAN Service

TMN Telecommunications Management Network

TMNA Telecommunications Management Network Applications

TOC Table of Contents

TOK Test OK

TOPS Traffic Operator Positions System

TRK Trunk

TSEC Transmission Staff Engineering Center

TSI Time Slot Interchange

TT Translation Type

UAS Unavailable Second

UDP User Datagram Protocol

UG Under Ground

UNI User-Network Interface

UPDCALC Update Calculations in CIMAP

USDC Universal Switched Digital Capability

USO Universal Service Order

USOC Universal Service Order Code

VF Voice Frequency

VLSI Very Large Scale Integration

VPN Virtual Private Networks

WA Work Authorization
WAL WATS Access Line
WAN Wide Area Network

WATS Wide Area Telecommunications Service

WORD Work Order Record and Details

WOT Wire and Office Tested

ZBTSI Zero Byte Time Slot Interchange

ZIP Zero Interval Provisioning

3. Glossary

Abstract Syntax Notation One (ASN.1)

The OSI language for describing abstract syntax.

Acceptance (Cooperative) Tests

Those tests performed by U S WEST in cooperation with the customer at a pre-negotiated time to establish new or additional services.

Acceptance Limit (AL)

The maximum deviation from a design parameter that is allowed at service turnup or customer acceptance.

Access Code

See carrier access code.

Access Distributed Queue Dual Bus (DQDB)

The process of operating of the DQDB protocol across the SNI.

Access Tandem (AT)

A U S WEST switching system that provides a concentration and distribution function for originating or terminating traffic between the U S WEST end-offices and an access customer's premises.

Acronym

A word formed from the first (or first few) letters of a series of words.

Actual Measured Loss (AML)

The actual measured insertion loss of a circuit at a given frequency (see Insertion Loss).

Address Signals

Signals used to convey call destination information, such as telephone station code, central office code, and area code. Some forms of address signals are called pulses, e.g., Dial Pulses (DP) and Multifrequency (MF) pulses.

Alarm Indication Signal (AIS)

A signal transmitted in lieu of the normal signal to maintain transmission continuity, and to indicate to the receiving terminal that there is a transmission fault which is located at, or upstream of, the transmitting terminal.

Alternate Billing Service (ABS)

ABS is the validation of calling card, collect, and third number billing services.

Alternate Mark Inversion (AMI)

A one (mark) pulse which is the opposite polarity as its predecessor.

American National Standard Institute (ANSI)

An organization supported by the telecommunications industry to establish performance and interface standards.

Amplitude Response Versus Frequency

The amplitude response of a channel over the bandwidth provided. It is often called frequency response, and commonly is referred to as a single frequency within the passband.

Amplitude Stability

The amount of change in (pilot) signal levels with time. For pilot signals, a short-term variation occurs in 5 minutes or less; a long-term variation occurs in a period in excess of 5 minutes. Typical examples are radio fading (short-term) or change in cable attenuation with temperature (long-term).

Answer Supervision

An off-hook signal transmitted towards the calling end of a connection when the called party answers.

Appletalk

A suite of communication protocols introduced and maintained by Apple Computer.

ASCII

American Standard Code for Information Interchange. A standard 8-bit information code used with most computers and data terminals.

Asynchronous Transfer Mode (ATM)

An information transfer method in which the information is organized into fixed length (53 octet) cells.

Asynchronous Transmission

Not synchronous: Data transmission in which the time of occurrence of specified significant instant of a data bit (usually the leading edge) is arbitrary, and occurs without necessarily having a fixed time relationship to preceding comparable instants.

Attachment Unit Interface Cable (AUI)

The cable, connectors, and transmission circuitry used to interconnect the Physical Signaling (PLS) and Medium Attachment Unit (MAU).

Attachment Unit Interface Cable (AIC)

The cable/connector assembly which attaches the Medium Attachment Unit (MAU) to the Digital Terminating Equipment (DTE) as shown in IEEE Std. 802.3-1985 Fig. 7-20.

Attenuation Distortion

The change in attenuation with frequency relative to the attenuation at a reference frequency; the reference frequency is 1004 Hz unless otherwise specified.

Audio Transmission

Denotes the transmission of speech or music within the audible spectrum.

Automatic Gain Control (AGC)

The process by which gain is automatically adjusted in a specified manner as a function of input or other specified parameters.

Automatic Number Identification (ANI)

The process of identifying the number of the calling station during a call sequence. Depending on the application, these digits may represent a directory number or billing number.

Automatic Protection Switch (APS)

A device which monitors a channel and automatically switches the channel to another facility whenever the channel fails or when specified parameters go beyond a specified threshold.

Availability

The relative amount of time that a service is "usable" by a customer, represented as a percentage over a consecutive 12 month period.

Balance (Longitudinal Balance)

See Longitudinal Balance

Balance (100 -Type) Test Line

Equipment in a Central Office that provides a reference impedance termination on a line for balance and noise tests on the line.

Bandwidth

The range of frequencies that contain most of the energy or power of a signal; also, the range of frequencies over which a circuit or system is designed to operate.

Basic Encoding Rules (BER)

The OSI language for describing transfer syntax.

BAUD

A unit of signaling speed. It is the reciprocal of the time duration in seconds of the shortest signal element (binary 1 or 0) within a code signal. The rates specified are the number of signal elements per second.

Bc - Committed Burst Size (bits)

The maximum amount of subscriber data that the network agrees to transfer, under normal conditions, during a time interval Tc.

Be - Excess Burst Size (bits)

The maximum amount of uncommitted data in excess of Bc that the network will attempt to transfer during a time interval Tc.

Binary *n*- Zero Substitution (B*n*ZS)

Binary n- Zero Substitution is an application of BPRZ, and is an exception to the Alternate Mark Inversion (AMI) line-code rule. It is one method for providing bit independence for digital transmission, by providing a minimum 1s density of 1 in n-bits. For DS3, n=3; for DS1, n=8; for 56 kbit/s service, n=7, and for subrates, n=6. The rule of BnZS is:

- Successional binary 1s (Marks) will be of opposite polarity (AMI) unless they are separated by *n* consecutive binary zeros, in which case the *n* 0s will be replaced by an *n*-bit byte containing 1s, having or causing, an intentional bipolar violation (bpv).
- For example in B6ZS, if the preceding binary 1 was +, then binary 100000011 is transmitted as signal voltage values: <u>-000+0+</u>-+ (the B6ZS byte is underlined). Assume the leftmost bit is transmitted first.
- In the decoding process, the BnZS signature is recognized and replaced by an all zero n-bit byte.

Bipolar Violation (BPV)

An unexpected violation (not a predetermined signature) of the Bipolar Alternate Mark Inversion (AMI) line-code rule. A violation is declared for AMI if two successive pulses have the same polarity if the bipolar violation is not part of an intentional byte used for special control, e.g. BnZS.

Bipolar With 8 Zero Substitution (B8ZS)

Bipolar 8 Zero Substitution is an application of BPRZ and is an exception to the Alternate Mark Inversion (AMI) line-code rule. It is one method for providing bit independence for digital transmission by providing a minimum 1's density of 1 in 8 bits.

Bit (Binary Digit)

A binary unit of information. It is represented by one of two possible conditions, such as the value 0 or 1, on or off, high potential or low potential, conducting or not conducting, magnetized or demagnetized. A Bit is the smallest unit of information, by definition.

Bits/second (bit/s)

Bits per second, e.g., 1200 bps. In data transmission, it is the number of binary zero and one bits transmitted in 1 second. Modern terminology uses "bit/s" e.g., 1200 bit/s.

Bit Error Rate (BER)

The ratio of the number of bit errors to the total number of bits transmitted in a given time interval.

Bridging (Multipoint Service)

Denotes the process of connecting three or more customer locations.

Buffer Threshold Value (BTV)

This value represents the buffer capacity allocated, at any given instant in time, for each congested Frame Relay Port.

Byte

A consecutive number of bits usually constituting a complete character or symbol. If the length of the byte is not specified, it is conventionally assumed to have a length of 8-bits. In the Digital Data System, a byte refers to an arbitrary group of 8 consecutive bits; it does not correspond to a byte of customer data.

C-Message

A frequency-weighting characteristic used for measuring noise in voice frequency communications circuits and designed to weight noise frequencies in proportion to their perceived effect in telephone service.

C-Message Noise

Denotes frequency weighted average noise which takes into consideration the electrical/acoustical properties of the 500-type telephone set and the human ear.

C-Notched Noise

Denotes the C-message frequency-weighted noise on a voice channel with a holding

tone, which is removed at the measuring end through a notch (very narrow band) filter.

Call

The sequence of events begun when an end-user makes a request for service and provides an address code, and concluded when communication between the end-users has terminated.

Call Attempt

Denotes the act of an end-user or customer provided equipment (CPE) providing the complete number (e.g. 0, 911, or 10 digits) using accepted network supervisory and address signaling protocols to the serving dial-tone central office.

Called Number

The called number is the telephone number originally dialed by the calling party.

Carrier (CXR)

An organization whose function is to provide telecommunications services. Examples are: Local Exchange Carriers, Interexchange Carriers, Cellular Carriers, etc.

Carrier Access Code (CAC)

The sequence an end-user dials to obtain access to the switched services of a carrier.

Carrier Detect

An E1A-232 interface control signal that indicates to an attached Data Terminal Equipment (DTE) device that the modem is receiving a signal from a remote modem.

Carrier Sense Multiple Access with Collision Detection (CSMA/CD)

Carrier Sense Multiple Access with Collision Detection is a method of controlling access to a shared transmission path, particularly in local area networks.

Category I

Special Access Services that are equivalent to the services that are defined in Part 68.2(a)(2) of the FCC Rules and Regulations.

Category II

Special Access Services not covered by Part 68 of the FCC Rules and Regulations. These services include those access services where protection is incidentally supplied in the normal provision of the service.

Category III

Special Access Services that are equivalent to the services that are defined in Part 68.2(a)(3) of the FCC Rules and Regulations.

Consultative Committee on International Telephone and Telegraph (CCITT)

An abbreviation for Consultative Committee on International Telephone and Telegraph; an international standards group now known as the International Telecommunications Union (ITU).

CCS

A hundred call seconds. This is a standard unit of traffic load that is equal to 100 seconds of usage.

CDVM

An abbreviation for the data/voice multiplexer located in the central office.

Central Office (CO)

A local switching system (or a portion thereof) and its associated equipment located at a wire center.

Central Office Connecting Channel (COCC)

A tariff rate category which provides for connections, within the same Hub wire center, between the Private Line Transport Channel and other services provided by U S WEST See FCC #1 for more information.

Centralized Automatic Message Accounting

Centralized Automatic Message Accounting is an arrangement that provides for the recording of detailed billing information at a centralized location other than an end office, usually a tandem office. CAMA equipment also may be associated with position systems, desks, etc.

Centralized Automatic Reporting On Trunks (CAROT) Testing

A type of testing that includes the capacity for measuring operational and transmission parameters.

Channel

An electrical or photonic, in the case of fiber optic based transmission systems, communications path between two or more points of termination.

Channel, Program

A one-way electrical or photonic, in the case of fiber optic based transmission systems, communications path between one point and one or more other points.

Channel Service Unit (CSU)

This unit provides regeneration of the signal received from the network, controls the pulse shape and amplitude for transmission of the signal into the network, and possibly

provides loop-back. The CSU function is frequently found within a Data Service Unit (DSU).

Channel Transmission Parameter

Denotes an objective which expresses the performance of a one-way or two-way path.

Channelize

The process of multiplexing-demultiplexing channels using analog or digital techniques.

Character

Letter, numeral, punctuation, control figure or any other symbol contained in a message.

Clear Channel Capability (CCC)

A characteristic of a transmission path in which the bit positions allocated for customer data may represent any combination of zeroes and ones.

Clear to Send

An EIA or CCITT defined interface control signal that indicates to the Data Terminal Equipment (DTE) whether or not the Data Communications Equipment (DCE) is ready to accept data from the DTE.

Closed End

The end of a switched service which transmits address signals.

CODEC

Equipment that converts an analog signal into a digital signal (binary format) and which may compress the information content so that less bandwidth is required for transmission compared to the original signal format. Conversely, the decoder part converts the digital signal back into an analog signal and may provide for expansion of the signal.

Committed Information Rate (CIR) bit/s

The rate at which the network agrees to transfer information, under normal conditions, during a time interval Tc.

Common Channel Signaling (CCS)

A signaling method in which a single channel conveys, by means of labeled messages, signaling information relating to a multiplicity of circuits or calls and other information, such as that used for network management. CCS is defined as a dedicated network for transporting signaling messages. The primary components of the network are STPs, signaling end points (including service control points and service switching points) and data links. The two basic types of CCS signaling are: 1) circuit-associated signaling, to support trunk signaling for call control; 2) and non-circuit associated signaling, to handle the exchange of queries and responses between CCS Switching Offices and data bases (SCPs) or between two CCS Switching Offices. This is also known as TCAP message routing.

Common Line

A line, trunk, pay telephone line, or other facility provided under the general and/or local exchange service tariffs of U S WEST Communications, Inc., terminated on a local switching system and which may be used to make and/or receive exchange service calls, intra-LATA message service calls, inter-LATA message service calls or international calls.

Conditioning

Denotes an enhancement to the transmission performance of a voice band channel. Parameter(s) affected are attenuation distortion, envelope delay distortion and noise.

Customer Premises Equipment (CPE)

Equipment owned and maintained by the customer and located on their side of the End-User Point of Termination (EU-POT) network interface.

Customers

Denotes any individual, partnership or corporation who subscribes to the services provided by U S WEST Customers are divided into two distinct and separate categories: (1) carriers, who provide interexchange services for hire for others, and (2) end-users, who request services only for their own use.

Customer Installation (CI)

Equipment and wiring at the customer's location on the customer side of the Network Interface.

Customer Interface

The interface with a customer at a point of termination.

Customer Premises

Denotes a building or portion(s) of a building occupied by a single customer or end-user either as a place of business or residence. Adjacent buildings and the buildings on the same continuous property occupied by the customer and not separated by a public thoroughfare, are also considered the customer's premises.

Customer Premises Equipment (CPE)

All telecommunication equipment located at a customer's location.

Customer Provided Equipment (CPE)

Equipment owned and maintained by the customer and located on their side of the End-User Point Of Termination (EU-POT) network interface. In the U S WEST Digital Data Service application, CPE typically includes the DSU (CSU/DSU) and data terminal equipment which are connected to the channel.

Customer Specified Premises Levels

The customer may specify both transmit and/or receive levels within ranges as delineated in various technical publications.

Cyclic Redundancy Check (CRC)

A method of checking the integrity of received data, where the check uses a polynomial algorithm based on the content of the data.

Data Communications Equipment (DCE)

The equipment that provides the functions required to establish, maintain and terminate data transmission connections; e.g., a modem, as well as the signal conversion and coding required for communications between data terminal equipment and data circuit.

Data Enhancement (End-Link, Mid-Link Applications)

This option provides improved attenuation distortion requirements and establishes limits for envelope delay distortion, phase jitter, and intermodulation distortion.

Data Link

The Data Link provides the electrical connection between a customer's terminal equipment, from the Network Interface and the fiber transmission facilities to a U S WEST Serving Wire Center.

Data Link (DL) - ESF

The overhead portion of a DS1 Clear Channel that may be used for carrying performance and control information across the network. This portion requires 4 kbit. In addition, framing requires 2 kbit, and Cyclic Redundancy Check requires 2 kbit.

Data Link Connection Identifier (DLCI)

The DLCI is located within the address field of a frame relay packet, and is used to identify each PVC.

Data Service Unit (DSU)

Digital, customer premises equipment used to recover timing from a baseband BPRZ signal, and which converts from BPRZ line signals to a business machine interface signal such as V.35. At 64 kbit/s and below, DSU and Channel Service Unit (CSU) functions are, in modern equipment, combined in a single unit sometimes called a General Service Unit (GSU), Basic Service Unit (BSU) or Data Service Unit-A (DSU-A) so that it is part of the Data Communications Equipment (DCE). Above 64 kbit/s, DSU functions are frequently contained in the Data Terminal Equipment (DTE). The DSU usually contains circuitry to recognize, and respond to, loop-back commands from the serving test center.

Data Set Ready (DSR)

An EIA or CCITT defined interface control signal that indicates to the Data Terminal Equipment (DTE) whether the Data Communications Equipment (DCE) is ready to transmit or receive data.

Data Terminal Equipment (DTE)

A generic term for customer terminal equipment that connects to the network through a modem or through digital Network Channel Terminating Equipment (NCTE), e.g., a computer or a PBX.

Data Terminal Ready (DTR)

An EIA or ITU (formerly CCITT) defined control signal that indicates to the Data Terminal Equipment (DTE) that the Data Communications Equipment (DCE) is ready to transmit or receive data.

Data Transmission (107-Type) Test Line

An arrangement that provides for a connection to a signal source providing test signals for one-way testing of data and voice transmission parameters.

DATAPHONE® Select-A-Station (DSAS)

Denotes a switched voice band private line data system designed to allow a single master station to communicate with a number of remote stations one at a time. The system enables point-to-point voice band connection between the master station at the customer premises and each remote station. Direct transmission between remote stations is not possible, nor is simultaneous communication from the master station to more than one station.

The following terms are used for the DATAPHONE® Select-A-Station:

Access Line

Denotes the communications path between component stations of the DATAPHONE® Select-A-Station system, obtained through private line access channels.

Automatic Step Sequential

Denotes a version of the Select-A-Station service which is designed to automatically poll remote stations in fixed sequence at fixed time intervals.

Controlled Step Sequential

Denotes a version of the Select-A-Station which is designed for continuous in-service control of connection time to each remote station by means of a signal sent from the master station.

Data Station Selector (DSS)

Denotes a switching device located in U S WEST Central Office (CO) having the capability of making connections between a 4-Wire outward transmission port and up to 128 output ports, either 2-Wire or 4-Wire, one at a time, either automatically or under the control of the customer's master station.

dBm

A decibel in which the reference power is one milliwatt.

dBrn

A unit used to express noise power relative to one picowatt (-90 dBm).

dBrn (f_1,f_2)

Noise power in dBrn measured over the frequency band from f_1 to f_2 without weighting (flat).

dBrn 15 kHz

Noise power is dBrn weighted according to a 15 kHz flat weighting network defined in ANSI/IEEE Standard 743-1984.

dBrnC

Weighted noise power in dBrn measured by a noise measuring set with C-Message weighting.

dBrnC0

Weighted noise power in dBrnC referred to or measured at a zero transmission level point (0 TLP).

DC Channel

A Direct Current (DC) Channel is an unconditioned 2-Wire channel with DC continuity capable of transmitting low speed varying signals at rates up to 30 baud. It is also capable of providing a two point circuit for control of a transfer arrangement, control of a relay, or a similar contact closure.

DDS End Office

A central office which provides all DDS Hub functions except for subrate multiplexing and bridging functions.

DDS Hub

A Hub, identified in the FCC #4 (NECA) tariff, used to provide multiplexing, test access, cross-connecting and bridging functions for U S WEST Digital Data Service (DDS) or DDS like services.

Decibel (dB)

A unit measurement of transmission loss, gain, or relative level. It is the logarithmic unit of signal power ratio most commonly used in telephony. It is used to express the relationship between two signal powers, usually between two acoustic, electrical, or optical signals; it is equal to ten times the common logarithm of the ratio of the two signal powers.

Demarcation Point

See Network Interface

Demultiplexing

The opposite of multiplexing. That is, the multiplexer combines signals and the demultiplexer takes them apart again. Also see Multiplexing.

Destination Address

An 8-octet field contained within the Level 3 Protocol Data Unit which identifies a specific end point of the destination SNI.

Dial Pulse (DP)

A means of signaling consisting of regular momentary interruptions of a direct or alternating current path at the sending end in which the number of interruptions corresponds to the value of a digit or a character. The interruptions are usually produced by a rotary telephone dial, but may be produced by a sender switching system.

Dialed Number Identification Service (DNIS)

An optional feature offered for WALs that enables trunk-side termination of the WAL and includes 4-digit outpulsing of an identification number to the end-user. This 4-digit outpulsing allows an end-user having a single service group, with multiple 800 numbers, to identify which 800 number was dialed.

Digital Connectivity

Denotes central offices or customer premises that are connected with digital transport facilities.

Digital Cross-connect System (DCS)

An intelligent (processor controlled) digital terminal that provides the capability to perform electronic cross-connects on digital channels operating at or below the bit rate of the transport systems terminated on the unit. The unit may also provide other features, e.g., bridging.

Digital Data Hub

A U S WEST designated seving wire center at which bridging, multiplexing, test access, cross-connecting functions are performed.

Digital Data Service (DDS)

Generically describes digital data service offering at 64 kbit/s and below.

Digital Hierarchy Level

The level in the digital hierarchy. The levels and the respective bit rates are:

<u>Level</u>	Bit Rate	
DS0	64.	kbit/s
DS1	1.544	Mbit/s
DS1C	3.152	Mbit/s
DS2	6.312	Mbit/s
DS3	44.736	Mbit/s
DS4NA	139.264	Mbit/s
DS4	274.176	Mbit/s

Digital Island

Two or more central offices connected with digital interoffice transport facilities that have no digital connectivity beyond these offices.

Digital Loop Carrier (DLC)

A digital transport facility used to carry circuits or channels on part of all of the loop between the serving wire center and the customer's location. Copper or fiber is normally used as the transport medium.

Digital Reference Signal (DRS)

The digital representation of a 1004 Hz tone at 0 dBm0.

Digital Test Access Unit+ (DTAU)

Equipment interposed in the DS1 bit stream providing access to the DS0 and DS1 bit stream for testing and performance monitoring capabilities.

Digital Transmission Facilities

May include both loop and interoffice facilities which perform multiplexing, demultiplexing, and transport of digital signals between the SS Exchange Termination and the Subscriber Access Termination.

Discard Eligibility (DE) Indicator bit

A single bit located within the address field of a frame relay packet which is used to indicate that a frame should be discarded in preference to other frames during a frame discarding process.

Disconnect Supervision

A change of state on a circuit from off-hook (busy) to on-hook (idle). This change may be initiated by the originating or the terminating end-user.

DS₀A

A DS0 signal that carries data for only one signal.

DS0B

A DS0 signal that carries data multiplexed from several subrate signals.

DS1 Clear Channel

Denotes that 1.535 Mbit/s of a 1.544 Mbit/s DS1 facility are available for customer information. The remaining 8 kilobits, or overhead, are for error correction, framing, and network performance/status/information.

Dual Tone Multifrequency Signaling (DTMF)

A signaling method that employs signals consisting of two sinusoidal voice frequency components, one from a group of four low frequencies and the other from a group of four high frequencies.

E & M Signaling Arrangements

Denotes a method of transmitting supervisory information between a switching machine or an end-user and a signaling system.

Echo Control

The control of reflected signals in a telephone channel.

Echo Path Loss (EPL)

The echo path loss, in decibels, is the difference between the incident and reflected signal powers.

Echo Return Loss (ERL)

The weighted average of the return losses of all frequencies between 560 and 1965 Hz.

Effective 2-Wire

A channel consisting of a single electrical path capable of voice grade transmission in both directions, but not simultaneously, and which is 2-Wire at the points of termination.

Effective 4-Wire

An effective 4-Wire channel is comprised entirely of 4-Wire facilities. The channel may be terminated as 2-Wire or 4-Wire at the end-user. The termination at the Interexchange Carrier Point Of Termination (IC POT) must be 4-Wire. When terminated as 2-Wire it is not possible to ensure independent information transmission simultaneously in both directions.

Embedded Operations Channel (EOC)

Use of some bits in the bit stream of a transport system for maintenance purposes.

Encryption

A process of encoding and decoding information so that it is not easily decipherable by unintended recipients.

End Office

A designation of a U S WEST switching system that occupies the lowest level of the public switched network hierarchy. It is the designation of a switching system that connects lines to lines, and lines to trunks (a local switching system).

End Office Switch

The term "End Office Switch" denotes a U S WEST switching system where local exchange Services are terminated for purposes of interconnection to trunks. Included are Remote Switching Modules and Remote Switching Systems served by a host office in a different wire center.

End-User (EU)

The term "End-User" denotes any customer of telecommunications service that is not a carrier, except that a carrier shall be deemed to be an "end-user" to the extent that such carrier uses a telecommunications service for administrative purposes without making such service available to others, directly or indirectly. The term is frequently used to denote the difference between a Carrier interface and an interface subject to unique regulatory requirements at non-Carrier customer premises (FCC Part 68, etc.).

End-User POT (EU-POT)

The Network Interface at the end-user's premises at which U S WEST Communications, Inc.'s responsibility for the provision of service ends.

Enhanced Services

As defined by the FCC, enhanced services are any services offered over common carrier transmission facilities that employ computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information; that provide the subscriber with additional, different or restructured information; or involve customer interaction with stored information. Examples of enhanced services include videotex, voice storage and retrieval, on-line business information, on-line travel information, electronic mail and protocol conversion in connection with packet switching service.

Enhanced Services Provider (ESP)

A business that provides enhanced services by using the ONA services made available by regulated telecommunications providers; also refers to interexchange carriers and resellers that act as ESPs.

Entry Switch

See first point of switching.

Envelope Delay Distortion (EDD)

A measure of the linearity of the phase-verses-frequency characteristic of a channel.

Equal Level Echo Path Loss (ELEPL)

The measure of echo path loss at a 4-Wire interface which is corrected by the difference between the transmit and receive Transmission Level Points (TLPs).

Equalization

The process of correcting frequency and/or phase distortion of a circuit by the introduction of networks to compensate for the difference in attenuation and/or time delay at the various frequencies in the transmission band.

Error Correction - DDS

Error correction is a technique used with "dataport" provisioning methods to improve transmission quality. The subrate DS0A dataport signal contains multiple copies which are used to employ a "voting" scheme to minimize errors. The use of error correction above the 19.2 kbit/s rate requires a second DS0 channel.

Error Free Second (EFS)

A one-second interval which does not contain any bit-errors. Usually expressed as a percent over a consecutive 24-hour period.

Errored Second (ES)

A one second interval with one or more bit errors.

Note: A period of no signal shall be considered a period of errored bits.

Ethernet

A packet-switched local network design (by Xerox Corp.) employing CSMA/CD as access control mechanism.

Exchange

A unit established by U S WEST for the administration of communications service in a specified geographic area that usually embraces a city, town, or village and its environs.

Exchange Access SMDS (XA-SMDS)

XA-SMDS is an access service provided by a LEC to an IC to support the IC's interexchange SMDS when the sending or receiving End-User (EU) is served directly by the LEC network.

Exchange SMDS

Exchange SMDS refers to End-Users (EU) service directly by LEC(s) communicating using SMDS in the exchange serving area, or Local Access and Transport Area (LATA). The LEC offers the service to the End-User. The SNI is used.

The calculated value of loss at a given reference frequency that one would expect to measure between two specified test points with the proper terminating impedance.

Extended Superframe (ESF) Format

An Extended Superframe consists of twenty-four consecutive DS1 frames. Bit one of each frame (the F-bit) is time shared during the 24 frames to describe a 6 bit frame pattern, a 6 bit Cyclic Redundancy Check (CRC) remainder, and a 12 bit data link. The transfer rate of each is 2 kbit/s, 2 kbit/s, and 4 kbit/s respectively.

Facilities

Facilities are the transmission paths between the demarcation points serving customer locations, a demarcation point serving a customer location and a U S WEST Central Office, or two U S WEST offices.

Feature Group (FG)

A Feature Group defines for Switched Access Service the type of connection to a U S WEST switching system (i. e., line side or trunk side) and the access calling pattern (e.g., 950-0XXX, 950-1XXX, 10XXX, NXX-XXXX).

Fiber Optic Terminal (FOT)

The terminating or originating portion of a fiber optic system that performs both an electrical to optical conversion and a multiplexing function.

First Point of Switching (FPOS)

The first U S WEST location at which switching occurs on the terminating path of a call proceeding from the Point Of Termination (POT) to the terminating end-user; or the last U S WEST location at which switching occurs on the originating path of a call proceeding from the originating end-user to the Interexchange Carrier Point Of Termination (IC POT).

Flow Control

The function of managing the rate at which data is received/transmitted by a receiver/transmitter.

Frame Relay Access Link

A Frame Relay access channel used to access the designated geographical U S WEST Frame Relay Service Serving Area.

Frame Relay Module

A plug-in of a Frame Relay Node/Concentration Node which contains multiple Frame Relay Ports.

Frame Relay Port

A termination point on the Frame Relay Module for the FRS Access Link(s).

Frame Relay Fractional Port

A termination point for a fractional channel comprised of contiguous 56/64 kbit/s channels that are provisioned within a FRS 1.544 Mbit/s Access Link.

Free (Unframed) Format

A non-standard use of the first bit in each DS1 frame, such that a synchronization pattern is either not transmitted or is held private by the user. Performance monitoring by a Carrier is not possible when framing is not evident. Free framing is not offered except to the Department of Defense.

Frequency Shift

The change in frequency of a tone as it is transmitted over a channel.

Frequency-Shift Keying (FSK)

A form of frequency modulation in which the modulating wave (often a binary signal) shifts the output frequency between predetermined values and the output wave has no phase discontinuity.

Full Duplex (FDX)

Simultaneous transmission in both directions between two points.

Gain/Frequency Characteristic

The change, plus or minus, in insertion loss or gain of a channel at specified frequencies.

Global Title

An address such as customer dialed digits which does not explicitly contain information that would allow routing in the signaling network, i.e., the SCCP translation function (Global Title Translation), is required.

Grandfathered

Denotes certain services offered to existing customers only.

Group Address Screen

Group Address Screen is used for screening destination addresses of protocol data units originating by the CPE.

Half-Duplex

Transmission in either direction between two points, but not simultaneously.

Half-Duplex Operation

Capability of transmitting and receiving signals, but only in one direction at a time.

Headroom

The difference, in dB, between the operating level and the overload level.

Hub

A U S WEST designated serving wire center at which bridging and multiplexing functions are performed. See also Digital Data Service (DDS) Hub.

Immediate Action Limit (IAL)

The bound of acceptable performance and the threshold beyond which U S WEST will accept a customer's trouble report and take immediate corrective action.

Impedance Balance

A measure of the degree of equality of the two impedances that are connected to the two conjugate ports of a hybrid set (or equivalent circuit).

Improved Echo Control at the 2-Wire POT Option

The Improved Echo Control 2-Wire option provides an upgraded return loss limit at the 2-Wire Point Of Termination (POT). This option is applicable for effective 2-Wire configurations.

Improved Echo Control at the 4-Wire POT Option

The improved echo control 4-Wire option provides an upgraded Equal Level Echo Path Loss (ELEPL) limit at the 4-Wire Point Of Termination (POT). This option is applicable for effective

4-Wire configurations.

Improved Termination Option

Provides the ordered impedance (nominally 600 ohms at 1kHz), a wide range of transmission level points (-16 to +7.0) and simplex reversal (when applicable) at the Point Of Termination (POT).

Impulse Noise

Any momentary occurrence of the noise on a channel significantly exceeding the normal noise peaks. It is evaluated by counting the number of occurrences that exceed a threshold.

Individual Address Screen

Individual Address Screens is used for screening destination addresses of Protocol Data Units (PDUs) originating by the CPE, and source addresses of PDUs delivered to the CPE.

Individual Case Basis (ICB)

Denotes a condition in which rates and charges for an offering are developed based on the circumstances in each case.

Inserted Connection Loss (ICL)

This term denotes the 1004 Hz power difference (in dB) between the maximum power available at the originating end, and the actual power reaching the terminating end through the inserted connection.

Insertion Loss

Insertion loss is the ratio (expressed in dB) of the power delivered to a specified load at the receiving interface by a specified source at the transmitting interface to the power delivered by the same source directly to an identical load.

Intelligent Network Element (INE)

A software programmable network component.

Integrated Services Digital Network (ISDN)

A network providing or supporting a range of telecommunications services that provides digital connections between end-users.

InterConnecting Networks (ICN)

Two independent networks which connect to each other.

Interexchange Carrier (IC)/(IEC) or Interexchange Common Carrier

Any individual, partnership, association, joint-stock company, trust, governmental entity or corporation engaged for hire in interstate or foreign communication by wire or radio, between two LATAs.

Interface Code

See Network Channel Interface

Integrated Services Digital Network (ISDN)

A network providing or supporting a range of telecommunications services that provides digital connections between end-users.

Interior Gateway Routing Protocol (IGRP)

An interior gateway protocol developed by Cisco Systems to exchange routing information within an autonomous system.

Intermodulation Distortion

A measure of the nonlinearity of a channel.

International Telecommunications Union (ITU)

An international standards group formerly know as the Consultative Committee on International Telephone and Telegraph.

Internetwork Packet Exchange (IPX)

Novell's Layer 3 protocol that is similar to IP, and is used in NetWare networks.

Inter-Ring Link

The Inter-Ring Link (formerly called the Transport Channel) provides for the fiber transmission facilities between U S WEST Serving Wire Centers.

IRE Unit

A unit equal to 1/140 of the peak-to-peak amplitude of the video signal, which is typically one volt. IRE is an acronym for Institute of Radio Engineers, the organization which defined the unit.

Isochronous Transmission

A transmission process in which there is always an integral number of unit intervals between any two significant instants. The transmission is characterized by a constant pulse rate, a constant time interval, or multiples thereof between voltage or electromagnetic field intensity transitions, and a gating by a controlled clock.

Jitter

Random timing distortions of a digital signal, whereby the appearance of a pulse differs from where the pulse should occur relative to time.

Key Activated Transfer Arrangement

An arrangement that allows the customer to transfer a leg of a Private Line Transport Service to either a spare or working channel that terminates in either the same or a different customer premises. A key activated control service is required to operate the transfer arrangement.

Key Pulse

Key Pulse signal indicates the start of a field of information.

Kilobit/Second (kbit/s)

One thousand (1000) bits/second

Layer 1

Physical Layer. Provides the transparent transmission of bit streams between systems including relaying through different media.

Layer 2

Data Link Layer. Provides the transfer of software between directly connected systems and detects any errors in the transfer. Establishes, maintains and releases software data links; handles error and flow control.

Layer 3

Network Layer. Provides routing and relaying through intermediate systems. Also handles segmenting, blocking, error recovery, and flow control.

Layer 4

Transport Layer. Provides the transparent transfer of software between end systems. Handles endtoend control, multiplexing, and mapping.

Layer 5

Session Layer. Provides administration and control sessions between application processes and manages their data.

Layer 6

Presentation Layer. Provides representation, interpretation, format and code transformation of information communicated between or referred to by application processes. MEDIACC uses standard ASN.1 representations for all messages and data communicated remotely. It uses standard presentation encoding, decoding, and transfer syntaxes.

Layer 7

Application Layer. Provides a window between application processes in order to exchange meaningful information. Performs management functions.

Line

The transport facility (cable pair or carrier channel) between the Central Office and Network Channel Interface.

Line Information Data Base (LIDB)

The LIDB contains originating line, billing number and terminating line call treatment status. The LIDB is used for Alternate Billing Service calls and, in U S WEST, the LIDB provides the listed directory name used in Calling Name Delivery (CNAM).

Line-Side Connection

Denotes a connection of a transmission path to the dial tone side of a switching system.

Line-Type Connection

Denotes a connection between a station at a customers premise and a Central Office (CO). These are connected on the dial tone side of the CO.

Link Access Procedure for Modems (LAP-M)

An error correction procedure defined in CCITT Recommendation V.42-1988.

Loaded Cable

Inductance, in the form of "Load Coils," is placed on longer metallic cables to improve the cable's voice transmission performance.

Local Access and Transport Area (LATA)

A geographic area for the provision and administration of communications service. It encompasses designated exchanges that are grouped to serve common social, economic and other purposes.

Local Area Network (LAN)

Network permitting the interconnection and intercommunication of a group of computers, primarily for the sharing of resources such as data storage devices and printers.

Local Exchange Carrier (LEC)

The regulated entity providing Access and IntraLATA services.

Local Switching System

A switching system that connects lines to lines, and lines to trunks. It may be located entirely at one wire center, or may be geographically dispersed as in some host-remote configurations.

Local Tandem Switch

A U S WEST switching system that connects trunks to trunks.

Longitudinal Balance (Longitudinal-to-Metallic)

The Longitudinal balance of any circuit is an expression, in dB, of the ratio of the longitudinal voltage (E_1) to the metallic voltage (E_m): Balance (dB) =20 $_{log}$ (E_1/E_m) where E_1 is the voltage measured "tip and ring to ground", and E_m is the voltage measured across the tip and ring.

Loop Signaling

Loop signaling uses a DC path, or loop, to convey address and supervisory signaling information.

Loopback

An out-of-service test procedure applied to a full duplex channel that causes a received signal to be returned to the source.

Loss Deviation

The variation of the actual loss from the designed value.

McCulloh Loop Signaling

Denotes a three state signaling format which provides a contact closure to the tip and ring of the Point Of Termination (POT) during the normal state. During an alarm state a momentary open is provided. During the signaling state a series of grounded pulses are applied to the POT for the termination for identification purposes.

Master Station

Denotes the equipment located on the customer's premises which controls communications between the master station and remote stations.

Mastergroup

A bandwidth allocation in frequency-division multiplexed systems that provides for 600 (or 10 supergroup) voice bandwidth channels. This allocation generally occupies several MHz of bandwidth.

Medium Attachment Unit (MAU)

The portion of the physical layer between the Medium Dependent Interface (MDI) and Attachment Unit Interface (AUI) that interconnects the trunk coaxial cable to the branch cable and contains the electronics which send, receive, and manage the encoded signals impressed on, and recovered from, the trunk coaxial cable. Shown in IEEE Std. 802.3, 1992 Edition, Figure 8-1.

Medium Dependent Interface (MDI)

The mechanical and electrical interface between the trunk cable medium and the Medium Attachment Unit (MAU).

Medium Interface Connector

A connector at which all transmitted and received signal specifications shall be met.

Megabit per Second (Mbit/s)

One million (1,000,000) bits per second

Metallic Facilities

A facility that consists of continuous metallic conductors, i.e., devoid of electronic enhancements that would corrupt Direct Current continuity.

Milliwatt (102-Type) Test Line

Denotes an arrangement in a U S WEST office which provides a 1004 Hz tone at 0 dBm for one way transmission measurements toward the customer.

MOdulator/DEModulator (Modem)

A contraction formed from the words modulator and demodulator to describe electronic equipment having both of these capabilities. A modem is a Data Communications Equipment (DCE) device to convert a business machine interface, e.g. RS232, to voice band signals suitable for transmission over a telecommunications channel.

Multicast

When applied to the U S WEST Frame Relay Service, the functionality which supports the transport of multiple duplicate frames from a single location to multiple end-user locations within the U S WEST Serving Area.

Multifrequency Pulsing

Multifrequency pulsing is information communicated over telephone trunks by various combinations of two of five frequencies in the voiceband. Signals for control functions are provided by combinations using a sixth frequency.

Multifrequency (MF) Signaling

An interoffice signaling method in which a combination of two out of six voice band frequencies are used to represent a digit or a control signal.

Multiplex

See multiplexer

Multiplexer (MUX)

An equipment unit to multiplex, or do multiplexing: Multiplexing is a technique of modulating (analog) or interleaving (digital) multiple, relatively narrow bandwidth channels into a single channel having a wider bandwidth (analog) or higher bit-rate (digital). The term Multiplexer implies the demultiplexing function is present to reverse the process so it is not usually stated.

MultiStation Access Unit (MSAU)

The Wiring Concentrator used to star-wire the physical ring in a Token Ring LAN. Provides the capability of isolating a faulty station from the ring.

NTSC (National Television Systems Committee) Signal

The standard North American television transmission signal format intended for the transmission of 525 line/60 field color or monochrome video and associated audio signals.

Network Channel (NC) Code

The Network Channel (NC) code is an encoded representation used to identify both switched and non-switched channel services. Included in this code set are customer options associated with individual channel services, or feature groups and other switched services.

Network Channel Interface (NCI) Code

The Network Channel Interface (NCI) code is an encoded representation used to identify five (5) interface elements located at a Point of Termination (POT) at a central office or at the Network Interface at a customer location. The Interface code elements are: Total Conductors, Protocol, Impedances, Protocol Options, and Transmission Level Points (TLPs). (At a digital interface, the TLP element of the NCI code is not used).

Network Control Signaling

The transmission of signals in the telecommunications system that perform functions such as supervision (control, status, and charge signals), address signaling (e.g. dialing), calling and called number identifications, rate of flow, service selection, error control, and audible tone signals (call-progress signals indicating reorder or busy conditions, alerting, coin denominations, coin-collect and coin-return tones) to control the operation of the telecommunications system.

Network Interface (NI)

The point of demarcation on the customer's premises at which U S WEST's responsibility for the provision of service ends.

Network Operations Forum (NOF)

A national committee of users, suppliers, and regulators, with the purpose of developing procedures and processes to enhance the communications arena.

North American Numbering Plan (NANP)

Denotes a numbering scheme which includes a three-digit (Numbering Plan Area) code and a seven digit telephone number which consists of a three-digit Central Office (CO) code plus a four digit station number.

National Television Systems Committee (NTSC) Signal

The standard North American television transmission signal format intended for the transmission of 525-line/60 field color or monochrome video and associated audio signals.

Octet

An eight (8) bit byte

Ohm

The unit of electric resistance.

Off-Hook

The supervisory state indicative of the active (in use) condition.

On-Hook

The supervisory state indicative of the idle condition.

Open End

The end of a switched service from which dial tone is drawn.

Open Systems Interconnection (OSI)

A seven-layer network architecture being used for the definition of network protocol standards to enable any OSI-compliant computer or device to communicate with any other OSI-compliant computer or device for a meaningful exchange of information.

Operator Services Systems Generic Requirements (OSSGR)

Is a comprehensive compilation of requirements and objectives, that, in the view of Bell Communications Research, Inc. (Bellcore), meet typical Bell Operating Company (BOC) operator services call handling needs. The requirements may be used by suppliers as a resource for their development of operator services systems. The OSSGR may also be used as a basis for analyzing operator systems developed by suppliers.

Optical Carrier (OC)

Optical carrier, the nomenclature for the line rate of the optical transmission signal described in this document.

Optical Interface (OI)

The OI is the transmit point wherein light waves move away from the interface toward an optical receiver.

Out-of-Frame Occurrence

Terminal equipment transition when failures are detected in four successive framing tests.

Packet

A unit of data, consisting of binary digits including data and call-control signals, that is switched and transmitted as a composite whole.

Packet Switched Network

A switched network which provides connection for forwarding standard data packets between user parties.

Parity

A coding scheme that adds a bit so that the total of all "one" or "mark" bits in an array will always be either even (even parity) or odd (odd parity). This permits detection of bit groups that contain single errors. It may be applied to characters or blocks.

Parity Check

The process of checking received data to determine if the correct parity has been received. If the total of "one" or "mark" bits is not odd or even, depending on the system being used, an error has occurred.

Phase Difference, Stereo

The phase difference at a given frequency between one channel of a stereo pair, used as a reference, and the other.

Phase Jitter

Intermittent, random displacements in time of digital bits, from their ideal placement in time.

Physical Signaling (PLS)

That portion of the physical layer, contained within the Data Terminal Equipment (DTE) that provides the logical and functional coupling between Medium Attachment Unit (MAU) and Data Link Layers. Shown in IEEE Std. 802.3-1985 Figure 8-1.

Plain Old Telephone Service (POTS)

An abbreviation for Plain Old Telephone Service such as single line residential and business service.

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Point of Presence (POP)

A physical location within a LATA at which an Interexchange Carrier (IC) establishes itself for the purpose of obtaining LATA access and to which U S WEST provides access service.

Point of Termination (POT)

The physical telecommunications interface that establishes the technical interface, the test point(s), and the point(s) of operational responsibility. (See Network Interface.)

Point-To-Point

A circuit connecting two (and only two) points.

Port

A place at which energy or signals enter or leave a device, circuit, etc.

Premises

Denotes a building or portion(s) of a building occupied by a single customer or end-user either as place of business or residence.

Presubscription

The process that permits each end-user (EU) served from an equal-access end-office switching system to route automatically, without the use of access codes, all the EU's inter-LATA calls to one Interexchange Carrier (IC) of the EU's choice. The EU may also gain access to other ICs by using appropriate access codes (e.g., 10XXX).

Primary DSAS

Denotes the data station selector located in U S WEST Central Office (CO) connected directly by an access line to the elector Control Unit (SCU) at the master station.

Private Branch Exchange (PBX)

A switching system that provides internal telephone communications between stations located on a customer's premises as well as between these stations and exterior networks.

Private Line Automatic Ringdown (PLAR)

Denotes a two-point or multipoint channel with U S WEST Communications. Inc. provided signaling at a serving wire center. Either end of the channel can originate a seizure which will cause a 20 Hz ringing signal to be applied to the remote end until answered. The customer must identify primary and remote stations.

Protocol

The rules for communication system operation which must be followed if communication is to be effected; the complete interaction of all possible series of messages across an interface. Protocols may govern portions of a network, types of service, or administrative procedures.

Protocol Code

The Protocol (character positions 3 and 4 of the Network Channel Interface [NCI] Code) is a two-character alpha code that defines requirements for the interface regarding signaling and transmission.

Protocol Data Unit (PDU)

An International Standards Organization (ISO) term referring to a packet of information exchange between two entities via a protocol.

or

A unit that is exchanged between peer entities within a particular layer.

or

A data object exchanged by protocol machines, usually containing both protocol control information and user data.

Public Safety Answering Point

Public Safety Answering Point (PSAP) is an agency or facility designated by a municipality to receive and handle emergency 911 calls.

Pulse Amplitude Modulation (PAM)

Modulation in which the modulating wave is caused to amplitude modulate a pulse carrier.

Pulse Code Modulation (PCM)

A type of modulation wherein the waveform of each channel is sampled many times per second in sequence. The amplitude of each sample is then encoded into a binary code and transmitted to the distant end where the pulse train is decoded and distributed to each channel in the exact time sequence to reproduce the original waveform of the channel.

Received Line Signal Detector

An EIA or CCITT defined interface control signal that indicates to the Data Terminal Equipment (DTE) that the attached Data Communications Equipment (DCE) is receiving a signal from a remote DCE.

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Registered Equipment

Denotes customer premises equipment which complies with and has been approved within the Registration Provisions of Part 68 of the FCC's Rules and Regulations.

Request to Send (RTS)

An EIA or ITU (formerly CCITT) defined interface control signal that indicates the Data Terminal Equipment (DTE) has data to transmit, and conditions the Data Communications Equipment (DCE) to transmit data to the network.

Return Loss

Denotes a measure of the similarity between the two impedances at the junction of two transmission paths. The higher the return loss, the higher the similarity.

Reverse Battery

The switch, during setup and ringing, places -48v on ring, ground on tip. When the called party goes off-hook, the condition is reversed (i.e., -48v on tip, ground on ring).

Ring Indicator

An EIA or ITU (formerly CCITT) defined interface control signal which indicates to the Data Terminal Equipment (DTE) that a ringing signal is being received on the communications channel.

Ringer Equivalence

A numeric indicator which is an inverse function of on-hook impedance and resistance, called the Ringer Equivalence Number (REN). All registered terminal equipment which can affect on-hook impedance and resistance are assigned a REN. The sum of all such REN's on a given telephone line shall not exceed 5, but may be fewer depending on the ringing voltage source and the facility serving the line. (FCC Part 68.312)

Routing Information Protocol (RIP)

An interior gateway protocol used to exchange routing information within an autonomous system.

Secondary DSS

Denotes the Data Station Selector in a U S WEST Central Office (CO) connected in tandem to a primary DSS. A secondary DSS is advantageous in serving geographic clusters of remote stations.

Selector Control Unit (SCU)

Denotes equipment located at the customer's premise which serves as the interface between a customer's master station and the telephone facilities for the purposes of facility cut-through, exchanging digital control signals with the customer and converting them to appropriate format for transmission to Data Station Selector.

Service Acceptance Limit (SAL)

The maximum deviation from a design parameter that is allowed at service turnup or customer acceptance.

Service Code (A COMMON LANGUAGE® code set)

A coded designation by which a particular Special Service Circuit may be identified. This designation must be unique, in a form that is readable and understandable, and be acceptable for both manual and mechanized procedures. (Special Service, as used by COMMON LANGUAGE®, may be called "Private Line", "Private Line Transport", "Switched Specials", "Dedicated Access", "Special Access", etc. in various tariffs and technical publications. Special Service is actually: COMMON LANGUAGE® Circuit Identification - Special Service, [abbreviated CLCITM - S/S]).

Service Control Point (SCP)

Serves as signaling nodes for access to data base information. Signaling messages usually consist of a query from any switch (End Office, Access Tandem, or Operator Services System, all of which can be SSPs) to a data base. The message is routed first to the STP which then forwards it to the SCP for access to the data base. The reply is passed from the SCP back to the STP which routes it back to the originating switching office.

Service Switching Point (SSP)

Can be End Offices, Tandems, or Operator Services Switches that have CCS and SS7 capability. SSPs serve as "control points" for data base query services by suspending call processing while accessing SCP data bases to obtain information required to complete the call. 800 and Calling Card calls must be routed to an SSP office for access to the appropriate data base.

Service Terminating Arrangement

Equipment furnished by U S WEST that is utilized for the termination of USWC provided Access Service. This equipment provides a clearly delineated interface that facilitates the design, isolation and testing of the Access Service where the service is connected with customer provided communications systems.

Serving Wire Center (SWC)

The term "Serving Wire Center" denotes a U S WEST Central Office from which dial tone for the Local Exchange Service would normally be provided to the demarcation point on the property at which the customer is served.

Seven-Digit Manual Test Line

An arrangement that enables the customer to select balance, milliwatt and synchronous test lines by manually dialing a seven-digit number over the associated access connection.

Severely Errored Second (SES)

A one second interval having a Bit Error Ratio of 10⁻³ or worse

Short-Circuit Test Line

An arrangement in a central office that provides for an AC short-circuit termination of a trunk or line by means of a capacitor of a least four microfarads.

Short Interruption Event (SIE)

An event beginning with the occurrence of a BER of 10⁻² or worse continuously for three or more consecutive seconds, which can last up to 120 seconds. A SIE clears when 10 consecutive seconds with BER better than 10 occur.

Note - The " 10^{-2} BER continuously" over each second implies that all sub-intervals, where the second is divided into at least 10 equal sub-intervals, have a BER of 10^{-2} or worse.

Short Interruption Event Count (SIEC)

A count of the Short Interruption Events in a given time frame (e.g., one month).

Signal-To-C-Notched Noise Ratio

The ratio, in decibels, of a test signal to the corresponding C-notched noise.

Signal-To-Noise Ratio (S/N Ratio)

The ratio of the signal power to the noise power at a given point in a given system (usually expressed in decibels).

Signaling

The transmission of information to establish, monitor, or release connections and/or provide Network Control.

Signaling Link Codes (SLC)

A field of information in certain signaling network management messages, which indicates the identity of the affected signaling link to which the message refers.

Signaling Point (SP)

A node in a signaling network which either originates and receives signaling messages, or transfers signaling messages from one signaling link to another, or both.

Signaling Point of Interface (SPOI)

An interface in a signaling network which either originates and receives signaling messages, or transfers signaling messages from one signaling link to another, or both.

Signaling Transfer Point (STP)

A signaling point with the function of transferring signaling messages from one signaling link to another and considered exclusively from the viewpoint of the transfer. STPs are stored program control packet switches which are inter-connected with other nodes in the signaling network by digital datalinks. The STPs perform a switching function to route signaling traffic within the signaling network.

Simplex Reversal Option

The Simplex Reversal Option physically turns over the simplexed DC path presented at the 4-Wire Point Of Termination (POT).

Simplex Signaling

Signaling in which two conductors are used for a single channel using a center-tapped coil, or its equivalent, at both ends.

Singing Return Loss (SRL)

The frequency-weighted measure of return loss at the edges of the voice band (260 to 500 Hz and 2200 to 3400 Hz), where singing (instability) problems are most likely to occur. (See IEEE Std. 743-1984, Table 10, for SRL low and Table 11 for SRL high).

Single Frequency Signaling (SF)

The use of a voice frequency tone (between 300 and 3300 Hz), keyed on and off, to transport dial pulse signaling, on-hook and off-hook supervision, or a combination of signaling and supervision over a carrier channel or 4-Wire metallic facility.

Slope (Also Three-Tone Slope or Gain Slope)

The loss at 404 and 2804 Hz relative to that at 1004 Hz.

SONET

See Synchronous Optical Network.

SONET Optical Terminal (SOT)

A terminal which uses SONET multiplexing to interleave the lower rate payloads, thereby creating a high rate synchronous signal.

Source Address

An 8-octet field contained within the Level 3_ Protocol Data Unit (L3_PDU) which identifies a specific end point of the originating SNI.

Special Access Service

A service that provides a transmission path within a LATA to directly connect a Point Of Termination (POT) to an end-user premises or to another POT.

Stand Alone Access Link

An access link which is used to provide access to other service provider(s) frame relay network.

Start Bit

In asynchronous transmission, the first bit in a character, normally a space, which prepares the receiving equipment for the reception and registration of the character.

Start Pulse

Start Pulse signal indicates the end of a field of information.

Stop Bit

In asynchronous transmission, the last bit of a character, normally a mark condition, which serves to return the line to its idle or rest state.

Stored Program Control (SPC)

A switching system comprised of a set of instructions within computer memory specifying operations to be performed which expands the capability of the system to selectively route traffic.

Subscriber Network Interface (SNI)

The point at which CPE interfaces to the network supporting SMDS.

Subsystem Number (SSN)

A number to identify a user of the Signaling Connection Control Part (SCCP). The SSN is used in SCCP addressing to route an SS7 message to the appropriate subsystem at the destination node, such as 800 service at an SCP or CLASSSM services application at an end office SP.

Superframe Format (SF)

A superframe consists of 12 consecutive DS1 frames. Bit one of each frame (the F-bit) is used to describe a 12-bit framing pattern during the 12 frames.

Supergroup

A bandwidth allocation in frequency-division multiplexed systems that provides for 60 (5 groups) voice bandwidth channels.

Supervision

The function of initiating a call request, holding a connection, or releasing a connection.

Sustained Information Rate (SIR)

The SIR refers to the rate of transfer of user information that CPE could sustain over long periods using that particular Access Class. The limits on the rate of information transfer are each defined by a set of parameters that is the basis for enforcement by the SS.

Switched Access Service (SAS)

A service that provides a 2-point electrical communication path within a LATA between a customer's Point Of Termination (POT) and a U S WEST end office and/or access tandem switch. Paths are capable of the transmission of voice and associated telephone signals within the frequency bandwidth of approximately 300 to 3000 Hz.

Switched Multi-megabit Data Service (SMDS) Access Class Data Rate

The SIR (Mbit/s) associated with a particular SMDS Access Class.

Switched Multi-megabit Data Service (SMDS) Access Connection

Allows for the transfer of information between Customer-provided compatible SMDS equipment and the ACS Network.

Switched Multi-megabit Data Service (SMDS) Data Unit

A packet which contains Customer information. Each data unit contains both the source address that identifies the originating Subscriber Network Interface and the destination address that identifies the SNI of the intended recipient.

Switched Multi-megabit Data Service (SMDS) Group Address

An address type of a set of individual address associated with one or more Subscriber Network Interfaces (SNI's).

Switched Multi-megabit Data Service (SMDS) Individual Address

An address type of a specific end point of a SNI.

Switched Multi-megabit Data Service (SMDS) Trunk

Trunk side connection to the SMDS Node.

Switched Services Network (SSN)

Private switching networks, which may have switch nodes at customer premises and in Central Offices, that use Private line channels and Central Office (CO) trunks and access lines to switch calls between customer locations. Modern SSN PBX's and CO switches use stored program control.

Switching System Exchange Termination

Termination [integrated into the Central Office (CO) Switching System] which implements SMDS Interface Protocol (SIP) Level 1 to format and transport the SIP Level 2 PDUs and SIP Level 1 Control Information across the Subscriber Network Interface (SNI).

Synchronous Optical Network (SONET)

Synchronous Optical Network (SONET): A standard providing electrical and optical specifications for the physical and higher layers, the first stage of which is at 51.84 Mbit/s, the Optical Channel 1 (OC1) level. Other rates, defined as OCn where n=3 through a number not yet firm, are possible.

Synchronous Test Line

An arrangement in a central office that performs marginal operational tests of supervisory and ring-tripping functions.

Synchronous Transmission

A transmission process such that between any two significant instants in the overall bitstream there is always an integral number of unit intervals.

System Network Architecture (SNA)

IBM reference model.

Tc - Committed Rate Measurement Interval(s)

A time interval for which the subscriber's committed information rate is measured. The formula used to calculate Tc is: Tc=Bc/CIR.

Time Compression Multiplexing (TCM)

A process of interleaving two or more bit streams. As defined for the SVDS application, the TCM is used to transfer the signaling plus data information by alternately time interleaving bursts of data in the transmit and receive directions (sometimes called Ping-Pong scheme).

Token Ring

A local network access mechanism and topology in which a token is passed from station to station in sequential order. Stations wishing to transmit must wait for the token to arrive before transmitting data. Throughout this document, the term "Token Ring" is used interchangeably with the IEEE Std. 802.5-1992 Edition.

Transfer Arrangement

An arrangement that affords the customer an additional measure of flexibility in the use of their Private Line Transport channel(s). The arrangement can be utilized to transfer a leg of a Private Line Transport Service to another channel that terminates in either the same or a different customer designated premises. A key activated control channel will be used to operate the transfer arrangement and will be rated as a Low Speed Data Channel Service. The Key will be located at the customer's premises and will be provided by the customer.

Transmission Control Protocol/Internet Protocol (TCP/IP)

Internetworking software suite originated on the Department of Defense's Arpanet network. IP corresponds to Open Systems Interconnection (OSI) network Level 3, TCP to OSI Layer 4 and 5.

Transmission Level Point (TLP)

A point in a transmission system at which the ratio, usually expressed in decibels, of the power of a test signal at that point to the power of the test signal at a reference point, is specified. For example, a zero transmission level point (0TLP) is an arbitrarily established point in a communication circuit to which all relative levels at other points in the circuit are referred.

Transmission Measuring (105-Type) Test Line/Responder

An arrangement in a central office that provides far-end access to a responder and permits two-way level, noise and return loss measurements to be made on trunks from a near-end office.

Transmission Path

Denotes a path capable of transporting signals within the range of the service offering. A transmission path is comprised of physical or derived facilities consisting of any form or configuration of plant typically used in the telecommunications industry.

Transmission Service Channel

A one-way transmission path between two designated points.

Transparent LAN Service (TLS)

A basic transport element designed to extend islands of Local Area Networks (LANs) across a limited geographic area (within a LATA and a single Wire Center).

Transparent

In communication systems, that property which allows transmission of signals without changing their electrical characteristics or coding beyond the specified limits of the system design.

Trunk

A communications path connecting two switching systems in a network, used in the establishment of an end-to-end connection.

Trunk Coupling Unit (TCU)

A physical device that enables a station to connect to a trunk cable. The TCU contains the means for inserting the station into the ring or, conversely, bypassing the station.

Trunk Group

A set of trunks that are traffic engineered as a unit for the establishment of connections between switching systems in which all of the communications paths are interchangeable.

Trunk-Side Connection

Denotes the connection of a transmission path to the non-dial tone side of a local exchange switching system.

Token Ring

A local network access mechanism and topology in which a token is passed from station to station in sequential order. Stations wishing to transmit must wait for the token to arrive before transmitting data.

Two-Wire to Four-Wire Conversion

Denotes an arrangement which converts a 4-Wire transmission path to a 2-Wire transmission path to allow a 4-Wire facility to connect to a 2-Wire entity.

Uniform Service Order Code (USOC)

The term "Uniform Service Order Code" denotes a three or five-character alphabetic, numeric, or an alphanumeric code that identifies a specific item of service or equipment. Uniform Service Order Codes are used in U S WEST billing system to generate recurring rates and nonrecurring charges.

Violation Monitor Removal (VMR)

Removes all violations such that BP violations do not propagate beyond the maintenance span.

Voice Grade (VG)

A term used to describe a channel, circuit, facility or service that is suitable for the transmission of speech, digital or analog data or facsimile, generally with a frequency range of about 300 to 3000 Hz.

Voice Band

Relating to the frequency spectrum from 300 to 3000 Hz.

Volume Unit (VU)

The unit of measurement for electrical speech power and other complex waveforms as measured by a VU meter in the prescribed manner. 0 VU equals 0 dBm, that is 1 mW, in measurements of sinusoidal wave test tone power.

Wide Area Telecommunications Service (WATS)

This type of service permits an end-user to make calls to selected inter-LATA or intra-LATA regions for a fixed monthly charge. A form of WATS called inward WATS permits callers within specified geographic regions to call the inward WATS customer without incurring a charge.

Wire Center

A building in which one or more central offices, used for the provision of local exchange services, are located.

X.25

Packet level messaging protocol. Consists of five classes of optional facilities.

X.25 Protocol

ITU (formerly CCITT) protocol recommendation which specifies how user data terminal equipment should interface with data circuit-terminating equipment for packet-switched networks. Includes Open System Interconnection (OSI) layers 1-3 functionality.

Zero Byte Time Slot Interchange (ZBTSI)

A method of providing DS1 Clear Channel Capability using the Extended Superframe (ESF) format and Alternate Mark Inversion (AMI) line code. See ANSI T1.107-1988.

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Those who are not U S WEST employees may order;

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