

Network Disclosure Announcement #441

Public Notice of Network Change(s), pursuant to CFR 47, subsections 51.325 - 51.335.
Qwest Communications Internet address: <http://www.qwest.com/disclosures>.

Global Locator Services Based on ANSI/TIA/EIA-41 Cellular Radiotelecommunications Intersystem Operations Mobility Application Part (MAP) Protocol Encapsulated in Transaction Capabilities Application Part (TCAP) Messages Over a Common Channel Signaling System 7 (CCS/SS7) Network Interconnection

Disclosure Date: June 2, 1999

Summary:

U S WEST announces plans to offer Wireless Service Providers (WSPs) Global Locator Services based on ANSI/TIA/EIA-41 Cellular Radiotelecommunications Intersystem Operations Mobility Application Part (MAP) Protocol encapsulated in Transaction Capabilities Application Part (TCAP) messages over a Common Channel Signaling System 7 (CCS/SS7) Network Interconnection. These Global Locator Services will enable WSPs supporting ANSI/TIA/EIA-41 Home Location Register (HLR) capabilities to utilize ANSI/TIA/EIA-41 MAP and TCAP protocols over SS7 A or D links to interface with U S WEST Signaling Transfer Points (STPs) connected to U S WEST Signal Control Points (SCPs). The ANSI/TIA/EIA-41 MAP based Global Locator Services announced by US WEST will enable WSPs with ANSI/TIA/EIA-41 HLR capability to query a U S WEST SCP pair for registration purposes. Queries from the WSPs HLR to the U S WEST SCP pair take the form of ANSI/TIA/EIA-41 RegistrationNotification (REGNOT) and MSInactive (MSINACT) messages. Associated response messages from the U S WEST SCP pair to the WSP HLR must be in the form of ANSI/TIA/EIA RegistrationNotification response (regnot) and MSInactive response (msinact) messages.

Locations and Timing of Deployment:

See Attachment 1 for Local STP locations. Available July 15, 1999

Pricing:

Individual case basis.

Interface Specifications:

Entities that are interconnecting to the U S WEST SS7 network can do so through the Local Signaling Transfer Points (LSTPs). The interconnection arrangements can be done through A-links or D-links based upon the arrangement that the Interconnecting Network (ICN) is capable of supporting. STP gateway screening tables will be individually translated for each link set by the appropriate U S WEST personnel to permit the Global Locator Request message sets to enter the U S WEST Network

ICN STP to U S WEST STP

The ICN mated STP pair is interconnected to the U S WEST mated STP pair by way of quad"D" (Diagonal) links. Three physically diverse link facility routes are strongly recommended. U S WEST will effectuate and maintain link diversity from the geographically separated U S WEST Communications Inc. Signaling Transfer Point to the ICN Signaling Point of Interface (SPOI) per a joint agreement. The ICN will be responsible for interm GTT to route to the U S WEST STP for final Global Title Translation.

ICN HLR to U S WEST STP

The ICN HLR is interconnected to the U S WEST mated STP pair by way of dual "A" (Access) links. U S WEST will effectuate and maintain link diversity from the geographically separated U S WEST Communications Inc. Signaling Transfer Point to the ICN Signaling Point of Interface (SPOI) per a joint agreement.

Link Transport Architecture

Link Architecture: Each CCS signaling link must provide digital bi-directional transmission. Each full duplex signaling link shall operate at the 56 kbit/s data rate and occupy a single DS0 (64 kbit/s) channel of a 24 channel DS1 digital transmission system. The DS0-A channels (links) are multiplexed into a DS1 format for hand off at the Network Interface (NI); the point of interconnect between the U S WEST Communications, Inc. Network and the ICN. Facility Architecture: A synchronized DS1 (1.544 Mbit/s rate) terrestrial digital facility is required. The facility must be channelized, and comply with the requirements given in Bellcore Technical Reference GR-342-CORE, "High-Capacity Digital Special Access Service -Transmission Parameter Limits and Interface Combinations."

- The DS1 facility does not require Clear Channel Capability (CCC) and may have robbed-bit signaling.
- DS1 Extended Superframe (ESF) format is *strongly* recommended.
- DS1 Superframe (SF) may be used, but is not recommended.

GR-324-CORE can be obtained by contacting:

Telecordia Customer Relations
8 Corporate Place, Room 3A-184
Piscataway, NJ 08854-4196
Fax: (908) 336-2559
Phone: (800) 521-CORE (2673) (U.S. and Canada)
Phone: (908) 699-5800 (Others) 77200 77375

Additional information is also contained in U S WEST's Technical Publications:

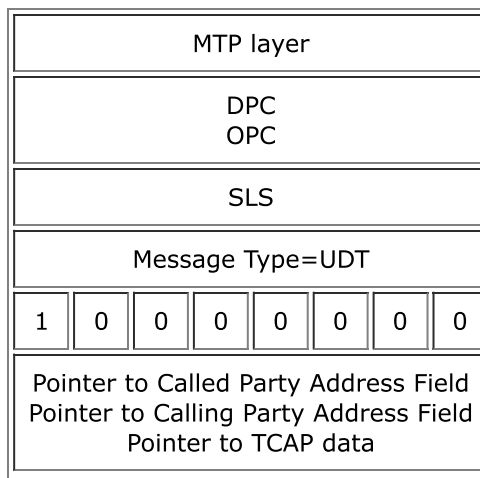
#77200 - DS1 Service and Synchronization Service
#77375 - 1.544 Mbit/s Channel Interface Technical Specifications for Network Channel Interface Codes Describing Electrical Interfaces at Customer Premises and at U S WEST Communications, Inc. Central Offices U S WEST Publications can be obtained by contacting:

Faison Office Products Company
3251 Revere Street, Suite 200
Aurora, CO 80011
or call (800) 777-3672
FAX Number (303) 340-1905

Message Format

The following section will define the Global Locator Service (GLS) messages containing the REGNOT query and regnot response messages as well as the MSINACT query and msinact response messages that will be sent between the WSPs HLR and the U S WEST SCP pair via a U S WEST local STP. There are two scenarios for the message format based on the type of interconnection the WSP chooses to utilize, either A or D links. For the REGNOT and MSINACT query messages, it is expected that these messages will be distributed across a linkset for load balancing purposes.

RegistrationNotification Invoke - "A" link interconnection (REGNOT)



LI of CdPA field							
1	0	0	0	1	0	0	1
Called Party Address Field SSN = 0 TT = 8 GTA Digits = MIN							
LI of CgPA Field							
1	1	0	0	0	0	1	1
Calling Party Address Field SSN = SSN for HLR GLS Application Point Code of HLR							
Length Indicator of TCAP Data Field							
TCAP Data Field (see TCAP query content, next page)							

RegistrationNotification Invoke - "D" link interconnection (REGNOT)

MTP layer							
DPC OPC							
SLS							
Message Type=UDT							
1	0	0	0	0	0	0	0
Pointer to Called Party Address Field Pointer to Calling Party Address Field Pointer to TCAP data							
LI of CdPA field							
1	0	0	0	1	0	0	1
Called Party Address Field SSN = 0 TT = 8 GTA Digits = MIN							
LI of CgPA Field							
1	1	0	0	0	0	1	1
Calling Party Address Field SSN = SSN for HLR GLS Application Point Code of HLR							
Length Indicator of TCAP Data Field							
TCAP Data Field (see TCAP query content, next page)							

TCAP Data Field - RegistrationNotification Invoke (REGNOT)

RegistrationNotification (Invoke) Parameters	
TCAP Package Type:	
	Query with Permission
Transaction ID	
Component Sequence	
Component Type:	Invoke (last)
Component ID	
Operation Code:	National TCAP
Parameter Set	
Mandatory Parameters--	
ElectronicSerialNumber	
MobileIdentificationNumber	
MSCID	
QualificationInformationCode	
SystemMyTypeCode	
Optional Parameters--	
AvailabilityType	
BorderCellAccess	
ControlChannelData	
ExtendedMSCID	
LocationAreaID	
PC_SSN	
ReceivedSignalQuality	
ReportType	
SenderIdentificationNumber	
SMS_Address	
SMS_MessageWaitingIndicator	
SystemAccessData	
SystemAccessType	
SystemCapabilities	
TerminalType	
TransactionCapability	

RegistrationNotification Return Result (regnot)

MTP layer
DPC OPC
SLS
Message Type=UDT
0 0 0 0 0 0 0 0
Pointer to Called Party Address Field Pointer to Calling Party Address Field Pointer to TCAP data
LI of CdPA field
Called Party Address Field SSN = SSN for HLR GLS Application
LI of CgPA Field Address Indicator
Calling Party Address Field SSN = SSN for SCP GLS Application
Length Indicator of TCAP Data Field
TCAP Data Field (see TCAP query content, next page)

TCAP Data Field - RegistrationNotification Return Result (regnot)

RegistrationNotification (Return Result) Parameters	
TCAP Package Type:	Response
Transaction ID	
Component Sequence	
Component Type:	
	Return Result (last)
Component ID	
Parameter Set	
SystemMyTypeCode	

MSInactive Invoke - "A" link interconnection (MSINACT)

MTP layer
DPC OPC
SLS
Message Type=UDT

0	0	0	0	0	0	0	0
Pointer to Called Party Address Field Pointer to Calling Party Address Field Pointer to TCAP data							
LI of CdPA field							
1	0	0	0	1	0	0	1
Called Party Address Field SSN = 0 TT = 8 GTA Digits = MIN							
LI of CgPA Field							
1	1	0	0	0	0	1	1
Calling Party Address Field SSN = SSN for HLR GLS Application Point Code of HLR							
Length Indicator of TCAP Data Field							
TCAP Data Field (see TCAP query content, next page)							

MSInactive Invoke - "D" link interconnection (MSINACT)

MTP layer							
DPC OPC							
SLS							
Message Type=UDT							
0	0	0	0	0	0	0	0
Pointer to Called Party Address Field Pointer to Calling Party Address Field Pointer to TCAP Data Field							
LI of CdPA field							
1	0	0	0	1	0	0	1
Called Party Address Field SSN = 0 TT = 8 GTA Digits = MIN							
LI of CgPA Field							
1	1	0	0	0	0	1	1
Calling Party Address Field SSN = SSN for HLR GLS Application Point Code of HLR							

Length Indicator of TCAP Data Field
TCAP Data Field (see TCAP query content, next page)

TCAP Data Field - MSInactive Invoke (MSINACT)

MSInactive (Invoke) Parameters	
TCAP Package Type:	
	Query with Permission
Transaction ID	
Component Sequence	
Component Type:	Invoke (last)
Component ID	
Operation Code:	National TCAP
Parameter Set	
Mandatory Parameters--	
MobileIdentificationNumber	
ElectronicSerialNumber	
Optional Parameters--	
CallHistoryCount	
DeregistrationType	
LocationAreaID	
SenderIdentificationNumber	
SMS_MessageWaitingIndicator	

MSInactive Return Result (msinact)

MTP layer							
DPC OPC							
SLS							
Message Type=UDT							
0	0	0	0	0	0	0	0
Pointer to Called Party Address Field Pointer to Calling Party Address Field Pointer to TCAP Data Field							
LI of CdPA field							
Address Indicator							

Called Party Address Field SSN = SSN for HLR GLS Application
LI of CgPA Field
Address Indicator
Calling Party Address Field SSN = SSN for SCP GLS Application
Length Indicator of TCAP Data Field
TCAP Data Field (see TCAP query content, next page)

TCAP Data Field - MSInactive Return Result (msinact)

MSInactive (Return Result) Parameters	
TCAP Package Type:	Response
Transaction ID	
Component Sequence	
Component Type:	
	Return Result (last)
Component ID	
Parameter Set	

Additional information relative to the Mobility Application Part (MAP) protocol is contained in ANSI/EIA/TIA-41.

This document can be obtained by contacting:
 Electronics Industry Association/Telecommunications Industry Association (EIA/TIA)
 2500 Wilson Blvd., Suite 300
 Arlington, VA 22201
 Phone: (703) 907-7700

**Additional
Information
Contact:**

For additional information please contact:

Ms. Maureen Callan
 U S WEST Communications
 1801 California, Room 2140
 Denver, CO 80202
 Phone: (303) 896-9582

U S WEST's Local STP Locations		
State	Pair / LATA	Location Name
ARIZONA	Phoenix	Deer Valley Mesa
ARIZONA	Tucson	Tucson Main Tucson East

COLORADO	Colorado Springs	Colorado Springs Main Pueblo Main
COLORADO	Denver	Dry Creek Denver Main
IDAHO	Idaho	Boise Pocatello
IOWA	Cedar Rapids	Cedar Rapids Downtown Waterloo Downtown
IOWA	Davenport	Davenport Downtown Davenport East
IOWA	Des Moines	Des Moines Mason City
IOWA	Sioux City	Sioux City Downtown Spencer
MINNESOTA	Duluth	Duluth Melrose Virginia
MINNESOTA	Minneapolis	Beard St. Paul Midway
MINNESOTA	Rochester	Owatonna Windom
MONTANA	Billings	Billings Bozeman
MONTANA	Great Falls	Helena Missoula
NEBRASKA	Omaha	Douglas "O" Street
NEW MEXICO	New Mexico	Albuquerque East Albuquerque Main
NORTH DAKOTA	Brainerd / Fargo	Fargo Grand Forks
OREGON	Portland	Belmont Capital
OREGON	Eugene	Eugene Medford
SOUTH DAKOTA	South Dakota	Rapid City Sioux Falls
UTAH	Utah	Kearns Provo
WASHINGTON	Seattle	Seattle Main Seattle East
WASHINGTON	Spokane	Spokane Riverside Yakima Chestnut

WYOMING	Wyoming	Cheyenne Casper
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NOTE: This announcement has been released in accordance with the FCC Rule 51.333(a), Certification of Short Term Public Notice.