IS-41 FEATURES

STANDARD	*FEATURES*
TIA/EIA/IS-41 Rev. 0 Published February 1988	Call delivery
	Basic intersystem handoff
	Basic service qualification
	Basic OA&M (Circuit management)
TIA/EIA/IS-41 Rev. A Published December 1990	Intersystem handoff
	Enhanced service qualification
	Location management
	Mobile station state management
	Call delivery
	Cellular feature support
	Call forward-unconditional
	Call forward-busy
	Call forwarding-not answer
	Call waiting
	Three-way calling
	Feature control
TIA/EIA/IS-41 Rev.B Published December 1991	Intersystem handoff
	Enhanced service qualification
	Location management
	Mobile station state management
	Call delivery
	Cellular feature support
	Call forward-unconditional
	Call forward-busy
	Call forwarding-not answer
	Call waiting
	Three-way calling
	Feature control
	Basic Automatic Roaming Functions
	Mobile Station (MS) service qualification
	MS location management
	MS state manegement
	HLR and VLR fault recovery
	Autentication Center (AC)
	Shared secret data sharing
	Global Challenge
	Unique chalenge
	Shared secret data update
	Call history count update
	Authentication reporting
	Call origination services
	Basic call origination

TIA/EIA/IS-41 Rev. C Published November 1995	*Subscriber personal identification number access (SPINA)*
	Calling number identification restriction (CNIR)
	Massages wating notification (MWN)
	Voice message retrieval (VMR)
	Call transfer (CT)
	Three-way calling (3WC)
	Conference call (CC)
	Priority access and chanel assigment (PACA)
	Preference language (PL)
	Voice privacy (VP)
	Calling termination services
	Call delivery(basic termination)
	Call forwarding-inconditional (CFU)
	Call forwarding-no answer (CFNA
	Call forwarding-inconditional (CFU)
	Call forwarding-busy (CFB
	Call waiting (CW)
	Do not disturb (DND)
	Calling number identification presentation (CNIP)
	Selective call acceptance (SCA)
	Password call acceptance (PCA)
	Mabil access hunting (MAH)
	Flexible Alerting (FA)
	SMS
	Delivering short messages to roaming subscribers
	Delivering short messages during intersystem handoff
	Methods for originating short messages from a MS
	Enhanced emergency services
	Circuit-switched asynchronous data and group III fax
	Network directive system selection
	Over-the-air activation
	Advanced digital features
	International mobile station identifier (IMSI)
	Subscriber confidentiality
	Lawfully authorized electronic surveillance
	PCS operation and interworking
	Wireless Intelligent Network
	AUTOMATIC ROAMING OPERATIONS
	AuthenticationDirective
	Initiate SSD Update (New SSD shared for SSD Update)
	Initiate SSD Update (SSD not shared for SSD Update)
	Initiate CallHistoryCount Update
	VLR-Initiated Unique Challenge
	AC-Initiated Unique Challenge
	Revocation of SSD Sharing
	AuthenticationDirectiveForward

Successful AuthenticationDirectiveForward
AuthenticationFailureReport.
Successful AuthenticationFailureReport: Access Denied on Initial Registration
AuthenticationRequest
Successful Authentication on Initial Access
Failed Authentication on Initial Access
Successful Authentication on Call Origination (SSD not shared)
Successful Authentication on Call Termination (SSD not shared)
Initiate Authentication on Voice Channel (SSD not shared)
Successful Authentication on Call Origination (SSD shared)
Successful Authentication on Call Termination (SSD shared)
Initiate Authentication on Voice Channel (SSD shared)
AuthenticationStatusReport
Report of AC-initiated Action
Report of VLR-initiated Action
BaseStationChallenge
Base Station Challenge with SSD not shared
Base Station Challenge with SSD shared
BulkDeregistration
Successful BulkDeregistration
CountRequest
Successful CountRequest
FeatureRequest
Direct FeatureRequest without Call Routing
Direct FeatureRequest with Call Routing
FlashRequest
Successful FlashRequest
InformationDirective
Successful InformationDirective
InformationForward
Successful InformationForward
InterSystemAnswer
Successful InterSystemAnswer
InterSystemPage
Successful InterSystemPage: Border MSC Routing Information Returned
Unsuccessful InterSystemPage: Border MSC Access Denied
Unsuccessful InterSystemPage: Border MSC Resource Shortage
InterSystemPage2
Successful InterSystemPage2: MS Presence Confirmed in Border MSC
Unsuccessful InterSystemPage2: Access Denied
Unsuccessful InterSystemPage2: Resource Shortage
InterSystemSetup
Successful InterSystemSetup
Unsuccessful InterSystemSetup
LocationRequest
Successful LocationRequest: Route to a PSTN DN
Successful LocationRequest: Route to a Local MS
Successful LocationRequest: Route to an MS on Another MSC

Successful LocationRequest: Routing Information and Access Denied
Indication Returned
Successful LocationRequest: Route to Multiple Terminations
Unsuccessful LocationRequest: Access Denied without Routing
Information Returned
MSInactive
Successful MSInactive: MS Declared Inactive
Successful MSInactive: MS Deregistered
OriginationRequest
Successful OriginationRequest
Unsuccessful OriginationRequest
QualificationDirective
Successful QualificationDirective: Re-authorization Only
Successful QualificationDirective: Re-authorization and Update Profile
Successful QualificationDirective: Update Profile Only
Successful QualificationDirective: De-authorization
QualificationRequest
Successful QualificationRequest: Authorization Confirmed
Successful QualificationRequest: Authorization Confirmed and Profile Returned
Successful QualificationRequest: Profile Returned Only
Unsuccessful QualificationRequest: Authorization Denied
RandomVariableRequest
Successful RandomVariableRequest
Unsuccessful RandomVariableRequest
RedirectionDirective
Successful Request
Unsuccessful Request
RedirectionRequest
Successful RedirectionRequest
Unsuccessful RedirectionRequest
RegistrationCancellation
Successful RegistrationCancellation: Single Access
Successful RegistrationCancellation: Multiple Access
Unsuccessful RegistrationCancellation: Multiple Access
RegistrationNotification
Successful RegistrationNotification: Confirmed at the VLR
Successful RegistrationNotification: Confirmed at the HLR
Unsuccessful RegistrationNotification: Denied at the HLR
RemoteFeatureControlRequest
RemoteUserInteractionDirective
Successful RemoteUserInteractionDirective
Unsuccessful RemoteUserInteractionDirective
RoutingRequest
Successful Indirect RoutingRequest: TLDN Returned
Successful Direct RoutingRequest: TLDN Returned
Unsuccessful Indirect RoutingRequest: Access Denied Returned
SMSDeliveryBackward
Successful SMSDeliveryBackward

Unsuccessful SMSDeliveryBackward
SMSDeliveryForward
Successful SMSDeliveryForward
Unsuccessful SMSDeliveryForward
SMSDeliveryPointToPoint
Successful SMSDeliveryPointToPoint
Unsuccessful SMSDeliveryPointToPoint.
SMSNotification
Successful SMSNotification: MS-Based SME Availability Report
Successful SMSNotification: MS-Based SME Unavailability Report
SMSRequest
Successful SMSRequest: MS-Based SME Address Request
Unsuccessful SMSRequest: MS-Based SME Address Request
TransferToNumberRequest
Successful TransferToNumberRequest
Unsuccessful TransferToNumberRequest: Access Denied
UnreliableRoamerDataDirective
Successful UnreliableRoamerDataDirective
UnsolicitedResponse
Successful UnsolicitedResponse
Unsuccessful UnsolicitedResponse with Return Result
BASIC AUTOMATIC ROAMING SCENARIOS
Registration
Initial MS Registration in a New Serving System
Multiple Registrations with Cancellation Denied at the VLR
Deregistration
MS Deregistered by Serving MSC
MS Deregistered by Serving VLR
MS Inactivity Reporting
Registered MS Declared Inactive by Serving MSC
MS Declared Inactive by Serving MSC at Registration
MS Declared Inactive by Serving VLR
MS Reported Inactive via the RoutingRequest Operation
Authentication
Initial Registration with Authentication
Origination with Authentication
Termination with Authentication
Authentication on Voice Channel Only
Authentication on Flash Request
SSD Update When SSD is Not Shared
AC Initiated CallHistoryCount Update with SSD Not Shared
Authentication When SSD is Currently Shared with Another System
SSD Update When SSD is Shared
AC Initiated Unique Challenge
VLR Initiated Unique Challenge When SSD is Shared
RegistrationCancellation with CallHistoryCount Report
Basic Feature Processing
Feature Request Confirmation with Release
Feature Request Confirmation with Call Routing

	Feature Request Denial with Call Release
	Feature Request After Handoff
	Service Provider Initiated Profile Change
	Call Origination without Profile
	Termination or Message Delivery without Profile
	Feature Request (Registration) with SPINI Active
	Automatic Roaming Maintenance
	Recovery from Data Failure at the HLR
	VLR-Initiated Bulk Deregistration
	VOICE FEATURE SCENARIOS
	Call Delivery
TIA/EIA/IS-41D	*CD Demand Activation or De-Activation*
	CD Invocation to an Idle MS on Another MSC
	CD Invocation to an Idle, Local MS
	CD Invocation to a Busy MS
	CD Invocation with No Page Response or No Answer
	CD Invocation to an Inaccessible MS
	CD Invocation with Intersystem Paging
	CD Invocation with Unsolicited Page Response
	TLDN Call Arrival with Intersystem Paging
	TLDN Call Arrival with No Page Response to Intersystem Paging
	TLDN Call Arrival with No Answer After Intersystem Paging, Call Release Initiated by Serving MSC
	TLDN Call Arrival with No Answer After Intersystem Paging, Call Release Initiated by Border MSC
	Origination in a Neighboring System
	Call ForwardingÑBusy
	CFB Variable Registration or De-Registration
	CFB Demand Activation with Courtesy Call
	CFB Demand Activation (without Courtesy Call) or De-Activation
	CFB Invocation
	CFB Invocation with Call Collision
	Call ForwardingÑDefault
	CFD Variable Registration or De-Registration
	CFD Demand Activation with Courtesy Call
	CFD Demand Activation (without Courtesy Call) or De-Activation
	CFD Invocation with Busy
	CFD Invocation with Call Collision
	CFD InvocationÑImmediate
	CFD Invocation with No Answer or No Response to Page
	Call ForwardingÑNo Answer
	CFNA Variable Registration or De-Registration
	CFNA Demand Activation with Courtesy Call
	CFNA Demand Activation (without Courtesy Call) or De-Activation
	CFNA InvocationÑImmediate
	CFNA InvocationÑDelayed
	Call ForwardingÑUnconditional
	CFU Variable Registration or De-Registration
	CFU Demand Activation with Courtesy Call

CFU Demand Activation (without Courtesy Call) or De-Activation
CFU Invocation with Alert
Call Transfer
Call Waiting
CW Demand Activation or De-Activation
CW Demand Cancellation with Call
CW Demand Cancellation (during call)
CW Invocation
CW Interaction after Handoff
Calling Number Identification Presentation
CNIP Invocation to an Idle Subscriber
CNIP Interaction with CW
CNIP Interaction with CW After Handoff
CNIP Interaction with CFU
CNIP Interaction with CFU after Handoff
Calling Number Identification Restriction
CNIR Temporary Activation or De-Activation with Call
CNIR Interaction with CFU
CNIR Interaction with CFNA or CFD on MS No Answer
CNIR Interaction with CFB or CFD on MS Busy
CNIR Interaction with CFB or CFD on Call Collision
Conference Calling
CC Invocation with Call Setup Request
CC Add Party (Without Feature Code Entry)
CC Invocation During a Call
CC Drop Last Party Invocation
Do Not Disturb
DND Activation or De-Activation
DND Invocation
DND Interaction with CFD or CFNA
DND Interaction with CFU
Flexible Alerting
FA Membership Activation or De-Activation
FA Invocation
FA Invocation with a Busy FA Group Member (Single-User Type)
FA Invocation with a Busy FA Group Member
FA Invocation with a No Answer FA Group Member with Member Redirection
FA Invocation with a No Answer FA Group Member with Group Redirection
FA Invocation on Revertive Call to FA Pilot DN
FA Invocation on Call from FA Group Member
Message Waiting Notification
MWN Alert Pip Tone Activation or De-Activation
Temporary De-Activation of MWN PIP Tone
MWN via Alert Pip Tones
MWN via an MS Indication or Message Count or Both
MWN After Handoff
MWN via Pip Tone on MS Call Origination

MWN via Pip Tone on MS Termination
Mobile Access Hunting
MAH Membership Activation or De-Activation
MAH Ordering Change Request
MAH Invocation
MAH Invocation with a Busy MAH Group Member
MAH Invocation with a Busy MAH Group Member
MAH Invocation with a No Answer MAH Group Member
MAH Invocation on Revertive Call to MAH Pilot DN
MAH Invocation on Call from MAH Group Member
Password Call Acceptance
PCA Demand Activation or De-Activation
PCA Variable Diversion Registration or De-Registration
PCA Password Registration or De-Registration
PCA Invocation with Call Accepted
PCA Invocation with Call Accepted: Alternate Procedure
PCA Invocation with Call Refused to Tone or Announcement.
PCA Invocation with Call Refused to Voice Mail
PCA Invocation with Call Refused to Forward-To Number
Preferred Language
PL Registration (variable option)
Priority Access and Channel Assignment
Successful PACA Activation
Aborted PACA Activation
Unsuccessful PACA Activation
Remote Feature Control
Normal RFC Transaction Sequence
Selective Call Acceptance
SCA Demand Activation or De-Activation
SCA Variable Diversion Registration
SCA Variable Number Registration or De-Registration
SCA Invocation with Call Accepted
SCA Invocation with Call Refused to Tone or Announcement.
SCA Invocation with Call Refused to Voice Mail
SCA Invocation with Call Refused to Forward-To Number
Subscriber PIN Access
SPINA Variable Registration
SPINA Demand Activation or De-Activation
Call Origination with SPINA Active
Feature Request with SPINA Active
Subscriber PIN Intercept
SPINI Variable Registration
Call Origination with SPINI Active and Correct PIN Entered
Call Origination with SPINI Active and PIN Not Required
Call Origination with SPINI Active and Incorrect PIN Entered
Successful Call Origination with Local SPINI Operation
Unsuccessful Call Origination with Local SPINI Operation
Three-Way Calling
Voice Message Retrieval

	Normal Operation: Invocation via Feature Code
	Normal Operation: Invocation via Revertive Call
	Voice Privacy
	VP Profile Change
	SHORT MESSAGE SERVICE SCENARIOS
	Successful Short Message to a Known MS-Based SME
	Short Message to a Denied MS-Based SME without Current Address
	Short Message Time-Out to an MS-Based SME without Notification
	Short Message Time-Out to an MS-Based SME with Notification
	Short Message with Originating SMS Supplementary Services to an MS-Based SME
	Short Message from an MS-Based SME to a Fixed SME
	Short Message from an MS-Based SME with Originating SMS Supplementary
	Services to a Fixed SME
	Successful Short Message Between Two MS-Based SMEs
	Short Message Between Two MSs with Originating SMS Supplementary Services
	Postponed SMSRequest without Current Address
	Postponed SMDPP
	Roaming Between SMS-Capable Systems with Pending Postponed Delivery
	Roaming to an SMS-Incapable System with Pending Postponed Delivery
	Roaming to an SMS-Capable System with Pending Postponed Delivery
	Local Roaming Between SMS-Capable Systems with Pending Postponed
	Delivery
	Local Roaming to an SMS-Incapable System with Pending Postponed Delivery
	Local Roaming to an SMS-Capable System with Pending Postponed Delivery
	MSC Deregistration with Pending Postponed Delivery
	VLR Deregistration with Pending Postponed Delivery
	Postponed MSC SMSNotification with Multiple SMDPPs
	Short Message Between MSC-Based SME and MS-Based SME
	Short Message Between HLR-Based SME and MS-Based SME
	Short Message Between MS and MC for MC-Based Feature Control
	Short Message to MS-Based SME After Handoff
	Short Message from MS-Based SME After Handoff

IS-41 RELATED SERVICES

STANDARD	***SERVICES***
TIA/EIA/IS-725 July 1, 1999	**Over-The-Air**
	Over-The-Air Service Provisioning
TIA/EIA/IS-771 Published July 1, 1999 TIA/EIA/IS-41-D	**Wireless Intelligent Network Phase I**
	Calling Name Presentation
	Incoming Call Screening
	Voice Controlled services
TIA/EIA/IS-826 Published September 1, 2000 TIA/EIA/IS-41-D	**Wireless Intelligent Network Phase II**
	Prepaid Charging
	Freephone
	Premium Rate
	Wireless Intelligent Network Phase III

TIA/EIA/IS-836 PN *TIA/EIA/IS-41-D*	*Advice of Charging*
	Location Based Charging, Fleet and Asset Management
	Location Based Information Service
	Enhanced Calling Routing
TIA/EIA/IS-756 *TIA/EIA/IS-841* *TIA/EIA/IS-41-D*	**Local Number Portability**
	Enhancements for Wireless Number Portability Phase II
	Based network enhancements for Mobile Directory Number (MDN) based messages centers for Wireless Number Potability Phase III