

ISO/IEC 15429:2003-04 (E)

Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Inter-exchange signalling protocol — Wireless Terminal Location Registration supplementary service and Wireless Terminal Information exchange additional network feature

Contents

Foreword	vi
Introduction	vii
1 Scope	1
2 Conformance	1
3 Normative references	1
4 Terms and definitions	2
4.1 External definitions	2
4.2 Other definitions	3
4.2.1 WTM user	3
5 Symbols and abbreviated terms	3
6 Signalling protocol for the support of SS-WTLR	3
6.1 SS-WTLR description	3
6.2 SS-WTLR operational requirements	3
6.2.1 Requirements on the Visitor PINX	3
6.2.2 Requirements on the Home PINX	3
6.2.3 Requirements on a Transit PINX	3
6.2.4 Requirements on the Directory PINX	4
6.3 SS-WTLR coding requirements	4
6.3.1 Operations	4
6.3.2 Information elements	7
6.3.3 Messages	7
6.4 SS-WTLR state definitions	7
6.4.1 States at the Visitor PINX	7
6.4.2 States at the Home PINX	7
6.4.3 States at the Directory PINX	7
6.5 SS-WTLR Signalling procedures for location registration	7
6.5.1 Actions at the Visitor PINX for location registration	7
6.5.2 Additional actions at the Visitor PINX for enquiry to the previous Visitor PINX	8
6.5.3 Additional actions at the Visitor PINX for enquiry to a Directory PINX	9
6.5.4 Actions at the Home PINX for location registration	9
6.5.5 Actions at a Transit PINX for location registration	10
6.5.6 Actions at the previous Visitor PINX for location registration	10
6.5.7 Additional actions at the previous Visitor PINX for enquiry from the Visitor PINX	10
6.5.8 Actions at the Directory PINX for enquiry from the Visitor PINX	10
6.6 SS-WTLR signalling procedures for location deregistration	11
6.6.1 Actions at the Visitor PINX for location deregistration	11
6.6.2 Actions at the Home PINX for location deregistration	11
6.6.3 Actions at a Transit PINX for location deregistration	12
6.7 SS-WTLR Impact of interworking with public ISDNs	12
6.8 SS-WTLR Impact of interworking with non-ISDNs	12
6.9 Protocol interactions between SS-WTLR and other supplementary services and ANFs	12

6.9.1	Interaction with Calling Name Identification Presentation (SS-CNIP)	12
6.9.2	Interaction with Connected Name Identification Presentation (SS-CONP)	12
6.9.3	Interaction with Completion of Calls to Busy Subscriber (SS-CCBS)	12
6.9.4	Interaction with Completion of Calls on No Reply (SS-CCNR)	12
6.9.5	Interaction with Call Transfer (SS-CT)	12
6.9.6	Interaction with Call Forwarding Unconditional (SS-CFU)	12
6.9.7	Interaction with Call Forwarding Busy (SS-CFB)	12
6.9.8	Interaction with Call Forwarding No Reply (SS-CFNR)	12
6.9.9	Interaction with Call Deflection (SS-CD)	12
6.9.10	Interaction with Path Replacement (ANF-PR)	12
6.9.11	Interaction with Call Offer (SS-CO)	12
6.9.12	Interaction with Call Intrusion (SS-CI)	12
6.9.13	Interaction with Do Not Disturb (SS-DND)	12
6.9.14	Interaction with Do Not Disturb Override (SS-DNDO)	13
6.9.15	Interaction with Advice Of Charge (SS-AOC)	13
6.9.16	Interaction with Recall (SS-RE)	13
6.9.17	Interaction with Call Interception (ANF-CINT)	13
6.9.18	Interaction with Transit Counter (ANF-TC)	13
6.9.19	Interaction with Route Restriction Class (ANF-RRC)	13
6.9.20	Interaction with Message Waiting Indication (SS-MWI)	13
6.9.21	Interaction with Wireless Terminal information exchange (ANF-WTINFO)	13
6.9.22	Interaction with Wireless Terminal Incoming Call (SS-WTMI)	13
6.9.23	Interaction with Wireless Terminal Outgoing Call (SS-WTMO)	13
6.9.24	Interaction with Wireless Terminal Authentication of Terminal (SS-WTAT)	13
6.9.25	Interaction with Wireless Terminal Authentication of Network (SS-WTAN)	13
6.10	SS-WTLR parameter values (timers)	13
6.10.1	Timer T1	13
6.10.2	Timer T2	13
6.10.3	Timer T3	13
6.10.4	Timer T4	14
7	Signalling protocol for the support of ANF-WTINFO	14
7.1	ANF-WTINFO description	14
7.2	ANF-WTINFO operational requirements	14
7.2.1	Requirements on the Visitor PINX	14
7.2.2	Requirements on the Home PINX	14
7.2.3	Requirements on a Transit PINX	14
7.3	ANF-WTINFO coding requirements	14
7.3.1	Operations	14
7.3.2	Information elements	14
7.3.3	Messages	14
7.4	ANF-WTINFO state definitions	14
7.4.1	States at the Visitor PINX	14
7.4.2	States at the Home PINX	15
7.5	ANF-WTINFO signalling procedures for transfer of restriction information	15
7.5.1	Actions at the Visitor PINX for transfer of restriction information	15
7.5.2	Actions at the Home PINX for transfer of restriction information	15
7.6	ANF-WTINFO signalling procedures for check of location data	15
7.6.1	Actions at the Visitor PINX for check of location data	16
7.6.2	Actions at the Home PINX for check of location data	16
7.6.3	Actions at a Transit PINX for support of ANF-WTINFO	17

7.7	ANF-WTINFO Impact of interworking with public ISDNs	17
7.8	ANF-WTINFO Impact of interworking with non-ISDNs	17
7.9	Protocol interactions between ANF-WTINFO and other supplementary services and ANFs	17
7.9.1	Interaction with Calling Name Identification Presentation (SS-CNIP)	17
7.9.2	Interaction with Connected Name Identification Presentation (SS-CONP)	17
7.9.3	Interaction with Completion of Calls to Busy Subscriber (SS-CCBS)	17
7.9.4	Interaction with Completion of Calls on No Reply (SS-CCNR)	17
7.9.5	Interaction with Call Transfer (SS-CT)	17
7.9.6	Interaction with Call Forwarding Unconditional (SS-CFU)	17
7.9.7	Interaction with Call Forwarding Busy (SS-CFB)	17
7.9.8	Interaction with Call Forwarding No Reply (SS-CFNR)	17
7.9.9	Interaction with Call Deflection (SS-CD)	17
7.9.10	Interaction with Path Replacement (ANF-PR)	17
7.9.11	Interaction with Call Offer (SS-CO)	17
7.9.12	Interaction with Call Intrusion (SS-CI)	18
7.9.13	Interaction with Do Not Disturb (SS-DND)	18
7.9.14	Interaction with Do Not Disturb Override (SS-DNDO)	18
7.9.15	Interaction with Advice Of Charge (SS-AOC)	18
7.9.16	Interaction with Recall (SS-RE)	18
7.9.17	Interaction with Call Interception (ANF-CINT)	18
7.9.18	Interaction with Transit Counter (ANF-TC)	18
7.9.19	Interaction with Route Restriction Class (ANF-RRC)	18
7.9.20	Interaction with Message Waiting Indication (SS-MWI)	18
7.9.21	Interaction with Wireless Terminal Location Registration (SS-WTLR)	18
7.9.22	Interaction with Wireless Terminal Incoming Call (SS-WTMI)	18
7.9.23	Interaction with Wireless Terminal Outgoing Call (SS-WTMO)	18
7.9.24	Interaction with Wireless Terminal Authentication of Terminal (SS-WTAT)	18
7.9.25	Interaction with Wireless Terminal Authentication of Network (SS-WTAN)	18
7.10	ANF-WTINFO parameter values (timers)	18
7.10.1	Timer T5	18
7.10.2	Timer T6	19
Annexes		
A	Protocol Implementation Conformance Statement (PICS) proforma	20
B	Imported ASN.1 definitions	28
C	Examples of message sequences	29
D	Specification and Description Language (SDL) representation of procedures	35
E	ASN.1 definitions according to ITU-T Recs. X.208 / X.209	43