

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

Working Group 2

20th Meeting

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**Status of Guidance Material for the
Internet Communications Service SARPs (Edition 3)**

Working Paper

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Summary

This paper reviews the status of the Guidance Material for Sub-Volume 5 of Doc 9705 and provides a high-level assessment of the impact on the Guidance Material caused by ICS-related PDRs and enhancements made to the 3rd Edition of Sub-Volume 5.

1 Introduction

This paper presents the status of the Guidance Material related to Edition 3 of the ATN Internet Communications Service (ICS) SARPs.

Furthermore, it analyses the complete set of PDRs raised against the ATN ICS SARPs in order to identify required modifications and amendments of the current Guidance Material as a result of these PDRs. Moreover, it compiles relevant references and sources which may be used as input material for new Guidance Material in response to the ICS enhancements made in Edition 3 of the ATN ICS SARPs.

2 Status

The focus of the activities performed by WG 2 since the last ATNP meeting was on the enhancement of the current Sub-Volume 5 with respect to issues such as security, data compression procedures, and mobile SNDCF. Associated SARPs provisions have been developed and included in Draft Edition 3 of Doc 9705. Although considerable text material explaining the justification for, the background and concept of the proposed enhancements has been developed no new formal Guidance Material for Sub-Volume 5 is available at this point in time.

The update and amendment of the ATN Guidance Material, i.e. ICAO Doc 9739, with respect to the ICS enhancements included in Draft Edition 3 of Doc 9705 and the PDRs which have been raised against Sub-Volume 5 is scheduled as WG 2 activity post ATNP/3.

3 Potential Input Material for ICS Guidance Material

Table 1 provides a high-level assessment of the submitted ICS PDRs with respect to their potential impact on the current ATN Guidance Material, i.e. ICAO Doc 9739.

PDR Number	PDR Title	Impact on Guidance Material
97060028	Transport Timers Configuration	None
97060029	Various Editorial Defects (1)	None
97060030	IDRP Timers	None
97100001	Incomplete specification for use of V.42bis by Mobile SNDCF	New text to be included
97100002	SNDCF Call Request/Confirm User Data Length Indicator	None
97100003	Various Editorial Defects (2)	None
97100048	LREF Directory Management	None
98040003	X.25 Address Extension Facility	New text to be included
98050001	IDRP Update Receive Process	None
98060003	Predicates in ISO/IEC 8473 APRL	None
98060004	Support of IDRP by Airborne Router implementing optional non-use of IDRP	None
98060005	Air/Ground Route Initiation APRL	None
98060006	Correlation of ATSC Class with A/G Subnetwork Type in Airborne Router	New text to be included
98060007	Symmetry of Mobile SNDCF APRL and Route Initiation APRL	None

98060008	IDRP Traffic Typing	None
98080001	Segmentation of Error Report PDU	None
98090002	Incorrect term "24-bit ICAO Aircraft Identifier"	Check consistency in Doc 9739
98090003	Downgrading of ATSC Class	New text to be included
98090004	Backbone Hides Optimal Route to Off-Back-bone BISs	New text to be included
98090010	Value of SNCR in X.25 Call Request Packets	None
98100002	Deflate Frame Checksum	None
98100003	End-of-Block Code in Deflate Data Block	New text to be included
98100004	Deletion of Trailing Zero-Octet	New text to be included
98100005	Deflate Backwards Window Size	None
98100007	Handoff Event	New text to be included
99010001	Over-specification of SNSDU Requirement	None
99010005	Loss of IDRP Connection	New text to be included
99010008	References to ISO/IEC 8802-2 Broadcast Subnetworks	None
99030001	Parameter Setting in CLNP Echo Response PDU	New text to be included
99030002	Emergency Use of a Mobile Subnetwork	Update existing text
99050001	Echo NPDUs Supported By ISs	New text to be included
99070004	Remove Jitter on IDRP Timers for Airborne BIS	None
99070005	ATSC Class of Locally Originated Routes	New text to be included
99070006	ATN NSAP Address Compression Algorithm (ACA)	Update existing text
99090001	Over-specification of ARS Address Field Assignment	Update existing text
99090002	Extension Capability of Mobile SNDCF Header	Update existing text
99100003	LREF Compression and CLNP Echo NPDUs	None
99100004	ISO/IEC 8208 Non-Standard Default Packet Size Facility	Update existing text
99100005	Reservation of Unassigned/Undefined Values	None

Table 1: ICS PDRs and their impact on the ATM Guidance Material

Table 2 provides a high-level assessment of the ICS enhancements made in Draft Edition 3 of Sub-Volume 5 with respect to their impact on the current ATN Guidance Material, i.e. ICAO Doc 9739, and compiles relevant sources which may be used in preparing Guidance Material for the individual enhancements.

Label	Enhancement for 3 rd Edition of ICS SARPs	Impact on Guidance Material	Potential Input Material
ICS3-01	Requirements for mobile subnetworks to issue Join and Leave Events within given latency interval	New text to be included	WP 484, WP 485, Flimsy 17-6, IDG1/Flimsy1, IDG2/Flimsy1, IDG1/WP4, WP 535, WP 540, IDG3/WP12

ICS3-02	Requirement for IS-SME to respect quarantine time before processing next Join event from mobile subnetworks having issued a Leave event	New text to be included	WP 474, WP 485
ICS3-03	Use of adaptive retransmission timers in the Connection Oriented Transport Protocol (TP4)	New text to be included	WP 512, IDG1/WP5, IDG2/WP8
ICS3-04	Route selection based on required support for additional mobile subnetwork types and additional criteria (e.g. service provider selection)	No impact on Doc 9739	-----
ICS3-05	Requirements for ICS-related systems management consistent with the ATN systems management concept (i.e. draft Sub-Volume 6)	No impact on Doc 9739	-----
ICS3-06	Requirements for enhanced IDRPs security consistent with the ATN security architecture (i.e. draft Sub-Volume 8).	New text to be included	WP 488, WP 492, WP 493, WP 518, WP 522, Draft SV 8, IDG1/WP9, IDG2/WP11, IDG2/WP12, WP 534
ICS3-07	Deletion of the ATN NSAP address compression algorithm (ACA)	Update existing text	
ICS3-08	Suppression of re-advertisement of routes in the case of changing mobile subnetwork connectivity	New text to be included	
ICS3-09	Conveyance of data link capability parameter in air/ground ISH PDU exchanges to signal protocol capabilities which are beyond 1 st edition of Doc 9705 between air/ground and airborne routers in a backwards compatible manner	New text to be included	WP 471, WP 520
ICS3-10	Improved handling of the loss of TPDU's experienced during changes in subnetwork connectivity	No impact on Doc 9739	-----
ICS3-11	Revision of TP4 Acknowledgement Timer value	New text to be included	IDG2/WP9
ICS3-12	Potential amendment of existing mobile SNDCF and/or development of additional mobile SNDCEs to include new subnetwork types	New text to be included	IDG2/WP13, IDG3/WP10, IDG3/WP14
ICS3-13	Potential enhancements to the DEFLATE algorithm to allow for the dynamic negotiation for the use of pre-stored dictionaries	New text to be included	IDG3/WP11
ICS3-14	Potential additional mobile SNDCF option to allow maintenance of DEFLATE history window when changing ground stations or air/ground routers respectively	New text to be included	IDG1/WP6, IDG3/WP11

Table 2: ICS Enhancements and their impact on the ATM Guidance Material

4 Recommendation

The WG2 is invited to note the above status on the ICS-related Guidance Material and to report this status to the Working Group of the Whole (WGW).