

**Report of the 21<sup>st</sup> Meeting of ATNP WG2**  
**11-14 July 2000**  
**Limerick, Ireland**  
*\*\*\*13 July 2000 DRAFT\*\*\**

**0. Meeting Organizational Issues**

Mr. Jones welcomed the working group members to the 21<sup>st</sup> meeting of WG2.

Mr. Grace, on behalf of Mr. O'Sullivan – the ATNP member from Ireland, welcomed the working group to 21st meeting of WG2 hosted by the Irish Aviation Authority in Limerick, Ireland.

**1. Approval of the Agenda (WP571)**

Mr. Jones introduced the proposed agenda, WP571. The agenda was approved with no changes.

**2. Approval of the report of 20th Meeting of WG2 (Tokyo – WP572)**

Mr. Jones introduced the report of the 20th meeting of WG2. The working group reviewed the report and approved it without any changes. It was noted there was one outstanding action item (i.e., Action 19/7) that was still open at the conclusion of the Tokyo meeting that needed to be addressed at the Limerick meeting. The group agreed to address the open issue during the Limerick WG2 meeting.

**3. Review Status of Work Programme Items to prepare for WG/4**

Mr. Jones presented WP580 proposing the WG2 inputs needed for the WG/4 meeting. The working group generally concurred with the proposed inputs with the modification as noted below. After some discussion the working group concluded that the draft Sub-Volume V validation report, available at the conclusion of the Limerick WG2 meeting, would only be distributed to the WG2 membership. The final version would be an updated version that would be output from the Berlin WG2 meeting for input into the subsequent WG/4 meeting. Mr. Cardwell raised an issue on the scope of the proposed changes to Sub-Volume V that are to be reported to WG/4 in the “change paper”. The issue was whether all changes from the 2nd edition vs. only those changes since the Tokyo/ATNP-3 version of the 3rd edition would be reported. The initial consensus of the group was that based on the discussions at ATNP/3 the changes paper to WG/4 should only address to the 3rd edition the changes since Tokyo output to ATNP/3. However, Mr. Cardwell phoned Mr. Graf, the Sub-Volume V editor and SME, who indicated that discussions with the CCB chairman and the panel secretary subsequent to ATNP/3 had concluded that the changes paper should address all changes against the second edition of Doc 9705.

**4. Report of the ICS Drafting Group (IDG) and other ICAO bodies**

**4.1 Report of IDG progress on ICS validation report, Sub-Volume V corrections and guidance material development**

Mr. Cardwell presented WP573, the report of the 4th meeting of the IDG held in April 2000. He reported on discussions on 3 specific issues addressed by the IDG and reported that the discussions on these three issues dominated the meeting time leaving less time for the other IDG topics that anticipated. The three issues that were addressed were:

- a) Frame Mode SNDCF Interface to VDL Mode 3
- b) Use of extended TP4 checksum (PDR M0040002)
- c) Discrepancy between SARPs and GM regarding mandatory encapsulation of IDRP data.

Mr. Cardwell reported on the discussions with the VDL Mode 3 experts from the AMCP on the frame mode SNDCF. He reported that a general framework for this new mobile SNDCF was agreed by the IDG and used as the basis of an action to draft the proposed additions to Sub-Volume V (draft presented for review by WG2 as WP579 under agenda item 7.2).

Mr. Cardwell reported on the discussions related to the use of the extended TP4 checksum. Mr. Whyman noted that subsequent to the IDG further analysis had indicated that the checksum should be 32-bits in length and the option for an extended 16-bit checksum was not included in the draft of Sub-Volume V provided for review at the WG2 meeting. Mr. Cardwell summarized the discussions on the other outstanding PDRs, including those against the 2nd edition as well as the draft 3rd edition of Sub-Volume V. He noted that most the PDRs have already been addressed in the latest draft Sub-Volume V 3rd edition draft. However, P3DR M0020015, P3DR M0020018 and P3DR M0020023 needed to be discussed by WG2 and he recommended they be addressed at the Limerick WG2 meeting. Mr. McParland noted there is a WG1/SG2 action still open associated with the SV-5 P3DR M0020022 on the compressed certificate length. It was noted that the action for Mr. Graf and Mr. Whyman related to “a proposal for the total suppression of the re-advertisement of IDRP routes over the air-ground links” was still open. Mr. Cardwell noted there is still some open actions for new guidance material associated with certain of the Sub-Volume V enhancements. He reported that the IDG did not have time at their meeting to address the validation activities.

#### **4.2 Review results of coordination with AMCP experts on Frame Mode mobile SNDCF**

Mr. Whyman informed the working group that e-mail coordination had taken place with one of the VDL Mode 3 experts (i.e., Mr. Signore) on the frame mode SNDCF and a few issues remain to be coordinated/resolved. Mr. Jones requested by Mr. Whyman attempt to contact Mr. Signore to attempt to resolve the issues raised by an email providing comments on the current draft of the frame mode SNDCF provisions. Mr. Jones noted that in any case, even if the agreement could be immediately reached on the frame mode SNDCF technical provisions there would not be time before the WG/4 meeting to conduct a formal technical validation, expect by inspection/analysis, nor formal coordination with AMCP, at the working group level. Given this situation it appeared unlikely that WG2 would be able to put forward the Sub-Volume V enhancements for the frame mode SNDCF at WG/4. Mr. Whyman observed that perhaps the frame mode SNDCF validation could be completed by the end of 2000. Mr. Jones observed that missing the 3rd edition publication cycle could result in significant delay in the publication of the frame mode provisions and he agreed to coordinate with the panel secretary on the subject.

#### **5. Report from the ICS SME including a review of any defect reports and change proposals**

Mr. Cardwell presented WP586, a status report provided by the Sub-Volume V SME (i.e., Mr. Graf ). He reported that two PDRs had been processed by the CCB since the WG/3 (Tokyo) against the 2nd edition of Sub-Volume V. He called the attention of the group to one of the PDRs and the proposed changes to Sub-Volume V (i.e., the extended checksum PDR). Mr. Cardwell also reported on the PDRs that had been submitted against the draft 3rd edition of Sub-Volume V. Another issue was raised by P3DR M0040002 relates to the use of transport extended checksum vs. CLNP extended checksum. The working group felt that the CLNP extended checksum would not address the certification issue attempting to be addressed by

the TP extended checksum. Therefore the proposed changes to Sub-Volume V for transport extended checksum was still supported by the working group.

## **6. Review/Update Sub-Volume V validation report**

Mr. Tamalet presented WP578, the draft Sub-Volume V validation report. This report included the overall introduction of the Sub-Volume V validation as well as the results of the validation efforts being conducted in France. The coverage reported included the Sub-Volume V enhancement except for the cryptographic mechanisms used to support the IDRP authentication.

Mr. McParland presented WP584, the draft FAA Sub-Volume V validation report. He reported on the FAA sponsored activities to validate the IDRP authentication technical provisions. This was noted as being complementary to the validation activities ongoing in France that were addressing the other aspects of the Sub-Volume V enhancements. The intent was for the inputs on the FAA validation activities to be integrated with the contents of WP578.

WP578 was updated, as WP578a, during the meeting to incorporate the material from WP584, as well as other minor changes to produce a consolidated Sub-Volume V draft validation report. This report is expected have further updates and will be provided for review by WG2 at its next meeting (i.e., Berlin, August 2000). Approval of the final validation report for the overall 3rd edition of Doc 9705 is expected at WG2/4, also in Berlin in August 2000.

Mr. Cardwell drafted flimsy 1 documenting the PDRs against Sub-Volume V that have been submitted/processed that while they fall under the CCB process they would also impact the 3rd edition being developed by WG2. The flimsy addressed the status/need for validation for each of the PRDs.

**ACTION 21/1:** Mr. Jones to provide a copy of Flimsy 1 to the CCB chair for coordination prior to the Berlin WG2 meeting.

## **7. Review/Draft Sub-Volume V (3<sup>rd</sup> edition) change paper**

### **7.1 Review/Draft Sub-Volume V (3<sup>rd</sup> edition) change paper to correct defects approved by the CCB an/or discovered by the ICS validation**

Mr. Cardwell presented WP575, prepared by Mr. Graf, summarizing the changes to the draft 3rd edition of Sub-Volume V since the Tokyo WG2 meeting. WP575 included the red-lined version of the 3rd edition of Sub-Volume V with all changes from the baseline 2nd edition of the document. The working group approached the review of to Sub-Volume V by reviewing only the PDRs, working papers, etc. that have been approved since the WG2 meeting in Tokyo in December 1999 that resulted in enhancements to the draft Sub-Volume V.

Mr. Tamalet presented WP582 describing an issue on the DEFLATE compressed PDU format. This paper identified a problem with at least one implementation (Pro-ATN) and possibly all of the Deflate compression PDU format that does not fully conform to the current Sub-Volume V requirements. The conclusion of the paper was standard deflate implementations do not conform Sub-Volume V requirements. The potential problem occurs when the compressed PDU does not end at byte boundary and the 'partial flush' mechanism to output the final block of the compressed PDU. The result can be the remaining bits of the last end of block symbol being appended to the next compressed PDU. The only method identified to bring the Pro-ATN router in Sub-Volume V compliance was to implement a new flush mechanism. This is an issue for the current baseline Sub-Volume V provisions and will therefore need to be addressed by the

PDR/CCB process. The working group assigned an action to Mr. Tamalet to prepare and submit a PDR to the CCB on the deflate issue. It was expected that WG2 would be asked by the CCB to provide their inputs, at the Berlin WG2 meeting, on the preferred Sub-Volume and/or GM changes to address the issue.

**ACTION 21/2:** Mr. Tamalet to submit a PDR to the CCB to raise the issue with using a partial flush of the final block of a DEFLATE compressed PDU that does not end on a byte boundary.

Mr. Tamalet drafted a PDR on Deflate Compressed PDU Format which was review and endorsed by the working group for submission to the CCB.

Mr. Cardwell described the 10 PDRs that have been submitted against the draft 3rd edition of Sub-Volume V which the IDG had reviewed at its fourth meeting and for which the proposed changes have now been incorporated into the draft 3rd edition Sub-Volume V (submitted to WG2 for review).

Mr. Tamalet presented P3DR M0020015 describing a possible Deflate synchronization error and proposing a procedure for handling of the error condition. The group agreed to having a simple reset performed if the error occurs. Mr. Tamalet drafted flimsy 4 to describe the required change to Sub-Volume V. The working group accepted the proposal with minor modification and it was agreed to provide the updated flimsy to Mr. Graf for input to the draft 3rd. edition of Sub-Volume V.

The group considered PDR M0020018 in conjunction with Flimsy 2. The group accepted the proposed Sub-Volume V changes proposed in Flimsy 2 to address handling of peer routers only supporting Type 1 IDR authentication by routers that support Type 2 authentication. This flimsy is to be provided to Mr. Graf, the Sub-Volume V editor, for incorporation into the draft 3rd edition document.

Mr. McParland addressed the issue raised by PDR M0020022. He indicated that two changes to Sub-Volume V are required to address the issue raised by this PRD and one of these has already been incorporated in the current draft while the second required change (i.e., specifying the size of a compressed certificate) will require further investigation.

**ACTION 21/3:** Mr. McParland to submit a proposed value for the compressed certificate as an input to the Berlin WG2 meeting. The information will be provided to the Sub-Volume V editor as soon as available.

Mr. Tamalet presented PDR M0020023 on the alignment of reset request and reset. The working group concurred with the proposed change to Sub-Volume V and agreed to provide it to Mr. Graf for inclusion in the draft 3rd. edition of Sub-Volume V.

Mr. Tamalet presented WP587 proposing changes to the draft 3rd edition of Sub-Volume V for the total suppression of the re-advertisement of IDR routes over the A/G links. The proposed change to SV-5 were accepted by the working group and are to be provided to Mr. Graf, the Sub-Volume V editor, for incorporation into the draft 3rd edition document.

Mr. Whyman presented PDR M0040002 on the Potential Misdelivery of CLNP Packets. This PDR proposed changes to Sub-Volume V to introduce a transport extended checksum enhancement to provide a mechanism to detect and recover from the misdelivery of CLNP packets. This issue was raised as a safety concern and the operational experts determined the need to limit misdelivery probability to on the order of  $10^{-7}$ . The proposed change would use an extended transport checksum that could detect and recover from an otherwise undetected errors in (i.e., corruption of) source and destination NSAP addresses. Mr. Moulton raised an issue with the way the PDR proposed requirement was stated in that it would only be applicable to

air-ground applications and should be an option in Sub-Volume V for the air-ground case, where MOPS or certification standards could on a local base require use of this option. Mr. Moulton also expressed a concern of including additional provisions in the transport user interface specifications to allow the extended checksum feature to be invoked. The working group concluded a number of additional changes will be required in Sub-Volume IV to include the new requirements within the transport service user interface which had not been addressed by the changes proposed in the PDR. Mr. Whyman and Mr. Moulton agreed to draft a flimsy to address the additional needed changes in Sub-Volumes IV and V. Mr. Tamalet also had a number of specific comments on the changes to Sub-Volume V proposed by the PDR. Mr. Whyman noted that the Sub-Volume V editor will need to introduce the necessary changes into the 2nd edition as well as the 3rd edition of Sub-Volume V.

Mr. Whyman drafted flimsy 5 proposing editorial instructions for the resolution of PDR M0040002. This flimsy proposed changes to a number of sections some where were editorial against the current text as well as to introduce the technical changes for the extended transport checksum. The working group in the review of the flimsy noted the need for a few minor corrections to the flimsy. Mr. Whyman updated the flimsy and this was to be provided to Mr. Graf, the Sub-Volume V SME, for coordination with the CCB, as it impacts the 2nd edition of Sub-Volume V, as well as the 3rd edition. The flimsy also proposed changes to Sub-Volume IV which require coordination with the CCB and the Sub-Volume IV SME.

**ACTION 21/4:** Mr. Bigelow to provide a copy of the updated flimsy 5 to the Sub-Volume IV SME.

Mr. Jones presented flimsy 3 proposing to add a note to table 5.2-2 describing the context for the maximum one-way mobile subnetwork transit delay requirement. As result of the working group review one change was made to the note proposed in flimsy 3 and the proposed note was provide to be provided to Mr. Graf, the Sub-Volume V editor, for incorporation into the draft 3rd edition document.

## **7.2 Review/Draft Sub-Volume V (3<sup>rd</sup> edition) change paper to add Frame Mode mobile SND CF**

Mr. Whyman presented WP579 providing draft SARPs for the frame mode mobile SND CF. This version had been drafted based on direction received out of the IDG/4 meeting where coordination had been conducted with a number of experts that support the AMCP in the area of VDL Mode 3. However the draft Frame Mode SARPs text had not been fully coordinated, in advance of the WG2 meeting, with the AMCP nor the individual VDL Mode 3 experts. Mr. Whyman described the approach for the frame mode mobile SND CF is intended to be generic and specific to just the VDL Mode 3 subnetwork. It was noted there were still a number of outstanding issues, including several that will require coordination and agreement with the AMCP. Given the state of the draft technical provision and the need for coordination with the AMCP the working group concluded the provisions were not mature enough for inclusion with the draft Sub-Volume V that was being prepared for review and approval at the Berlin WG2 and WG2 meeting. Mr. Tamalet had a number of specific comments and questions on the proposed frame mode mobile SND CF. Mr. Whyman agreed to address the comments and issues identified by Mr. Tamalet in a revised draft of the document he will prepare after the conclusion of the working group meeting.

The following actions came out of the discussions:

**ACTION 21/5:** Mr. Whyman to revise the frame mode SND CF draft provisions as per the discussions at the WG2-21 meeting, to informally coordinate the revised draft with experts from the AMCP, and to provide an updated draft into the Berlin WG2 meeting.

**ACTION 21/6:** Mr. Jones accepted an action to seek the advice of the ATNP secretary on the most appropriate approach to progress the frame mode SND CF into Doc 9705 given the maturity of the technical provisions and the need for coordination with the AMCP.

Mr. Tamalet raised an issue with para. 5.2.5.2 of the draft 3rd edition of Sub-Volume V related the requirement for subnets to provide connection mode services in light of the planned support for VDL Mode 3 frame mode service. Mr. Whyman pointed out that the VDL Mode 3 Frame Mode does provide a connection mode service and thus is not contrary to the requirement of the draft 3rd edition of Sub-Volume V. However in reviewing the draft Sub-Volume V the group noted that the current Para. 5.2.5.2.1.1 requirement appears to be misplaced as it needs to be moved up to a higher level paragraph.

Mr. Cardwell prepared flimsy 6 to provide guidance to the 3rd edition Sub-Volume V and guidance material editor for providing updates to these documents for the changes agreed at the WG2 meeting.

**ACTION 21/7:** Mr. Cardwell to collect all of the agreed to enhancements and corrections to the draft 3rd edition of Sub-Volume V and provide these to Mr. Graf, the document editor, with flimsy 6 as the summary of the accepted changes.

#### **8. Review/Draft ICS guidance material for the Doc 9705 Sub-Volume V enhancements introduced with the 3<sup>rd</sup> edition**

Mr. Cardwell presented WP576, prepared by Mr. Graf, providing the change log for the ICS guidance material (i.e., Part IV of the CAMAL) to incorporate changes to account for some, but not all of the enhancements to the draft 3rd edition of Sub-Volume V. The working paper indicated the SV5 enhancement not yet reflected the graft GM.

Mr. Whyman introduced WP579 proposing draft GM for the frame mode SND CF. He indicated the current draft GM is very high level and is oriented toward VDL Mode 3. He indicated that it would require a modest effort to update once the frame mode SND CF technical provisions are finalized.

Mr. Tamalet presented WP583 providing guidance on the enhancements to the SND CF. The working group agreed with the proposed guidance and agreed to request that Mr. Graf, the ICS GM editor, incorporate the material into the draft Part IV of the Camal for review at the WG2 meeting in Berlin.

Mr. McParland presented WP585 providing material that could be used as the basis for the development of guidance material for IDRP security mechanisms. There was some discussion on what form of guidance on IDRP security would be most useful. Mr. Whyman noted that the guidance material need to present the high level overview followed by the scenarios. He also noted the guidance needs to explain the processes defined by the technical provisions of Sub-Volume V.

Mr. Jones prepared flimsy 7 offering a draft of a proposed working paper from WG2 to WG/4 providing the status of the ICS guidance material and providing recommendations for the new WG-B to progress the guidance material after WG/4.

#### **9. Any other Business**

No working papers were presented under this agenda item.

#### **10. Plans for the 22<sup>nd</sup> meeting of WG2 in Berlin (August 2000)**

The 22nd and final meeting of WG2 will be convened 21-23 August 2000 in Berlin, Germany.



## **WG2 21st MEETING ACTION ITEM LIST**

**ACTION 21/1:** Mr. Jones to provide a copy of Flimsy 1 to the CCB chair for coordination prior to the Berlin WG2 meeting.

**ACTION 21/2:** Mr. Tamalet to submit a PDR to the CCB to raise the issue with using a partial flush of the final block of a DEFLATE compressed PDU that does not end on a byte boundary.

**ACTION 21/3:** Mr. McParland to submit a proposed value for the compressed certificate as an input to the Berlin WG2 meeting. The information will be provided to the Sub-Volume V editor as soon as available.

**ACTION 21/4:** Mr. Bigelow to provide a copy of the updated flimsy 5 to the Sub-Volume IV SME.

**ACTION 21/5:** Mr. Whyman to revise the frame mode SND CF draft provisions as per the discussions at the WG2-21 meeting, to informally coordinate the revised draft with experts from the AMCP, and to provide an updated draft into the Berlin WG2 meeting.

**ACTION 21/6:** Mr. Jones accepted an action to seek the advice of the ATNP secretary on the most appropriate approach to progress the frame mode SND CF into Doc 9705 given the maturity of the technical provisions and the need for coordination with the AMCP.

**ACTION 21/7:** Mr. Cardwell to collect all of the agreed to enhancements and corrections to the draft 3rd edition of Sub-Volume V and provide these to Mr. Graf, the document editor, with flimsy 6 as the summary of the accepted changes.

**Agenda for the 21<sup>th</sup> Meeting of ATNP WG2**  
**11-14 July 2000**  
**Limerick, Ireland**

0. Meeting Organizational Issues
1. Approval of the Agenda (WP571)
2. Approval of the report of 20th Meeting of WG2 (Tokyo – WP572)
3. Review Status of Work Programme Items to prepare for WG/4
4. Report of the ICS Drafting Group (IDG) and other ICAO bodies
  - 4.1 Report of IDG progress on ICS validation report, Sub-Volume V corrections and guidance material development
  - 4.2 Review results of coordination with AMCP experts on Frame Mode mobile SNDCF
5. Report from the ICS SME including a review of any defect reports and change proposals
6. Review/Update Sub-Volume V validation report
7. Review/Draft\* Sub-Volume V (3<sup>rd</sup> edition) change paper
  - 7.1 to correct defects approved by the CCB an/or discovered by the ICS validation
  - 7.2 to add Frame Mode mobile SNDCF
8. Review/Draft ICS guidance material for the Doc 9705 Sub-Volume V enhancements introduced with the 3<sup>rd</sup> edition
9. Any other Business
10. Plans for the 22<sup>nd</sup> meeting of WG2 in Berlin (August 2000)

ATNP WG2 21<sup>th</sup> Meeting  
11-14 July  
Limerick, Ireland

**LIST OF WORKING PAPERS**

<b>WP No.</b>	<b>Agenda Item</b>	<b>Presenter</b>	<b>WP Title</b>
571	1	R. Jones	Agenda for the 20th Meeting of ATNP WG2
572	2	R. Jones	Report of the 19th Meeting of ATNP WG2
573	4	B. Cardwell	IDG/4 report
574	7.1	K-P Graf	Changes Made to Draft Edition 3 of Sub-Volume 5
575	7.1	K-P Graf	Draft Sub-Volume V Third Edition
576	8	K-P Graf	Update guidance material for Sub-Volume V
577	8	K-P Graf	Draft Comprehensive ATN Manual – Part IV Communication Services
578	6	S. Tamalet	Draft SV5 Validation Report
579	7.2	T. Whyman	Proposed SARPs for a frame mode SND CF
580	3	R. Jones	Preparations for the Working Group of the Whole meeting in Berlin
581	8	T. Whyman	Proposed guidance material for Frame Mode SND CF
582 (IP)	7	S. Tamalet	Issue on the Deflate compressed PDU format
583	8	S. Tamalet	Proposed draft GM on the 3 <sup>rd</sup> Edition enhancements to the mobile SND CF
584	6	T. McParland	FAA inputs to the SV-5 Validation Report
585	8	T. McParland	Draft IDR P Security guidance inputs
586	5	K-P Graf	Sub-Volume V SME Report
587	7	S. Tamalet	Proposal for the total suppression of the re-advertisement of IDR P routes on the A/G links
588			
<b>Flimsy No.</b>			
1	6	B. Cardwell	PDRs against SV5 Edition 2 and the need for validation
2	7	T. McParland	Proposed Changes to Sub-Volume V for IDR P Authentication
3	7	R. Jones	Proposed Sub-Volume V Change to define context for mobile subnet transit delay requirement
4	7	S. Tamalet	Proposed SARP s amendment for the resolution of P3DR M0020015
5	7	T. Whyman	Editorial Instructions for the Resolution of PDR M0040002
6	7	B. Cardwell	Summary of the changes to the 3rd edition of Sub-Volume V
7	8	R. Jones	Proposed Working Paper to WG W/4 on the Status of the ICS Guidance Material
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## WG2 21<sup>th</sup> Meeting Attendance

Limerick, Ireland, 11-14 July 2000

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