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29th March 1996

To: ATNP WG2 Members & Interested Parties

Report of the ATN Panel 7th WG2 Meeting
South Brisbane, Australia, 5th - 9th February 1996

Please find attached the First Issue of the Report of the Seventh ATNP WG2 meeting. Any comments by those who attended the meeting would be greatly appreciated so that they may be included in a revision of the report if appropriate. Any clarification relating to the proceedings of the meeting by those who have an interest but did not participate should be sent to me ideally addressed to the above internet e-mail address. *Please note that the WG2 action list at Appendix W to the report includes some additional actions that had been overlooked when the previous action list was circulated shortly after the meeting.*

As agreed the next (8th) WG2 meeting will take place at EUROCONTROL HQ in Brussels in the period 22nd - 26th April. Should you require any information relating to administrative details (e.g. hotel accommodation) please contact Pieter Tonks (tel: 32 2 729 3144, fax: 32 2 729 9083, e-mail: tonks.pieter@eurocontrol.be) A draft Agenda will be sent out shortly. Where possible, please make any WPs that you intend to submit to the Brussels meeting available to the atn-internet-technical mailing list in advance.

As a final point in order to avoid unnecessary photocopying costs please bring a copy of this report and any Working Papers made available prior to the next meeting with you if you plan to attend.

Yours Sincerely

Akhil Sharma
(Rapporteur ICAO ATNP WG2 (ATN Internet WG)

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL
South Brisbane, Australia
5.2.96-9.2.96

Issue 1.0

ATN Internet Working Group 2 (WG2)

Seventh Meeting Report

1. Agenda Item 0 - Meeting Organisational Issues

At the initial ATNP-1 meeting held in Montreal 8-21 June 94, three working groups were created in order to further the work of the Panel. This is a report of the seventh meeting of Working Group 2 (WG2) of the ATNP which took place in South Brisbane, Australia in the period 5th - 9th February 1996.

Twenty three experts from seven States (Brazil, Canada, Australia, Japan, Germany, USA, France, UK) and four International Organisations (ARINC, SITA, IATA, EUROCONTROL) attended the meeting. The list of attendees is at Appendix A. A total of fifty seven Working Papers were submitted to the meeting, the list is at Appendix B.

2. Agenda Item 1 - Approval of Agenda and Objectives

2.1 Mr. Sharma, Rapporteur of WG2, opened the meeting and drew the participants attention to the Working Papers that had been prepared for the meeting and, in particular, to WP/193 comprising the agenda, a list of all known working papers, their assignment to agenda items, a list of meeting objectives, and a proposed schedule for the meeting. This had been prepared by Mr. Sharma in advance of the meeting.

2.2 The meeting agreed the objectives for the meeting as proposed in WP/193 and are reproduced below:

- to progress Version 3.1 of Sub-Volume V to Version 4.0;
- to agree detailed work plan in order to submit final draft SARPs to ICAO by end April '96
- to review available guidance material and agree detailed work plan to submit final draft to ICAO by end of June '96
- to review draft validation report (common to WGs 1, 2 & 3) and agree detailed work plan to submit report to ICAO by end of June '96
- to agree detailed work plan to consolidate validation results by mid-October '96
- to review, and where appropriate resolve, issues arising from other ATNP WGs & other Panels

2.3 The agenda was adopted as proposed in WP/193 and reproduced in Appendix C.

3. Agenda Item 2- Approval of Banff WG2 Meeting Report

3.1 The report of the Banff meeting was agreed with the following minor amendments:

- Section 1, 2nd par. - insert "Canada" in parentheses
- Section 2.4, First bullet - delete "He would" from the end of the paragraph.
- Section 3.3, 4th bullet - replace "6th" with "5th" and replace "10th" with "9th"
- Section 16.8 - delete "against" from the last line
- Section 28.1 - replace "SICASP V" with "SICASP IV"

3.2 The meeting then reviewed the action list in order to assess the progress to date:

Ref	Deliverable	Actionee	Status

WG2-8	Review and agree ATN User Requirements, submit Defect Reports and supporting draft Change Proposals **EUROCONTROL*/ GERMANY/JAPAN/US/ UK**	EC	On-going
4/1	To develop high level proposals for CNS/ATM-2 internet requirements for presentation to the October ATNP WG meetings.	US	On-going
5/7	Co-ordinate on future Congestion management Proposals to WG and present results of CM Validation activities .	USA/EURO CONTROL	closed
5/13	Ms. Thulin to submit Defect Reports and CPs to CCB based on sections 5.1, 5.2 and 5.3 of Flimsy #6.	Ms. Thulin	closed
6/1	To reflect JWG/3 agreements with respect to Sub-Volume nomenclature, replacing sections with chapters in order to be consistent with other CNS/ATM-1 SARPs.	Mr. Crenais	closed
6/2	To submit DR & draft CP based on WP/168 recommendations to CCB as WG2 approved with instructions to CCB members to vote acceptance	Mr. Whyman	closed
6/3	To submit DR & draft CP based on WP/170 to CCB as WG2 approved with instructions to CCB members to vote acceptance	Mr. Whyman	closed
6/4	To submit DR & Draft CP based on WP/170 to CCB	Mr. Whyman	closed
6/5	To submit DR & draft CP based on WP/173 to CCB as WG2 approved with instructions to CCB members to vote acceptance	Mr. Whyman	closed
6/6	To submit DR & Draft CP based on WP/174 to CCB taking into account editorial changes agreed at WG2	Mr. Whyman	closed
6/7	To investigate the background to WP/191 and submit DR and draft CP to CCB following circulation on atn-internet-technical list.	Mr. Roy	closed

6/8	To make the AMSS SARPS Validation Report available at WG2/7	Mr. Brangier	on-going
6/9	To present IATA position on use/non-use of IDRP in avionics for CNS/ATM-1 at next WG2 meeting.	Mr. Hennig	closed
6/10	To submit DR and Draft CP based on Flimsy #10 to CCB	Mr. Whyman	closed
6/11	To submit DR and Draft CP to CCB based on Issue 1 of Flimsy # 7 as WG2 approved with instructions to CCB members to vote acceptance	Mr. Whyman	closed
6/12	To submit DR and Draft CP to CCB based on Issue 2 of Flimsy # 7 as WG2 approved with instructions to CCB members to vote acceptance	Mr. Whyman	closed
6/13	To confirm whether as the result of SICASP IV ICAO sent out State Letter recommending establishment of Address Registration Authorities	Mr. Hof	closed
6/14	To submit DR and Draft CP to CCB proposing corrections to traffic type terminology	Mr. Sharma	on-going
6/15	To develop Validation Database in accordance with WP/183	Mr. Hof	closed
6/16	To produce draft of Validation Report based on Attachment A to WP/161	Mr. Whitfield	closed
6/17	To provide guidance on format in which tool specification information should be provided in a common format with an example to the atn-internet-technical mailing list.	Mr. Hof	closed
6/18	To provide German tool specification information based on guidance provided as a result of 6/16	Mr. Herber	closed
6/19	To provide US tool specification information based on guidance provided as a result of 6/16	Mr. Cossa	closed
6/20	To provide ARINC tool specification information based on guidance provided as a result of 6/16	Mr. Roy	closed
6/21	To provide French tool specification information based on guidance provided as a result of 6/16	Mr. Crenais	closed
6/22	To provide IATA tool specification information based on guidance provided as a result of 6/16	Mr. Hennig	on-going

6/23	To provide UK tool specification information based on guidance provided as a result of 6/16	Mr. Sharma	closed
6/24	To provide Eurocontrol tool specification information based on guidance provided as a result of 6/16	Mr. Hof	closed
6/25	To provide SITA tool specification information based on guidance provided as a result of 6/16	Ms. Thulin	closed
6/26	To provide proposed detailed validation objectives	Mr. Hof	closed
6/27	To make version 3.1 of Sub Volume V draft SARPs using strike out/revision marks available with summary of changes included .	Mr. Crenais	closed
6/28	To provide consolidated draft guidance material to Rapporteur	Mr. Pellegrino	Unable to complete due to lack of timely input.
6/29	To complete draft Section 1 of Guidance Material	Mr.Pellegrino	closed
6/30	To complete draft Section 2 of Guidance Material	Mr. Cossa	closed
6/31	To complete draft Section 3 of Guidance Material	Mr. Sharma/Mr. Hennig	on-going
6/32	To complete draft Section 4 of Guidance Material	Mr. Whyman	closed
6/33	To complete draft Section 5 of Guidance Material	Mr. Roy	on-going
6/34	To complete draft Section 6 of Guidance Material	Mr. VanTrees	closed
6/35	To complete draft Section 7 of Guidance Material	Mr. Hennig	on-going
6/36	To issue DR and Draft CP to CCB based on WG3, Flimsy #2 regarding values for ATSC communications classes.	Mr. Colliver	closed
6/37	To determine the ISO 10747 definition of a BIS	Mr. Sharma	closed
6/38	To submit Flimsy #4 to CCB	Mr. Whyman	closed

4. Agenda Item 3 - Issues Arising out of ATNP WG1 Brisbane Meeting

4.1 Miss Cosgrove provided the meeting with a verbal report of the proceedings of the WG1 meeting that had taken place in the previous week. In particular she reported on : the status of the development of the World Wide Planning Document which was now at its third draft, the status of the Sub-Volume 1 SARPs development, the draft Agenda for ATNP/2, the fact that a number of WG1 deliverables had as yet to have assigned editors, a WP presented by Tom Kraft (FAA) on Safety Analysis and Hazard Classification, FAA Validation Activities and Plans, the subject of downstream Clearance, proposed amendments to the format and/or use of the ICAO flight plan and finally the WG1 scheduling of an additional meeting in October to finalise Validation results.

4.2 Miss Cosgrove presented WP/238 (Flimsy #7 of the WG1 meeting) which advised the meeting that WG1 had conducted a review of the draft SARPs contained in Sub-Volume 1 (Introduction and System Level Requirements) and requested that :

- WG2 identify introductory material in Sub-Volume V that may be more suitably placed in Sub-Volume 1 and
- WG2 provide material towards system level requirements definition that are explicitly defined in Sub-Volume V or may be derived.

4.3 With respect to the first point it was agreed that the current Introductory material in Sub-Volume V should remain there for the next draft at least. With respect to the second point it was agreed that WG2 will provide some input to WG1 and Miss Cosgrove was tasked with drafting a Flimsy (#7-1, Appendix D) that would respond as such.

4.4 Mr. Sharma briefly presented WP/224, "WG2 Report to WG1", for information. The paper was presented to WG1 a status report on WG2 activities and its future work plans.

5. Agenda Item 5 - Review of the Sub-Volume 5 of the CNS/ATM-1 SARPs (Version 3.1)

5.1 Mr. Crenais presented WP/194, Version 3.1 of the draft SARPS, which visibly highlighted, through the use of revision marks, all changes that had been incorporated into the baselined Version 3.0. No comments were raised on WP/194. Mr. Sharma requested that participants spend some time during the week to review the paper prior to the WG accepting the changes highlighted. *Note: - No further comments were raised an WP/194 was therefore accepted by the WG.*

6. Agenda Item 5.1 - Report of the CCB/Review of CCB Recommendations

6.1 Mr. Cossa (CCB Chair) presented WP/217, "WG2 Configuration Control Board Activity in Support of CNS/ATM-1 SARPs". The paper presented the results of the CCB process since the Banff WG2 meeting in the resolution of outstanding defect reports (DRs 68, 69, 70) and change proposals (CPs 32, 33). The WP further proposed a status for submitted DRs and CPs.

6.2 DR68, relating to RDI terminology, was accepted by the WG. Mr. Hof was actioned to submit a corresponding CP.

ACTION 7/1 - MR. HOF - SUBMIT CP FOR DR68 RELATED TO RDI TERMINOLOGY.

6.3 The meeting agreed to re-visit DR69 once WP/236 had been reviewed. *Note. - Refer to par. 7.19 of this report.*

6.4 DR70, related to Table 10-1 of the Guidance Material subnetwork priority mapping, was rejected on the grounds that VRCIs are only currently applicable to draft SARPs and not guidance material. However, an action was assigned to the Section 4 guidance material editor to implement DR70.

ACTION 7/2 - MR HOF - SECTION 4 GM TO INCLUDE AMENDMENTS TO SUBNETWORK PRIORITY MAPPING TABLE BASED ON DR 70/CP33.

6.5 It was agreed that the status of CP32 should be changed to ACCEPTED and it was noted that the CP had already been implemented in the draft SARPS.

6.6 CP33 was the CP supporting DR70. It was agreed that its status should be REJECTED on the grounds that it related to guidance material. However, it was agreed that it should be taken into account by action 7/2.

6.7 WP/250, "Outstanding Defect Reports", was presented by Mr. Crenais. This paper documented all defect reports that were still outstanding, DR3, 8, 10, 18, 19, 31, 32, 35, 44, 46, 48, 49, 50, 63, and 67.

6.8 The following table documents the WG agreed revised status of each of these DRs :

DR Ref.	Comment	Reported Status	Revised Status
3	----------	PENDING	WITHDRAWN
8	----------	ACCEPTED	RESOLVED
10	Action 7/3	ACCEPTED	RESOLVED
18	----------	ACCEPTED	RESOLVED
19	Action 7/3	ACCEPTED	RESOLVED
31	Action 7/4	ACCEPTED	ACCEPTED
32	----------	ACCEPTED	RESOLVED
35	----------	ACCEPTED	REJECTED
44	Action 7/5	PENDING	ACCEPTED
46	Action 7/6	ACCEPTED	ACCEPTED
48	----------	ACCEPTED	ACCEPTED
49	----------	ACCEPTED	RESOLVED
50	----------	ACCEPTED	RESOLVED
63	Action 7/7	ACCEPTED	ACCEPTED
67	Flimsy#2	ACCEPTED	ACCEPTED

6.9 The following actions wee agreed as a result of WP/250:

ACTION 7/3 - MR HOF - SECTION 4 GM TO ADDRESS ISSUES RAISED IN DR'S 10, 19 & 50

ACTION 7/4 - MR HOF - SUBMIT CP FOR DR 31

ACTION 7/5 - MR HOF - SUBMIT CP FOR DR 44

ACTION 7/6 - MR GRAF - SUBMIT CP FOR DR 46

ACTION 7/7 - MR HOF - SUBMIT CP FOR DR 63 (SECURITY PARAMETER SETTINGS IN BISPDUS)

6.10 Mr. Briand was tasked to develop a flimsy (#2, Appendix E) related to DR67.

6.11 Mr Crenais reported that both he and Mr. Colliver would be resigning from the CCB and that the new representative from France would be Mr. Stephane Tamalet. The current CCB Membership is: R Cossa, JP Briand, Sherry Cosgrove, Klaus Peter Graf, Paul Hennig & Helene Thulin.

7. Agenda Item 5.2 - Review of Proposed Changes

7.1 WP\216, "NAT Requirements", was presented by Mr. Crenais on behalf of the Rapporteur of the NATSPG Data Link Implementation Sub-Group (DISG). The paper described the current schedule for the introduction of data link applications in the NAT Region which foresees the implementation of key ground systems in order to enable initial benefits from mid 1998 and subsequently allowing an operational evaluation of ADS and CPDLC to take place between mid 98 and mid 99. In order to support this schedule the paper recommended that WG2 note the NAT planning when deciding the requirements that will comprise the CNS/ATM-1 Package internet service and that any requirements that are unlikely to be available by end 1Q 97 for integration by mid 98 would delay the provision of benefits to the user community. The meeting noted the recommendation in WP\216 and concluded that the current definition of the internet communications service in the Sub Volume V draft SARPs did not include any requirements that had been considered to be un-implementable within the timeframe in question.

7.2 WP\215, "Proposed ATN Systems RFP PICS", was presented by Mr. Hennig. In his presentation Mr. Hennig pointed out that the WP had been jointly developed and agreed by France, the US and IATA. The paper included material that had been extracted from the ATN Systems Inc. Request for Proposal for an ATN Router Reference Implementation (RRI) and recommended that:

- a team of experts from WG2 undertake an analysis of the RRI specification and its PICS in order to identify areas where it might differ from the draft internet SARPs;
- that these experts prepare change proposals to the draft SARPs to allow the RRI specification and its PICS to achieve SARPS compliance;
- validation efforts be focused on these revised SARPs.

7.3 Mr. Hennig stated that during the development of the RFP decisions had to be made on whether certain protocol options should be selected since it was believed that leaving such features as optional had the potential to result in inter-operability problems. He therefore believed that the majority of differences that existed between the RFP and the current draft SARPS related to option selection. Mr Graf stated that if such situations could arise then this indicated a defect in the draft SARPs since the term "optional" is intended to mean that

systems should inter-operate irrespective of whether or not an optional feature has been selected. Mr. Hof agreed and proposed that defect reports be submitted to the CCB for consideration, he further believed that "time-scale" should not be a factor i.e. if a particular feature is believed to be un-implementable in a given time-frame it should not be used as a reason to delete the feature from the SARPs. Mr. Hennig stated that time-scale was not a factor in the deviations from the SARPs.

7.4 Mr. Colliver provide some further back-ground to the development of the RFP. He stated that the one area that the RFP excluded was related to Route Aggregation since it was believed that the requirements had not been adequately specified in either the draft SARPs and the ISO standard.

7.5 Mr. Sharma asked whether there was any document which highlighted the differences between the RFP and the draft SARPs - no such document was volunteered. Given that the ATNSI initiative was likely to result in the first implementation of the CNS/ATM-1 Package it was agreed that the WG establish a drafting group to review the RFP and to identify any defects and subsequently submit **defect reports** to the draft SARPS. It was agreed that the group would be led by the P Hennig as the IATA representative with support from Messrs. Colliver, Crenais, Feighery & Brangier. Mr. Hennig was tasked to develop a flimsy (Flimsy #4, Appendix G) documenting the DGs terms of reference based upon the guidelines that:

- only defects to SARPs should be identified and supporting CPs developed for submission to the CCB;
- the results of the DG must be available within the time-frame prior to the next WG2 meeting.

7.6 Mr Sharma undertook to develop a Flimsy which would propose an overall plan for further SARPs development taking into account the activity of the drafting group. *Note: the results of this flimsy are summarised under the report for Agenda Item 9.*

7.7 With reference to the proposal in WP/215 regarding the use of non-PICS information for guidance material it was agreed to discuss the subject further under Agenda Item 6.

7.8 WP/210, "Delete Optional Non-Use of Airborne IDRP from Draft Sub-Volume V SARPs", was presented by Mr. Hennig as an IATA position. The WP proposed that the currently defined provisions in the draft SARPs supporting the optional non-use of IDRP in avionics systems be removed and that future validation activities be focused on validating the use of IDRP over air/ground subnetworks. The WP documented the initial rationale for allowing the non-use of IDRP which it believed was no longer applicable, namely the availability of a certifiable airborne IDRP within the time-scales foreseen for NAT implementation , i.e. 1998. Whilst the meeting agreed with the proposal in principle, the editorial impact of removing the applicable "non-use" provisions was not clear. It was therefore agreed not to accept the proposal at this point in time, however, it was agreed that the guidance material should document the IATA position. Given that the implementation of IDRP in avionics no longer appeared to be technically difficult, including issues with respect to avionics capacity, the need for the "airborne IDRP sub-set" was questioned. Mr. Sharma recalled that the sub-set was proposed at the Toulouse '95 March WG2 meeting in response to capacity concerns in avionics systems. Given that the ATNSI RFP specified the airborne sub-set and given that the editorial impact of removing the sub-set was unclear it was agreed to retain the current definition. It was noted that the primary simplification in the airborne sub-set was based upon the fact that the aircraft was restricted to function solely as an ERD i.e. no transit routing functionality was permitted.

7.9 WP/199, "IDRP Route Aggregation and ATN Requirements for Route Aggregation", was presented by Mr. Briand. The paper made recommendations on how route aggregation and route information reduction should be implemented by SARPs compliant routers which were

summarised in Table 1 of Section 6. It was unclear to the meeting whether the ticks in Table 1 were to be interpreted as mandatory or recommendations. Mr. Colliver did not support the inclusion of the table since it required additional new notation, he preferred that any such requirements/recommendations be explicitly stated in text. This were agreed and Mr Hof was actioned to submit a CP related to the procedures required for "policy based route aggregation" and "policy based route information reduction". The meeting further concluded that the majority of the material would prove as an excellent basis for guidance material and it was agreed to consider this aspect further under Agenda Item 6.

ACTION 7/8 - MR HOF - SUBMIT CP RELATED TO PROCEDURES REQUIRED FOR POLICY BASED ROUTE AGGREGATION & POLICY BASED ROUTE INFORMATION REDUCTION BASED ON WP/199.

7.10 WP/197, "Results of Congestion Management Simulations", was presented by Mr. Hof. The paper documented the results of simulation exercises that Eurocontrol had undertaken to assess the need for congestion management functionality in the ATN. Of the three different strategies investigated the results supported the need for the "receiving transport layer congestion avoidance" algorithm which demonstrated a considerable improvement in overall transit delay. Mr Hof reminded the meeting that, at its previous Rome meeting (July '95), Eurocontrol had proposed the adoption of the algorithm based upon the sending transport layer "back-off". He reported that the subsequent on-going Eurocontrol simulations had now discounted this algorithm as inferior to the one proposed. The Rome meeting proposal had been primarily objected to (by Messrs. Jones, Crocker, Cossa Herber & Graf) based upon the grounds that the algorithm may have been unnecessarily invoked during hand-over between mobile subnetworks which did not necessarily correspond to a congested situation. Mr. Cossa questioned whether the proposed algorithm was applicable to ground/ground communications only. Mr. Hof stated that this was not the case and mobility was not a factor in any case since the proposed algorithm was receive based. Mr Graf supported the proposal since concerns he had raised at the Rome meeting regarding the impact of mobility had been resolved with the revised approach.

7.11 WP/231, "Proposal for Congestion Management Algorithm", proposed a set of requirements and recommendations to support the recommended congestion management algorithm based upon the simulation results documented in WP/197. The meeting reviewed the proposed text in detail and agreed a number of detailed changes. There was, however, some concern expressed over specific values for the various parameters: alpha - CLNP output queue threshold, beta (window decrease factor), W0 (Initial Window) and lambda (congestion ratio). It was concluded that Mr Briand develop a flimsy (#7, Appendix I) which would be in the form of a CP based on WP/231 and that it would include only ranges/recommendations for the various parameters and that Eurocontrol would continue their simulation activities to determine optimal values for the parameters in question.

ACTION 7/9 - MR HOF - CONTINUE SIMULATION WORK IN ORDER TO PROVIDE OPTIMAL VALUES FOR PARAMETERS IN ADOPTED CONGESTION MANAGEMENT ALGORITHM (WP/197, 231)

7.12 WP/218, "Systematic Review of Certain Option Selections for TP4 Timer Values", was presented by Mr. Cossa. The paper documented proposed defects resulting from a detailed review of certain APRL requirements specified for the transport service/protocol. The meeting reviewed each proposed defect (connection mode transport security, acknowledgment and inactivity timer values, timer settings, use of selective/request acknowledgment TPDU size parameters, TPDU size negotiation) and agreed a resolution. Mr. Cossa agreed to reflect the WG decisions in a Flimsy (#8, Appendix J).

7.13 WP/219, "Need for More Complete Definition of TP4 Timer Settings and Usage", was presented by Mr. Cossa. The paper recommended further research take place to investigate static versus dynamic timer implementations. In addition, a set of interim recommendations for CNS/ATM-1 implementations of TP4 timer capabilities were proposed. The meeting agreed to change the resolution

of the Acknowledgment Timer based upon the fact that the ISO standard currently restricts the timer to a max. of 65 seconds and that recent FAA trials had concluded that optimal performance over the AMSS subnetwork was achieved with the timer set between 160 & 400 seconds. It was agreed that Flimsy #8 (Appendix J) would propose a change to the resolution of the timer. The WP proposed a two options to define TP4 timers based upon the specified traffic type of ATSC end systems. A third option to base TP4 timer settings on dynamically assessed round trip delay was also proposed. With respect to section 6 of the WP the meeting agreed that further research in the areas proposed was required. With respect to the Package 1 recommendation in section 7 of the paper which proposed a set of TP4 timers for each ATSC traffic type there was significant concern at the fact that the timers had bee associated with requested traffic types e.g. with such an approach an aircraft reporting periodic ADS data may transit from a Satellite to Mode S subnetwork with the TP4 timer values remaining constant and therefore not optimising to the characteristics of the Mode S subnetwork . It was proposed that the timer values should be optimised on the functionality/performance of the mobile subnetworks which resulted in the conclusion that the dynamic assignment of TP4 timer values, as per the third proposal in section 6, may be the only way forward. *Note. - It is proposed to re-visit this subject further at the Brussels WG2 meeting.*

7.14 WP/225, " Definition of Priority Categories within the ATN Internetwork ", was presented by Mr. Sharma. The paper comprised two parts. The first was a paper from the WG2 Rapporteur to the AMCP WG meetings that had taken place in January on the subject of CLNP priority. The second part was the AMCP response to this paper. The first paper had identified three areas "a", "b" and "c" based upon the WG2 conclusions of the Banff meeting based upon WP\184. The WG concluded that the AMCP WG, in their response, has possibly mis-understood the WG2 decision with respect to the CLNP values associated with the "safety and regularity of flight". It was agreed to develop a flimsy (#9, Appendix K) would be developed in response to WP/225 which would explain that CLNP priority values 6, 7 and 8 were to be associated with the ITU category "flight regularity".

7.15 WP/221, "Defects found in Internet SARPs v3.1 and proposed solutions" was presented by Mr. Crenais.

7.15.1 Section 2.1 of the WP related to a defect in the APRL for Air/Ground Route Initiation, section 3.5.2.13 of the draft SARPS. The defect identified in 2.1.1 was agreed as was the CP proposed in 2.1.2.

ACTION 7/10 - MR CRENAIS - SUBMIT CP'S FOR WG AGREED DEFECTS PROPOSED IN WP/221, SECTION 2.1

7.15.2 The defects in section 2.2.1 and the proposed changes in section 2.2.2 were agreed by the WG.

ACTION 7/11 - MR. CRENAIS - SUBMIT DR & CP BASED ON SECTION 2.2 OF WP/221

7.15.3 Section 3 of WP/221 identified potential defects with respect to the 8208 diagnostic codes to which the ISO 8208 back-off procedure should be applied, and what action should be required in the cases where the back-off procedure is not applied. With respect to the first point the WG reviewed contributions from past CCB discussions and agreed that, in addition to the cases already defined, the back-off procedure will also be applied in cases of the following diagnostic codes: 0, 133, 145, 146, 160 to 163 inc., 240 and 241 to 248 inc. With respect to the second point WP/221 proposed some SARPS text to be inserted after paragraph 3.5.2.2.1.1.a. This text was reviewed and the final agreed text is as follows:

"If the call is cleared with a diagnostic code reporting an error that the SNDCF is unable to correct then the called DTE shall be removed from the polled DTEs list. Otherwise, if required, the SNDCF shall retry the call after resolved the cause of the rejection."

It was agreed that Action 7\10 would include CP material for the above text.

7.15.4 Section 4 of WP/221 identified a potential problem related to the generation of a Leave Event on expiration of the inactivity timer. Mr. Crenais agreed to draft a Flimsy (#10, Appendix L) to document a proposed WG2 decision.

7.15.5 Section 5 of WP/221 identified a potential problem related to the suppression of ISH periodic transmission when a BIS BIS connection has been established. The WG agreed the identified defect and the corresponding proposed CP in Section 5.2.

ACTION 7/12 - MR. CRENAIS - SUBMIT DR & CP BASED ON SECTION 5 OF WP/221

7.15.6 Section 6 of WP/221 related to the subject of mandating the support of transport priority. The WG had already accepted a proposal to mandate transport priority (WP/218) and Flimsy #8 (Appendix J) would include the corresponding CP material.

7.15.7 Section 7 of WP/221 related to questions regarding the ATSC traffic type class and how IDRP will manage the transit delay attribute unless an assumption is made that ground/ground transit delays should be treated as being negligible. The WG recalled that it had been previously agreed in Banff that the ATSC class would be associated with transit delay of mobile subnetworks and that the transit delay of ground/ground subnetworks should be treated as negligible. However, it was considered that there may be a "hidden" defect in Section 7 and Mr. Colliver was actioned to submit a defect report to the CCB should one indeed exist after further consideration.

ACTION 7/13 - MR. COLLIVER - SUBMIT DR BASED ON SECTION 7 OF WP/221 (TRAFFIC TYPE SEMANTIC & HANDLING WITHIN IS'S)

7.15.8 Section 8 of WP/221 identified an inconsistency between Chapters 2 and 6 on the subject of security classification. The WG agreed the defect and Mr. Crenais was actioned to submit a defect report and CP to the CCB to achieve consistency.

ACTION 7/14 - MR. CRENAIS - SUBMIT DR & CP IN ORDER TO ALIGN CHAPTER 2 & CHAPTER 6 WITH REFERENCE TO SECURITY CLASSIFICATION.

7.16 WP/230, "CIDIN Compatibility with the ATN", was presented by Mr. Cossa. The WP had been originally presented to the Banff WG1 meeting where WG1 had agreed to forward the paper to WG2 for further consideration. Mr. Colliver recalled that the ASPP had undertaken a considerable amount of analysis on the subject before it concluded on the current provisions defined in the draft SARPs and that any further review of the subject should take into account previous ASPP conclusions. The WP identified potential incompatibilities between the CIDIN and ATN architectures. The WG did not review the material in detail but agreed that the current provisions defined in the draft ATN SARPs should be reviewed and any resulting defects be submitted to the CCB.

ACTION 7/15 - MR. COSSA - REVIEW CIDIN SNDCF SARPS IN SUB-VOL V & , IF APPROPRIATE, SUBMIT DR'S & CP'S TAKING INTO ACCOUNT WP/230 & APPLICABLE ASPP MATERIAL

7.17 WP/228, "Proposed Changes to the Foreword of Sub Volume V", was presented by Mr. Sharma. The WP proposed a number of detailed changes to the existing Foreword. The proposal was agreed and an action assigned to the SARPS editor to implement the proposed change.

ACTION 7/16 - MR. CRENAIS - REPLACE SUB-VOL. V FOREWORD WITH WP/228

7.18 WP/229, "Proposed Changes to Chapter 1 of Sub Volume V", was presented by Mr. Sharma. The WP proposed a whole-sale replacement of the existing Chapter 1. The proposal was agreed and an action assigned to the SARPS editor to implement the proposed change.

ACTION 7/17 - MR. CRENAIS - REPLACE SUB-VOL. V INTRODUCTION WITH WP/229 AS AMENDED BY WG

7.19 WP/236, "Route Merging Problem found during Validation", was re-visited. Mr. Briand clarified any previous confusion that existed when the WP was initially discussed in that the WP now included comments that had been raised on a previous draft by Mr. Graf and that, to date, there had been no formal voting on the raised defect (DR69). The WG agreed DR69 and actioned Mr. Hof to submit a CP based on the proposal in WP/236.

ACTION 7/18 - MR. HOF - SUBMIT CP BASED ON WP/236

7.20 WP/247, "Change Proposal for Supporting VDL SNDCF" was presented by Mr. Roy in response to an action agreed at the previous Banff WG2 meeting (Action 6/7). The Banff meeting was presented with WP/191 which indicated that AMCP WG-C had identified additional requirements for the mobile SNDCF. Action 6/7 was tasked to investigate these additional requirements and to propose changes to the draft internet SARPs. WP/247 proposed a specific change to the Mobile SNDCF compression technique octet, in particular it proposed that the sixth octet of the Call User Data Field be changed from "spare" to "reserved for VDL use". It was questioned whether the change indicated would be sufficient to overcome the problem that had been identified. Mr. Roy believed that additional Mobile SNDCF functionality would be required but did not believe that this would be defined within the scope of the CNS/ATM-1 Package definition. The WG agreed that all requirements fro the Mobile SNDCF should be specified in the draft ATN SARPs alone. Any requirements that the AMCP identify should be submitted to WG2 for consideration taking into account any impact on other ATN subnetworks. Mr. Graf agreed to develop a Flimsy (Flimsy #11, Appendix M) that would be in the form of a communiqué to the AMCP advising them as such. Mr. Roy was tasked with submitting the specific change in WP/247 to the CCB as a DR/CP and also to submit any additional Mobile SNDCF requirements that the AMCP had identified as DRs/draft CPs to the CCB.

ACTION 7/19 - MR. ROY - SUBMIT CHANGE REQS (CR'S), DR'S & CP'S BASED ON WP/247 & AMCP WG VDL SPECIFIC MOBILE SNDCF REQUIREMENTS

7.21 WP/198, "Proposed text for SARPs Reference section and associated change proposals", was presented by Mr. Briand.

7.21.1 Proposal 1: move all references to the front section, and delete sub-sections in chapters - WG agreed.

7.21.2 Proposal 2: remove all unused references. Add applicable references when GM is made available - WG agreed.

7.21.3 Proposal 3: use latest ISO catalog information - WG agreed.

7.21.4 Proposal 4: split the front reference section into two sub-sections: "References in SARPs" and "Additional References and Guidance" - WG rejected.

ACTION 7/20 - MR. CRENAIS - IMPLEMENT WP/198 AS AMENDED BY WG INTO VERSION 4.0 OF SUB VOL V

7.22 WP/208, "CNS/ATM-1 Security Label", was presented by Mr. Van Trees developed as a result of a recent WG3\SG3 meeting. The primary purpose of the WP was to question the currently defined format of the security label which required 15 octets to encode whilst for CNS/ATM-1 3 octets were believed to be sufficient. The second purpose of the WP was to advise WG2 of the ATN Object Identifier (OID) tree that WG3\SG3 had developed and that WG2 note that an "atn" arc for WG2 had been incorporated into this schema. Mr. Colliver recalled that the current format for the security label had been based upon a Military Specification and the intent was to allow for future evolution and upward compatibility. It was further noted that the security label was not sent over air/ground links for each CLNP packet other than those which set up the context i.e. the first one. WP/208 also sought WG2 guidance on QoS mapping whilst noting that ISO/IEC 8072 contains no provisions for presenting the security label to the transport layer. The WG agreed that passing of this parameter was a local implementation issue.

7.23 Mr. Van Trees brought up a number of additional WG3 related issues:

- Requirements related to TS-User Data where applications might wish to send data with the T-Connect primitive. Mr. Van Trees stated that SG3 wanted to mandate support of this provisions and likewise for the T-Disconnect Request. The WG noted that the current provisions in the Base ISO Standard mandate the support of User Data in the Transport Connect & Disconnect PDUs. It was further agreed that guidance material on this specific subject was required.
- Requirements for CLTP noting that none of the currently defined CNS/ATM-1 applications had requirements for the support of CLTP. The WG recalled previous discussions on this subject where it had agreed to retain the provisions for CLTP since regional applications such as radar data distribution in Europe may require the support of CLTP.
- proposal to reword the note in section 5.1.2 (c) of the draft internet SARPs in order to reflect the system view of Residual Error Rate (RER), proposal to reword 5.1.2 (b), expedited data since WG3 had agreed that the ATN Upper Layer Architecture (ULA) should not support expedited Session data.

7.23.1 Mr. Van Trees agreed to develop a Flimsy (#12, Appendix N) in the form of a CP that would propose the changes indicated above.

8. Agenda Item 4 - CNS/ATM-1 Registration Authority

8.1 WP/239, "SubVolume V Technical Issues to be resolved", was presented by Mr. Graf.

8.1.1 The proposal in par. 2.1 was rejected by the WG. Mr. Colliver agreed to draft a Flimsy (#13, Appendix O) that would address the concerns raised in par. 2.1.

8.1.2 The proposal in par. 2.2 was agreed and it was agreed that Flimsy #13 would incorporate the proposed change.

8.1.3 The proposal in par. 2.3 was agreed and it was agreed that Flimsy #13 would incorporate the proposed change.

8.1.4 The proposals in paras. 2.4.1 and 2.4.2 were rejected by the WG.

8.2 WP/204, "ATN Address Registration", was presented by Mr. Hof. The WP was produced as a result of action 6/13 from the Banff WG2 meeting and reproduced correspondence that had taken place between Mr Hof and the Panel Secretary on the subject of NSAP Address Registration. The Secretary had responded that no action to date had been taken by ICAO and that the ATNP should formulate an appropriate recommendation at ATNP/2 that States establish appropriate Registration Authorities.

ACTION 7/21 - MR COLLIVER - DRAFT RECOMMENDATION FOR ATNP/2 REQUESTING THAT ICAO REQUEST STATES TO ESTABLISH REGISTRATION AUTHORITIES FOR NSAP ADDRESSES

8.3 The WG was informed that the CENA server had allocated an area on which registered NSAP addresses may be stored in the interim. Mr. Sharma was actioned to propose the format in which these addresses should be stored along with a recommendation that the area be sub-divided into operational and experimental addresses.

ACTION 7/22 - MR SHARMA - PROPOSE FORMAT FOR NSAP ADDRESS REPOSITORY ON CENA ARCHIVE

9. Agenda Item 6 - Development of Sub-Volume V of the CNS/ATM-1 Guidance Material

9.1 Mr. Pellegrino, editor of the guidance material, reported that due to lack of input from various guidance material "actionees" he had been unable to complete action 6/28 which required that he consolidate all input material and present a single draft of the guidance material. In the interests of progressing the task Mr. Pellegrino proposed the creation of a guidance material drafting group and that this group meet in the period 4th - 8th March in Brazil. There was, however, little support for the proposal due to unavailable effort in the time frame proposed.

9.2 WP/227, "Section 1 - Sub Volume V of the CNS/ATM-1 Package Guidance Material", was presented by Mr. Pellegrino in response to action 6/29 agreed at the Banff WG meeting. There were no comments on the material and it was agreed that it should be integrated into the next draft of the material.

9.3 WP/207, "Proposed Guidance Material Section 2", "The ATN Concept", was presented by Mr. Cossa in response to action 6/30. Mr. Cossa reported that the material contained in WP/207 was an edit of the original draft of guidance proposed at Banff in WP/172. No comments were made and it was agreed that the material in WP/207 be integrated into the next draft of the guidance material.

9.4 WP/214, "Section 3 - Guidance for ATN Administrators" and "Section 4 - Guidance for System Implementors", was presented by Mr. Hennig in response to action 6/31 from the Banff WG2 meeting. It was agreed that section 3.2 should be re-titled to "Aircraft Operators". There were no other comments and it was agreed that WP/214 be integrated into the next consolidated draft of the guidance material.

9.5 WP/234, "Proposed Guidance Material for Section 4 - Transport Layer (Part 1)", was presented by Mr. Hof. It was agreed that section 4.1 should include a statement that End Systems and Intermediate Systems may reside in one physical platform. There were no other comments and it was agreed that WP/234 will be integrated into the next draft of the guidance material. Mr. Hof reported that Part 2 (i.e. WP/235) was not yet available and withdrew the WP.

9.6 Mr. Sharma presented WP/196, "Guidance to Subnetwork Implementors" - Section 8, on behalf of Mr. Bochkorev who had been unable to attend the meeting. The material was not reviewed in detail due to lack of available time. Ms. Thulin agreed to review the

proposed text off-line since she believed it contained material that was specific to the internals of the satellite subnetwork and not entirely relevant as ATN guidance.

9.6 Mr. Sharma presented Flimsy #14 (Appendix P) which was a catalogue of all the issues for which the meeting had previously discussed the need for guidance material. The following actions, based on the issues in Flimsy #14, were agreed:

ACTION 7/23 - MR. HOF - DEVELOP GUIDANCE MATERIAL FOR ROUTE AGGREGATION, ROUTE MERGING & ROUTE INFORMATION REDUCTION

ACTION 7/24 - MR. COSSA - TO DEVELOP GUIDANCE MATERIAL FOR VDL MODE 3/CLNP PRIORITY MAPPING

ACTION 7/25 - MR. COSSA - TO DEVELOP GUIDANCE MATERIAL RELATED TO TP4 TIMER SETTINGS

ACTION 7/26 - MS. THULIN - TO DEVELOP GUIDANCE MATERIAL RELATED TO SUBNETWORK PRIORITY INVOCATION & USE OF THE X.25 IDLE TIMER

ACTION 7/27 - MR. SHARMA - TO DEVELOP GUIDANCE MATERIAL RELATED TO SECURITY LABEL HANDLING BY TRANSPORT SERVICE/ENTITY

ACTION 7/28 - MR. COLLIVER - TO DEVELOP GUIDANCE MATERIAL RELATED TO TRAFFIC TYPE SEMANTIC AND HANDLING WITHIN ISS

ACTION 7/29 - MR. GRAF - TO DEVELOP GUIDANCE MATERIAL RELATED TO (A) NSAP, TSAP ADDRESS REGISTRATION AND ASSIGNMENT , (B) EFFICIENT ASSIGNMENT OF GROUND ARS VALUES TO SUPPORT EFFICIENT GLOBAL ROUTING

ACTION 7/30 - MR. HOF - TO DEVELOP GUIDANCE MATERIAL ON CONGESTION MANAGEMENT

9.7 With respect to future planning it was agreed that the next consolidated draft of guidance material (Version 2.0) would be made available by 15th April and that all actions contributing to this draft would need to be completed by 5th April and submitted to Mr. Pellegrino. Mr. Pellegrino agreed to draft a Flimsy (#16, Appendix Q) which would document a proposed future planning for the development of the guidance material. Recognising the fact that a considerable amount of effort/time is still required to complete the guidance material to the level desired it was felt that a significant risk existed that a final draft would not be available as an input to the June

meeting in order for it to be submitted to ICAO. Mr. Sharma agreed to liaise with the Panel Secretary to assess the latest date ICAO would accept the material in order for it to be processed in time for ATNP/2, November 1996.

ACTION 7/31 - MR. SHARMA - TO DISCUSS WITH PANEL SECRETARY LATEST SUBMISSION DATE FOR GUIDANCE MATERIAL

9.8 Mr. Pellegrino agreed to consolidate all currently available guidance material into a next complete draft (Version 1.2) by 15th April for review by WG2 in Brussels. It was agreed that the draft resulting from Brussels would be referred to as Version 2.0.

ACTION 7/32 - MR PELLEGRINO - TO CONSOLIDATE GUIDANCE MATERIAL AVAILABLE & ISSUE NEXT DRAFT VERSION 1.2

10. Agenda Item 7 - Development of the CNS/ATM-1 Internet SARPs Validation Report

10.1 WP/201, "CNS/ATM-1 Package Internet SARPs Validation Objectives", was presented by Mr. Briand. The WP had been developed as a result of action 6/26 agreed at the Banff WG2 meeting. The WP proposed a number of validation objectives which had been classified according to the following criteria:

- has the requirement been implemented ?
- do ATN systems inter-operate ?
- does the ATN satisfy User Requirements ?
- does the ATN perform well ?

10.1.1 WP/201 proposed that:

- WG2 endorse the list of proposed objectives and maintains it as the basis of the validation process and of the validation reporting procedure
- WG2 puts in place the assessment means required
- Member States prepare specifications for validation exercises and classify them according to the endorsed objectives.

10.1.1.1 Due to shortage of available time the WG concluded that it was not possible to review and agree each of the proposed objectives in detail. It was therefore agreed that participants review the material off-line and provide comments directly to Eurocontrol within one month. It was further agreed that, in the absence of any comments, the proposed objectives are endorsed by the WG.

ACTION 7/34 - ALL - TO REVIEW & COMMENT ON VALIDATION OBJECTIVES

10.1.1.2 Mr. Hennig agreed to bring to WG2 results of on-going NUT Concept Validation trials to the next WG2 meeting in Brussels.

ACTION 7/33 - MR HENNIG - PRESENT RESULTS OF NUT CONCEPT VALIDATION TRIALS

10.1.1.3 With respect to the 2nd proposal in WP/201 Mr Hof agreed to develop a detailed proposal for the validation assessment process. Mr Whitfield agreed t support this action.

ACTION 7/35 - MR HOF - DEVELOP PROPOSAL FOR VALIDATION ASSESSMENT PROCESS

10.1.1.4 With respect to the 3rd proposal in WP/201 all participants agreed that they would present results of their Organisations on-going validation activities against the WG agreed validation objectives.

10.2 WP/200, "CNS/ATM-1 Package SARPs Requirement Database Tables", was presented by Mr. Briand, the paper was produced as a result of action 6/15 agreed at the previous WG2 meeting in Banff. The WP included the data being proposed for inclusion in the ATN Requirements Database in the form of tables which would be transferred into a MS Access 2.0 database. The WP further described the intended use and future maintenance of the database and included the following recommendations:

- WG2 members review the material contained in the document and assess its completeness and suitability for the validation work
- a standing WG2 document is produced from the material in WP/200
- that WG2 take a decision on the maintenance scheme required for the document

10.2.1 With respect to the first recommendation it was agreed to action WG2 members to review the document off-line and to provide comments directly to Eurocontrol. It was further agreed that, in the absence of any comments, the document is accepted by WG2 in terms of its completeness and suitability for validation work.

ACTION 7/36 - ALL - TO REVIEW & COMMENT ON PROPOSED SARPS REQUIREMENTS DATABASE

10.2.2 With respect to the second recommendation the WG agreed that WP/200 becomes a standing WG2 document and that, once aligned with the current version of the draft SARPs, all CPs submitted to the CCB or the WG should assess the impact on the tables contained in WP/200.

10.2.3 With respect to the third recommendation the WG agreed the first of the two schemes proposed, i.e. that an editor is assigned to the database and that CCB procedures and templates are amended to include the reporting of DRs/CPs impact on the database tables. It was agreed that Mr. Briand would be the Database Editor. It was further agreed that the version numbering of the database would be as per the draft SARPs.

ACTION 7/37 - MR. COSSA - UPDATE CCB PROCEDURES (WP/66) TO REFLECT EC AS REQUIREMENTS DATABASE EDITOR & THE REQUIREMENT THAT CP'S SUBMITTED MUST ALSO PROPOSE CORRESPONDING CHANGES TO REQUIREMENTS DATABASE

10.3 WP/202, "Excerpts from CNS/ATM-1 Package SARPs Validation Exercise Specification", was presented by Mr Briand as an information paper. The paper contained some examples of validation exercise specifications developed within the European Strategy for SARPs Validation. Mr. Hof agreed to make available the Eurocontrol paper defining the graphical notation ("JPL") that had been used in WP/202 to describe the various system topologies.

ACTION 7/38 - MR HOF - MAKE AVAILABLE "JPL" GRAPHICAL NOTATION TO SUPPORT DESCRIPTION OF EXPERIMENTAL NETWORK CONFIGURATIONS

10.4 It had been agreed at the Banff WG2 meeting that certain high level information on all known Validation Tools be catalogued in a common format which was to be proposed by Mr Briand as a result of action 6/17. A number of Information Papers documenting information on validation tools were submitted by a number of States and Organisations. Mr Hof agreed to consolidate all the validation tool descriptions received into a complete draft that will be presented at the next WG2 meeting as a WG2 standing document.

ACTION 7/39 - MR HOF - CONSOLIDATE ALL AVAILABLE VALIDATION TOOL DESCRIPTIONS

10.5 WP/249, "CNS/ATM-1 Package Sub-Volume V Draft Validation Report", was presented by Mr. Whitfield as a result of action 6/16. The WP proposed a high level outline of the WG2 Validation Report. It was noted that, based upon decisions made at the Banff meetings, it was intended that the WGs develop and agree one common overall Validation Report (max. 6 pages) for all Sub-Volumes and that the October '96 meetings would agree the contents of the various Annexes for the common report. The WG agreed the proposed outline of the report and agreed that the description of the database remains in the Annex. Mr. Whitfield agreed to develop the next draft of the Report and was nominated as the WG2 representative on the activity that would draft the common ATNP Validation Report.

ACTION 7/40 - MR. WHITFIELD - CONTINUE DEVELOPMENT OF VALIDATION REPORT FOR SUBMISSION TO WG2/8

10.6 - WP/243, "Approach for Developing Validation Reports for CNS/ATM-1 Package Draft SARPs", was presented by Mr. Cossa. The WP proposed an approach for the development of a validation report for submission to ATNP2 based upon the decisions that had been made in the Banff WG meetings. The WP recalled that WG3 had adopted the approach WG2 had developed in Banff and documented in Flimsy #12 of its Banff meeting. The WP proposed that:

- WG2 proceed with validation of the draft Sub Volume V SARPs based upon Flimsy #12 of the Banff WG2 meeting
- WG2 co-ordinate with WG1 & WG3 for the development of a common WP for ATNP2 and that this WP (6 pages max.) be approved at the JWG meeting in June 1996 and subsequently submitted to ICAO for translation.
- WG2 support joint meetings in October to be focused on finalising detailed validation reports that would become attachments to the ATNP2 WP.
- WG2 consider a US invitation to host the October meetings

10.6.1 The WG accepted all of the proposals and agreed that Mr. Whitfield would be the WG2 representative to provide input to the common ATNP2 Validation WP. Mr. Cossa agreed to document the WG2 response in a flimsy (#19, Appendix T).

10.7 WP/205, "Progress Report and Initial Results of IDRP Large Scale Simulations", was briefly presented by Mr. Hof as an Information Paper. He stated that he would present a detailed report at the next WG2 meeting. Mr. Brangier questioned if whether any general conclusions could be drawn on the work to date. Mr. Hof believed that, from a technical perspective, a centralised routing structure demonstrated a higher performance with respect to route updating than a distributed architecture.

10.8 WP/206, "FAA Validation Roadmap: Approach & Plans", was presented by Mr. Feighery. The paper described the FAA approach, methodology and plans for validating ATN systems. Mr. Hof noted that the FAA had decided that their validation activities be focused on the ATNSI Specifications and not the draft SARPs as he had hoped. Mr. Sharma pointed out that any validation results brought to WG2 in support of SARPs acceptance must clearly reference the draft SARPs. This was noted. Other States/Organisations were encouraged to bring their validation plans to the next WG meeting.

10.9 WP/240, "ATN Time Performance Measurements Over Mode S", was briefly presented by Mr. Feighery as an information paper.

11. Review of Flimsies

11.1 Ms. Cosgrove presented Flimsy #1, (Appendix D), which documented the WG2 response to WP/238 (Flimsy 4-7 of WG 1/4). The meeting agreed that Ms Cosgrove would be the WG2 representative at the WG1 DG1 drafting group scheduled to take place at the end of March. It was agreed that Flimsy#1 would be forwarded to WG1 and the WG1 DG1. Mr. Sharma/Ms. Cosgrove presented Flimsy #3 (Appendix F) which had been jointly been developed by the Rapporteurs of the ATNP WGs. The WG noted that a WG1 DG1 meeting had already been scheduled for the end of March and agreed that Ms. Cosgrove would represent WG interests as per Flimsy #1 (Appendix D).

11.2 Flimsy #2, (Appendix E), "Change Proposal Material for Transport Security (DR67)", was presented by Mr. Briand as a result of the WGs discussions on DR67 under Agenda Item 5.1. The flimsy was agreed and it was agreed that the material be implemented in the next version of the draft SARPs (Version 4.0).

11.3 Flimsy #4 (Appendix G), "Terms of Reference for WG2 sub-Drafting Group" was presented by Mr. Hennig as a result of the WGs discussions as reported in paras. 7.2 through 7.5 of this report.. The final WG2 agreed text is at Appendix G.

11.4 Flimsy #7 (Appendix I) , "Change Proposal Material for Congestion Management", was presented by Mr. Briand as a result of WG discussions as reported in paras. 7.10 & 7.11. The final WG2 agreed text is at Appendix J and it was agreed that the material be implemented in the next draft of the SARPs (Version 4.0).

11.5 Flimsy #8 (Appendix J) "Changes in Chapter 5 APRLs Relating To TP4 Timer Value Settings", was presented by Mr. Cossa as a result of WG2 discussions reported in paras. 7.12 and 7.13 of this report. The final WG2 agreed text is at Appendix J and it was agreed that the material be implemented in the next draft of the SARPs (Version 4.0). IN reviewing Flimsy #8 it a general problem was noted as described in the action below.

ACTION 7/41 - TBA - REVIEW ATN SPECIFIC PRLS WITH RESPECT TO REPLACING THE WORDS "USE OF" WITH "SUPPORT OF"

11.6 Flimsy #9 (Appendix K) " Review of AMCP Responses to WG2's questions regarding VDL Priority Handling and ATN Priority Mapping", was presented by Ms. Thulin as a result of the WGs discussions reported in par. 7.14. The final WG2 agreed text is at Appendix K and it was agreed that Mr. Sharma forward the material to the ATNP Secretary for onward submission to the AMCP.

ACTION 7/43 - MR SHARMA - SUBMIT FLIMSY 9 & FLIMSY 11 TO PANEL SECRETARY RELATED TO AMCP CO-ORDINATION

11.7 Flimsy #10 (Appendix L), " Generation of the “Leave Event” upon call cleared due to Idle timer expiration", was presented by Mr Crenais as a result of the WGs discussions reported in par. 7.15.4. The final WG2 agreed text is at Appendix M and it was agreed that the material be implemented in the next draft of the SARPs (Version 4.0).

11.8 Flimsy 11 (Appendix M), " COMMUNIQUE TO AMCP CONCERNING VDL SNDCF REQUIREMENTS" was presented by Mr Graf as a result of the WGs discussions reported in par. 7.20 of this report. The final WG2 agreed text is at Appendix M and it was agreed that Mr. Sharma forward the material to the ATNP Secretary for onward submission to the AMCP.

11.9 Flimsy #13 (Appendix O) , "Clarification of draft ATN Internet SARPs Material on NSAP/TSAP Address Administration" was presented by Mr. Colliver as a result of the WGs discussions reported in par. 8.1 of this report. The final WG2 agreed text is at Appendix O and it was agreed that the material be implemented in the next draft of the SARPs (Version 4.0).

11.10 Flimsy #16 (Appendix Q) , " Conclusions of Guidance Material Discussion", was presented by Mr. Pellegrino as a result of the WGs discussions under Agenda Item 6. The flimsy solicited volunteers to support a drafting group meeting in the period 27th - 31st May. Mr. Sharma suggested that the meeting be "penciled in" and that WG2 members consider the available effort to support the proposed meeting and be in a position to provide an answer at the Brussels WG2 meeting.

11.11 Flimsy #18 (Appendix S) , "Action 7/6", was presented by Mr. Graf in response to the discussion under Agenda Item 5.1. The final WG2 agreed text is at Appendix S and it was agreed that the material be implemented in the next draft of the SARPs (Version 4.0).

11.12 Flimsy #19 (Appendix T), " Approach for Developing Validation Reports for CNS/ATM-1 Package Draft SARPS" was presented by Mr. Cossa as a result of the WG2 review of WP/243. The final WG2 agreed text is at Appendix T and it was agreed to forward the Flimsy to WG3.

11.13 Flimsy #20 was presented by Mr. Sharma. The flimsy was produced a s a result of discussions between the Rapporteurs of the WGs and proposed an approach for document configuration control based upon the procedures WG2 had employed to date. The WG therefore accepted the proposals in Flimsy #20.

11.14 Flimsy #12 (Appendix N), developed by WG3 was presented by Mr. Van Trees.

11.14.1 With respect to par. 2.1 of Flimsy #12 WG2 confirmed that the security label is not routinely transmitted air/ground but is encoded in the local reference information.

11.14.2 With respect to par. 2.2 of Flimsy #12 which requested that WG2 reconsider the encoding of the security label it was agreed that Mr. Van Trees submit a Change Request/CP to the CCB for further consideration.

ACTION 7/44 - MR VAN TREES - SUBMIT CR & DRAFT CP TO CCB RELATED TO SECURITY LABEL CHANGE AS INDICATED IN FLIMSY 12, REC. 2 ON BEHALF OF WG3.

11.14.3 It was agreed to defer discussion on par. 2.3 since Flimsy #21 (to be presented next) addressed the same subject in more detail.

11.14.4 The WG noted that WG3 wished to stet their previous recommendation to remove the CLTP draft SARPs from Sub Volume V and that WG3 planned to develop a CL ULA for the Brussels WG3 meeting.

11.14.5 The WG noted par. 4 of Flimsy #12 in that the expedited data option had been eliminated from the ULA. It was agreed that no consequential change was required in the Sub Volume V draft internet SARPs.

11.14.6 With respect to par. 5.1 of Flimsy #12 which requested that WG2 expand the existing note ref. 5.1.2 c) on the subject of RERs Mr. Van Trees agreed to develop an appropriate modification.

ACTION 7/45 - MR. VAN TREES - TO SUBMIT DR/CP TO CCB PROPOSING REVISIONS TO NOTE 5.1.2 C) TO REFLECT PARA. 5.1 OF WG2/FLIMSY #7-12.

11.14.7 With respect to para. 5.2 of Flimsy #12 which requested WG2 guidance on the achievable levels of RER through the use of transport checksum and subnetwork specific mechanisms it was agreed to action the development of guidance material on the subject.

ACTION 7/46 - MR VAN TREES - DEVELOP SUB VOLUME 5 GUIDANCE MATERIAL ON THE SUBJECT OF ACHIEVABLE RERS THROUGH THE USE OF TRANSPORT CHECKSUM AND SUBNETWORK SPECIFIC MECHANISMS IN RESPONSE TO WG2 FLIMSY 7-12, PARA. 5.2

11.14.8 Para. 6, ATN Naming Tree, was noted by the WG.

11.15 Flimsy #21 (Appendix V), Traffic Types", was presented by Mr. Van Trees. The flimsy had also been presented to the WG3 meeting (as Flimsy 5-6). The flimsy proposed to expand the number of traffic types that had been previously agreed in Banff. It was agreed that prior to WG2 modifying the current provisions related to the number/values of traffic types that a final firm set of requirements agreed by the ADSP which is scheduled to meet in March 96 be submitted. Mr. Colliver questioned whether the ADSP &/or WG3 fully understood the semantics of the traffic type and that, in reality, the necessary service would be available through appropriate network capacity planning & design. Mr Van Trees noted that WG2 had agreed an action (7/28) to develop guidance material on the semantics of traffic type. Mr. Van Trees questioned whether it was in fact appropriate to retain the values for the various traffic types in Sub Volume V or whether the would be better placed in Sub-Volume 1. Mr. Colliver & Mr Pearce supported that the values were indeed a Sub Volume 1 issue. This was agreed.

ACTION 7/47 - MR. VAN TREES - SUBMIT CR & DRAFT CP FOR ADDITIONAL TRAFFIC TYPE CLASSES AS INDICATED IN FLIMSY 21

12. Agenda Item 8 - CNS/ATM-2 Internet Requirements

12.1 WP/223, "Revised Recommendations in respect of WP/3-13, "Overall Security Concept, relating to the work of WG2", was presented by Mr. Sharma. Mr. Sharma reported that this WP was an input from WG1 and that WG2 had been asked to consider:

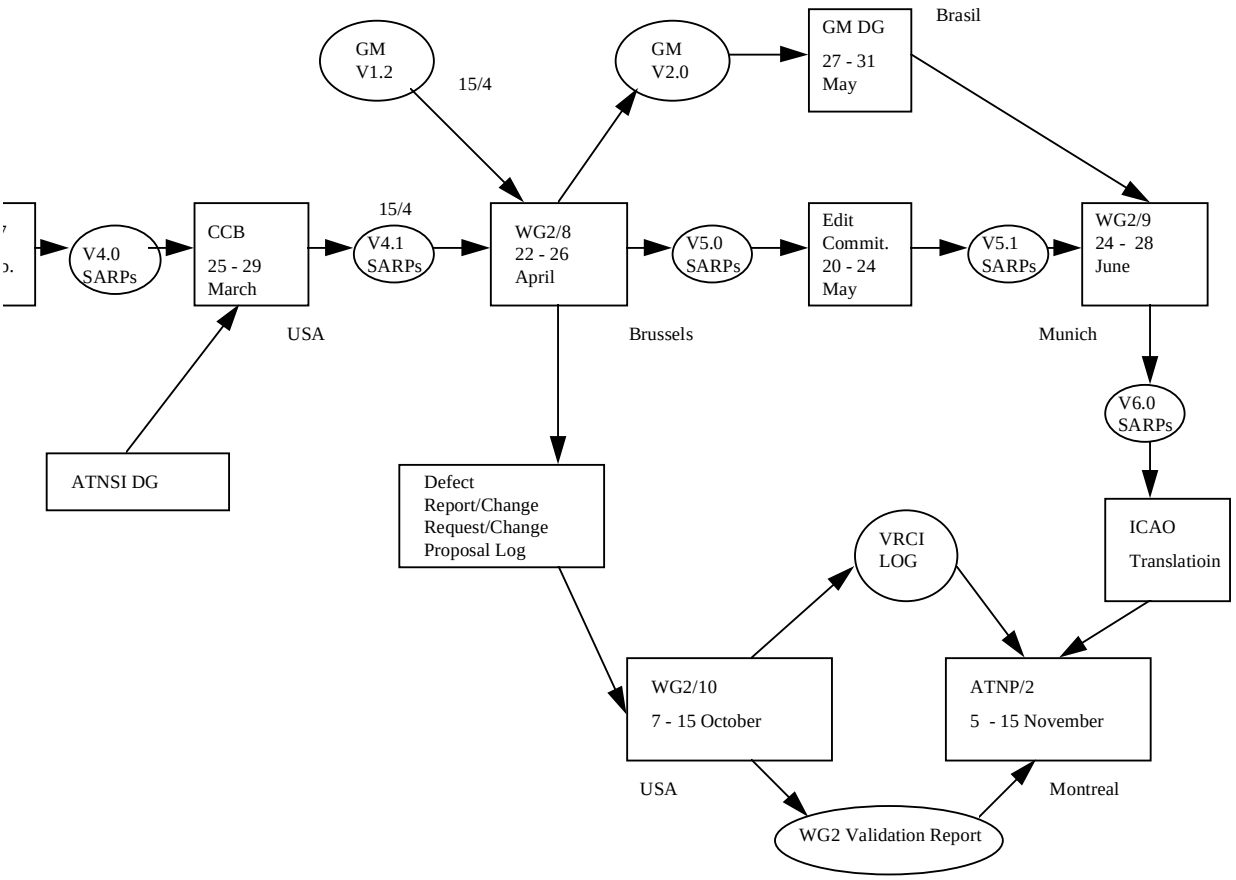
- the suitability of the Digital Signature Standard to protect routing information through the unauthorised use of IDRP in the context of CNS/ATM-2 &

- the suitability of the Message Authentication Check (MAC) to provide a means to protect systems management messages against modification, masquerade and replay in the context of CNS/ATM-2.

It was agreed that the on-going US action (4/1) would address these two areas for consideration post ATNP/2.

13. Agenda Item 9 - Future Work Plan up to ATNP/2

13.1 The WG agreed the following future work plan for WG2:



13.2 It was agreed that Version 4.0 of the draft SARPs would be made available in a "clean copy" as well as with revision marks visibly indicating all changes between Version 3.0 and 4.0. It was agreed that Version 4.0 would be made available on 26th February.

13.3 The WG agreed on the need to establish a small editorial committee at the next meeting which would be tasked with conducting a detailed **editorial** review of the draft SARPs. It was further agreed that, whilst the editorial committee was conducting its review that it would not be possible to incorporate any further changes. The resulting implication was that the Brussels meeting would be the last WG meeting to review any proposed technical changes to the draft SARPs. Any subsequent proposed changes would be stored in a "VRCI LOG". It was agreed that the edit committee would present Version 5.1 of the draft

SARPs to Munich. The draft resulting from Munich would be Version 6.0 and submitted to ICAO. The VRCI LOG would be maintained and reviewed at WG2/10 and submitted to ATNP/2 along with version 6.0 of the draft SARPs. The meeting identified a risk that guidance material may not be completed to a satisfactory level by the end of the June meeting. It was agreed to review the situation in Brussels.

13.4 Mr. Hof provided administrative details for the next WG2 meeting which Eurocontrol had kindly offered to host at their Head Quarters (Hareen/Brussels) in the period 22nd to 26th April. An information pack regarding the recommended hotel etc. was made available to participants. Participants were advised that Eurocontrol were planning to provide a daily coach service between the Hotel and EUROCONTROL HQ. Mr Hof asked that Hotel bookings be made by 8th March in order to ensure the preferential rate that EUROCONTROL had secured with the Hotel in question.

14. Agenda Item 10 - Any Other Business

14.1 Mr. Hof, noting the potentially critical role that the CCB has to play in the development of the next version of the SARPs requested that regular bi-weekly progress reports are submitted to the technical mailing list. Mr. Cossa, CCB Chair, agreed.

15. Agenda Item 11 - Conclusions & Action List

15.1 The draft action list was reviewed and dates assigned. The final action list is at Appendix W.

15.2 The WG agreed that they had made good progress given that 57 WPs had been submitted, 21 Flimsies reviewed and 47 actions assigned. Mr. Sharma thanked participants for attending, thanked Air Traffic Services Australia for the excellent venue and support that had been provided throughout the meeting. The meeting was then closed.

16. Appendix A - WG2 ATTENDANCE LIST

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17. Appendix B - List of Working Papers

No.	Title	Presented By	Agenda Item
193	Proposed Objectives, Schedule & Planning	A Sharma	1
194	CNS/ATM-1 SARPS & Guidance Material - Sub-Volume V:Internet Communications Service (Version 3.1, 31/12/95)	JM Crenais	5
195	The ATN Validation Archive/Server	JM Crenais	5.3
196	Guidance to Subnetwork Implementors, Part [8] of Guidance Material for ATN	V Bochkorev	6
197	Results of Congestion Management Simulations	H Hof	5.2
198	Proposed Text for SARPs Reference Section & Associated Change Proposals	JP Briand	5.2
199	IDRP Route Aggregation & ATN Requirements for Route Aggregation	H Hof	5.2
200	CNS/ATM-1 Package SARPs Requirement Database Tables	JP Briand	7
201	CNS/ATM-1 Package Internet SARPs Validation Objectives	JP Briand	7
202	Excerpts from CNS/ATM-1 Package SARPs Validation Exercise Specifications	JP Briand	7
203	Validation Tool Descriptions	JP Briand	7
204	ATN Address Registration	H Hof	4
205	Progress Report and Initial Results of IDRP Large Scale Simulations	H Hof	7
206	FAA Validation Roadmap: Approach and Plans	P Feighery	7
207	Proposed Guidance Material - Section 2	R Cossa	6
208	CNS/ATM-1 Security Label	S VanTrees	5.3
209	Tools for ATN Validation Experiments in Germany	A Herber	7
210	Delete Optional Non-Use of Airborne IDRP from Draft Sub Volume V SARPs	P Hennig	5.2
211	Paper Withdrawn		
212	Sub Volume V, Chapter 6 Guidance Material, Applications Use of ATN Internet	S VanTrees	6
213	Status of WG2 VRCIs	JM Crenais	5.1
214	Proposed Guidance Material for Section 3, Guidance for ATN Administrator	P Hennig	6
215	Proposed ATN Systems RFP PICS	P Hennig	5.2
216	NAT Requirements	JM Crenais	5.2
217	WG2 CCB Activity in Support of CNS/ATM-1 Internet SARPs	R Cossa	5.1
218	Systematic Review of Certain Option Selections for TP4 Timer Values	R Cossa	5.2

219	Need for more complete definition of TP4 Timer Settings & Usage	R Cossa	5.2
220	ATN Simulation with Realistic Terminal Information Service (ATIS) Message Statistics	R Cossa	7
221	Defects found in Internet SARPs Version 3.1 and proposed solutions	JM Crenais	5.2
222	UK Validation Tool Description	A Sharma	7
223	Revised Recommendations in respect of WP/3-13, "Overall Security Concept", relating to the work of WG2	A Sharma	8
224	Report of WG2 to WG1	A Sharma	3
225	WG2 WP to AMCP WGs & AMCP WG response	A Sharma	5.2
226	Description of SITA ATN Systems and tools available for SARPs Validation	H Thulin	7
227	Section 1 - Sub Volume V of the CNS/ATM-1 Package Guidance Material	C Pellegrino	6
228	Proposed Changes to Foreword of Sub-Volume V	A Sharma	5.2
229	Proposed Changes to Chapter 1 of Sub-Volume V	A Sharma	5.2
230	WG1\WP 3-22 - CIDIN Compatibility with the ATN	L Sayadian	5.2
231	Proposal for Congestion Management Algorithm	H Hof	5.2
232	ADS Europe Press Release	A Sharma	10
233	WG2 Future Work Plan	A Sharma	9
234	Proposed Guidance Material - Section 4 - (Part 1 - Transport Layer)	H Hof	6
235	Proposed Guidance Material - Section 4 - (Part 2 - Transport Layer)	H Hof	6
236	Route Merging Problem found during Validation	H Hof	5.2
237	NAT Planning	P Hennig	10
238	WG1 Flimsy 4-7, Request for System Level Requirements for inclusion in ATN SARPs Sub Volume I	S Cosgrove	3
239	Sub-Volume V - Technical Issues to be Resolved	KP Graf	4
240	ATN Time Performance Measurements over Mode S	R Jones	7
241	End through End Data Integrity and the ATN	R Jones	7
242	FAA Launches Data Link Web Site	R Jones	10
243	Approach for Developing Validation Reports for CNS/ATM-1 Draft SARPs	R Jones	7
244	Description of US Validation Tools	R Jones	7
245	Description of demonstration at IATA's "Gateway to the ATN" Seminar in Chicago, USA	R Jones	7
246	Paper Withdrawn	--------	-------
247	Change Proposal supporting the VDL SNDCF	A Roy	5.2
248	ARINC Validation Tools	A Roy	7
249	CNS/ATM-1 Package Sub Volume V Draft Validation Report	P Whitfield	7

250	Outstanding Defect Reports	JM Crenais	5.1

18. Appendix C - Meeting Agenda

0.	**Meeting Organisational Issues**	
1.	**Approval of Agenda and Objectives**	**193**
2.	**Approval of the Banff WG2 Meeting Report** **- Review of Action List**	**193**
3.	**Issues Arising out of ATNP WG1 Brisbane Meeting**	**224**
4.	**CNS/ATM-1 Registration Authority** **- para. 5 of Banff WG2 meeting report**	**204**
5.	**Review of Sub-Volume V of the CNS/ATM-1 SARPs (Version 3.1)** **- general comments/issues**	**194**
5.1	**Report of the CCB/Review of CCB Recommendations**	**217, 213**
5.2	**Review of Proposed Changes**	**216, 215, 210, 199, 197, 231, 218, 219, 225, 221, 230, 228, 229**
5.3	**General**	**208, 195**
6.	**Development of Sub-Volume V of the CNS/ATM-1 Guidance Material**	**227, 207, 214, 212, 196**
7.	**Development of the CNS/ATM-1 Internet SARPs Validation Report**	**201, 200, 203, 209, 222, 226, 202, 206, 205, 220, 248, 249, 240, 243, 244**
8.	**CNS/ATM-2 Internet Requirements**	**211, 223**

9. Future Work Plan up to ATNP/2
- draft SARPs
- guidance material
-Validation Report
- Validation Results

9.1 Future WG meetings

9.2 ATNP/2 Agenda

10. Any Other Business **232, 237, 242, 245**

11. Conclusions and Action List

19. Appendix D - (Flimsy #1) Response to Flimsy 4-7 of WG 1/4 System Level Requirements from Sub-Volume V

In response to WG1/4 filmsy 4-7 (Brisbane 30 Jan - 2 Feb) WG2 was requested to compile introductory material and high level technical requirements for inclusion in Sub-Volume 1. The following are the recommendations and actions determined by WG2:

1. WG2 decided that the introductory material from Sub-Volume V will remain in its current location.

2. The WG2 contribution to Sub-Volume 1 will consist of System Level Requirements which address general functions of the Internet Communications Service and those which are imposed on the Internet Communications Service by the Upper Layer Architecture and Applications.

3. A representative of WG2 is to submit the Sub-Volume V requirements to the Drafting Group System Level Requirements chapter editor. These requirements will be distributed on the ATN-Technical- Internet for comment and acceptance before submission.

4. WG2 suggests that WG2 WP 87 be used by WG1/2/3 as an initial WG2 input for defining the System Level Requirements for the ATN.

20. Appendix E (Flimsy #2) Change Proposal Material for Transport Security (DR67)

WG2 - Flimsy 7-2
Revision 3
9 February 1996

The attached CP material has been produced in order to resolve the outstanding DR67. The defect relates to the incomplete specification of the transport security provisions and its alignment with provisions of chapter 6. The proposed changes essentially define the "TC Security Label" and specifies how it is set on initiating and receiving sides.
After further review by the Working Group it was found that section 2.7.3.1 and 2.7.4.1 already addressed part of the missing requirements and that section 5.2.5 needed alignment w.r.t. Security Label passing at NS boundary. Consequently, this flimsy now proposes a new set of changes which takes into account the available text in 2.7. Although this text should preferably appear in section 5, it is proposed to minimize the changes by making a reference to it where appropriate.
Replacement text for sections 5.1.2, 5.2.2.2 and 5.2.5:

5.1.2 Internet Service Description

Note 1. - When the TS-USER requires use of the connection mode transport protocol the TS-USER will provide the following information to the TS-PROVIDER on a per Transport Connection basis:

a) called and calling TSAP address;

b) whether or not the expedited data option is required;

c) the required residual error rate (RER) to determine whether or not the transport checksum is required;

d) the Application Service Priority to be mapped into the resulting CLNP NPDUs according to Table 2-2;

e) the ATN Security Label specifying the ATN Traffic Type, i.e.

- *ATN Operational Communications;*
- *ATN Administrative Communications;*
- *General Communications;*
- *Systems Management Communications.*

In the case where the Traffic Type specified is ATN Operational Communications the TS-USER will additionally provide the Sub-type, i.e. Air Traffic Services Communications (ATSC) or Aeronautical Operational Control Communications (AOCC).

In the case of the ATSC sub-type the TS-USER will further specify the required Class of Communications Service from Class A to Class H.

In the case of the AOCC sub-type the TS-USER will further specify the subnetwork preference (including no preference).

The ATN Traffic Types and their associated Sub-types are specified in Chapter~~Section~~ 6, Table 6-1. The encoding of the ATN Security Label is specified in Chapter 6, Figure 6-1 and section 6.2.2.1 bullet 2.

Note 2. - The TS-USER is not required to specify any other Transport Service Quality of Service parameters.

[...]

5.2.2.2 Connection Mode Transport Security

Note.— The ATN security mechanism does not make use of the ISO/IEC 8073 Protection parameter. The support of the Protection parameter is therefore optional for CNS/ATM-1 Package.

~~1.~~ The transport layer shall allow a TS-user to specify a S~~s~~ecurity Label for a transport connection. The transport security shall be implemented as specified in 2.7.3.1. The Security Label shall be encoded according to the provisions of Chapter 6, section 6.2.2.1.~~in accordance with the four Security Types applicable to the ATN and their respective sub-types, as defined in Chapter~~Section 6 (Table 6-1):

~~b)~~ATN Operational Communications;

~~b)~~ATN Administrative Communications;

~~b)~~General Communications; and,

a) ~~ATN Systems Management Communications.~~

~~2.~~ The transport layer shall not alter the ~~TC~~ S~~s~~ecurity Label specified by the TS-user ~~[a8 t 0140]~~.

~~3.~~ The transport layer shall treat all connections without expressed security as default security ~~[a8 t 0150]~~.

~~4.~~ The default s~~s~~ecurity shall be ~~the lowest security (i.e.~~the zero-length Security Label value indicating "General Communications" traffic~~). [a8 t 0160]~~.

Note.— When default security label is specified, NPDUs are generated without CLNP Security parameter.

[...]

5.2.5.2.3.2 Network Layer Security.

~~The COTP shall use the security label provided in the T-CONNECT request as the value of the N-UNITDATA security parameter.~~

Note.— The use of the network layer security is specified in 2.7.4.1.

[...]

5.2.5.3.3 Network Quality of Service

~~*Note.— There are no requirements for the receiving transport entity to perform any actions based on the other network QOS parameters contained in the N-UNITDATA Indication primitive.*~~

5.2.5.3.3.1 Network Layer Security.

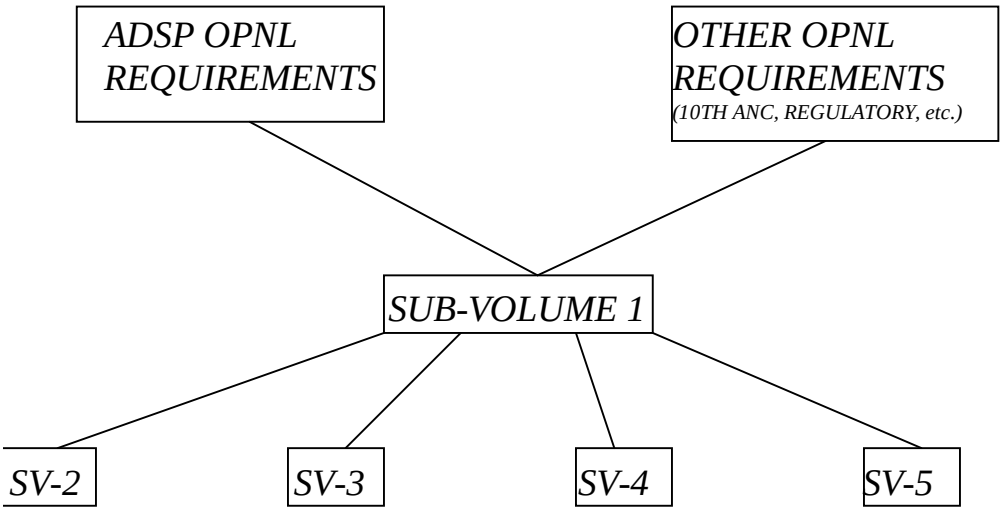
Note.— The use of the network layer security is specified in 2.7.4.1.

21. Appendix F (Flimsy #3) Principles for the Development of System Level Requirements for Sub-Volume 1

It is understood that the ATN SARP's will be published by ICAO as a single chapter of Annex 10 and even though each Sub-Volume requires some degree of being able to stand alone, the entire series has to be presented as a unified whole. The System Level Requirements will be in Sub-Volume 1 and the Detailed Requirements will be in the other Sub-Volumes.

System Level Requirements to be placed in Sub-Volume 1 can be derived from two directions:

-From above due to defined Operational Requirements and other sources
-From other draft Sub-Volume's of the ATN SARP's



DOWNWARD- The requirements can be explicit or implicit. They are derived system level requirements based on ADSP operational requirements, 10th ANC (FANS-2) such as those from Institutional Issues etc., existing functionality such as AFS, and assumed functionality that drove the definition of the ATN.

UPWARD- The system level requirements are those that cut across two or more of the detailed Sub-Volume (2 to 5) boundaries such as priority and routing policies etc. These requirements are not those specific "interface" SARP's which provide interconnectability between the elements covered by the Sub-Volumes.

RECOMMENDATION

- Form a drafting group consisting of the Editors of the Sub-Volumes and the Sub-Volume 1 drafting group to extract the system level requirements from the available documentation;
- Prepare a draft to be ready for presentation in Brussels
- Call a special WG1 one/two day focus meeting in conjunction with the Brussels meeting to review the draft
- Prepare a final draft for approval at the Munich WG1 meeting

22. Appendix G - (Flimsy #4) - Terms of Reference for WG2 sub-Drafting Group

WG2 - Flimsy 7-4
8 February 1996

At their 5-9 February meeting in Brisbane, WG2 agreed to form a sub-Drafting Group, specifically to accomplish recommendations from WP215 “ATN Systems Inc RFP PICS” namely:

o that a team of experts from Working Group 2 urgently undertake an analysis of the areas in which the attached RRI specification and its PICS (WP215) may differ from requirements expressed in the current draft ATN SARPs, and

o that these experts prepare change proposal(s) to correct identified defects in these draft ATN SARPs.

The following volunteered to staff the proposed sub-Drafting Group:

Paul Hennig/IATA (figurehead chairman)	paulhennig@aol.com
Francis Brangier/Thomson-CSF	brangier@ozemail.com.au
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Pat Feighery/MITRE	feighery@mitre.org
Aloke Roy/ARINC (subject to confirmation)	ar@arinc.com
Helene Thulin/SITA	thulin@eg.par.sita.int

The following schedule of deliverables and meetings was agreed to:

o Meet this week on Wednesday at 1730 to decide action plan, division of work, communication expectations, etc.;

o Submit a consolidated change proposal, indicating rationale (e.g., implementation timing versus interoperability risk, etc.) to the atn-internet-technical@cenatls.cena.dgac.fr mailing list by close of business Wednesday 13 March 1996 (version 3.0 is fallback, 3.1/4.0 is preferred);

NOTE THAT SUB-DRAFTING GROUP FACE-TO-FACE MEETINGS BEFORE 25 MARCH ARE NOT ANTICIPATED, AND EMAIL EXCHANGES ARE PROPOSED FOR THE 6 MARCH DELIVERABLE

o Join with the CCB in a meeting, if necessary, the week of 25-29 March to agree on CHANGE PROPOSAL(S);

o By close of business 15 April 1996, CENA SARPs Editor will send Version 4.1 to the atn-internet-technical@cenatls.cena.dgac.fr mailing list; and

o Sub-Drafting Group will report to the Working Group 2 meeting in Brussels.

23. Appendix H - (Flimsy #6) -Sub-Volume 1 - System Requirements

Introduction

This flimsy summarizes the discussion and agreements of WG3, provides guidance to WG1 DG1, and includes a schedule for the development of a working paper, which proposes Sub-Volume 1 and its impact on the other Sub-Volumes of the CNS/ATM-1 package, at the Brussels meeting. This flimsy has also been revised to incorporate the discussions of WG2 Flimsy 3/WG3 Flimsy 4. This flimsy provides WG3's response to WG1 Flimsy 4-7, which requests for support in the development of Sub-Volume 1.

Objectives

This flimsy discusses an approach for presenting the CNS/ATM-1 package SARPs as a family of Sub-Volumes that are structured such that high-level requirements are specified as system level requirements. This approach will:

a) Eliminate redundancies that currently exist in the Sub-Volumes.
b) Facilitate the development of SARPs by making them easier to maintain because as requirements mature, they only need to be revised in one place.
c) Provide a basis for high-level validation of the CNS/ATM-1 package SARPs.
d) Provide the ATNP's interpretation of the ADSP guidance material.
e) Provide a means to specify high-level requirements that currently are not specified in any of the existing SARPs or ADSP guidance material.
f) Reduce the amount of material requiring translation and review at ATNP/2.

Discussion

It is proposed that the family of Sub-Volumes defining the CNS/ATM-1 package provide a cohesive description of the CNS/ATM-1 package. High level requirements would be contained in Sub-Volume 1 and technical (i.e., low level and derived) requirements contained in other Sub-Volumes. The idea is that if we can identify relationships between different levels of requirements, we can specify the different levels of requirements, show the relationships, and eliminate redundancies across the Sub-Volumes. This approach will facilitate the development of the SARPs by making them easier to maintain and reduce the risk of not meeting schedules.

In addition to providing an overview of the CNS/ATM-1 package to its readers, Sub-Volume 1 can also be used to guide the authors of the Sub-Volumes 2-5 in developing SARPs material in a consistent way. Sub-Volume 1 can provide introductory material, including a common purpose and scope that would not need to be broken down further and included in Sub-Volumes 2-5, and a discussion of the structure of the family of Sub-Volumes. Also, the basis for determining system level requirements, a common lexicon (definitions), acronym list, functional descriptions, and general requirements are all potential candidates for inclusion in Sub-Volume 1, which can provide an overall description of the CNS/ATM-1 package. This would leave only technical requirements within the Sub-Volumes 2-5 that would be in one of two forms:

a) Low-level requirements that are directly traceable to a high-level system requirement, for example, the bit pattern and structure of a CPDLC message in ASN.1 provides the instantiation of a data communication message understood by the pilot, which is a system level requirement taken from PANSRAC and is consistent with voice communication message set.
b) Derived requirements that do not directly trace to a high-level system requirement but contribute to meeting a particular system level requirement (e.g., system management messages and priority primarily provide a way of meeting performance, integrity, and availability requirements, or the internet communications service and upper layers are needed to provide services to the distributed data applications, so that information collected by one end system can be used by another.)

At the ATNP Brisbane meeting in February 1996, WG3 discussed the scope of Sub-Volume 1 and its implications on the other Sub-Volumes. The following items are noted:

I. We need to capture system level requirements in the CNS/ATM-1 SARPs.

II. There are different classes of requirements, some whose source is not known, some are embedded with low-level requirements material, upward trace will be more difficult than trace to lower level requirements, etc.

III. System Level Requirements to be placed in Sub-Volume 1 can be derived from two directions: from above due to defined Operational Requirements and other sources, and from below coming from the other draft Sub-Volumes of the ATN SARP's. (See **Figure 1**)

A. DOWNWARD. The requirements can be explicit or implicit. They are derived system level requirements based on ADSP operational requirements, 10th ANC (FANS-2) such as those from Institutional Issues etc., existing functionality such as AFS, and assumed functionality that drove the definition of the ATN.

B. UPWARD. The system level requirements are those that cut across two or more of the detailed Sub-Volume (2 to 5) boundaries such as priority and routing policies etc. These requirements are not those specific "interface" SARP's which provide interconnectability between the elements covered by the Sub-Volumes.

IV. WG3 agreed that we need to determine to what degree should Sub-Volumes be standalone. You will need at least to reference Sub-Volume 1 in the other Sub-Volumes. Material will remain in other Sub-Volumes until at such time (e.g., Brussels meeting) it is determined that Sub-Volume 1 satisfied the needs of the other Sub-Volumes.

V. The ATN SARP's will be published by ICAO as a single chapter of Annex 10 and even though each Sub-Volume requires some degree of being able to stand alone, the entire series has to be presented as a unified whole. The System Level Requirements will be in Sub-Volume 1 and the Detailed Requirements will be in the other Sub-Volumes.

VI. The primary audience for Sub-Volumes 2-5 will be oriented toward the technically knowledgeable user; functional description and acronyms, etc. will be contained in Sub-Volume 1 for the more system level user.

VII. WG1 DG1 should provide a description of the relationship of Sub-Volume 1 to the other Sub-Volumes for inclusion in introduction of all Sub-Volumes so that no matter which Sub-Volume the reader starts with, s/he knows to go to Sub-Volume 1 for the overall system requirements.

VIII. System level requirements, acronyms and definitions, that are directly traceable and can be isolated to low-level requirements contained within a particular Sub-Volume may be contained within that Sub-Volume.

IX. It would be most effective for someone or a small group to produce a proposal, which should include the next draft of Sub-Volume 1 SARPs, a description of the impact on other Sub-Volumes, and a statement of future work. WG3 suggests that WG1 DG1 should come up with proposal. We should agree on general guidance for drafting group 1 to develop proposal. The WG1 DG1 should use this flimsy as guidance in the preparation of the working paper proposal for the Brussels meeting.

X. WG3 suggests that an editorial group consisting of SG/WG chairs should review material prepared by WG1 DG1 prior to submittal to the joint working group to take place at the Brussels meeting..

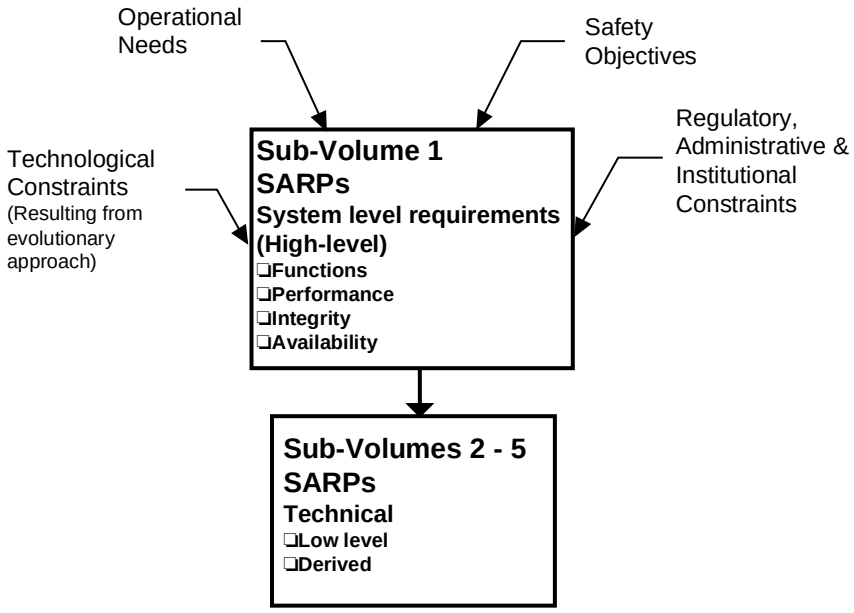


Figure 1: *Relationship of Sub-Volume 1 to other Sub-Volumes.*

Recommendation

The ATNP WG 2 and WG 3 are invited to consider that Sub-Volume 1 provide the main document to guide the reader through the other Sub-Volumes. It should include the following:

a) Common purpose and scope that is applicable to all of the Sub-Volumes of the CNS/ATM-1 package. Further breakdown of the purpose for each Sub-Volume will not be necessary as all provide standards and recommended practices (e.g., intended function, interoperability requirements) for each of the functions of the CNS/ATM-1 package.
b) Sub-Volume 1 include a global lexicon and acronym list that contains all definitions used in Sub-Volume 1 and in more than one of the other Sub-Volumes.
c) Functional description of the CNS/ATM-1 package.
d) High level requirements that are taken from specifications and material that are not under the control of the ATNP (e.g., ADSP guidance material, PANSRAC, Subnetwork requirements, etc.)

It is recognized that while Sub-Volume 1 is being drafted by the WG 1 drafting group, the group expects input from WG 2 and WG 3 to provide material for inclusion within Sub-Volume 1. The WG 1 drafting group would like to retain the responsibility to make editorial changes for internal consistency without changing the technical content of the information.

The following plan is proposed:

Who	When	What	Where/how
WG1 DG1	25-29 Mar 96	Prepare WP proposal	Seattle

WG1 DG1 Begin comment period for SG/WG chairs, SARPs editors, and others on request	31 Mar 96	Distribute WP proposal for comment	email, fed ex
Commentors	9 Apr 96 COB PST	Send comments to WG1 DG1 Tom_Kraft@mail.hq.faa.gov voice: 206-227-2129 fax: 206-227-1181 FAA, Northwest Mountain Region 1601 Lind Ave SW Renton, WA 98055-4056	email, fed ex
SG/WG chairs & WG1 DG1	15 Apr 96 Monday eve. 1800 hrs	Finalize WP proposal from WG1 DG1.	Brussels
JWG	20 Apr 96 Saturday 0900-1700	Reach agreement on WP proposal across all WGs and determine course and actions for Munich meeting.	Brussels

24. Appendix I - (Flimsy #7) - Change Proposal Material for Congestion Management

Revision 3

9 February 1996

The attached CP material has been produced as a result of the discussions on congestion management (WP197 and WP231). The principle of the algorithm presented in WP197 was adopted with some comments which have been taken into account:

1. CE bit should be set when NPDU leaves the ATN IS
2. CP material needs to be presented as SARPs text insertion/modification
3. All the parameters in the algorithm should be named and values/range of values recommended in a separate section.
4. A note should be added to indicate that the transport congestion avoidance algorithm applies only to COTS.
5. section 5.2.5 needs to be aligned
6. APRLs for CLNP need to reflect the required mechanisms

New CP material is attached as change text for chapters 5 and 6..

CP material for Chapter 6

6.2.4 Congestion Management

~~*Note.— No congestion management provisions have been defined for use in the Network Layer.*~~
Note.— The congestion management provisions in the network layer are intended to guarantee the notification to the transport layer of potential risks of congestion via the C/E bit conveyed in QOS Maintenance parameter. The transport layer will take measures to avoid congestion if a high proportion of NPDUs are received with C/E bit set.

6.2.4.1 Setting of the congestion experienced flag

1. The *congestion experienced* flag in the QoS maintenance parameter in the options part of an NPDU header shall initially be set to zero by the originator of the NPDU.
2. When a NPDU is being forwarded by an ATN IS, the IS shall examine the depth of the output queue selected for that NPDU. If the depth of the selected output queue exceeds a threshold α, the ATN IS shall set the *congestion experienced* flag in the QoS maintenance parameter in the options part of the NPDU header.
3. Once the *congestion experienced* flag in the QoS maintenance parameter in the options part of an NPDU header is set, it shall not be reset by any ATN IS traversed by the NPDU further along to the path towards the destination.
4. When a destination network entity receives an NPDU of which the *congestion experienced* flag is set in the QoS maintenance parameter in the options part of the header of the NPDU, it shall convey the congestion experienced information to the destination transport entity by local means.

6.2.4.2 Required algorithm values

The value settings defined in the following table shall be implemented:

Name	Description	Required range
α	Output queue threshold	> 0 % and ≤ 10%

[...]

6.3.2.5 Quality of Service Maintenance Function

~~*Note.—Use of this function is a local matter.*~~
ATN ES and IS Network entities shall support the Quality of Service Maintenance Function.
[...]

6.3.2.7 Congestion Notification Function

~~*Note.— There are no requirements for use of this function.*~~
ATN ES and IS Network entities shall support the Congestion Notification Function.
[...]

eQOSM-s	<s> QOS Maintenance	6.16, CNS/ATM-1 SARPs Ref. 6.3.2.5	O	M~~O~~
eQOSM-r	<r> QOS Maintenance	6.16, CNS/ATM-1 SARPs Ref. 6.3.2.5	O	M~~O~~
eCong-s	<s> Congestion Notification	6.18	eQOSM-s:M	eQOSM-s:M
eCong-r	<r> Congestion Notification	6.18	O	M~~O~~

edQOSM-s	<s> QOS Maintenance	7.5.6	eQOSM-s or eCong-s:M	eQOSM:M
edQOSM-r	<r> QOS Maintenance	7.5.6	eQOSM-r or eCong-r :M	eQOSM or eCong-r:M

eeQOSM-s	<s> QOS Maintenance	7.5.6	eQOSM-s or eCong-s:M	eQOSM-s or eCong-s:M~~OX~~
eeQOSM-r	<r> QOS Maintenance	7.5.6	eQOSM-r or eCong-r:M	eQOSM-r or eCong-r:M~~OX~~

eqQOSM-s	<s> QOS Maintenance	7.5.6	eQOSM-s or eCong-s:M	eQOSM:M~~OX~~
eqQOSM-r	<r> QOS Maintenance	7.5.6	eQOSM-r or eCong-r :M	eQOSM or eCong-r:M~~OX~~

epQOSM-s	<s> QOS Maintenance	7.5.6	eQOSM-s or eCong-s:M	eQOSM:M~~OX~~
epQOSM-r	<r> QOS Maintenance	7.5.6	eQOSM-r or eCong-r :M	eQOSM or eCong-r:M~~OX~~

iQOSM	<s> QOS Maintenance	6.16, CNS/ATM-1 SARPs Ref: 6.3.2.5	O	M~~OX~~
iCong	<s> Congestion Notification	6.18, CNS/ATM-1 SARPs Ref: 6.3.2.7	O	M~~O~~

iQOSNAVAIL	If requested QOS not available, deliver at different QOS	6.16	iQOSM:M	iQOSM:M
iQOSNOT	Notification of failure to meet requested QOS	6.16	iQOSM:O	iQOSM:M

	Which of the following formats of QOS are implemented ?			
iSADDQoS	Source Address Specific QoS	7.5.6.1	iQoSM:O.3	iQOSM:O
iDADDQoS	Destination Address Specific QoS	7.5.6.2	iQoSM:O.3	iQOSM:O
iGUNQoS	Globally Unique QoS	7.5.6.3	iQoSM:O.3	iQOSM:M
iSvTD	Sequencing versus Transit Delay	7.5.6.3	iGUNQoS:O.4	iGUNQoS:O.4
iCongE	Congestion Experienced	7.5.6.3	iGUNQoS:O.4	iGUNQoS:M~~O.4~~
iTDvCst	Transit Delay versus Cost	7.5.6.3	iGUNQoS:O.4	iGUNQoS:O.4
iREPvTD	Residual Error Probability versus Transit Delay	7.5.6.3	iGUNQoS:O.4	iGUNQoS:O.4
iREPvCst	Residual Error Probality versus Cost	7.5.6.3	iGUNQoS:O.4	iGUNQoS:O.4

O.3: The Quality of Service Maintenance parameter within a single NPDU specifies a QoS format code indicating Source Address Specific, Destination Address Specific or Globally Unique QoS.

O.4: If the QOS format code indicates that the Globally Unique QoS maintenance function is employed, then each bit in the associated parameter value may be set to indicate the order of intra and inter domain routing decisions based on QoS. The parameter values which apply to inter-domain routing are provided in Table 4 of ISO/IEC 10747.

idQOSM-s	<s> QOS Maintenance	7.5.6	M	M~~OX~~
idQOSM-r	<r> QOS Maintenance	7.5.6	iQOSM or iCong:M	iQOSM or iCong:M~~OX~~

ieQOSM-s	<s> QOS Maintenance	7.5.6	M	M~~OX~~
ieQOSM-r	<r> QOS Maintenance	7.5.6	iQOSM or iCong:M	iQOSM or iCong:M~~OX~~

iqQOSM-s	<s> QOS Maintenance	7.5.6	M	M~~OX~~
iqQOSM-r	<r> QOS Maintenance	7.5.6	iQOSM or iCong:M	iQOSM or ICong:M~~OX~~

ipQOSM-s	<s> QOS Maintenance	7.5.6	M	M~~OX~~
ipQOSM-r	<r> QOS Maintenance	7.5.6	iQOSM or iCong:M	iQOSM or ICong:M~~OX~~

CP material for chapter 5

5.2.4.1.1.2 Specific ATN Requirements.

[...]

ATN30	Congestion Avoidance Measures?	M~~O~~

[...]

5.2.6 Transport Layer Congestion Avoidance

~~*Note.— ATNP/WG2 recognizes the need for congestion management in the ATN. Specific algorithms for transport layer congestion management are not at present defined for the CNS/ATM-1 Package, therefore no requirement has been placed in these SARPs. However, specific requirements may be added at the sixth WG2 meeting (October 1995) based on the validation results presented at that meeting. This will not preclude the use of Explicit Flow Control for congestion avoidance which is a required element of COTP.*~~

Note 1.— The congestion avoidance mechanisms in the transport layer make use of the notification by the network layer of Congestion Experience flags in received NPDUs. This mechanism allows transport entities to reduce the window, i.e. the number of DT TPDUs allowed to be sent without acknowledgement, when the proportion of NPDUs indicating congestion reaches a certain threshold.

Note 2.— Transport Congestion Avoidance measures are applicable to connection oriented transport service only.

Note 3.— The algorithm defined in this section is applied for each transport connection individually.

The transport entity shall implement the congestion avoidance algorithm defined in this section.

5.2.6.1 Advertised window

A transport entity that is receiving TPDUs shall provide the transport entity that is sending the TPDUs with the lower window edge and the size of the *advertised window (W)* by using the explicit flow control mechanisms specified in ISO/IEC 8073.

*Note.— The **advertised window** is the window advertised by the receiver of the data to the sender of the data. It indicates the number of DT TPDUs that the receiver is willing to accept.*

5.2.6.2 Receiving Transport Entity Congestion Avoidance

5.2.6.2.1 Initialisation of the advertised window

The initial value of the advertised window W_0 that will be advertised to the sending transport entity shall have a locally configurable upper bound. This initial window shall be sent to the sending transport entity in the first CDT field transmitted.

5.2.6.2.2 Sampling Period

The receiving transport entity shall maintain a fixed value for the size of the advertised window *W* during a sampling period. The sampling period ends after *2*W* DT TPDUs have been received by the receiving transport entity.

Note.— The end of a sampling period determines the beginning of the next sampling period. The size of the advertised window may be modified at the end of a sampling period.

5.2.6.2.3 Counting of Received TPDUs in a Sampling Period

The receiving transport entity shall maintain a count *N*, equal to the number of TPDUs received, and a count, *NC*, equal to the total number of TPDUs received with an indication that congestion is experienced. All types of TPDUs shall be included in the counts for *N* and *NC*.

5.2.6.2.4 Action upon the end of a Sampling Period

The receiving transport entity shall take the following actions at the end of each sampling period:

1. If the count *NC* is less than λ % of the count *N*, the receiving transport entity shall increase the size of the advertised window by adding 1 up to a maximum based on the local buffer management policy. Otherwise, it shall decrease the size of the advertised window by multiplying it by β. If the result of this multiplication has a decimal part, the new window size shall be the truncated to its integer value. The size of the advertised window shall not go to a value smaller than 1.
2. The counts *N* and *NC* shall be reset to 0.
3. The new window size shall be transmitted to the sending transport entity in accordance with the explicit flow control mechanisms specified in ISO/IEC 8073.

Note.— If the window size is reduced by this procedure, the transport entity may have to reduce credit gradually so as to avoid the reduction of the upper window edge.

5.2.6.3~~6.2.4.2~~ Recommended algorithm values

***Recommendation**.— The value settings defined in the following table should be implemented:*

Name	Description	Recommended value/range
β	Window decrease factor	0.5 to 0.625
W_0	Initial window	1
λ	Congestion ratio	50 %

[...]

5.2.5.3.3 Network Quality of Service

~~Note.— There are no requirements for the receiving transport entity to perform any actions based on the other network QOS parameters contained in the N-UNITDATA Indication primitive.~~

5.2.5.3.3.2 Congestion Notification

The network layer shall indicate the value of the C/E bit contained in the QOS Maintenance Parameter.

25. Appendix J - (Flimsy #8) - Changes in Chapter 5 APRLs Relating To TP4 Timer Value Settings

Revision - 1

1. Introduction

Based upon discussions in the WG2/7 meeting, certain changes were agreed upon relating to the presentation of APRL specifications in Chapter 5 of the 3.1 Internet SARPS. These changed APRL requirements are presented in this paper.

2. Acknowledgment and Inactivity Timer Values

In Section 5.2.4.1.1.2, Specific ATN Requirements, Index Items ATN 15, 17, 23, and 25 relating to use of Acknowledgment and Inactivity Timers in CR and CC TPDUs have been changed from “O” optional to “M” mandatory.

3. Transport Priority

Transport priority is mandated by making the following changes in chapter 5:

In section 5.1.2 d), replace “ the application Service Priority to be mapped into the resulting CLNP NPDUs according to table 2.2; ” by “ the application Service Priority to be mapped into the resulting transport priority according to Table 2.3; ”

In section 5.2.4.1.1.2, items ATN14 and ATN22 : are changed from “O” to “ M”.

4. Other Changes

Based upon changes approved in WP 224, and discussion in WG2, Index Items ATN8, ATN30 and ATN 32 are changed from “O” to “M”.

5.2.4.1.1.2 Specific ATN Requirements.

Specific ATN Requirements.

The CNS/ATM-1 ATN COTP shall implement the features marked "M" in the table.

Index	Feature	CNS/ATM-1 Package Support
ATN1	Initiating CR TPDU?	M
ATN2	Responding to CR TPDU?	M
ATN3	Extended TPDU Numbering	O
ATN4	Acceptance of Non-use of Checksum?	M
ATN5	Use of Concatenation?	O
ATN6	Use of Selective Acknowledgement?	O
ATN7	Use of Request of Acknowledgment?	O
ATN8	Reduction of Credit Window	M
ATN9	ER TPDU Transmission?	O
ATN10	Use of Called Transport-Selector Parameter in CR TPDU?	M
ATN11	Use of Calling Transport-Selector Parameter in CR TPDU?	M
ATN12	Use of TPDU Size Parameter in CR TPDU?	O
ATN13	Use of the Additional Option Selection Parameter in CR TPDU?	M
ATN14	Use of the Priority Parameter in CR TPDU?	M
ATN15	Use of the Acknowledgment Timer Parameter in CR TPDU?	M
ATN16	Use of Preferred Maximum TPDU Size Parameter in CR TPDU?	O
ATN17	Use of Inactivity Time Parameter in CR TPDU?	M
ATN18	Use of Called Transport-Selector Parameter in CC TPDU?	M
ATN19	Use of Calling Transport-Selector Parameter in CC TPDU?	M
ATN20	Support of TPDU Size Parameter in CC TPDU?	O

5.2.4.1.1.2 Specific ATN Requirements.

Specific ATN Requirements (Continued)

The CNS/ATM-1 ATN COTP shall implement the features marked "M" in the table.

Index	Feature	CNS/ATM-1 Package Support
ATN21	Use of the Additional Option Selection Parameter in CC TPDU?	M
ATN22	Use of the Priority Parameter in CC TPDU?	M
ATN23	Use of the Acknowledgment Timer Parameter in CC TPDU?	M
ATN24	Use of Preferred Maximum TPDU Size Parameter in CC TPDU?	O
ATN25	Use of Inactivity Time Parameter in CC TPDU?	M
ATN26	1024 octets as the minimum preferred maximum TPDU size in a CR TPDU?	O
ATN27	1024 octets as the minimum preferred maximum TPDU size in a CC TPDU?	O
ATN28	1024 octets as the largest value of the maximum TPDU size parameter in a CR TPDU with preferred class 4?	O
ATN29	1024 octets as the largest value of the maximum TPDU size parameter which may be sent in a CC TPDU when class 4 is selected?	O
ATN30	Congestion Avoidance Measures?	M
ATN31	Quality of Service Mapping?	M
ATN32	Timer Settings?	M

Note: - ATN31 refers to the passing of the CE bit and the security parameter between the transport and the network entity and also the mapping of thepriority value between the transport and the network entity.

5. Use of Selective/Request Acknowledgment

In section 5.2.4.1.3.1.3, ISO 8073 Optional Functions, Index Items T4F31 and T4F32 have been changed from “M” mandatory to “MO” mandatory to implement, optional to use. An additional note is included at the end of this section clarifying the MO terminology.

ISO 8073 Optional Functions.

The ATN COTP shall implement the features marked "Predicate:M" in the table if the predicate is true, i.e. the ATN recommendation has been followed.

Index	Feature	ISO/IEC 8073 References	ISO Status	CNS/ATM-1 Package Support
T4F28	Data TPDU numbering (extended)	6.10	O	ATN3:M
T4F29	Non-use of checksum	6.17	O	ATN4:M
T4F30	Concatenation	6.4	O	ATN5:M
T4F31	Retention and acknowledgement of TPDUs Use of selective acknowledgement	6.13.4.3	O	**ATN6:MO**
T4F32	Retention and acknowledgement of TPDUs Use of request acknowledgement	6.13.4.2	O	**ATN7:MO**

T4F30:: The transport entity~~layer~~ shall not concatenate TPDUs from TCs with different transport priorities or different security types.
T4F31:: **Recommendation.—** *The Selective Acknowledgement should be used for conservation of bandwidth by preventing retransmission of correctly received out-of-sequence TPDUs.*
T4F32:: **Recommendation.—** *The Request of Acknowledgement should be used to reduce AK traffic*

Note.— *The classification "MO" indicates mandatory to implement, optional to use.*

6. TPDU Size Parameters

In section 5.2.4.1.5.2.1, Optional Parameters for a Connection request TPDU, Index Items I4CR9, TPDU Size and I4CR18, Preferred Maximum TPDU Size, have been changed from "M" mandatory to "MO" mandatory to implement, optional to use.

Optional Parameters for a Connection Request TPDU.

The ATN COTP shall implement the features marked "M" in the table.

Index	Supported parameters	ISO/IEC 8073 References	ISO Status	CNS/ATM-1 Package Support
I4CR7	Called Transport-Selector	13.3.4 a)	O	M
I4CR8	Calling Transport-Selector	13.3.4 a)	O	M
I4CR9	TPDU size	13.3.4 b)	O	**ATN12:MO**
I4CR10	Version Number	13.3.4 d)	O	O
I4CR11	Protection parameters	13.3.4 e)	O	O
I4CR12	Additional option selection	13.3.4 g)	O	M

I4CR13	Throughput	13.3.4 k)	O	O
I4CR14	Residual error rate	13.3.4 m)	O	O
I4CR15	Priority	13.3.4 n)	O	ATN14:M
I4CR16	Transit delay	13.3.4 p)	O	O
I4CR17	Acknowledgement time	13.3.4 j)	O	ATN15:M
I4CR18	Preferred maximum TPDU size	13.3.4 c)	O	**ATN16:MO**
I4CR19	Inactivity timer	13.3.4 r)	O	ATN17:M

I4CR9:: **Recommendation.—** *The transport layer should propose a TPDU size of 1024 octets or more*

Recommendation.— *The transport layer should use the TPDU size parameter rather than the preferred maximum TPDU size parameter.*

7. TPDU Size Negotiation

In section 5.2.4.1.9.3, TPDU Size Negotiation, the notes TS4 and TS3 and the recommendation for TS4 and TS3 (and also T4S1 and T4S2) have been consolidated into one recommentation, as follows: "TS3, TS4, T4S1, T4S2:: **Recommendation.**— To support efficient transmission of anticipated application data exchanges, a TPDU size (using either the maximum or preferred maximum parameters) resulting from TPDU size negotiation of at least 1024 octets is recommended."

TPDU Size Negotiation

Index	TPDU size	ISO/IEC 8073 References	ISO Status	CNS/ATM-1 Package Support
TS1	If maximum TPDU size is proposed in a CR TPDU then the initiator shall support all TPDU sizes from 128 octets to the maximum proposed, as defined in ISO 8073	14.6 e)	I4CR9:M	I4CR9:M
TS2	If the preferred maximum TPDU size parameter is used in a CR TPDU then the initiator shall support all TPDU sizes, except 0, that are multiples of 128 octets up to the preferred maximum proposed	14.6 e)	I4CR18:M	I4CR18:M

Index	TPDU size	ISO/IEC 8073 References	ISO Allowed values	CNS/ATM-1 Package Supported values
TS3	What is the largest value of the preferred maximum TPDU size parameter in a CR TPDU?	14.6 e)	any multiple of 128 octets	any multiple of 128 octets
TS4	What is the largest value of the preferred maximum TPDU size parameter in a CC TPDU?	14.6 e)	any multiple of 128 octets	any multiple of 128 octets

TS3, TS4:: *Note.— An implementation of the transport layer can support a preferred maximum TPDU size larger than 1024 octets.*

Index	TPDU size	ISO/IEC 8073 References	Allowed Values	CNS/ATM-1 Package Supported Values
T4S1	What is the largest value of the maximum TPDU size parameter in a CR TPDU with preferred class 4?	14.6 e)	One of 128, 256, 512, 1024, 2048, 4096, 8192	One of 128, 256, 512, 1024, 2048, 4096, 8192

T4S2	What is the largest value of the maximum TPDU size parameter which may be sent in the CC TPDU when class 4 is selected?	14.6 e)	128, 256, 512, 1024, 2048, 4096, 8192	128, 256, 512, 1024, 2048, 4096, 8192

TS3, TS4, T4S1, T4S2:: **Recommendation.**- *To support efficient transmission of anticipated application data exchanges, a TPDU size resulting from TPDU size negotiation (using either the maximum TPDU size or the preferred maximum TPDU size parameters) of at least 1024 octets is recommended.*

8. Acknowledgment Timer Specification

The following paragraph is to be inserted in Chapter 5 of the version 3.1 Internet SARPS:

5.4 Implementation

Recommendation. *The following timers and variables should be configurable on a TC basis:*

- *the local retransmission timer (T1),*
- *the acknowledgement timer (A_L),*
- *the window update timer (W),*
- *the inactivity timer (I),*
- *the frozen reference time (L),*
- *the maximum retransmission number (N),*
- *the persistence timer ®*

For use in the ATN, the acknowledgement timer (A_L) shall retain the ISO 8073 standard parameter length of 2 octets (16 bits) but express the value in seconds (rather than milliseconds). A maximum value of 65,565 seconds for this Acknowledgment Timer is therefore allowed for use within the ATN.

Note: - This change is in response to the unique requirements of the aeronautical environment which may require longer acknowledgment times.

26. Appendix K - (Flimsy #9) - Review of AMCP Responses to WG2's questions regarding VDL Priority Handling and ATN Priority Mapping

9 February, 1996

I. Introduction

During the ATNP WG meeting held in October 1995, the discussion relating to ATNP WG2 WP184 "Priority Definitions within Annex 10 and the Relationship to the ATN SARPS" raised several questions which have been forwarded to the AMCP WGD and WGC .

AMCP WG-D has then provided a response drafted at AMCP WG2 January 1996 meeting held in Sweden , requesting some changes in the guidance material proposed in the ATN internet SARPs for Mapping Message Categories and Associated Priority Levels.

In Brisbane, WG2 has reviewed this AMCP Working Group-D " Response to Questions Regarding VDL Priority Handling and ATN Priority Mapping", and and has the following comments :

II. Analysis

AMCP item a :

WG2 has understood the AMCP requirement to associate only messages of the ITU category "Flight regu

larity " ,or of higher ITU priority, to safety and regularity of flight.

In subvolume 5 of the CNS/ATM-1 Package Internet Draft SARPS,(version 3.0) - this ITU category "Flight regularity" has been subdivided in three different ATNP types of messages : "Flight regularity communications" , "Aeronautical Information Services ", "Network/System administration" which have respectively CLNP priority 8,7,6. Despite of this division, all these three message types are ITU "flight regularity" messages and therefore should be associated to regularity of flight.

This means that all messages of CLNP priorities 6 and greater are associated to safety and regularity of flight as proposed in Working paper WG2-184.

AMCP item b

WG2 has noted the absence of prioritisation of messages in VDL modes 1 and 2 .

AMCP item c

When available, the proposed VDL Mode-3 priority mapping will be incorporated in the CNS/ATM Package Internet guidance documentation. As the CNS/ATM-1 Package Internet guidance is scheduled to be provided to I.C.A.O for translation end of June 1996 , the proposed mapping information should be provided as an input to the ATNP Working Group 2 meeting which will be held in June 1996 in Munich (21 -27 June)

AMCP general comment

The ATN 8473 (CLNP) priority scheme is the one selected by the International Standards Organization in ISO 8473 . Changing this scheme would mean a deviation from the standard . For this reason, the change proposed by the AMCP cannot be adopted by ATNP WG2.

27. Appendix L - (Flimsy #10) Generation of the "Leave Event" upon call cleared due to Idle timer expiration

Introduction

Based on WP221, section 4, WG2 discussed whether or not the generation of a "Leave Event" by the mobile SNDCF is appropriate when a subnetwork connection is closed due to the expiration of the X.25 Idle timer.

The group agreed that, because the expiration of the Idle timer does not always ensure that subnetwork connectivity has effectively been lost (e.g. in case of multiple subnetwork connections), it is not desirable to systematically generate a "Leave Event" which would then result in the termination of the BIS-BIS connection.

But when a subnetwork connection which was previously closed due to the expiration of the Idle timer fails to be re-established, the probability that subnetwork connectivity has effectively been lost is greater and the generation of the "Leave Event" becomes then desirable in order to avoid long lived routing black holes.

Recommendation

In order to record these considerations in the CNS/ATM-1 SARPs, this flimsy proposes to add the following recommendation in section 3.5.2.12 (Air/Ground Route Termination), just following *Note 2*

Recommendation. *A "Leave Event" should not be generated by the mobile SNDCF when a subnetwork connection is closed due to the expiration of the X.25 Idle timer, except if this subnetwork connection fails to be re-established.*

28. Appendix M - (Flimsy #11) COMMUNIQUE TO AMCP CONCERNING VDL SNDCF REQUIREMENTS

A change to the Subnetwork Dependent Convergence Facility (SNDCF) for ISO 8208 mobile subnetworks as currently specified in Subvolume V (Internet Communications Service) of the CNS/ATM-1 Package Draft SARPs was proposed to the 7th meeting of ATNP WG 2 in order to support the requirements of the VDL subnetwork. In this context, ATNP WG 2 noted that additional SNDCF requirements for the VDL subnetwork have been developed by AMCP WG-C and defined in the VDL Draft SARPs.

ATNP WG 2 was concerned that the specification of subnetwork specific SNDCF requirements in the individual subnetwork SARPs may result in several subnetwork specific SNDCF implementations. ATNP WG 2 recognised the need for a single, generic SNDCF specification in the CNS/ATM-1 Package SARPs which accommodates the requirements of all mobile subnetworks that are foreseen to be used in the ATN in the timeframe of the CNS/ATM-1 Package.

AMCP is requested to bring any additional VDL SNDCF requirements to the attention of ATNP WG 2, preferably in the form of defect reports and associated change proposals against the current specification of the SNDCF for mobile ATN subnetworks (contained in Chapter 7 of Version 4.0 (dated February 1996) of Subvolume V of CNS/ATM-1 Package Draft SARPs). With this information ATNP WG 2 will review and amend the SNDCF specification, as appropriate.

Given that ATNP WG 2 intends to include the VDL SNDCF requirements into the generic SNDCF specification of the CNS/ATM-1 Package SARPs, it is recommended that no requirements related to the provision of the connectionless network service (ISO 8473) over the VDL subnetwork are included in the VDL SARPs.

Action

The ATNP secretary is asked to pass this inter-panel communications to the AMCP secretary for consideration at the next AMCP meeting. The VDL SNDCF requirements are required from AMCP by ATNP WG 2 until its next meeting (22-26 April 1996) in order to ensure that they are incorporated, where appropriate, in the CNS/ATM-1 Package SARPs which will be submitted to ICAO in June 1996 for presentation to ATNP/2 in November 1996.

29. Appendix N - (Flimsy #12) - TS-User Specification

Flimsy __WG2/12
Flimsy __WG3/9
Revision 1

ATNP Working Group 3

Gold Coast, Australia

TS-user Specification

This flimsy proposes certain agreements between Working Group 3 and Working Group 2 in the TS-user specification.

Introduction

WG 3 specifies the upper layers, which is the TS-user in terms of WG2.

Security Label

The Upper Layer Architecture (ULA) provides the application traffic type in order to complete the ATN CLNP security label.

WG3 understands that the 13 octets labeled TS-user security label in Figure 1 are required to encode the one-octet Traffic Type.

Recommendation WG3 seeks confirmation that the security label is not routinely transmitted air-ground, but rather is encoded in the SNDCF LREF information. V, 7.5.4.5.3.a would appear to indicate this. [WG2 confirmed this.]

Recommendation WG3 recommends that WG2 reconsider the encoding of the security label. It is not clear that the security label with the ATN OID derives from a CNS/ATM-1 security schema, or provides

forward compatibility to a known CNS/ATM-2 schema. [This is WG2 action 7-44 to draft a change request]

Recommendation WG3 recommends that WG2 incorporate the contents of the attached WG3 Flimsy in 2.7.1.1b, Table 2-2. WG3 notes that the traffic types have been extended to A-J. [This a WG2 action 7-45 is for WG3 to provide the approved table based on the material from the ADSP WG meeting in Dakar.]

Connectionless Transport

3.1 Recommendation WG3 wishes to stet the CLTP recommendation, as it is developing a CL ULA for the Brussels WG3 meeting. [Accepted by WG2]

Expedited Data Option

Reference 5.1.2 Note 1 - b) WG3 informs WG2 that the expedited data option has been eliminated from the ATN ULA, and will not be requested in CNS/ATM-1.

Residual Error Rate

Recommendation Reference 5.1.2 Note 1 - c) WG3 would prefer that the note be expanded to indicate that WG2 shall support RER below that determined solely by the use of the Fletcher's checksum. WG3 notes that some applications will always request the low RER (checksum required) in CNS/ATM-1. [WG3 to provide text to WG2]

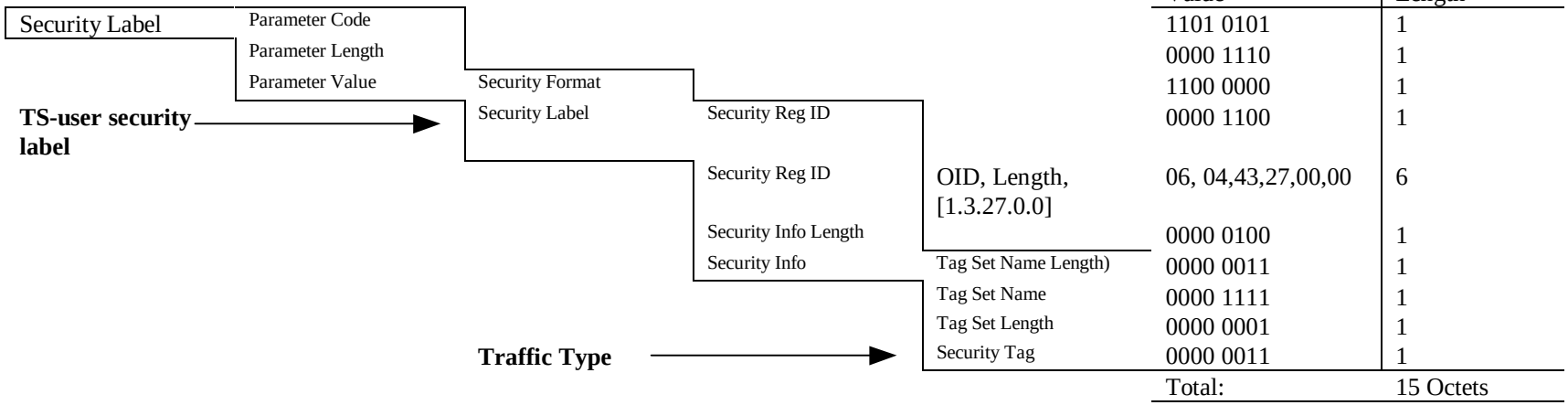
Recommendation WG3 notes that applications using the ATN ULA have requested RERs of 10^{-6} and 10^{-7}. WG3 therefore asks WG2 for guidance on support of these specified levels of RER through the use of the transport checksum and other subnetwork-dependent mechanisims. [Sub-Volume 1 guidance material]

ATN Naming Tree

WG3 offers the attached ATN naming hierarchy (see figure 2) for WG2 information purposes. WG2 has sole authority below the atn(0) arc.

Recommendation

It is recommended that WG2 review the material in this paper and action the Recommendations offered in 2.1.2, 2.1.3, 2.1.4, and 5.2.



	Value	Length
Parameter Code	1101 0101	1
Parameter Length	0000 1110	1
Security Format	1100 0000	1
Security Label	0000 1100	1
Security Reg ID	06, 04,43,27,00,00	6
Security Reg ID		
Security Info Length	0000 0100	1
Security Info	0000 0011	1
Tag Set Name Length)	0000 1111	1
Tag Set Name	0000 0001	1
Tag Set Length	0000 0011	1
Security Tag	Total:	15 Octets

Figure 1: Present Encoding of Security Label

All values are static in CNS/ATM-1 except the last.

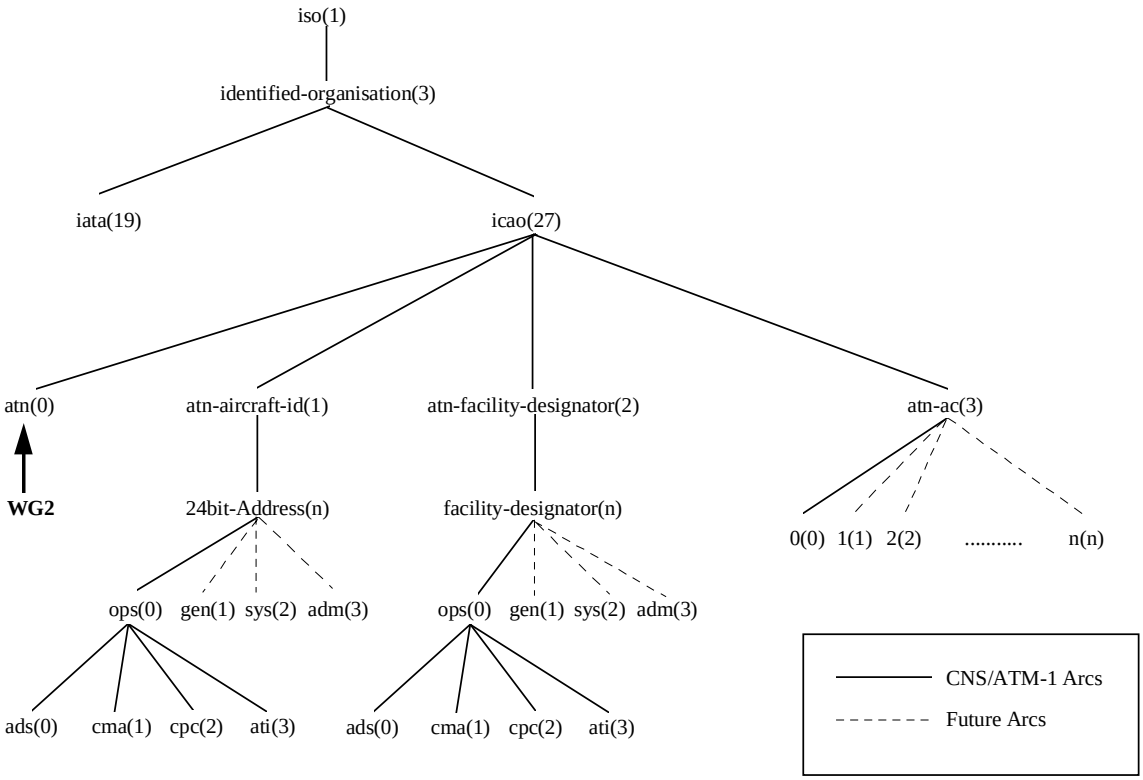


Figure 2: ATN Naming Tree

30. Appendix O - (Flimsy #13) - Clarification of draft ATN Internet SARPs Material on NSAP/TSAP Address Administration

Problem Statement

Based on the meeting discussion of ATNP/WG2-WP/239, the Working Group agreed that the addition of clarifying notes and guidance material was essential prior to the consideration of this material by the ATN Panel. In particular, the approach specified for delegation of administrative duties was unclear, and had caused confusion as to what exactly was being asked of the various involved parties, i.e. ICAO, IATA, the States, and the airlines. Concern was expressed that the mechanisms needed to support the early proliferation of the ATN would not be placed into service, given the lack of clarity as to exactly who should do what in this regard.

Thus, the Working Group agreed that two courses of action were in order:

a) First, it was agreed that guidance material must be developed prior to the meeting of ATNP/2, in order to expand on the subjects of address registration, assignment and publication, and in order to clarify the various dimensions of address administration (i.e. as regards NSAP, TSAP, NET, RDI and RDC identification, et. al.) that are required to place the ATN into operational service.

b) Second, it was agreed that certain urgent clarifying notes and certain changes in normative text were needed to support the SARPs validation process, and that these notes should be incorporated into the draft SARPs at the earliest editorial opportunity.

This flimsy proposes certain changes in Chapter 4 of the draft ATN Internet SARPs, in order to address the action identified on item (b) above.

Recommendations

It is proposed that the following changes be made to Chapter 4 of the draft ATN Internet SARPs:

Changes to Section 4.1: "General Provisions"

It is proposed that the notes in this section be structured as follows:

1. Change "Note" to "Note 1"

2. Add a new "Note 2" as follows:
   Note 2. - In general, where reference is made in this chapter to delegation of administrative responsibility by ICAO to States or organisations, it is expected that the practical effect of this delegation is that the respective States or organisations assume full administrative duties related to the delegated responsibilities. This means, for example, that if ICAO delegates to one or more States or organisations the responsibility for allocation, assignment and general administration of particular segments of the ATN address space, then those States or organisations must place into operation the necessary administrative structure to carry out the delegated allocation, assignment and administration activities. After having carried out the delegated administration of these field values, the State or organisation is then obliged to inform ICAO on a mutually agreed basis of administrative actions taken, so that ICAO may fulfill its responsibility as the ATN addressing authority in terms of publication and communication of this information for use by the civil aviation community. It is also important to note that a State or organisation may request delegation by ICAO of direct responsibility for its own administrative address space, if and when that State or organisation wishes to commence its own administrative activities. Finally, it is important to note that the role of ICAO in this area is one of international coordination, advice and consultation in order to ensure orderly and efficient operation of the global aspects of the ATN. Thus, ICAO may be expected to provide counsel to States and organisations having assumed such delegated

responsibilities, in order to ensure that address administration is carried out in a manner that supports the orderly and efficient global operation of the ATN internet.

Changes to Section 4.1.3: "Addressing Goal"

It is proposed that a new note be added as follows:

Note.- In meeting this goal, it is important to consider the impact of address assignment strategies on the quantity and frequency of exchange of routing information. In other words, while it is a given that the unambiguous identification of Network entities is the primary goal of the assignment of Network addresses, it is also true that without due caution, both routing information exchange efficiency and the resulting effectiveness of routing aggregation may be adversely affected. These effects must be considered when performing the administrative functions of address assignment and field value allocation.

Changes to Section 4.5.9: "NSAP Selector"

It is proposed that the text in sections 4.5.9.2 and 4.5.9.3 be replaced as follows:

4.5.9.2 Administration

SEL field values in the range [01] - [fd] shall be assigned and administered by the authority designated in the ADM field.

Note - Authority may be further delegated by the designated authority as required.

4.5.9.3 Range

Valid SEL field values shall be in the range [00 - ff].

The SEL field value for an intermediate-system network entity shall be [00], except for the case of an airborne intermediate-system not supporting IDRP. In that case, the SEL field value shall be [fe]. The SEL field value [ff] shall be reserved.

Note.- SEL values in stand-alone end-systems (i.e.in end-systems not co-located with intermediate-systems) are not constrained.

Changes to Section 4.6: "Definition of a Network Entity Title"

It is proposed that the text in former section 4.6 is amended as follows, and moved forward to become a new section 4.1.9

4.1.9 Definition of a Network Entity Title

Note 1.— A Network Entity Title (NET) is the unique name of a Network Entity (NE) contained in an end-system (ES) or in an intermediate-system (IS). It is used to unambiguously identify a given NE. An end-system or intermediate-system may comprise multiple NEs, in which case each will be identified by a unique NET.
Note 2.— NETs are assigned from the same addressing space as Network Service Access Point (NSAP) addresses. The authority which is responsible for allocating addresses from a given address space to NSAPs, may choose also to allocate NETs following the same procedures and rules it observes in the allocation of NSAPs.
Note 3.— NETs and NSAP addresses are syntactically indistinguishable; any value that the responsible authority is permitted to allocate as an NSAP address may be allocated as a NET.

Note 4.— The ATN NSAP Addressing Plan mandates specific values for the Selector (SEL) field for two types of NEs contained in ATN Intermediate Systems, as given in section 4.5.9.3

New Section on “Addressing Administrative Domains”

It is proposed that a new section 4.1.10 be added, as follows:

4.1.10 Addressing Administrative Domains

ATN end-systems or intermediate-systems located on-board general aviation aircraft shall belong to an ATSC administrative domain, whereas ATN systems located on-board commercial aircraft shall belong to an AINSC administrative domain.

31. Appendix P - Flimsy 14 - Issues to be addressed by guidance material

During the course of the meeting the following issues have arisen that require the development of supporting guidance material:

1. The incorporation of "non PICS" info in WP/215 (ATNSI) in to gm.

2. Explanation of the background related to the inclusion of the "optional non-use of IDRP" in the CNS/ATM-1 SARPs & the current IATA position (WP/210).

3. Information related to Route Aggregation (WP/199).

4. Information related to VDL subnet priority mapping (DR70).

5. Setting of TP4 timer values. (WP219)

6. Subnetwork priority invocation.

7. Use of X.25 Idle timer.

8. Receipt of security label from TS-User.

9. Traffic type semantic and IS handling of traffic type.

10. Address Registration Assignment, ground ARS values support of efficient routing, Routing Confederations

11. TSAP selector assignment.

32. Appendix Q - Flimsy 16 - Conclusions of Guidance Material Discussion

1. The new consolidate version of the Guidance Material(draft 1.1) should be available to Feb. 26 in CENA server(GM-V1-1.ZIP).
2. The deadline for all new material inputs to the GM editor is 5/4/96 (*note: try to send it as an attached file to editor's e-mail).*
3. The GM draft version 2.0 will be available in CENA server in 15/4/96.

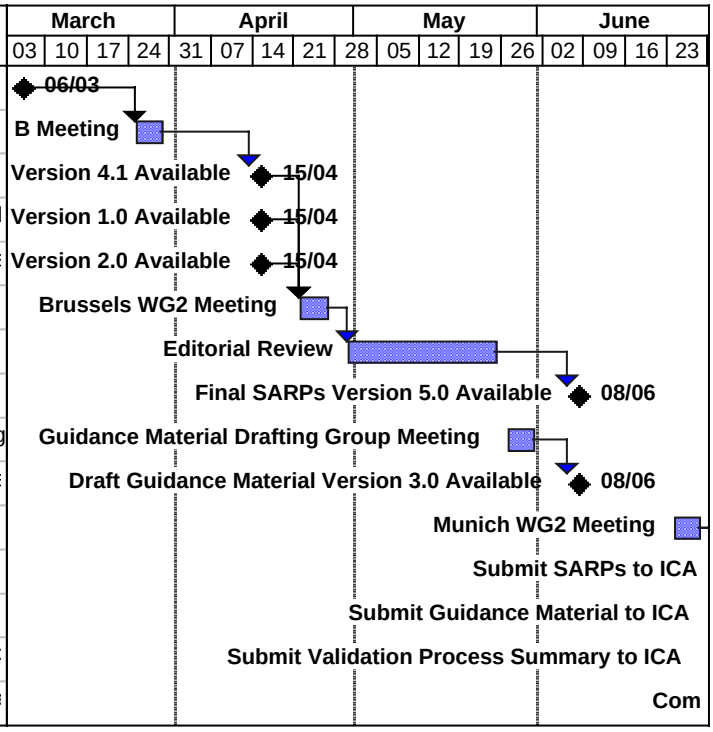
4. The future planning on GM is to create a Draft Group to review all GM in order to present it during the Munich meeting (June 96). The editor invites the volunteers to attend a meeting in Brazil (suggested date - May 27-31).

5. The editor new e-mail:

   carlosed@br.homeshopping.com.br

33. Appendix R - Flimsy 17 - Schedule of WG2 Activities Leading upto ATNP/2

ID	Task Name
4	ATNSI Drafting Group Change Proposal
5	CCB Meeting
6	Draft SARPs Version 4.1 Available
7	Draft Validation Report Version 1.0 Availal
8	Draft Guidance Material Version 2.0 Availa
9	Brussels WG2 Meeting
10	Editorial Review
11	Final SARPs Version 5.0 Available
12	Guidance Material Drafting Group Meeting
13	Draft Guidance Material Version 3.0 Availa
14	Munich WG2 Meeting
15	Submit SARPs to ICAO
16	Submit Guidance Material to ICAO
17	Submit Validation Process Summary to IC
18	Complete Validation Report Version ? Ava



33. Appendix S - Flimsy 18 - ACTION 7/6 - CHANGE PROPOSAL FOR 95010046.DR

This flimsy provides status information and proposed text changes in response to the defects presented in the agreed defect report 95010046.DR.

a) ***Defect:*** Incorrect abbreviation of the Initial Domain Part
Status: Change has been implemented in version 3.1 of Subvolume V

b) ***Defect:*** Missing reference for encoding rules for IA-5 character set
Status: Change has been implemented in version 3.1 of Subvolume V

c) ***Defect:*** Missing reference for ordinal encoding rules for ICAO Location Indicators
Proposed Change:
*"**4.5.7.1.1 ATSC Format***
..... encoded using ordinal rules defined insection 4.4.7."

*"**4.5.7.1.2 AINSC Format***
..... encoded using ordinal rules defined insection 4.4.7."

d) ***Defect:*** Incorrect predicate in APRL for ConnectionConfirm TPDU parameters
Status: Change has been implemented in version 3.1 of Subvolume V

e) ***Defect:*** Incorrect predicate in APRL for ConnectionConfirm TPDU parameters
Status: Change has been implemented in version 3.1 of Subvolume V

f) ***Defect:*** Inconsistent forward reference to Appendix 9
Proposed Change:
*"**5.2.5 Use of the ATN Network Service***
Note.— This section specifies how the COTP operates over the CLNS provided by the ATN network layer.

5.2.5.1 Use of the N-UNITDATA Request

5.2.5.1.a. The transport layer shall use the N-UNITDATA Request primitive, as defined in ISO 8073, to transmit TPDUs.
Note.— The way the parameters are exchanged between the transport entity and the Network Service is a local matter.

5.2.5. 1.b. The length indication given to the network service shall be equal to the length of the TPDU(s).
Note.— The maximum size of each TPDU is restricted to the locally defined maximum NSDU size.

[....]

5.2.5.2 Use of the N-UNITDATA Indication
The transport layer shall be capable of receiving TPDUs from the ATN network service using the N-UNITDATA indication primitive, as defined in ISO 8073.
Note.— The way the parameters are exchanged between the transport entity and the Network Service is a local matter.

g) ***Defect:*** Technically incorrect statement in note
Status: Change has been implemented in version 3.1 of Subvolume V

h) ***Defect:*** Inconsistent wording in note
Status: The changes proposed in Flimsy 7-2 and 7-7 to section 5.2.5.3.3 of Subvolume V remove the noted defect. Consequently, no further change proposal is required for this defect.

34. Appendix T - Flimsy 19 - Approach for Developing Validation Reports for CNS/ATM-1 Package Draft SARPS

1. Introduction

This document responds to ATNP WG2 Working Paper 243 in which several proposals were presented in relation to a coordinated approach among Working Groups 1, 2, and 3 for validation of the CNS/ATM-1 Package SARPS.

2. Response to Proposals

- In response to the first proposal presented in WG243, WG2 fully supports and agrees with the validation steps outlined. Validation Database development and maintenance has been initiated; definition of validation objectives and means has been accomplished; validation exercise design and specification is underway which will allow for the conduct and analysis of these exercises within specified time frames.

- In response to the second proposal, WG2 agrees with the need for developing a working paper to ATNP/2 describing the validation approach taken. In support of this effort, WG2 has nominated a representative to work with WGs 1 and 3 to prepare such a paper to be approved at a Joint Working Group meeting in June 1996 in Munich. The WG2 representative is Peter Whitfield whose e-mail address is: peter.whitfield@airservices.gov.au. Working Groups 1 and 3 are invited to nominate representatives to work with Mr. Whitfield.

- In response to the third proposal, WG2 agrees to the need for Working Group meetings in the October timeframe and accepts the invitation by the U.S. to participate, at a location to be determined. The preference of WG2 is to hold the meetings on the US west coast.

35. Appendix U - Flimsy 20 - Configuration Management

Flimsy 5-7
Feb. 8, 1996

Aeronautical Telecommunication Network

Working Group 3

Brisbane, Feb. 1996

As a result of discussions between the Rapporteurs of ATNP WG1/2/3 the following approach for document configuration control of the draft SARPs and Guidance Material is proposed:

Proposal

- Only the working groups can approve a new document baseline
- Document baseline versions will be identified with an *X*.0 version number (e.g., 1.0, 2.0, etc.)
- Each baseline version of the documents will include a revision record, and revision bars, indicating the revisions that have been incorporated since the prior baseline version
- Interim versions prepared by the document editors or drafting groups will be identified with a non-zero decimal extension (e.g. 1.1, 1.2, 1.3 etc.)

- Each interim version of the documents will include a revision record, and revision bars, indicating the revisions that have been incorporated since the prior baseline version

Recommendation

Each of the ATNP working groups is invited to adopt the above approach for document configuration control.

36. Appendix V - Flimsy 21 - Request for Additional Traffic Types

ATNP WG-3
Gold Coast, Australia
8 Feb. 96
Flimsy 5-6
Rev. 2

1. INTRODUCTION

1.1 This flimsy proposes to extend and complete the Traffic Type Table values that have been accepted as Chapter 6 material in the Air-Ground SARP's.

2. DISCUSSION

2.1 At the ATNP WG meeting in Banff, a proposal to fill the values of the Traffic Type tables was agreed. The values information had been requested from ADSP by ATNP, with no response having been received prior.

2.2 This information was presented to the ADSP @ the Montreal meeting in Nov./Dec. 95. The ADSP determined that it was imperative that each application needed to state the requirements for one way transfer delay, integrity, and availability.

2.3 The WG's created tables in Chapter 2 of the Draft Manual on ATS Data Link Applications, for up to five times per application. These values are to be reviewed and agreed to @ the Working Group of the Whole meeting in Dakar (3/96).

2.4 The tables in each part currently add up to thirteen (13) different values. It is assumed that the WGW meeting will result in a minimum of ten (10) different values, plus a NULL, being spread amongst the applications.

Note: The NULL value would equate to a "no preference" value.

2.5 It is important to note that the operational context of these values, allows a state to determine the level of performance needed for a given domain. This determination can be based on factors such as type of airspace/airport, separation minima, traffic density, service being provided, or time of day.

2.6 The reality of the "package" approach is likely to result in an extended lifetime and use of package 1 applications. For this reason, the following recommendations are submitted.

3. RECOMMENDATION

3.1 As the ADSP is continuing to derive its requirements for beyond CNS/ATM package 1, it is recommended that the ATNP include in its Chapter 6 Traffic Type tables, the values provided in
Appendix-A to this flimsy.

3.2 Although it may not be possible for CNS/ATM package 1 networks to meet some of the values listed, the addition of these values will provide implementors with the opportunity to size the networks for evolving uses of the package 1 applications, and forecast upgrade needs of network performance.

3.3 The ATNP WG-3 is invited to share this information with WG-2 for resolution of this proposal.

3.4 Results of the ATNP conclusions on this subject will be briefed @ the ADSP WGW meeting. It would be the authors intention, that ADSP include these values as the requirements for the Air-Ground and Ground-Ground applications in the Draft Manual on ATS Data Link Applications.

APPENDIX A

Traffic Type	95 % One Way Transfer Delay (seconds)
A	0.7
B	1.5
C	2.5
D	5
E	8
F	15
G	20
H	30
I	55
J	75

NOTE: CNS/ATM-1 Package validation activities are only expected to validate types E-J.

37. Appendix W - Current WG2 Action List

Ref	Deliverable	Actionee	By
	MELBOURNE WG		
	TOULOUSE WG		
	Fair Oaks		
Action - 4/1	To develop high level proposals for CNS/ATM-2 internet requirements for presentation to the October ATNP WG meetings.	Ron Cossa	WG2/8
	ROME		
	Banff		
6/8	To make the AMSS SARPS Validation Report available at WG2/7	Ron Cossa	WG2/8
6/14	To submit DR and Draft CP to CCB proposing corrections to traffic type terminology	Mr. Sharma	13/3
6/22	To provide IATA tool specification information based on guidance provided as a result of 6/17	Mr. Hennig	WG2/8
6/28	To provide consolidated draft guidance material to Rapporteur	Mr. Pellegrino	22/1
6/31	To complete draft Section 3 of Guidance Material	Mr. Sharma/Mr. Hennig	5/4
6/33	To complete draft Section 5 of Guidance Material	Mr. Roy	5/4
6/35	To complete draft Section 7 of Guidance Material	Mr. Hennig	5/4
	Brisbane		
7/1	Submit CP for DR 68 related to “RDI” terminology	H Hof	13/3
7/2	Section 4 GM to include amendments to subnetwork priority mapping table based on DR 70.	H Hof	5/4
7/3	Section 4 GM to address issues raised in DR’s 10, 19 & 50	H Hof	5/4
7/4	Submit CP for DR 31	H Hof	13/3
7/5	Submit CP for DR 44	H Hof	13/3
7/6	Submit CP for DR 46	KP Graf	complete - F7/18
7/7	Submit CP for DR 63 (Security parameter settings in BISPDUs)	H Hof	13/3
7/8	Submit CP related to procedures required for policy based route aggregation & policy based route information reduction based on WP/199.	H Hof	13/3

Ref	Deliverable	**Actionee**	**By**
7/9	Continue simulation work in order to provide optimal values for parameters in adopted Congestion Management algorithm (WP/197, 231)	H Hof	WG2/8
7/10	Submit CP's for WG agreed defects proposed in WP/221, Section 2.1	JM Crenais	13/3
7/11	Submit DR & CP based on Section 2.2 of WP/221	JM Crenais	13/3
7/12	Submit DR & CP based on Section 5 of WP/221	JM Crenais	13/3
7/13	Submit DR based on Section 7 of WP/221 (traffic type semantic & handling within IS's)	F Colliver	13/3
7/14	Submit DR & CP in order to align Chapter 2 & Chapter 6 with reference to security classification.	JM Crenais	13/3
7/15	Review CIDIN SNDCF SARPs in Sub-Vol V & , if appropriate, submit DR's & CP's taking into account WP/230 & applicable ASPP material.	R Cossa	13/3
7/16	Replace Sub-Vol. V Foreward with WP/228.	JM Crenais	26/2
7/17	Replace Sub-Vol. V Introduction with WP/229 as amended by WG.	JM Crenais	26/2
7/18	Submit CP based on WP/236	H Hof	13/3
7/19	Submit Change Reqs (CR's), DR's & CP's based on WP/247 & AMCP WG VDL specific Mobile SNDCF requirements.	A Roy	13/3
7/20	Implement WP/198 as amended by WG into Version 4.0 of Sub Vol V.	JM Crenais	26/2
7/21	Draft recommendation for ATNP/2 requesting that ICAO request States to establish registration authorities for NSAP addresses.	F Colliver	WG2/8
7/22	Propose format for NSAP address repository on CENA archive	A Sharma	WG2/8
7/23	Develop guidance material for route aggregation, route merging & route information reduction.	H Hof	5/4
7/24	To develop guidance material for VDL Mode 3/CLNP priority mapping	R Cossa	5/4
7/25	To develop guidance material related to TP4 timer settings	R Cossa	5/4
7/26	To develop guidance material related to subnetwork priority invocation & use of the X.25 Idle timer	H Thulin	5/4
7/27	To develop guidance material related to security label handling by transport service/entity	A Sharma	5/4
7/28	To develop guidance material related to traffic type semantic and handling within Iss.	F Colliver	5/4

Ref	Deliverable	Actionee	By
7/29	To develop guidance material related to (a) NSAP, TSAP address registration and assignment , (b) efficient assignment of ground ARS values to support efficient global routing	KP Graf	5/4
7/30	To develop guidance material on congestion management.	H Hof	5/4
7/31	To discuss with Panel Secratary latest submission date for guidance material	A Sharma	26/2
7/32	To consolidate guidance material available & issue next draft Version 1.2	C Pellegrino	15/4
7/33	Present results of NUT Concept Validation Trials	P Hennig	WG2/8
7/34	To review & comment on Validation Objectives	All	26/2
7/35	Develop proposal for Validation Assessment Process	H Hof	WG2/8
7/36	To review & comment on proposed SARPs Requirements Database	All	26/2
7/37	Update CCB Procedures (WP/66) to reflect EC as Requirements Database Editor & the requirement that CP's submitted must also propose corresponding changes to Requirements Database.	R Cossa	WG2/8
7/38	Make available "JPL" graphical notation to support description of experimental network configurations	H Hof	26/2
7/39	Consolidate all available Validation Tool Descriptions	H Hof	WG2/8
7/40	Continue development of Validation Report for submission to WG2/8	P Whitfield	WG2/8
7/41	Review ATN Specific PRLs with respect to replacingthe words "use of" with "support of"	TBA	TBA
7/42	Submit WG2 "SYstem Level Requirements" to WG1 Sub-Volume 1 Drafting Group	S Cosgrove	18/3
7/43	Submit Flimsy 9 & Flimsy 11 to Panel Secratary related to AMCP co-ordination	A Sharma	26/2
7/44	Submit CR & draft CP to CCB related to security label change as indicated in Flimsy 12, Rec. 2 on behalf of WG3.	S VanTrees	13/3
7/45	To submit DR/CP to CCB proposing revisions to note 5.1.2 c) to reflect para. 5.1 of WG2/Flimsy #7-12	S VanTrees	13/3
7/46	Develop Sub Volume 5 Guidance Material on the subject of achievable RERs through the use of transpoirt checksum and subnetwork specific mechanisms in response to WG2 Flimsy 7-12, para. 5.2	S Van Trees	15/4

Ref	Deliverable	**Actionee**	**By**
7/47	Submit CR & draft CP to CCB related to security label change as indicated in Flimsy 12, Rec. 2 on behalf of WG3	S Van Trees	13/3