

AERONAUTICAL TELECOMMUNICATION NETWORK PANEL**Report of the 3rd ATNP Working Group B Meeting****15-18 March 2002, Phuket, Thailand****1. Meeting Organisational Issues**

- 1.1 The third meeting of the ICAO Aeronautical Telecommunication Network Panel Working Group B was held in Phuket, Thailand on the 15th - 18th March 2001. The meeting was chaired by the Rapporteur, Brian Cardwell, and was attended by some 18 Members from 5 States and 1 International Organisation. 22 Working Papers (WP) and 3 Information Papers were presented. A copy of the Agenda for the meeting is at Appendix A, the list of Working Papers is attached at Appendix B and the list of attendees is at Appendix C.
- 1.2 The chairman thanked AEROTHAI on behalf of WG B for hosting the meeting.
- 1.3 As there were new members, the chairman invited the attendees to introduce themselves.

2. Approval of the Agenda

The agenda, as presented in WP301, was approved.

3. High Level Update of Main Work Items since last meeting

The Rapporteur explained that ICAO had received the proposed Doc 9705 Edition 3, although quite a while after the Honolulu meetings and it had required ICAO input to bring parts of it up to their format. The Panel Secretary had made the final material available to the Rapporteurs in January and the Editors checked the material over in the short time they were given. Some SVs still required further corrections and these were all submitted and corrected immediately prior to the Phuket meetings - there were very limited changes required in the Comms SVs. The Ed 3 files will not be changed further, with the exception of SV6 which requires some minor ASN.1 updates, and are awaiting publication by ICAO - preferably on a CD-ROM rather than on paper.

Most of the GM files were placed on the CENA server for review prior to the meeting. These documents will be checked over for a final time in this meeting and given to ICAO (along with the rest of the Doc 9739 Ed 2 material) for publication in the near future.

4. Reports of previous meetings**4.1. Review of WG-B/2 Report**

The Rapporteur presented WP302, "Report of 2nd WG B Meeting" to check progression of actions and work items.

Action 1/5, relating to zlib, remained open and the Rapporteur took responsibility for closing this action before the next meeting.

Action 1/5 - contact zlib author/owner to protect ATN future use of zlib - Cardwell

Action 1/12 - preparation of the Doc 9739 Ed 2 Part V intro - WP324 in this meeting would address this action.

Para 4.1.3. - the update of the CLNP Priority Mapping table would be addressed during the Phuket meetings.

All the work items listed in the report had been progressed and would be reported on further in this meeting.

4.2. SG Meeting Reports

4.2.1. Brian Cardwell, the SG B1 Chairman, presented WP321, "Report of the third SG B1 Meeting". The SG had:

- reviewed the SV5-related GM in Doc 9739 Ed.2 and, with minor modifications, had approved it for publication.
- progressed the primary work item, namely the development of an IP SNDCF.
- noted the work of AEEC 664 which is working on the standardisation of TCP/IP for use within airframes.
- reviewed and edited an IP Position Statement to explain the high-level intent of development of the IP SNDCF - this would not be presented to WG B (most participants had already seen it) but would be presented to the JWG meeting instead.
- received an IP on Enterprise Management which will be presented again in this meeting (IP303) in order that System Management experts can also express a view.
- noted that a few clarification PDRs may be appropriate against SV 5 - these would be forthcoming over the next few months.
- received a paper from the FAA outlining the work of the Asia/Pac transition task force. ICD had been developed to enable the deployment of a ground ATN Internetwork in support of, initially, the AMHS application - a positive step towards implementation.

4.2.2. Tony Kerr, the acting SG B2 Chairman, presented WP314, "Draft Report of SGB2 Meeting 2". This reported that the SG had:

- decided that the Doc 9739 Ed 2 Guidance Material relating to SVs 4, 6 and 7 was complete and ready for publication.
- decided that the "Convergent MIB" document was a further piece of GM that should be shared, although its size prevented its inclusion in the GM. This should ideally be placed on the ICAO website alongside Doc 9739 Ed 2, but the Convergent MIB contains commercial logos. This doc was placed on the meeting archive as IP323, but was not printed nor reviewed.

The Panel Secretary confirmed that it could not be placed on the ICAO website with the logos. Christine Ricci agreed to try to contact the companies involved and see if the logos could be removed.

Action 3/1 - Contact ProATN & ACI to see if they are willing to have their logos removed from the Convergent MIB in order that it can be published on the ICAO website
- Christine Ricci

- reviewed a draft of additional implementation GM for the Secure Dialogue Service - this would not be included in 9739 Ed 2 but would be further developed and included in a later issue of Doc 9739.
- reviewed 3 new PDRs against SV 4 - these would be progressed with SG B3 and handled through the CCB.
- noted that Aerothai had reported that they had started an implementation of the ATN SM provisions - a positive step towards ATN which will provide further validation evidence.

4.2.3. Tom McParland, the new SG B3 Chairman, presented WP319, " Draft Report of SGB3 Meeting 5". This reported that:

- there had been no changes to SV-8 since Honolulu.
- two new draft PDRs are under discussion.
- the work programme was being progressed as planned - see section 10.4 for details.
- the Sec GM and CONOPS had been reviewed and were recommended for publication.
- no new validation activity had been reported.

More details can be found in section 10 of this report. There was a question regarding why the subgroup was developing confidentiality SARPs. The answer was that the airlines were understood to require this functionality - the rapporteur agreed to check with the IATA Panel Member that this was still the case. Tony Kerr added that secure connectionless profile was also a requirement, given the work of AEEC 637 - the SG would be addressing this as part of the work programme.

5. Input from Other Groups

5.1. Panel Secretary's Report

The Panel Secretary's update was WP 322. This had no direct impact on WG B.

5.2. Communiqués from AMCP?

No inputs.

5.3. OPLINKP

No inputs.

6. SV4 - ULCS

6.1. Guidance Material Status

WP304, the SV4 SARPs & GM Status Report, stated that the ULCS- related GM was ready for publication.

Tony Kerr had issued WP310 prior to the WG B meeting. It informed WG B members where the GM could be found on the CENA server, that the material should be reviewed prior to the meeting and that any comments should be brought to the meeting. There were no further comments and WG B endorsed the recommendation to publish this as part of Doc 9739 Ed. 2 without further delay.

6.2. Doc 9705 Ed 3 Status

WP304, the SV4 SARPs & GM Status Report, reported three new PDRs had been raised against SV4. Additionally it lists all the enhancements made to Ed 2 to produce Ed 3 and provides a development timeline.

Tony Kerr presented WP306, "SME4 Status Report" which lists and explains all the PDRs raised against SV4 since Ed 2 was published. It indicates that there are 3 open PDRs and that these are under discussion. These were accepted in the Phuket meetings and progression will require B2, B3 and A2 participation. This WP also states that the ULCS ASN.1 has been placed on the CENA server for use by implementers.

6.3. Further Validation Results

Tony Kerr presented IP307, "Eurocontrol GACS Project Update". The WG noted the continued development of this project and the demonstration of AOC using the ATN in accordance with AEEC 637. In particular, the paper reports the further developments of the GACS project including the integration of a commercial ground end-system. Two major airlines and a DSP are involved in this activity.

6.4. Future Work Programme & Schedule

SG B2 will work on the 3 new PDRs in association with SGs B3 and A2. A simultaneous meeting is likely to be required, although efforts should be made to use telephone and video conferencing where feasible.

SG B2 will also progress the development of further GM for Secure Dialogue Service implementation issues.

7. SV5 - ICS

7.1. SV5 Guidance Material Status

WP309 had informed SG B1 and WG B members that the SV5-related Doc 9739 Ed 2 GM was on the CENA Server for review. It requested that members print and review the GM prior to the meeting and bring any comments to the meeting. There had been comments in SG B1 and a subsequent update to the GM was undertaken. There were no further comments in WG B and the document was recommended for immediate publication as part of Doc 9739 Ed 2.

7.2. Doc 9705 Ed 3 Status

The SG B1 meeting report (WP321) indicated that SV5 Ed 3 is ready for publication although a few clarification PDRs were likely over the next few months.

7.3. Further Validation Results

The SG B1 meeting report (WP321) did not include any new validation material, but did report on the operational experience of the Asia/Pac Transition Task Force in planning the deployment of a ground ATN Internetwork.

7.4. Future Work Programme & Schedule

The SG B1 meeting report (WP321) indicated work would continue on the development of the IP SND CF and that a meeting would be held in 3-4 months time - date/location tba.

8. SV6 - SM

8.1. SV6 Guidance Material Status

WP311 & WP312 had been issued before the meeting to inform members that the SV6 related GM was available on the CENA server, to request members to print and review the material and to bring comments to the meeting.

Tony Kerr presented WP305, "SV VI SARPs & GM Status report", which reported that both the SM GM and CONOPs were stable and approved by SG B2. WG B endorsed this and recommended that the SV6 related GM is published as part of Doc 9739 Ed 2 without delay.

8.2. Doc 9705 Ed 3 Status

WP305 also reported on the SV6 SARPs. Errors in the ASN.1 had been found in the ICAO version of SV6 that was published on the ICAO website in January. These had been identified to ICAO and will be corrected in the published version of Doc 9705 Ed 3.

8.3. Further Validation Results

SG B2 had reported that AEROTHAI plans to commence an implementation of the Ed3 SM technical provisions. This may lead to PDRs or additional validation material in due course.

8.4. Future Work Programme & Schedule

Kelly Kitchens / Leon Sayadian presented IP303, "Enterprise Management of ATM Communication Systems", a paper that had been forwarded from SG B1. This paper outlined the need for the ATN SARPs/GM to provide a mechanism to co-exist with SNMP-based products, especially as the ATN starts to accommodate IP subnets. The System Management experts in the WG thought that the current SARPs and GM adequately covered this subject, especially given the limited amount of information that States would be willing to / were required to make available across State boundaries. It was concluded that further study could be worthwhile and that if any new issues arose a WP should be submitted to SG B2.

Action 3/2 - Further study the CMIP/SNMP interaction issue to determine if the current SARPs/GM adequately address this. Any subsequent papers to SG B2 - Leon Sayadian

It was noted that a future SV6 work item was the development of secure CMIP provisions.

9. SV7 - DIRECTORY

The DIR report was included in WP314 and supplemented verbally. The DIR GM was complete and one copy had been printed. The material had been restructured and renumbered since Honolulu, but the only new material was the acronyms and definitions section. The DIR CONOPS was untouched since Honolulu. WG B endorsed both sections for publication in Doc 9739 Ed.2.

The Doc 9705 Ed3 SARPs had been reviewed on the ICAO server and no changes were necessary. There were no PDRs against DIR and no changes were expected.

The FAA is developing a DIR implementation that may lead to PDRs and additional validation material. A validation paper is expected in the next 12 months.

10. SV8 - SECURITY**10.1. SV8 Guidance Material Status**

As reported in the SG B3 meeting report, the Security GM and Sec CONOPs were ready for publication after this meeting. WG B endorsed this proposal and recommends that the Security GM is published without delay as part of Doc 9739 Ed 2 package.

10.2. Doc 9705 Ed 3 Status

The Editor reviewed the pre-publication version of SV8 that was placed on the ICAO website and only one small error was found. This has been corrected and the file will be published as part of the Ed. 3 document in the near future.

10.3. Further Validation Results

No further validation results were reported, although more validation of the existing Sec SARPs is planned as part of the validation of the Confidentiality enhancement. This will be complete in about 12 months.

10.4. Future Work Programme & Schedule

Tom McParland presented WP316, "Proposal to Extend IDRP Security Solution for Optional Protection of Routed CLNP PDUs". This paper proposed a mechanism to protect CLNP packets by encapsulating them in IDRP packets. The discussion concluded that it would be necessary for an operational requirement to be presented and analysed before extension work of this type was undertaken. Definitions of operational requirements are invited by WP to the next WG B meeting.

Tom McParland presented WP317, "Communique to AEEC on Avionics key management requirement". This paper recognised that, although ATNP had developed the ATN Security Services, there was a need for airframes to have, and manage, the Security Keys. Responsibility for this procedural work onboard an airframe was thought to rest within the AEEC bodies and this paper was an initiating communique to inform AEEC of the existence of the ATN Security SARPs and the requirements they place on airframes. After minor modification, the paper was forwarded to the JWG for acceptance and then to ICAO for forwarding to AEEC.

Tom McParland presented WP318, "Strawman ICAO Policy on Mandate of Security Services". This paper is in response to the work item that requests advice on the setting of a Security sunset date. As it is not easy to just choose a date, this paper sets out an approach for Regions/States to follow that should lead to a security mandate date. This was a first draft and many comments were raised. The paper will be forwarded to the JWG for further comment and to determine whether SG A1 (Institutional Issues sub-group) can assist in advancing this work. SG B3 will update the policy paper for the next WG B meeting.

Simon Blake-Wilson presented WP320, "Confidentiality as an ATN Security Service". This paper contained a table that described the current security mechanism that provides authentication and then outlines the changes necessary to provide (optional) confidentiality. Confidentiality without Authentication is not permitted. Major issues that are under consideration within SG B3 are also included. As the proposed solution for confidentiality will affect the air-ground CM application, this paper will be forwarded to the JWG meeting to inform the air-ground applications sub-group (SG A2) of the work in progress.

Tom McParland presented WP315, "SG B3 Work Program". This paper provides a summary of progress against the Work Items that SG B3 are working on. All the work items, except Secure Multicast were endorsed. One issue raised was the publication of the confidentiality enhancement - as it was planned to be complete and validated within 12 months, understanding of the method of getting the material into Doc 9705 was required. After consultation with the Panel Secretary determined that the material could be offered to the Secretariat via a WGW Meeting with a recommendation for inclusion in Doc 9705. The Secretariat would offer this, with a covering WP, to the Air Navigation Commission. As no changes to Annex 10 would be required, it is not necessary to have a Panel Meeting to add this new material.

Other issues raised for SG B3 to consider were:

- look at SM traffic security
- extend PKI to look at Directory Issues
- a new threat analysis

WPs on all the SG B3 work items are invited from all States for the next SG B3 meeting.

11. SV9 - REG

11.1. Update

It was noted that there had been an update to SV9 since the Honolulu meetings. A PDR had been raised, resolved and the new text included in Ed 3.

12. Future meetings of WG-B and its SGs

WG B will meet again in 6-7 months, the location would be determined in the JWG meeting.

SG B1 will meet once before then, in about 3 months time; date/location tba.

SG B2 will need to meet with SG B3 and SG A2 to progress the 3 PDRs.

SG B3 will meet in July in Toronto - it would be useful if telephone conference facilities were available to enable SG B2 participation.

13. Output of WG-B to other WG-A+B and other Groups

To the JWG (A+B+CCB) Meeting

- The revised CLNP Priority mapping table would be presented directly to WG A+B.
- The updated Doc 9739 Ed 2 Part V Introduction for approval.
- The SG B1 Internet Protocol Subnetworks Position Statement to WG A+B for info
- A WG B Work Programme Status report
- A WG B GM Status Report
- A WG B Doc 9705 Ed 3 Status Report
- The "Strawman ICAO Policy on Mandate of Security Services" for broader comment
- The "AEEC Communique for Avionics Key Management" for approval and forwarding.

- The Summary Table for Confidentiality Enhancements

Info - The UK TCP/IP Discussion paper would be presented to WG A+B

14. A.O.B.

IP308, "Eurocontrol Datalink CD-ROM" was deferred to the JWG meeting.

Brian Cardwell presented WP313, "Ground-Ground Networking Protocols - A Discussion Paper". This paper questions whether it was globally viable to use interconnected TCP/IP internetworks (which most administrations are implementing for domestic use) for the AMHS application. This question arose from UK and European planning which indicated that, for AMHS, early implementation could be achieved by using the TCP/IP comms stack that is inherent in commercial X.400 products. The paper further questioned whether it was viable to utilise TCP/IP protocols to access the AMHS extended services and to do the international communication for these extended services via TCP/IP. In the discussion it was noted that:

- the Asia/Pac Region had almost implemented operational AMHS over the ATN specified protocols.
- it should not be assumed that TCP/IP is purely "Plug and Play" - that to use it globally would require standardisation work that could take several years to complete.
- cost alone was not a sufficient reason to move to TCP/IP, there had to be a technical assessment and technical assurance activity.
- ATNP was seen as elitist, that recognition of TCP/IP was a good thing and that cost was a valid consideration.
- moving ground applications to non-ATN Internetworks could delay the deployment of air-ground applications.
- removal of the CLNP security parameter for AMHS may result in more COTS product use.

The Rapporteur took the opportunity to thank CENA Archive Manager, Thomas Kircher, for the great work he does in support of the Working Groups and Sub-groups, especially in the rush before each round of meetings.

There was no other A.O.B.

Appendix A

ATNP WG B-3 Agenda

1. Meeting Organisational Issues
2. Approval of the Agenda
3. High Level Update of Main Work Items since last meeting
4. Reports of previous meetings
 - 4.1. Review of WG-B/1 Report
 - 4.2. SG Meeting Reports
5. Input from Other Groups
 - 5.1. Panel Secretary's Report
 - 5.2. Communiqués from AMCP?
 - 5.3. OPLINKP?
6. SV4 - ULCS
 - 6.1. Guidance Material Status
 - 6.2. Doc 9705 Ed 3 Status
 - 6.3. Further Validation Results
 - 6.4. Future Work Programme & Schedule
7. SV5 - ICS
 - 7.1. SV5 Guidance Material Status
 - 7.2. Doc 9705 Ed 3 Status
 - 7.3. Further Validation Results
 - 7.4. Future Work Programme & Schedule
8. SV6 - SM
 - 8.1. SV6 Guidance Material Status
 - 8.2. Doc 9705 Ed 3 Status
 - 8.3. Further Validation Results
 - 8.4. Future Work Programme & Schedule

9. SV7 - DIR

- 9.1. SV7 Guidance Material Status
- 9.2. Doc 9705 Ed 3 Status
- 9.3. Further Validation Results
- 9.4. Future Work Programme & Schedule

10. SV8 - SEC

- 10.1. SV8 Guidance Material Status
- 10.2. Doc 9705 Ed 3 Status
- 10.3. Further Validation Results
- 10.4. Future Work Programme & Schedule

11. SV9 - REG

- 11.1. Update

12. Future meetings of WG-B and its SGs

13. Output of WG-B to other WG-A+B and other Groups

14. A.O.B.

Appendix B - Working Paper List for WG B Meeting 3.

WP N^o	Agenda Item	Presenter	WP Title
WP300	1	Rapporteur	Working paper list for 2 nd WG-B Meeting
WP301	2	Rapporteur	Agenda
WP302	4.1	Rapporteur	Report of second WG B Meeting
IP303	8.4	L. Sayadian	Enterprise Management of Air Traffic Management (ATM) Communication Systems
WP304	6	T. Kerr	SV4 SARPs and GM status report
WP305	8	T. Kerr	SV6 SARPs and GM status report
WP306	6	T. Kerr	SME4 status report
IP307	6.3	T. Kerr	Eurocontrol GACS project update
IP308	14	T. Kerr	Eurocontrol Data Link CD-ROM
WP309	7.1	H. Boyce	Doc 9739 Edition 2 Guidance Material for SV5
WP310	6.1	T. Kerr	SV4 GM (9739 Ed 2, Part IV, Chapter 2)
WP311	8.1	T. Kerr	SV6 CONOPS (9739 Ed 2, Part II, Chapter 3)
WP312	8.1	T. Kerr	SV6 GM (9739 Ed 2, Part V, Chapter 2)
WP313	14	B. Cardwell	Ground-Ground Network Protocol - A Discussion Paper
WP314	4.2	T. Kerr	Sub-group B2 Meeting report
WP315	10.1 / 4	T. McParland	SG-B3 Work Program
WP316	10.4	T. McParland	Proposal to extend IDRP Security Solution for Optional Protection of Routed CLNP PDUs
WP317	10.4 & 13	T. McParland	Communiqué to AEEC on Avionics Key Management Requirements
WP318	10.4	T. McParland	Strawman ICAO Policy on Mandate of Security Services
WP319	4.2	T. McParland	Draft report of SG B3 Meeting 5 - Phuket, Thailand
WP320	10.4	T. McParland	Summary table of confidentiality enhancements
WP321	4.2	B. Cardwell	Report of SG B1 Meeting 3 - Phuket, Thailand
WP322	3	M. Paydar	ATN Panel Secretary's Update (not printed)
WP323	4.2	T. Kerr	Convergent MIB (not printed)
WP324	14	Chairman	CAMAL Ed 2 Part V Introduction
Flimsy N^o	Agenda Item	Presenter	Flimsy Title

Appendix C - Attendee list for 3rd ATNP B Meeting

NAME	ORGANIZATION	ADDRESS	PHONE/FAX	E-MAIL ADDRESS
BROWN, Mark	Oki Electric Industry Co., Ltd	4-10-3 Shibaura, Minato-ku, Tokyo 108-8551, JAPAN	+81-3-3454-2111 +81-3-3798 7623	mark667@oki.com
BURGEMEISTER, Alvin	B-twelve Assoc, (Boeing)	1103 W, Meeker St, Kent, WA 98032-5751 US	+1-253-859-0515 +1-253-852-4732	al@b12assoc.com
CARDWELL, Brian	NATS	Spectrum House, Gatwick Road, Gatwick Airport South, West Sussex, UK RH60LG	44-1293-576 401 44-1293-576 381	brian.cardwell@nats.co.uk
JAMPATHON, Bhumisathit	Aeronautical Radio of Thailand	102 Ngamduplee, Tung Mahamek, sathorn Bangkok 10120, THAILAND	662-285-9006 662-285-9100	bhumisat@aerothai.or.th
KERR, Tony	CIVAL Consulting Ltd.	Conifers, Longhill Rd, Ascot, Berkshire, SL5 8RE, UK	+44 1252 724386 +44 1252 724384	tony.kerr@cival.co.uk tonykerr@aol.com
KITCHENS, Kelly	FAA/TRIOS	2216 N. Harrison St, Arlington, VA 22205, US	+1-202-645-5931	kelly.kitchens@baesystems.com
MCPARLAND, Tom	BCI/FAA	BCI 6712 Washington Ave, Suite 101 Egg Harbor Twp, NJ 08234 USA	+1 609-641-9698 +1 609-641-0203	tmcparland@bcisse.com
MOULTON, Jim	ONS/FAA	22636 Glenn Drive, Suite 305 Sterling, VA 20164 USA	+1.703.481.9590 +1.703.481.9509	moulton@ons.com
NAOVARATKOONCHAI, Thavit	Aeronautical Radio of Thailand	102 Ngamduplee, Tung Mahamek, sathorn Bangkok 10120, THAILAND	662-285-9578	thavit@aerothai.or.th
PATEL, Vic	FAA ACT-350	WJH Tech Centre, Atlantic City Airport, Atlantic City, NJ, 08405, US	+1-609-485-5046	Vidyut_patel@tc.faa.gov
PHILLIPS, Brent	FAA	800 Independence Av, Washington	1-202-358-5311	brent.phillips@faa.gov

WG-B/3 REPORT
Issue 1

		DC 20591, USA	+1-202-358-4922	
PHRUKKUMWONG, Chanyut	Aeronautical Radio of Thailand	102 Ngamduplee, Tung Mahamek, sathorn Bangkok 10120, THAILAND	662-285-9250 622-285-9253	Chanyut@aerothai.or.th
RICCI, Christine	STNA	1 Av Dr M Grynfogel B.P.1084 31035 Toulouse, Cedex, FRANCE	+33 5 62 14 54 82 +33 5 62 14 54 02	christine.ricci@aviation- civile.gouv.fr
ROBINSON, David	FAA/ AIR130	800 Independence Av, Washington DC 20591, USA	+1-202-267-8625	David.w.robinson@faa.gov
SAYADIAN, Leon	FAA/ ASD-140	800 Independence Av, Washington DC 20591, USA	+1-202-358 5316 +1-202-358-4922	leon.sayadian@faa.gov
SUPANUNDHA, Nuttawat	Aeronautical Radio of Thailand	102 Ngamduplee, Tung Mahamek, sathorn Bangkok 10120, THAILAND	662-285-9246 662-285-9253	nuttawat@aerothai.or.th
VABRE, Pierre	STNA	1 Avenue du Dr M Grynfogel - BP 1084, 31035, Toulouse Cedex, FRANCE	+33 5 62 14 57 61 +33 5 62 14	pierre.vabre@aviation- civile.gouv.fr
WILSON-BLAKE, Simon	Certicom Corp	5520 Explorer Drive, 4th Floor, Mississauga, Ontario, Canada L4W 5L1	905-501-3786 905-507-4230	sblakewilson@certicom.com