

**AERONAUTICAL TELECOMMUNICATIONS NETWORK (ATN)**

**WG3 - (ATN Applications and Upper Layers) Seventeenth Meeting**

**Gran' Canaria, Spain**

**28 September – 1 October 1999**

**Agenda Item 4: Air Ground Applications**

**4.1 - Report of Sub Group 2 – Air/ground Communications**

(Presented by M J Asbury)

**1. INTRODUCTION**

1.1 The 21st Meeting of the ATNP WG3/SG2 (Air/Ground Communications) was held, courtesy of Open Network Solutions (ONS) and the FAA, in the Blue Horizon Hotel, Vancouver, from 12 – 16 July 1999. The meeting was chaired by Mike Asbury.

1.2 The attached paper constitutes the report of the meeting.

1.3 Members are asked to note the contents of the attached Report.

**NOTES OF THE 21st MEETING OF AERONAUTICAL TELECOMMUNICATIONS NETWORK  
PANEL WG3/SG2 (AIR/GROUND SUBGROUP), BLUE HORIZON HOTEL, VANCOUVER, 12 – 16  
JULY 1999**

**1. INTRODUCTION**

1.1 The 21st Meeting of the ATNP WG3/SG2 (Air/Ground communications) was held, courtesy of Open Network Solutions (ONS) and the FAA, in the Blue Horizon Hotel, Vancouver, from 12 – 16 July 1999.

**Present:**

Mike Asbury (MA)	NATS UK (Chairman)
Jane Hamelink (JH)	ONS/FAA
Frederic Picard (FP)	STNA
Greg Saccone (GS)	ONS/FAA
Paul Camus (PC)	Aerospatiale
Mike Harcourt (MH)	Eurocontrol/ECSOft

1.2 MA welcomed members to Vancouver. GS was thanked for making all the arrangements for the meeting.

1.3 The Agenda (Appendix A) had been circulated earlier, and was approved. A list of Working Papers is at Appendix B.

**2. AGENDA ITEM 1 - NOTES, BRIEFING AND OUTCOME OF RELEVANT MEETINGS -**

**i. 20<sup>th</sup> WG3/SG2 Meeting, Brussels, 1 – 5 March 1999**

*WP 3 – Notes of the 20<sup>th</sup> Meeting of WG3/SG2*

2.1 The report of the Brussels meeting was reviewed. There were no changes required.

2.2 The actions arising were considered (numbers in parenthesis relate to the paragraphs in the notes of the meeting). Unless noted below, actions were complete.

(2.2) MA had not received the necessary clarification from Tony Whyman – he would e-mail Ron Jones

**Action - MA**

(2.9) Action Complete. Gregg Anderson did not support the use of the 'Error' message in this context – FAA will be using the 'Service Unavailable'.

(2.12) Action Complete. UK does not agree with PIT methodology, but is not a strong enough player to effect any changes at this stage.

(3.2 & 3) Action Complete. PDRs presented, accepted and closed.

(3.5) Action Complete. ADSP aware of the problem

(3.6) Action Complete. Notes of PIT meeting available from MA if required.

(4.5) Action Complete. Mini application concept was discussed and rejected.

(4.6 & 7) Outcome not known – MA would discuss with Mike Bigelow this week.

(6.2) Action not completed. JH will discuss with FP, who is trying to keep PDRs to a minimum at present.

(6.12) Action not carried out, because ADSP secretariat sent out e-mail saying this paper was not wanted.

(6.14) Action Complete. ADSP informed.

(7.3) Action Complete. WG 3 vetoed the proposal.

(8.6) Action not completed. Will be reviewed at this meeting under Agenda Item 7.

(8.8) Action Complete. Updated draft PICS/OICS circulated.

(8.16) Action Complete. ADSP didn't really want to know.

(8.17) Action Complete. PDR accepted.

(8.23) Action still under discussion – see below.

(8.24) Action Complete. MH produced draft material for Naples meeting.

2.3 There was some discussion arising from this review of the Minutes. PC understood that a ground AOC would not be able to log on to an ATS connection. FP confirmed that this was true – there had been a PDR amending and clarifying this situation (98120003), such that if the dialogue did not indicate ATS, then there was no possible chance of a connection.

2.4 PC said that pilots were having a problem concerning facility designators – the ICAO addresses were not user-friendly in the way that the three-letter IATA designators were – he wanted to know whether the ICAO designators would appear on the Jeppesen charts, for example. MA said that some would, but he wasn't sure whether a full eight-letter designator would be on the chart – more likely in the en-route supplement. PC was also concerned that the data authority address would be different to the executive control authority which the pilot was communicating with – e.g. talking to Toulouse through the Bordeaux data authority. This was accepted as being likely to happen.

2.5 Reviewing earlier discussion on the optional/mandatory elements of air and ground vectors (although inclusion of a vector may be optional, if it is included, then all elements in the vector are mandatory) it was agreed that the SARPs were in error in not making this distinction clear. It was agreed that if possible, a note would be put on the PICS/OICS for clarification. The Guidance Material should also be amended, but at present this path was not well defined. Changing three SARPs at this stage through a PDR was not possible – interoperability would be affected. It was hoped that implementers would interpret the SARPs correctly, and accept that all vector elements were mandatory if the vector was used.

## ii 16th Meeting of ATNP WG 3, Naples, 18 – 21 January 1999

### *WP 4 - Report of the 16th Meeting*

2.6 With the exception of MH, all members of the SG had been present at the meeting. MA had circulated a copy of the Report. MA briefly reviewed the outcome of the meetings, and the joint WG2/3 meeting including briefings on system and security matters. A brief report of the meeting is attached at Appendix C.

2.7 Regarding the question of System Management (SM) for air/ground applications, FP noted that there was a Joint Systems Management Subgroup meeting in Toulouse starting 19<sup>th</sup> July, which he would be attending. He was not sure about the stability of the SM, and he felt that the SG should review the output of the JSG meeting. He thought that it could be easier to derive a MIB for the lower layers, but not so easy for the applications, since there was a question of what managed objects would be required inter-domain for applications. Pam Tupitza had prepared a paper, and it was agreed that this would be reviewed by the SG during the course of this meeting, so that informed comment could be passed to the JSG through FP. There was a suggestion by FP and GS that interdomain MIBs might be a local matter, with the type of management information to be passed inter

domain agreed through ATSU letters of agreement (LoA), rather like current ATC procedure information is done today.

2.8 It was generally agreed that there needed to be an independent high level analysis of the SM requirements, and this seemed to have been missing from the current programme – a top-down approach had yet to be carried out. FP asked why one should need information if one could not do anything with/about it (e.g. on message delays through a node). PC agreed – he found it difficult to define operating advantages of SM for airborne applications – would it be for fault/performance/configuration management, and if so, what were the perceived benefits. He agreed that the systems people in Aerospatiale felt that there was a need for SM for ATNP data link implementations, but this was not at the application level. MH agreed – he felt that the only need for SM was related to data transmission parameters and network monitoring/control. This would be discussed further when the Tupitza paper was reviewed.

### **iii ADSP WG A & B Meetings, Ottawa, 26 April – 7 May 1999**

*WP 5 – Brief Report of the ADSP WG A Meeting, Ottawa, 3 – 7 May 1999*

*WP 6 – Brief Report of the ADSP WG B Meeting, Adelaide, 26 – 30 April 1999*

2.9 MA briefly reviewed the results of the two meeting. Since they were the last meetings being held prior to the ADSP/5 Panel meeting, they were more concerned with getting their own houses in order than to pick up on detail for the ATNP. However, they had both replied to the security questions which had been passed to them from ATNP WG 1, and the results had been taken back to the WG. In addition, WG B had produced some useful METAR ORs which had enabled FP to develop material for additional DFIS SARPs (to be discussed later – Agenda Item 6).

2.10 One page notes of the meetings are attached at Appendices D and E for reference.

### **iv PIT and Post-PIT meetings, Geneva, 14 – 16 April and Atlantic City, 16 – 18 June**

2.11 JH briefed the meeting on the outcome of the WG53/SC189 SG 1 meeting and the PIT meeting itself, held consecutively at Atlantic City. Comments relating to the Geneva meeting were also noted, and a brief report of the Geneva meeting is at Appendix F.

2.12 JH said that there had been much discussion on Ian Valentine's paper on the dynamic behaviour of the ATN data link systems, based on the PIT. She thought that the outcome could well be an RTCA MOPS based on the PIT implementation/interpretation, which she thought was seriously skewed from her ideas of a SARPs based implementation. (GS agreed – at the Geneva meeting he had been trying to keep things generic, but kept falling out with Tony Martin and Rob Mead.) JH said that the meeting had split into two groups – one to deal with CM/CPDLC and the other to deal with ADS. She kept bobbing between the two meeting, and was disturbed at the lack of appreciation of the operational, let alone the technical, details evinced by members of the meetings. PIT had thought that the ADS SARPs were not explicit enough, but they had not read the guidance material (typical excuses being that ICAO wouldn't let them have the material, or that they had not got WordPerfect. Both these excuses hold no water in view of the fact that the GM is on the FANS-IS website, in PDF format.) JH has a meeting set up with Jim Simpkins to compare the PIT interpretation and the true CPDLC SARPs (GS will possibly attend.)

2.13 Dung Nuygen (Boeing) was not present – JH thought that this re-enforced the idea that PIT can say what it likes, but Boeing will do just what Boeing wants to do. Also pilots are having trouble with the concept of the LACK (strongly agreed by PC). Finally there was a question of alignment between PIT and the FAA, even on CM implementation, and the question of additional and/or changing fields in the CM – i.e. if the destination airport changes in flight - does this require another logon to change the correlation with a new flight plan. In the FAA Build 1/1A, since there is only going to be one centre, problems related to multicentre operations (e.g. NDA) are just being 'parked' at present, and will not be seriously considered until much later.

2.14 Concluding her brief, JH was firmly of the opinion that not enough time was being devoted to technical/operational problems at the meetings – they needed to be longer and better structured, at

least until there was a better technical comprehension, and many of the air/ground interoperability problems were sorted out.

### **3. AGENDA ITEM 2 - SARPS AND GM FOR VERSION 1 APPLICATIONS: MAINTENANCE**

#### **2.0 General - Discussion on SARPs P-1 maintenance procedures**

*WP 7 – ADS Defects Report Proposal re Doc 9705*

3.1 FP introduced this paper, which described some ADS defects in Doc 9705 identified by SG 1 of SC189/WG53. The paper was presented to this meeting to determine whether new PDRs had to be generated. There were five possible points of contention.

3.2 The first point related to a note to paragraph 2.2.1.7.1.5.2. The SG agreed that the note had been superseded by PDR 98120003, and should have been removed when that was implemented. It was now inconsistent and wrong, and should be deleted.

3.3 The paper indicated that there was no recommendation on what the ADS-Air-User should do when it received an ADS-demand-contract but could not respond within 0.5 seconds. Para 2.2.1.7.2.1 referred. MA and GS thought that the Guidance Material covered the case just fine (para 3.4.6.3.2), but the trouble was that, as we all know too well, no-one reads the GM. FP said that there seemed to be inconsistencies between the Demand and the Periodic contract timings, but MA said that these were taken care of in 2.2.1.7.1.3.1. It was agreed that there would be a low priority clarification PDR raised either as a package 2 amendment, or as part of a future Amendment 2 to Doc 9705 (amendment No 1 has been finalised).

3.4 The third proposal related to clarification of the FOM parameter, specifically relating to what part of the three part parameter should be set to zero in the event of a failure of the aircraft bto be able to send any of the position, timestamp or FOM parameters. The general feeling of the SG was that if the FOM was going to be used as an indicator, we had to be very sure of which parameter was set to zero, in order to pass the correct signals to the ground. The SG agreed that the words were better left as general, rather than be too specific, and the need for the PDR was rejected.

3.5 A further considered defect was that there was no firm guidance to say that when an aircraft was flying an offset, the lateral deviation event *shall* be defined with respect to the transition path to and from the offset. PC said that Airbus aircraft in FMS following mode had the facility to determine waypoints to and from an offset, but MA said that this capability certainly was not fitted to all aircraft, many of which would still use the 'across track' monitoring capability to fly an offset. The proposal was far too strong, and would be an unreasonable demand. It was agreed that this proposal should be rejected.

3.6 Finally, the paper indicated that the mandatory requirement for a system to be able to invoke a user abort after an unrecoverable system error may be unrealistic. The SG agreed that this was probably true, and that the 'shall' statement should be a 'should'. It was agreed that a low level PDR for clarification could be the best way to change the requirement.

**Action – FP would liaise with SG1 and prepare the appropriate PDRs**

#### **2.1 Accepted & Forwarded PDRs for CM, ADS, CPDLC & FIS**

3.7 There were no PDRs to review. FP said that a determined effort was being made to reduce the incidence of PDRs, and he would expect fewer to be accepted.

### **4. AGENDA ITEM 3 – CM – DEVELOPMENT OF FUTURE LOGON PROCEDURES**

*WP 24 – PIT CM Interoperability Considerations.*

4.1 GS presented this paper, which contained extracts from the PIT Interoperability Document, along with questions and comments. He said that it was likely that the interoperability requirements could become the *de facto* MOPS. However, some of the 'requirements' in this paper related to

procedures, and they were probably better suited for inclusion in a formal ICAO document, such as PANS/RAC (Doc 4444). Some of the requirements should probably be written into AEEC Doc 638. GS accepted that questions regarding all facets of implementation would continue to be asked, but if we could formalise some of the procedures and requirements, this would give credence to the ATN, and encourage its implementation. He personally didn't feel that the RTCA MOPS were the right place for all this material – the problem might be wider than the expertise of this SG, but there had to be some consideration of the problems – some of the solutions could be administrative.

4.2 PC agreed with the sentiments of many of the requirements in the paper – particularly those relating to information capture. Aerospatiale had been asking for years where the information relating to data link was going to be made available to the pilots – would it be on the charts, or in briefing rooms or what? All they were worried about was the source of the information – how it would be entered into the system would be a local matter. They were seeking to automate the CM as much as possible, and didn't want the pilot to have to go hunting for lists of data authorities. JH said that although it was possible in FANS 1 for the pilot to log on directly to a CPDLC data authority (which probably had a user-friendly name), this would not be the case in ATN. MA said that the basic logon information would be available from En-route Supplements, just like the frequencies of today, and it was likely that Jeppesen charts would carry similar information. (PC has been worried about this for some time now, and still does not seem to any more appeased.)

4.3 GS said that the FAA procedures for Baseline one are based on PIT, and the RTCA interoperability is also based on PIT – there was therefore a certain inevitability that the RTCA MOPS would be PIT-based as well. MA thought that the MOPS should not be written for PIT, but JH did not agree – she said that the MOPS were being written for what the FAA wanted to do, and if they were reflecting PIT ideas in their implementation, then it was realistic that the MOPS should also reflect the PIT procedures.

4.4 The SG agreed that at least some of the points raised here should be passed to the ADSP. MA and JH had agreed that the ADSP had not covered CM matters in particular detail, since they had been very caught up with ADS and CPDLC. MA would include some of the PIT CM concerns in a paper to the ADSP/5.

#### **Action - MA**

*WP 27 – Clarifications for CM Application Information*

*WP 27A – PDR for Clarifications for CM Application Information*

4.5 GS presented this short paper (WP 27). Some implementers had been confused over the difference in the SARPs over what constitutes air, ground, air-only and ground-only applications in the CM Logon Request and Response parameters. Undoubtedly some of this confusion arose because they did not read the Guidance material. GS proposed to make some minor changes in the SARPs, and add a note of clarification. FP was strongly against changing the SARPs – any change would only weaken and confuse the current correct wording. In addition, notes in the SARPs were not for clarification – the correct place for that was in the GM, which people ought to read!!

4.6 While agreeing with FP, MA said that if the implementers wanted to submit a PDR proposing a change, they could go ahead, but it was likely that the CCB, under the tutelage of FP, would recommend a possible note of clarification in the GM, but nothing stronger. GS would discuss further action with the implementers involved, but in the mean time no change action would be taken.

#### **Action - GS**

*(GS subsequently revised the text, and prepared a PDR (WP 27A) which was passed to FP for action.)*

### **5. AGENDA ITEM 4 – ADS – DEVELOPMENT OF FUTURE ENHANCEMENTS**

5.1 There were no papers submitted on this item, but there was considerable discussion based on the new operational requirements outlined at the ADSP meeting, particularly relating to the need to be able to include the five categories of emergency/urgency defined by the ADSP in any responses

downlinked from the aircraft. MA thought that this was clearly a Package 2 enhancement, involving major changes in the ASN.1 etc. FP said that that he was not sure that there would be such a drastic change – as a result of his work of adding the METAR service, he thought that there might be more flexibility than previously thought. JH was surprised to see how much the later work done by Tim Maude in his final revision of the ADSP SARPs would allow concerning the sending of emergency reports in event contracts, even if there were no periodic contracts in place. FP thought that ASN.1 changes could be very limited, and there would be little effect on Chapters three and five.

5.2 There was some considerable discussion on the use of extensibility markers, and the way they are treated in ASN.1, but the idea of introducing a more selective emergency capability was not seen as insurmountable in the shorter term. GS and JH would try to develop an appropriate amendment for the next meeting, based on an opportune joint meeting within the next month. MA would be very grateful if this could be done, given that neither of them were ADS editors – it would enable information to be given at the ADSP meeting, possible through a paper submitted by the FAA, that these Operational Requirements were being implemented into the ATN work.

**Action – JH/GS, for the next meeting.**

5.3 PC said that the hardest part of this implementation would be the pilot input to the system, which until now had been almost wholly non-existent. A new interface would have to be designed.

**6. AGENDA ITEM 5 - CPDLC**

*WP 18 – CPDLC – Operational Use of Messages*

6.1 PC presented this paper, which requested clarification of message intent and use in typical scenarios. In particular, he wanted to know if the 'Position' parameter on a route modification message was a part of the cleared procedure. JH said that this was not the case – it was a straightforward position parameter, which may or may not be the start of a procedure, but it had no special attributes.

6.2 The other main point related to the information required when the Ground User sent Message 216 – Request Flight Plan. MA and JH confirmed that the intention of this message was just what it said – the ground did not have a flight plan, and needed the information. A normal airborne filed flight plan procedure was required, using free text giving all normal flight plan details, including departure, current and onward route, flight levels, POB etc. An Assigned Route was not a valid reply.

**7. AGENDA ITEM 6 – FIS – NEW FIS SERVICES**

*WP 8 – Introduction of METAR into the DFIS Application*

*WP 22 – ADSP Report Appendix F – METAR Operating Method with Data Link*

7.1 FP introduced this paper, which was a compendium of three – METAR SARPs, METAR Guidance Material and a Draft METAR Validation Report. FP said that the addition of the METAR had not involved too many changes, since the high level DFIS application took care of most of the work. He reviewed the work in detail, with particular reference to the differences between the METAR and ATIS services. The METAR service allowed for multiple applications of the same fields – e.g. Weather type – which was not permitted in ATIS. He sought confirmation of this, and MA said that he would check with the UK Met experts.

**Action – MA**

7.2 FP said that he had noted some discrepancies between Annex 3 and Appendix F (WP 22) but he had focussed on Annex 3 as the ultimate authority. Appendix F was also missing information relating to the multiple fields, which rather confused things. He had welcomed the comments on his draft material from Mike Williamson of NATS, and would welcome a further review of the draft material.

7.3 This was the first use of a change of version numbers, and the need for forward/backward compatibility to be demonstrated. FP had proposed a change to the existing version one SARPs to make them forward compatible, but this was argued out by the rest of the members. They felt that the onus was on the new service to be backward compatible, rather than for the old service to be forward compatible. The principle result of this was that if a version 2 air user asked for a version 2 service from a version 1 only ground user, the system would abort. This was indicative of a breakdown of system integrity, since this should be able to happen.

7.4 FP had also included METAR Service Requirements in the SARPs (2.4.7.2.7) – the members felt that at least the paragraphs relating to procedures should go elsewhere, probably through the ADSP documentation – FP would pass this on to J-F Grout, the French ADSP member.

7.5 FP had amended the FIS Guidance Material as a whole – he had not written a specific METAR section. Basically he had added METAR wherever ATIS was mentioned, and made sure that the specific METAR points were covered. There was not too much in the way of additional material.

7.6 Concerning the Validation Report, FP noted that this was modelled on the Package 1 validation format, developed by this SG and used by everybody else for their work. CENA have an ATN platform, and the METAR service had been implemented, with validation work in progress. He would certainly expect a validation level (d) – one implementation validated by one State/Organisation – to be completed by September, and the Service should be able to be submitted to the Working Group of the Whole meeting in December. There was one validation point which had yet to be tested, and that related to interoperability between version numbers. However, he was confident that this could be achieved.

7.7 FP was congratulated on his submission of this complete package, and of the standard of completeness of the work. There was little but detail outstanding, although FP did say that he would welcome contributions from anyone else developing a METAR service (!).

## **8. AGENDA ITEM 7 – PICS AND INTEROPERABILITY**

### *WP 9 – 14 – PICS/OICS Proformae*

8.1 MH introduced the revised and redrafted PICS/OICS for CM, ADS and CPDLC, amended in the light of comments from SG2 meetings at Albuquerque and Brussels. He had prepared an even later version, giving source material reference by chapter – this at the request of the RTCA. There was some considerable detail discussion on the work in a line by line review – MH felt that we were revisiting work, which had previously been accepted, and this he did not feel was productive. The benefit of the PICS came from the filling in of the profile – what we should be developing was the standards Proforma, against which implementers would indicate exceptions and changes. The brief notes reflect a period of protracted discussion involving all aspects of the PICS/OICS, and comments on individual sections have not been made.

8.2 JH, ever the iconoclast, asked why we needed the PICS at all – we should just prepare the OICS. MH said that there were two good reasons why we should prepare the PICS – namely that from an implementers point of view, they were easier to use than the ASN.1, and in the tabular format easier to identify additions/omissions, and secondly, comparisons of profile and performance were much easier, particularly when the process was automated.

8.3 FP said that some messages would never be used, and could be replaced with NULL entries to keep the ASN.1 format consistent. He was still not sure of the format of the PICS – but he could accept the OICS.

8.4 Ultimately, after much discussion, it was agreed that the PICS Template should faithfully replicate the SARPs, because this was what implementers would prepare profiles against. Likewise, we should not be too critical if implementers put an 'x' against a mandatory element (indicative of non-compliance with SARPs) - we should just provide them with the means of doing that, and informing other users.

8.5 Concerning the CPDLC application, there was considerable discussion as to what level the PICS/OICS should address. If the level was too high, it would not be possible to verify true interoperability, since many messages had optional elements, and it was the way implementations dealt with these options which could be critical related to interoperability. Several options were investigated, including a breakdown of messages through parameter components, a breakdown of parameters themselves, and an extension of the way that MH had provided, reviewing the parameters along ASN.1 lines. MH had great experience of the ISO PICS standard setting and implementation, and considered that the PICS would not be of significant use unless they could be compared at the lowest level – i.e. the lowest level components in a breakdown of a parameter. This would mean a greater amount of work, larger documents, and a greater level of detail.

8.6 MH thought that almost all the components of the PICS were already available, and they would just require resorting and tabulating – JH's work on the guidance material had greatly helped in the identification of which messages included what parameters were included in which messages. This reduction to the lowest level of detail probably only was a workload problem in CPDLC, where the message parameters were significant. In a further attempt to make the PICS more user-friendly, JH proposed that a table should be prepared for specific parameters of each service primitive, e.g. *CPDLC Message* and *Result* for the CPDLC –end Service primitive. The SG agreed that this would be a better way of presenting the information, and allowing implementers to identify which services they would be implementing, at a high level, and only having to be specific about the presence of parameters if the service was being implemented.

8.7 The SG eventually agreed that MH would investigate the listing of high level parameters in the message table, and further tables that would take each message which contained any parameters at all, and decompose each message parameter down to its lowest level. This would allow a multi-stage PICS/OICS review by implementers – first at message level, to check whether a specific message was going to be implemented. Only if it was decided that a message was being implemented would a decomposition of its parameters have to be reviewed for the preparation of a profile, and a measure of interoperability.

8.8 Much midnight oil was burned subsequently. FP prepared an outline of a Service-based document (WP 26), and MH has prepared a message breakdown extract (WP 25). In addition, FP had been considering the depth of decomposition which looked like having to be carried out for each message, and was not happy with the level apparently needed – he could see a lot of nugatory and repetitive work being carried out. He saw a need for a set of tables that could be consulted if and only if a parameter was going to be used in a message, and interoperability checking was required.

#### *WP 25 – UM 54 Example*

8.9 MH had worked overnight and had prepared his breakdown of a specific message, UM 54, containing a complex parameter (Position) and a simple one (Time). (This message was used in the PIT IIe implementation, and would serve as a demonstration at the meeting the following week.) His breakdown indicated the detail that was required, and the amount of repetition of parameters that could occur. The meeting reviewed this in detail, concluding that the idea was correct, but that the repetition could be avoided by cross referral, once a parameter had been decomposed to its lowest level at least once in a message. This cross referral would be only within a message – if the same parameter was used in another message it would be decomposed again (although the material would be merely copied to facilitate preparation). This would allow for the case when the same parameter may be used in a different way in different messages. JH had identified about twenty high level parameters requiring detailed decomposition, and of these, only about 4 were arduously complex.

8.10 MH pointed out that by making only one decomposition of a parameter in a message and cross referring, it would not be possible to identify interoperability problems if a parameter was used in more than one way in the same message – e.g. latitude in degrees, minutes and seconds in one part of the message, and degrees only in another part of the same message element. MA said MH should put a high level note at the top of the document, and in the Guidance Material, saying that if a variable was used in a specific way in a parameter, it would be used consistently within that parameter. JH noted that if the PICS/OICS were prepared in this manner, there would be almost no need for conditional statement, and most parameters would be simply of the 'Mandatory' or 'Optional' type.

8.11 Ultimately, with a considerable amount of detail changes, the SG agreed that a redrafted CPDLC PICS/OICS, based on the changes indicated in MH's paper, would be the best way to proceed. Revised material would be prepared by MH, and circulated for comment. The main changes were really only aimed at the CPDLC, due to its unique requirements for interoperability

#### **Action – MH**

8.12 The SG reviewed the ADS PICS/OICS, which had previously been reviewed in detail at the Brussels meeting. MH had incorporated the changes from that draft, and consequently there were relatively few further changes to be made. The only difference in the ADS material was that there was an open sequence, where the SARPs indicate that an aircraft has to support a minimum number (4) of ground ATS connections, but no maximum is indicated. Again, this would be up to the implementers to indicate how many connections would be supported, although in this case, provided at least four were supported, there would be no need to justify how many other would also be supported.

8.13 MH had also prepared the PICS for the ADS Report Forwarding (ARF) application - this was probably the first time in three years that this application had been subjected to such scrutiny. The SG agreed that it would be better if the PICS were split into two sections – Initiator and Receiver. This would remove most of the conditionals, and produce a set of documents which were in the same format as the existing ADS PICS. Much of the information in the ARF material was copied directly from the ADS, and MH would also review the material for consistency when he reformatted.

#### **Action - MH**

*WP 15 & 16 – PICS/OICS for FIS*  
*WP 27 – Extract from Airborne FIS PICS*

8.14 FP had prepared the FIS PICS/OICS (WPs 15/16) and also an extract based on the concept of providing one table per service primitive (WP 27). FP said that he rather liked the Service table presentation – he thought it was clear, and it also gave scope for putting in what each part of the primitive was trying to achieve by its inclusion and attributes – he felt that this was more user friendly than just a bald table – standards documentation generally suffered through lack of explanation, and this layout gave this opportunity for explanation. The SG agreed that this was a good presentation, and, combined with earlier generic amendments, would lead to a clearer and less ambiguous set of documents.

8.15 FP then presented the FIS material generally, which the SG reviewed in detail. FP said that generally the PICS/OICS were simpler, because everything was mandatory – the aircraft never know what information was being passed – and the weather dictated its own ranges for the day, as it were. However there was serious discussion related to the OICS, and the limitations that may be put on the operational aspects of the implementation. For example, the ATIS called for the system to be able to send information on 36 runways for an airport. This was clearly excessive, since no airport will ever have that number of runways – the question was whether an implementation was not SARPs compliant if, although the ASE could handle 36 runways, the implementation limited the information which would be displayed to the pilot to, say, four at a maximum. The SG agreed that this was the purpose of the OICS – to indicate the operational performance of an individual implementation – and provided the proforma indicated correctly what was mandatory, it was up to the implementer to indicate what they were actually doing. MH would put a note in the Guidance Material to say that where there was an indication of a difference between the SARPs and an operational implementation, a note of explanation should be added.

#### **Action – MH**

8.16 There was further discussion on the use of OICS and the indication of constraints generally. It had been noted that early implementations of the CPDLC were only going to handle a maximum of two message elements per CPDLC message. JH said that this sort of constraint was alright if imposed by a sender, but a receiver still had to be able to deal with a five element message. Sending an 'error' response was totally wrong, since there was no SARPs error. It may be that a free text message 'This systems does not handle messages of more than two elements' could be sent up in

free text, but this would have to be made known generally. FP agreed – he said that all constraints should be well documented, and should give an indication of how a system behaved operationally outside the constraints, but inside the SARPs. This was more material for the GM.

8.17 The details of the FIS PICS/OICS were agreed, with few changes, and FP would prepare a (hopefully!) final draft for the next meeting, taking into account generic comments. He would also prepare FIS-related pages for MH's GM.

#### **Action - FP**

8.18 The GM was similar to that which had been presented to the WG 3 meeting in Naples, and the meeting agreed that, although there were generic sections, there would need to be specific sections for each application, and MH would reformat it accordingly.

#### **Action - MH**

8.19 This led to discussion on the final dissemination of the PICS/OICS material. At the Naples meeting of WG 3, Danny van Roosebroek had said that Eurocontrol would put it on their web site, with the appropriate caveats to indicate that this was not official SARPs-type material, use at own risk, etc., etc. MH confirmed that it would be loaded as part of the PETAL section, and he would make the URL available soonest. FP said that the GM should be included in the CAMAL – this would let people know that the work had been done, and was available. MA thought that all the PICS material should be in the GM, as an additional chapter to each application. He also thought that this might be a greater incentive on ICAO to publish the GM. (It had been agreed much earlier that the PICS material should not be included in the SARPs). He proposed that the material was presented at the Working Group of the Whole meeting in December, with a view to presenting it at ATNP/3, and hence formal adoption by ICAO. This was agreed by the SG as the ideal solution, and MA would discuss this with Masoud Paydar.

#### **Action – MA**

8.20 The SG was very appreciative of MH's work, with the thoroughness and attention to detail that was required. Members felt that the documents that would now result would allow a rigorous comparison between implementations, resulting in better interoperability and appreciation of the functionality of individual systems.

8.21 As a result of the PICS/OICS analysis work, MA had been rather surprised that CM messages did not require timestamping, but would be stamped on receipt if required, and that only ADS messages containing an ADS position report would be timestamped. He would consider taking this further at the next ADSP meeting.

#### **Action - MA**

### **9. AGENDA ITEM 8 – NEW SARPS FOR VERSION 2 APPLICATIONS**

#### *WP 19 – Package 2 Logon Logout Service*

9.1 GS presented this paper, which had been generated as a result of PIT and FAA discussions. Given that we had a CM Logon service, should not there be some way of cancelling the input to the system, for example if there was a late aircraft change – this would result in two identical flight plans with only the 24 bit aircraft address different, or a mismatch between the aircraft address and the flight plan information if the plan had not been changed or refiled. The objective was to avoid ambiguity in the ground system, or rejection of correlation when trying to start a dialogue. (It would be analogous to a computer 'uninstall' function.) The problem was highlighted because of the emphasis now put on automatic flight plan correlation, not evident when SARPs were being prepared initially.

9.2 FP thought that this was an implementation dependent problem, and MA queried whether this was a 'tail of a tail' condition. (JH, whose aircraft had gone 'tech delay' twice in 12 hours thought that it was far from a tail condition!) MA said that in integrated flight plan submission procedures there was a 'Change' message, which allowed Flight Plan details to be changed – would it not be possible

for a similar system to be developed for the ATN. JH agreed that the correlation was the problem – which was really an implementation/ATC Flight Planning problem – and she thought that there may be other solutions, not requiring a change in the SARPs. PC asked why we were using the 24-bit ID, and not the flight number, as a discriminator – but it was pointed out that this could be ambiguous in normal operations, let alone when there were changes in the system.

9.3 The meeting agreed that there was likely to be a problem in the future, and that it was Package 2 work. GS was asked to consult with PIT/FAA in more detail, and review possible other solutions to the problem. MA would discuss the problem with the UK and Eurocontrol Integrated Flight Plan Service (IFPS) staff, and see if they had given it any thought. An expanded version of the paper would be welcome at the next meeting.

**Action – GS, to revisit with FAA/PIT**

**Action – MA to discuss with IFPS personnel**

#### *WP 20 – CM Logon Response Enhancements*

9.4 GS presented this paper, noting that implementers of CM are adopting different means of handling rejected CM logons. It would therefore seem reasonable to standardise the rejected logon procedure as a Package 2 enhancement. As in the previous case, the logon could be rejected because all the relevant (optional) correlation information was not included. There was useful information in the Guidance Material, but again, this had not been published, and people just did not read this, for a variety of reasons.

9.5 GS said that the two options currently being introduced are to return a logon response with no information (not very helpful), or to abort (even less helpful.) The paper proposed that there should be a new CMGroundMessage choice called CMLogonReject. JH said that it would be helpful if there was some indication as to whether it was worth trying again, whether some vital information was missing, or whether there was a temporary technical unserviceability. FP asked whether it would be possible to make a change in Chapter 7 only, which would not change the bits on the wire. JH would also prefer to change Chapter 7, and offered a form of words. She thought that in fact the FAA had revised their ideas, and would not now be doing an abort, and she agreed to try and find out more, and pass the information to GS.

9.6 JH proposed that a PDR amending the current Chapter 7 could be raised as a clarification to the existing Package 1 SARPs, and FP agreed that this could be acceptable. GS would therefore prepare a PDR for review by the SG, and subsequent submission.

**Action – GS**

9.7 As a follow up to previous papers, FP asked what was being done about the Package 2 SARPs for the CM Server Application. GS said that some validation work was in progress for ATNP/3, based on the redline version submitted to WG 3 in Naples.

## **10. AGENDA ITEM 9 – CONSEQUENT SARPS AMENDMENTS AND VERSION CONFIRMATION**

10.1 There were no papers introduced against this agenda item, and no discussion on the topic.

## **11. AGENDA ITEM 10 – INPUT TO WORKING GROUP 3 MEETING, GRAN’CANARIA, SEPTEMBER 1999**

11.1 MA would prepare these notes as a basis for the report of this meeting to WG 3.

11.2 MH will prepare revised PICS/OICS for CM, ADS (including ARF) and CPDLC, taking into account the general comments, format changes, and detailed revision carried out at this meeting. Hard Copy of CPDLC and GM will be presented. Soft copy of the rest will be available.

11.3 FP will revise his draft FIS PICS in the light of the general comments and format changes, and prepare a revised version in soft copy.

11.4 MH will, if time permits, prepare an updated guidance to PICS/OICS procedures.

11.5 FP will submit a METAR package, updating the comprehensive material presented to this meeting.

11.6 GS would review alternative paths to achieve a 'Logout' functionality, and prepare a paper.

## **12. AGENDA ITEM 11 - AOB**

### *WP 23 – Proposed Application Management Boundary MIB*

12.1 This paper was prepared by Pam Tupitza (PT), and presented by FP. Given that the Systems Management (SM) aims to provide mechanisms to monitor, control and co-ordinate communications, applications and other ATN-related resources, with a view to achieving a 'seamless' communications service in support of ATC, PT had identified three main areas where management information would be required, namely Performance, Fault and Configuration Management.

12.2 Performance Management planned to assess the performance of the system against the performance levels given in the ADSP end to end transfer delay requirements table. MA asked how transfer delay could be measured if not all messages were time stamped. MH said that at the transport level round trip transfer times (using the Acknowledgement message) were measured, and if end to end transfer times were taken to be equal to half round trip times, a reasonable assessment of system performance could be made.

12.3 Fault management might be acceptable when appropriate remedial action could be taken, or use made of the information passed, while the SG could see little use for configuration management at the application level. Both GS and JH saw system management as a local matter – local in terms of domain concept, with little, if any, need for cross domain management activities, certainly at the application level. The SG felt that it had no authority to decide politically what Managed Objects would have to be catered for cross domain, but recognised that the paper provided a very useful guide to application SM requirements at a local level. (FP thought that we should not be developing MOs for local management, and he was probably right.)

12.4 FP would report the discussion and conclusions of the SG at the next meeting of the ATNP WG1 Joint SM subgroup, which was meeting in Toulouse the following week.

### **Action – FP**

### *WP 21 – Compilation of Security e-mails*

12.5 FP presented this compilation of papers, based on a request from Mike Bigelow, Chairman of the Security Subgroup, asking whether changes were being made to the Air.Ground applications to incorporate a capability to request security services, and secondly, if that was the case, were they being made in such a way as to allow the selection of security level by the applications. FP, in his very comprehensive reply, had returned a copy of his paper recently presented to WG 3, which indicated that the Security Functions would be provided by a new component of the Dialogue Service provider, the Security ASO. However, this had been amended by changes introduced by the Security Subgroup, indicating that only two levels of security (all or nothing) may be required. But he was not sure about the stability of the SSG requirements.

12.6 PC was unhappy about the possibility of hard coding a level of security in an application – he thought that security levels/requirements might be different between regions. FP said that this might not be possible if there were only two levels – if it was all or nothing, then this would be easy to cope with. However, we should wait to see what levels of security were decided by WG 1 – until then there was a degree of uncertainty in the proceedings which could be counter-productive. MA proposed that

the SG should take no further action on this aspect of security until WG 1 had confirmed the levels required.

#### *WP 28 – Security Communiqué from ATNP WG1 SG2*

12.7 Mike Bigelow, Chairman of WG1SG2 had forwarded this paper based on his SG2 perceptions, and asked for comments. WG1 SG2 believed that it was acceptable to assign global fixed values to the security level of air initiated applications but that the level of security assigned to ground initiated applications should be configurable (albeit not dynamically) on a state or regional basis. However, WG1 SG2 believed that the assignment of global fixed values to the security level of specific air initiated applications was a WG1 function.

12.8 The SG reviewed this perception, and raised the following points –

a. Who was going to provide WG 1 with the information that would be needed before they could be assigned to CM, CPDLC (air initiated) and FIS. As an aside could different values be assigned to a ground initiated CPDLC from an air-initiated CPDLC?

(If global fixed values would be assigned to air initiated applications, would it be through a Table, to indicate that the FIS value, for example, may be lower than the CPDLC, rather like the ITU-T priorities level table?)

b. Information would need to be provided on key definitions, and key handling logistics, including how to access and validate the key, and what would have to be exchanged during logon.

c. There is a requirement for a clear definition of what the user requirements will be for the Secure Dialogue Service, especially for the CM user.

d. Could the Directory Entries be used to co-ordinate with CM interface actions related to key distribution?

12.9 Mike Bigelow also reminded SG2 of the requirement (from ADSP) to notify the end-user of the absence of security. In his interpretation of this requirement his SG believed that ADSP was answering from an end state perspective where the default would be the presence of security and all systems would be expecting security, so that only the absence need be signalled. However, because the implementation of security will be on a transition basis and 'Package-1' implementations (without security) must be supported indefinitely two levels of notification are required.

12.10 These levels were:

- a) Security not expected (P1 – P2) – nothing by P1; amber by P2.
- b) Security expected not provided (P2 – P2) – red.

Security expected and provided (P2 – P2) or green is the default case with no notification required.

As a consequence, information related to the above notifications must be passed to the ASE-user.

12.11 GS wanted to know whether, if information on failure of security had now to be passed to the ASE, the policy on 'abort if security checks fail' policy has been changed. There was a need to make sure that we would not be indicating to a potential unauthorised user that they had failed security. However, the SG generally felt that notification of an absence of security was all right providing security availability was not expected anyway (case (a) above) but not otherwise, at any transition stage or any other time. MA would copy these notes to Mike Bigelow as a response.

#### **Action – MA**

### **13. AGENDA ITEM 12 – DATE AND PLACE OF NEXT MEETING**

13.1 The next meeting will be held from 1999 in the Washington area from 1 – 5 November, directly following the ADSP meeting in Montreal. JH agreed to make the necessary arrangements, and inform the SG members as soon as possible.

13.2 The meeting closed on Friday 16<sup>th</sup> July 1999.

Michael J A Asbury  
Chairman, ATNP WG 3/SG 2  
UK NATS

16 July 1999

**AGENDA**

for

**THE 21<sup>st</sup> MEETING OF ATNP WG3/SG2 (Air/Ground Subgroup)**

in

**The Blue Horizon Hotel, Vancouver, BC, CANADA**

**12 - 16 July 1999**

1. Notes, Briefing and out come of -
  - i. 20th WG3/SG2 Meeting, Brussels, 1 – 5 March 1999
  - ii. ATNP WG3 and WG1 Meeting, Naples, 18 -26th May 1999
  - iii ADSP WG A & B Meetings, Ottawa, 26 April – 7 May 1999
  - iv PIT and Post-PIT meetings, Geneva, 14 – 16 April and Seattle, 16 – 18 June
2. SARPs and GM for Version 1 Applications: maintenance
  - 2.0 General - Discussion on SARPs P-1 maintenance procedures
  - 2.1 Accepted & Forwarded PDRs for CM, ADS, CPDLC & FIS
3. CM - Detailed development of future DLIC/logon procedures
4. ADS - Development of future a/g enhancements, including security, pilot interface, inputs for Emergencies
5. CPDLC
6. FIS - New FIS services (**Please do your METAR homework!**)
7. PICS and Interoperability (PICS previously circulated by Mike H and Frederic will be reviewed in detail.)
8. New SARPs for Version 2 Applications
9. Consequent SARPs Amendments & Version Confirmation
11. Input to Working Group 3 Meeting, Gran Canaria (Spain), September 1999, including thoughts on Panel Material
12. AOB
13. Date and Place of next Meeting (UK/France November 1999?)

**End**

## LIST OF WORKING PAPERS

### ATNP WG3/SG2

#### Twenty First Meeting

**Blue Horizon Hotel, Vancouver,  
Canada**

**12 – 16 July 1999**

Paper Number	Agenda Item	Presenter	Title
1	1	M Asbury	Agenda
2	1	M Asbury	Working Paper List
3	1	M Asbury	Report of 20th SG 2 Meeting, Brussels
4	1	M Asbury	Report of WG3 Meeting, Naples
5	1	M Asbury	Brief Report of ADSP WG A Meeting, Ottawa
6	1	M Asbury	Brief Report of ADSP WG B Meeting, Ottawa
7	2	F Picard	Doc 9705 – ADS Defects Reports Proposal
8	6	F Picard	Draft Validation Report for METAR
9	7	M Harcourt	CM PICS/OICS Proforma – Airborne ASE
10	7	M Harcourt	CM PICS – Ground Element
11	7	M Harcourt	ADS PICS – Air Element
12	7	M Harcourt	ADS PICS – Ground Element
12A	7	M Harcourt	ADS PICS – Report Forwarding
13	7	M Harcourt	CPDLC PICS – Air Element
14	7	M Harcourt	CPDLC PICS – Ground Element
15	7	F Picard	FIS PICS – Air Element
16	7	F Picard	FIS PICS – Ground Element
17	7	M Harcourt	PICS/OICS Guidance Material
18	5	P Camus	CPDLC – Operational Use of Messages
19	8	G Saccone	Package 2 CM Logon Logout Services
20	8	G Saccone	P2 CM Logon Response Enhancements
21	8	F Picard	Compilation of Security e-mails
22	6	F Picard	Appendix F (METAR – operating method with data link)
23	12	P Tupitza	Proposed Application Management BMIB
24	1	G Saccone	PIT Extracts
25	7	M Harcourt	UM 54 Example
26	7	F Picard	Extract from Airborne FIS PICS
27/(27A)	8	G Saccone	Clarifications for CM LogonRequest/Response. (PDR)
28	12	M Bigelow	Communique from WG 1 SG 2

**BRIEF REPORT OF THE 16TH MEETING OF THE ATNP WG3 - (APPLICATIONS AND UPPER LAYERS), NAPLES, ITALY, 18 – 21 MAY 1999**

1. The 16th meeting of the ICAO Aeronautical Telecommunications Network Panel Working Group 3 was held in the Royal Continental Hotel, Naples, from 18 – 21 May 1999. The meeting was chaired by the WG3 Rapporteur, Mike Asbury, and was attended by 29 Members from 10 States and 3 International Organisations. 43 Working Papers and Information Papers were presented.
2. The WG was presented with brief reports of the recent ADSP Working Group meetings. WG 3 had been looking to this meeting of ADSP to finalise the METAR operational requirement and approval of the ranges and resolutions – this appeared not to have been done. If the information was not forthcoming, then the METAR service would not be ready for ATNP/3.
3. The ATNP Secretariat said there was a need to revise and update Annex 10, Vol II (Communication Procedures). This task is to be progressed by ATNP (for data communications). WG3/SG1 was probably the only group with the relevant expertise to take on this task.
4. The WG reviewed a proposal to assess the need for security, prior to developing the mechanisms. It was that there was a need to carry out risk analysis, but the need to develop security mechanisms was clearly stated in the work programme for ATNP approved by the ANC post ATNP/2. The WG agreed that there was a need to have to work on the technical building blocks now for a service that will be needed in the future.
5. An updated draft of the proposed SV 6 SARPs, relating to System Management, was made available. There was still a great deal of work to be done. Guidance Material was also presented. There was still a question of whether management information was Guidance Material or SARPs.
6. SG1 (Ground/Ground applications) had met once since the Honolulu WG 3 meeting. Current work involved maintenance of the Package 1 ATSMHS SARPs, the extended ATS message service (a first draft of the Package II SARPs had been produced), the CIDIN/ATN gateway and the AMHS use of a Directory. It expected that all objectives would be achieved by the Panel Meeting.
7. SG2 (Air/Ground applications) had met once since the 15<sup>th</sup> meeting of WG 3. Work continued on the development of future logon procedures, how the implementation of security would affect the air-ground applications, the updating of the METAR service, the concept of PICS (Protocol Implementation Conformance Statements) for air/ground applications and the revisions of the air/ground SARPs material to meet implementation requirements.
8. SG 3 had met once since Honolulu. The work programme included the SV 4 Doc 9705 Amendment 1 change pages, the CNS/ATM-2 SARPs, (GACS, CLDS, and Naming and Addressing), associated CNS/ATM-2 Guidance Material and the ATNP/3 validation paper for the upper-layer enhancements.
10. The WG was presented with information on interoperability and the development of Protocol Implementation Conformance Statements/Operational Implementation Conformance Statements (PICS/ OICS) for all applications - the document provides the guidance material for all aspects of the PICS/OICS development and use. The PICS should go in the Guidance Material - the WG suggested that they could be put on a Eurocontrol web site. Eurocontrol indicated that this might be possible.
11. The WG were presented with an update to the ATN Lexicon. An updated ATNP lexicon should be tabled at ATNP/3, and be included in its report. New ATN definitions should be included in future updates of the ATN Comprehensive Manual and Doc 9705.
12. The WG was made aware of the latest features in the ATN SARPs Electronic Library and a list of Acronyms for SARPs documents. It was confirmed that the FAA wanted to make the library available.– the plan was for a six month free access to the tool over the internet.
13. The next meeting of the WG will be in Grand Canaria (Spain) from 28/9 – 1/10/99.

**BRIEF NOTES OF THE AUTOMATIC DEPENDENT SURVEILLANCE PANEL (ADSP) WORKING GROUP A (WG A) MEETING, OTTAWA, 3 – 7 MAY 1999**

1. The last meeting of the ADSP WG A meeting prior to the next full Panel meeting (ADSP/5) was held at the Sheraton Hotel, Ottawa, from 3 – 7 May 1999. It was attended by members from 13 States and three International Organisations. 16 Working Papers were presented.
2. There were no papers relating to proposed amendments to Annex 10 – all proposed amendments relate to PANS/RAC. Material was presented and adopted relating to Amendments to sections concerning –
  - a. Security,
  - b. Finding a solution to ADS performance differences so as not to enforce the high demands of surveillance performance on all uses of the ADS,
  - c. The use of ADS in co-ordination demarcate the function of the controller and that of the ADS processing system,
  - d. Prioritising of the already listed 'essential' and 'desirable' requirements of an ADS automation (not slavishly follow the terminology out of the radar sections), and,
  - e. Presentation of ADS information to the controller,
3. The Panel Secretary reviewed previous draft material, and the (his) outstanding actions. He wanted extra input at this meeting on –
  - a. System data/flight plan correlation,for a generic ADS operation,
  - b. The mixture of controller and automation tasks in an automated environment including consideration of human factors input,
  - c. ADS contact procedures,
  - d. The testing of ADS in an operational environment, and,
  - e. Procedures relating to aircraft navigational accuracy
4. Material suitable for approval at ADSP/5 and subsequent introduction to PANS/RAC and Annex 10 was produced at the meeting
5. The WG had been made responsible for generating the ADS-B operational concept for ICAO. US had prepared a large paper, based on existing RTCA work, and UK offered an outline paper the format of a proposed ADS-B concept paper for ADSP/5 along the lines requested by the Panel Secretary. A paper was prepared along the lines of the UK draft.
6. A short paper on the legal aspects of data link implementation was presented, and will be expanded for ADSP/5. Another regulatory paper, which proposed amendments to Annex 1 to accommodate ADS, CPDLC and future technologies from a training, rating and licensing perspective, was presented – this had been co-ordinated with UK/JAA work through UK SRG. There needed to be more discussion, at least with Europe, and this would be recognised in a paper for ADSP/5.
7. There will be no further meeting of the Working Group before the next Panel meeting, to be held in Montreal from 18 – 29 October 1999. All papers for the Panel meeting should be in three months before the date of the Panel meeting – i.e. by mid July. The draft agenda for the Panel meeting has been published, and will be circulated in the official report of the meeting.

**BRIEF NOTES OF THE AUTOMATIC DEPENDENT SURVEILLANCE PANEL (ADSP) WORKING GROUP B (WG B) MEETING, OTTAWA, 26 – 30 APRIL 1999**

1. The last meeting of the ADSP WG B meeting prior to the next full Panel meeting (ADSP/5) was held at the Sheraton Hotel, Ottawa, from 26 - 30 April 1999. It was chaired by J-F Grout, of France and attended by members from 13 States and three International Organisations. 18 Working Papers were presented, and the revised draft Manual of ADS Data Link Applications (Doc 9694) was made available for editorial review prior to publication.
2. The meeting was principally concerned with the review of Controller Pilot Data Link Communications (CPDLC), Data Link Flight Information Services (D-FIS) including Data Link Automatic Terminal Information Service (D-ATIS) and Data Link Aerodrome Meteorological Reports (D-METAR), and Air Traffic System Interfacility Data Communications (AIDC) amendment proposals for the ICAO Annexes, Procedures for Air Navigation/Rules of the Air (PANS/RAC) and associated guidance material to be contained in Doc 9694,
3. Material was brought to the meeting concerning security of all data link applications, timestamping of messages, operational aspects of CPDLC, updating of METAR and ATIS information in the D-FIS, amendments to the ground/ground AIDC requirements, human factors performance of controllers in the data link environment, data link system testing procedures, and the use of non Annex 5 compliant units in some part of the world.
4. This material was evaluated by the working group, and appropriate material for Annex 2, Annex 10 Volume II, Annex 11, Doc 4444 (PANS/RAC) and Doc 9694 (Manual of ATS Data Link Applications) was prepared. This will be brought to the 5<sup>th</sup> Meeting of the ADSP in October.
5. The ADSP had been tasked with preparing a Manual outlining the concept of a RCP, (but not the mechanism by which it could be achieved, nor an index of types). The overall concept had been accepted in Adelaide, but it had required refining, and this had been done. The meeting (excluding the Spanish and Saudi Arabian members) concluded that the concept was mature enough to take to ADSP/5 and hence to the Air Navigation Commission for further consideration.
6. The ADSP Working Groups have also developed a lexicon of definitions relating to the ATS Data Link Applications. An updated version was presented, and the meeting agreed that the lexicon should be presented to the Panel, but not translated. This was not a standard procedure, since all papers would normally be translated, but the essence of the lexicon was that it was of terms in the English language.
7. An Editorial group reviewed the latest version of Doc 9694, due for printing and publication in the near future. There was a need to differentiate what were mere editorial errors, which might be changed prior to printing, and what were material changes which would have to be brought before the Panel for ratification. Opportunity was taken to remove obsolete material, and to bring the material into line with Annex 2, 11 and PANS/RAC amendments. Doc 9694 should be published and distributed within the next two months.
8. There will be no further meeting of the Working Group before the next Panel meeting, to be held in Montreal from 18 - 29 October 1999. All papers for the Panel meeting should be in three months before the date of the Panel meeting – i.e. by mid July.

**BRIEF NOTES OF THE 5<sup>TH</sup> PETAL INTEROPERABILITY TEAM (PIT) MEETING – GENEVA, 14/15 APRIL 1999**

1. The 5<sup>th</sup> Eurocontrol PETAL Interoperability Team (PIT) meeting was held in the regional office of SITA in Geneva from 15<sup>th</sup> to 16<sup>th</sup> April. The meeting was chaired by Rob Mead, and attended by 47 members, principally from Eurocontrol, FAA, Rockwell/Collins, American Airlines and the French administration. The only other person representing a UK organisation was Phil Platt, Business Manager, Civil Aviation Division, DERA Malvern.

2. Rob Mead presented an update of PIT risk analysis, with the risks re-assessed in the light of tasks carried out or events occurring. There were no comments, and, to all intents and purposes, little attention paid to this important presentation.

3. Participants were encouraged to present reports of the status of the work so far, whether directly as a part of, or peripheral to, the PIT programme. Reports were received from France, American Airlines, ARINC, Eurocontrol, FAA (2) and the team responsible for the PETAL-II overview and PIT re-orientation

4. As far as Rob was concerned, the PETAL II specifications were frozen at version 3.0, unless any life-threatening Potential Defect Reports emerged.

5. A formal procedure was set up to identify, review, analyse and vote on any defects identified in the specifications, and if need be, incorporate remedial changes.

6. Activities are going ahead in support of certification and operational approval, and anything affecting them. There needed to be cost-efficient and effective certification methods, to allow extensions and upgrades without having to go through a full re-certification process each time. This was a high risk area, and there was discussion going on with the FAA on various certification issues.

7. ATNSI schedules are consistent with the FAA. Some dates have been changed, but much remains stable. The work was dependent on the stability of other programmes. There were still VDL Mode 2 issues relating to interference which had not been taken care of – AMCP had not resolved all issues at their recent meeting. ARINC had signed up for the PIT, but was concerned about the schedules, and timekeeping. ARINC would complete ground station work with Eurocontrol by Q1/01, allowing the start of the PETAL II trials between May and September 2001.

8. It was identified that VDL running 8208 was not compatible with the mobile SNDCF of the ATN SARPs. This could be a major issue for the system providers. Eurocontrol said that the problem, which related to connect before handover protocols, had already been identified, and a solution had been proposed, which was awaiting Industry approval. This solution should minimise any effect on the ATNSI programme.

9. The dates of the next meetings were confirmed as –

PIT/6	16-17 June	Atlantic City (FAA Tech Centre)
PIT/7	8-9 September	Brussels (Eurocontrol)
PIT/8	16-17 November.	Dallas (AA Hq)