Twenty Fifth Meeting of the
Informal South Pacific ATS Co-ordinating Group (ISPACG/25)

Honolulu, Hawaii, USA, 24-25 March 2011

Agenda Item 4 Review Open Action Items (AI 17-11)

AIDC Update

Presented by Airservices Australia

SUMMARY

This information paper provides an update on AIDC activities in YBBB since ISPACG/24

1. INTRODUCTION

1.1   ATS Interfacility Data Communications (AIDC) allows the electronic exchange of coordination information between ATS Units. While the use of AIDC is transparent to the operators, the use of AIDC has the capability to enhance safety and to reduce controller workload, allowing improved response time in the processing of flight crew requests.

2. DISCUSSION

2.1   While AIDC capability exists in TAAATS, the full potential of AIDC has not been implemented. However, small steps are being taken! The following provides a summary of AIDC activities since ISPACG/24, as well as pending AIDC activities:

- Continuation of AIDC trial with Makassar;
- Use of AIDC to support voiceless coordination between YBBB and YMMM;
- Expansion of the use of CDN messaging.

2.2   Continuation of AIDC trial with Makassar

2.2.1   The AIDC trial with Makassar is still continuing. The trial involves the exchange of AIDC messages which is then backed up with voice coordination.

2.2.2   While the majority of message exchanges are successful, problems are still being encountered periodically. These problems include:

- Delayed response to AIDC messages sent to Makassar. This appears to occur every few days, lasts for a period of approx 20 minutes then operations return to normal;
- no ACP response to EST messages transmitted from YBBB to WAAF for a period of time, then operations return to normal.

2.2.3   Difficulty is being encountered in establishing the cause of these problems.

2.3   Use of AIDC to support voiceless coordination between YBBB and YMMM

2.3.1   On the 10th March 2011, the use of AIDC for coordination between YBBB and YMMM was implemented between sectors on the YMMM/YBBB FIR boundary across the majority of mainland Australia.

2.3.2   Previously in this airspace AIDC messages were exchanged, but this was followed up by voice coordination.

2.3.3   While there are still some issues associated with this change in procedures, it represents a major shift in the way that coordination is conducted within Australia.

2.3.4   See Attachment 1 for a depiction of the airspace affected by this change.

2.4   Expansion of the use of CDN messaging

2.4.1   AIDC CDN messages are used to propose revisions to coordination (e.g. change of level) after initial coordination has been completed. The CDN interface in TAAATS was not very user friendly, and so the use of CDN messages by YBBB was suspended.

2.4.2   Improved CDN capability was introduced into TAAATS in December 2009. This allowed the re-introduction of CDN messages to coordinate revisions to estimates and levels for eastbound traffic

2.4.3   In the near future, the use of CDN messaging will be expanded to include the receipt of CDN messaging for westbound traffic from NZZO.

2.5   LRM analysis

2.5.1   The normal response to a syntactically correct AIDC message is a Logical Acknowledgement Message (LAM). If the received message is syntactically incorrect, the response should be an Logical Rejection Message (LRM).

2.5.2   An LRM analysis can indicate interoperability problems between two ATS Units. Several examples identified from our AIDC logs are included below:

- TAAATS does not support the non-ICAO DOF/ indicator in Field 18, and currently has a system limitation of 10 characters (max) in Field 10. Receipt of an AIDC message containing DOF/ or greater than 10 characters in Field 10 will result in an LRM response from TAAATS;

- An FIR adjoining YMMM only supports a maximum of 100 characters in Field 18. This results in a large proportion of ABI sent by YMMM to this ATS Unit being rejected.

2.5.3   While Version 3 of the AIDC ICD did prescribe maximum values for some variables, any future upgrade to these specifications should probably consider defining maximum sizes to all variables and flight plan fields.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to note the information in this paper.

Attachment 1.   Airspace affected by the implementation of voiceless coordination
Attachment 2.   3 days AIDC performance analysis (message transmitted/received by YBBB)
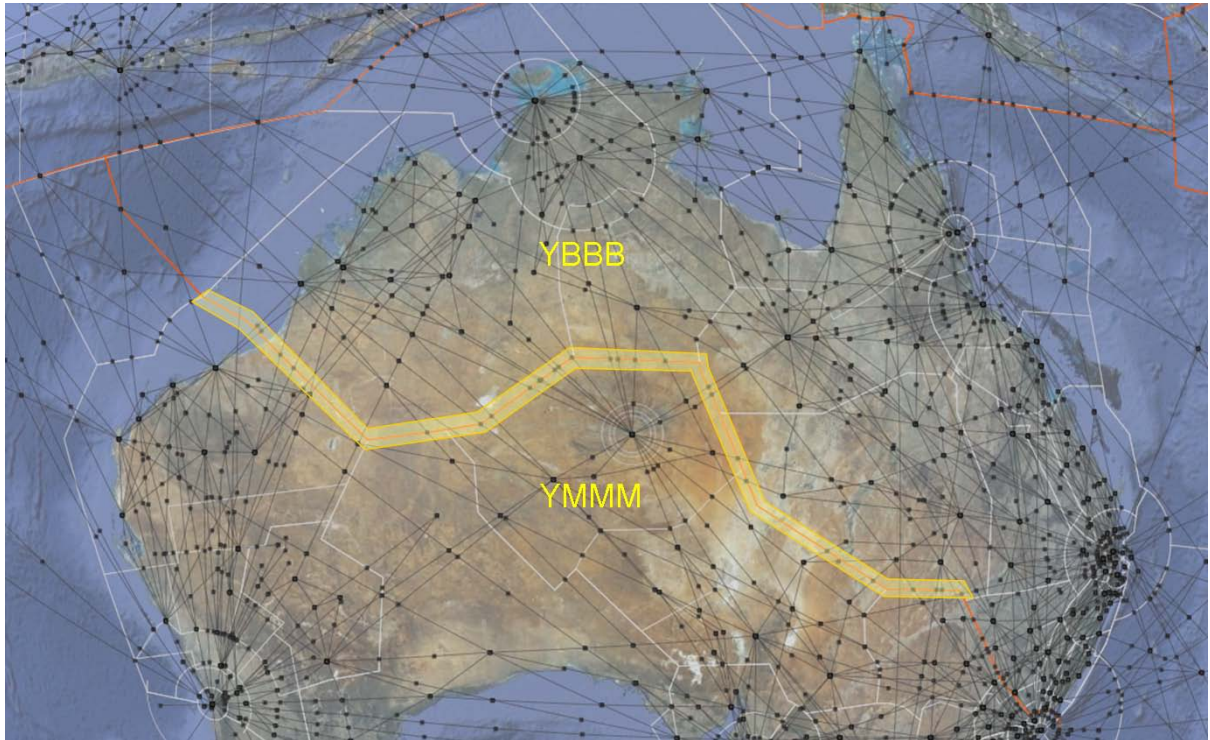
Attachment 1

Figure 1. Airspace in which voiceless coordination has recently been introduced

Attachment 2
AIDC message summary for 19/02/11to 22/02/11

YBBB ==> WAAF	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	362	9	361	0	5.6	1	0	-	-	-	-	-
EST	309	6	309	0	2.6	0	0	270	-	-	39	2.9
ACP	237	-	237	0	3.6	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	330	-	330	0	2.3	0	0	-	-	-	-	-
AOC	246	-	245	0	2.4	0	0	-	-	-	-	-

YBBB ==> YMMM	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	2494	17	2494	0	0.5	0	0	-	-	-	-	-
EST	1279	13	1279	0	0.2	0	0	1257	-	-	22	0.2
ACP	1316	-	1316	0	0.2	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	1287	-	1287	0	0.2	0	0	-	-	-	-	-
AOC	1338	-	1338	0	0.2	0	0	-	-	-	-	-

YBBB ==> NFFF	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	75	4	72	2	2.4	1	0	-	-	-	-	-
EST	64	3	62	1	1.0	0	0	62	-	-	2	0.0
ACP	82	-	82	0	1.0	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	69	-	65	0	1.0	0	0	-	-	-	-	-
AOC	86	-	84	1	1.0	0	0	-	-	-	-	-

YBBB ==> NZZO	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	283	8	279	0	4.5	0	0	-	-	-	-	-
EST	223	4	220	1	3.4	0	0	220	-	-	3	1.5
ACP	210	-	208	0	3.2	1	0	-	-	-	-	-
CDN	12		12	0	2.3	0	0	12	0	0	0	57.2
TOC	222	-	220	0	2.2	0	0	-	-	-	-	-
AOC	209	-	203	0	2.4	0	0	-	-	-	-	-

YBBB ==> KZAK	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	4	2	4	0	2.5	0	0	-	-	-	-	-
EST	4	2	4	0	1.5	0	0	4	-	-	0	1.0
ACP	4	-	4	0	2.0	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	0	-	0	0	-	0	0	-	-	-	-	-
AOC	0	-	0	0	-	0	0	-	-	-	-	-

WAAF ==> YBBB	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	0	0	0	0	N/A	0	0	-	-	-	-	-
EST	244	2	244	0	2.7	0	0	224	-	-	20	3.6
ACP	270	-	270	0	2.9	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	259	-	259	0	2.4	0	0	-	-	-	-	-
AOC	267	-	267	0	2.1	0	0	-	-	-	-	-

NFFF ==> YBBB	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	106	11	105	1	0.1	0	0	-	-	-	-	-
EST	86	9	86	0	0.0	0	0	81	-	-	5	1.0
ACP	63	-	62	0	0.0	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	88	-	87	0	0.0	0	0	-	-	-	-	-
AOC	65	-	65	0	0.1	0	0	-	-	-	-	-

NZZO ==> YBBB	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	232	8	230	2	1.5	0	0	-	-	-	-	-
EST	210	6	208	1	0.6	1	0	209	-	-	1	4.5
ACP	232	-	232	0	1.5	0	0	-	-	-	-	-
CDN	1		1	0	1.0	0	0	0	0	0	1	-
TOC	210	-	208	0	0.9	2	0	-	-	-	-	-
AOC	220	-	220	0	0.6	0	0	-	-	-	-	-

KZAK ==> YBBB	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	13	3	3	10	1.1	0	0	-	-	-	-	-
EST	5	1	5	0	0.4	0	0	4	-	-	1	2.0
ACP	4	-	4	0	1.0	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	0	-	0	0	-	0	0	-	-	-	-	-
AOC	0	-	0	0	-	0	0	-	-	-	-	-

YMMM ==> YBBB	#	# Blk level	Application response LAM	LRM	Response	>180 sec LAM	LRM	Operational Response ACP	REJ	CDN	NIL	Response
ABI	2416	17	2416	0	0.5	0	0	-	-	-	-	-
EST	1320	11	1320	0	0.3	0	0	1308	-	-	12	0.2
ACP	1258	-	1258	0	0.2	0	0	-	-	-	-	-
CDN	0		0	0	-	0	0	0	0	0	0	-
TOC	1334	-	1334	0	0.2	0	0	-	-	-	-	-
AOC	1219	-	1219	0	0.2	0	0	-	-	-	-	-