

**Communiqué from ATNP WG-A to AMCP WG-M on priority mapping**  
(September 2000)

**1. Background**

The AMCP/7 meeting in March 2000 approved the Core SARPs for the VDL Mode 3 and the VDL Mode 4 mobile subnetwork. ATNP/3 at its meeting at February 2000 elected to not include specific recognition of these new mobile subnetworks because they had at that time not yet been approved by the AMCP. Since they have now been approved by the AMCP, it is proposed to add provisions within the Third Edition of Doc 9705 Sub-Volume I to include the ATN network layer to subnetwork priority mapping for these new VDL subnetworks. It is our understanding that AMCP/7 also approved the core SARPs for the next generation aeronautical mobile satellite service (NG-AMSS). However this is a generic subnetwork service definition and the specific technical provisions, such as internet to subnet priority mapping, will be defined in the future for specific service providers. Therefore, it is not currently proposed by ATNP WG-A to add any changes to Doc 9705 Sub-Volume I related to the use of the NG-AMSS as an ATN mobile subnetwork.

**2. Discussion**

It is the understanding of ATNP WG-A that the VDL Mode 3 subnetwork offers four priority levels (values 0 - 3) at the subnetwork interface. Furthermore, VDL Mode 3 is restricted to communications related to safety and regularity of flight. This is defined in Table 5-57 of the VDL Mode 3 technical manual.

It is the understanding of ATNP WG-A that VDL Mode 4 subnetwork supports 3 priority levels (high, medium and low) at the subnetwork interface. Section 2 of the

VDL Mode 4 technical specification references the VDL Mode 2 subnetwork provisions for ATN support except it states: "During link establishment, an airborne station shall establish an SVC for each of the priority levels ...it expects to use over the link, using the priority facility of ISO 8208." It is our understanding that this area of the VDL Mode 4 technical provisions may still be under review by the AMCP WG-M and the VDL Mode 4 Validation Subgroup. Furthermore, ATNP WG-A notes that VDL Core SARPs as were approved by AMCP/7 (i.e., para. 6.9.3.1 of the AMCP/7 report) limit the applicability of the VDL Mode 4 subnetwork to support for surveillance applications.

### **3. Requested Action of AMCP WG-M**

ATNP WG-A requests that AMCP WG-M review the proposed changes to Table 1-3 of the Third Edition of Doc 9705, Sub-Volume I to ensure the intended ATN network layer-to-VDL (Mode 3 and Mode 4) mobile subnetwork layer priority mapping has been correctly reflected.

Concurrence with the proposed VDL Mode 3 and VDL Mode 4 priority mapping and/or any comments on the table should be submitted to ATNP WG-A no later than 31 January 2001, otherwise the priority mapping table in the third edition update to Doc 9705 will not be revised to include the new VDL subnetwork.

**Table 1-3. Mapping of ATN network priority to mobile subnetwork priority**

Message categories	ATN network layer priority	Corresponding mobile subnetwork priority (see Note 5)					
		AMSS-1 (see Note 4)	VDL Mode 2	VDL Mode 3	VDL Mode 4	SSR Mode S	HFDL
Network/systems management	14	14	see Note 1	<u>3</u>	<u>high</u> <u>see Note 7</u>	high	14
Distress communications	13	14	see Note 1	<u>2</u>	<u>high</u> <u>see Note 7</u>	high	14
Urgent communications	12	14	see Note 1	<u>2</u>	<u>high</u> <u>see Note 7</u>	high	14
High-priority flight safety messages	11	11	see Note 1	<u>2</u>	<u>high</u> <u>see Note 7</u>	high	11
Normal-priority flight safety messages	10	11	see Note 1	<u>2</u>	<u>high</u> <u>see Note 7</u>	high	11
Meteorological communications	9	8	see Note 1	<u>1</u>	<u>medium</u> <u>see Note 7</u>	low	8
Flight regularity communications	8	7	see Note 1	<u>1</u>	<u>medium</u> <u>see Note 7</u>	low	7
Aeronautical information service messages	7	6	see Note 1	<u>0</u>	<u>medium</u> <u>see Note 7</u>	low	6
Network/systems administration	6	5	see Note 1	<u>0</u>	<u>medium</u> <u>see Note 7</u>	low	5
Aeronautical administrative messages	5	4	restricted - see Note 1	<u>restricted</u>	<u>low</u> <u>restricted</u> <u>see Note 7</u>	not allowed	4 restricted
<unassigned>	4	not assigned	not assigned - see Note 1	<u>not assigned</u>	<u>not assigned</u> <u>see Note 7</u>	not allowed	not assigned
Urgent-priority administrative and U.N. Charter communications	3	3	restricted - see Note 1	<u>restricted</u>	<u>low</u> <u>restricted</u> <u>see Note 7</u>	not allowed	3 restricted
High-priority administrative and State/Government communications	2	2	restricted - see Note 1	<u>restricted</u>	<u>low</u> <u>restricted</u> <u>see Note 7</u>	not allowed	2 restricted
Normal-priority administrative communications	1	1	restricted - see Note 1	<u>restricted</u>	<u>low</u> <u>restricted</u> <u>see Note 7</u>	not allowed	1 restricted
Low-priority administrative communications & Aeronautical Passenger Communications	0	0	restricted - see Note 1	<u>restricted</u>	<u>low</u> <u>restricted</u> <u>see Note 7</u>	not allowed	0 restricted

*Note 1.— VDL Mode 2 has no specific subnetwork priority mechanisms.*

*Note 2.— The AMSS SARPs specify mapping of message categories to subnetwork priority without explicitly referencing ATN network layer priority.*

*Note 3.— The term “not allowed” means that only communications related to safety and regularity of flight are authorized to pass over this subnetwork as defined in the subnetwork SARPs.*

*Note 4. — The term AMSS-1 refers to the first generation Aeronautical Mobile Satellite Service.*

*Note 5. — Only those mobile subnetworks are listed for which subnetwork SARPs exist and for which explicit support is provided by the ATN Boundary Intermediate System technical provisions.*

*Note 6. — The term “restricted” means for this message category the use of this subnetwork may not be allowed in certain States and/or regions based on ITU radio frequency spectrum allocation.*

***Note 7. — The VDL Mode 4 subnetwork has only been specified to support surveillance applications (e.g., ADS).***

