



VDLM2 Implementation Plan

AFC June 2016 Meeting

Scope



- Review current progress
- Identify outstanding work
- Future planning

Current Progress



- Joint industry proposal to implement a method with ASRI, CSPs and Harris.
 - Assign new VDLM2 channels to meet DataComm, while minimizing impact on existing users
- Planned for 4 phase process from initiation on 1 Jul 2014
 1. Reorganize lower band AES voice users
 2. Migrate affected voice users from upper AES band
 3. Migrate upper band ACARS networks
 - a) Secondary ACARS networks (3)
 - b) SITA ACARS base frequency*
 4. Assign new VDLM2 frequencies
 - a) Upper 136 MHz band
 - b) Lower 136 MHz band

Timelines



Frequencies	2014		2015		2016		2017	
(MHz)	07/01	01/01	07/01	01/01	07/01	01/01	07/01	
136.550-136.950	Clearing Voice*	All Adjacent Channels Cleared						
136.575	ACARS		ACARS Migration**	Cleared				
131.650	Clearing Voice	Cleared	↪	ACARS**				
136.650	ACARS		ACARS Migration	VDLM2 RC				
129.350	Clearing Voice	Cleared	↪	ACARS				
136.800	ACARS		ACARS Migration	VDLM2 SITA				
129.525	Clearing De-icing Usage		↪	ACARS				
136.850	ACARS			ACARS Migration**			Cleared	
131.725	Clearing Voice	Cleared		↪			ACARS**	

*Some voice users will be moved to 136.500 and 136.525 MHz.

**Date and actions subject to change dependent on VDLM2 traffic requirements.

VDLM2 Channel Plan



Frequency (MHz)	Allocation	Notes
136.975	Common Signaling Channel	Already assigned nationally to VDLM2
136.950	Guard Channel	
136.925	Guard Channel	
136.900	Guard Channel	
136.875	Guard Channel	
136.850	Guard Channel	
136.825	Guard Channel	
136.800	VDLM2 on-site SITA	Primarily ground traffic - Planned for national US deployment
136.775	Guard Channel	
136.750	VDLM2 off-site SITA	Primarily enroute traffic - Planned for national US deployment
136.725	Guard Channel	
136.700	Guard Channel	
136.675	Guard Channel	
136.650	VDLM2 on-site RC	Primarily ground traffic - Planned for national US deployment
136.625	Guard Channel	
136.600	VDLM2 off-site RC	Primarily enroute traffic - Planned for national US deployment
136.575	Guard Channel	
136.550	Guard Channel	
136.525	ASRI voice users	Select US areas only
136.500	ASRI voice users	Select US areas only

Frequency (MHz)	Allocation	Notes
136.475	FAA voice users	Select US areas
136.450	FAA voice users	Select US areas
136.425	Guard Channel	
136.400	Guard Channel	
136.375	Guard Channel	
136.350	VDLM2 off-site SITA	Primarily enroute traffic - Planned for national US deployment
136.325	Guard Channel	
136.300	VDLM2 on-site SITA	Primarily ground traffic - Planned for national US deployment
136.275	Guard Channel	
136.250	Guard Channel	
136.225	Guard Channel	
136.200	Guard Channel	
136.175	Guard Channel	
136.150	VDLM2 off-site RC	Primarily enroute traffic - Planned for national US deployment
136.125	Guard Channel	
136.100	VDLM2 on-site RC	Primarily ground traffic - Planned for national US deployment
136.075	Guard Channel	
136.050	Guard Channel	
136.025	Guard Channel	
136.000	Guard Channel	

Outstanding actions



- RC change proposal
- SITA adjacent frequency implementation for 131.725 MHz
- Canadian coordination
 - 131.725
 - 129.350
- Lower 136 MHz channel plan
- FAA licensing of lower 136 MHz band
- Siting coordination for ground/enroute
- Future of VDLM2 spectrum sub-group

RC VDLM2 Change Proposal Update



- RC has requested for a change in the AFC's approved VDLM2 plan
 - Keep SITA POA base frequency on 136.850 MHz
 - Reorganize VDLM2 plan
 - No voice users in 136 band
- Key issues cited by RC
 - Gives SITA a competitive advantage
 - Intermod concerns between ground stations
 - Avionics modifications required for frequency table updates
- SITA's position
 - Hard ACARS cutover scheduled for 30 June 2017 as agreed by AFC
 - Started engagement with customers, manufacturers and OEMs
 - Some airlines already implemented frequency table update
 - SITA has already invested over \$1million USD in ground radios for update

RC VDLM2 Change Proposal Update



- Harris produced a technical assessment of intermods
 - Does not believe intermods are an issue (<.03% chance)
 - Interference risk to the CSC if POA traffic remains on 136.850 MHz
- FAA does not want to move federal voice users out of the 136 band
 - Would need to migrate entirely to UHF system over 3 years
 - Non-FAA users affected, so source of funding (approx. \$500k) not yet agreed between agencies
- ASRI limited on options to migrate voice users
 - Primarily one airline, and several other users, affected on 136.500 & 136.525
 - Strong opposition from the airline to change again
 - Already changed once, and would require new equipment
 - Only one spare channel in lower AES band (SITA's presumed ACARS)

Discussion



- Updates from interested parties on work since summary was published
- Discussion
 - Roundtable views on the issue
- Options on the way forward
 - Required planning needed