

Technical Excellence...Tactical Value

Marine Corps Tactical Systems Support Activity



USMC
Network Design Facility
Advanced Planning Brief to Industry

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USMC NDF Overview

- **The USMC NDF is Chartered to :**
 - **Develop and deliver Link 16 Networks, initialization data and supporting documents to USMC operating forces employing Link 16**
 - **Provide Link 16 network management support to operating forces**
 - **Support meetings, conferences and forums that discuss and develop technologies, enhancements and changes to the standards that impact the employment of Link 16**
 - **Support integration and testing of USMC TDL systems**



Agenda



		Slot Group																																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25															
		RTT-B	PPLI-A	PPLI-B	PPLI-C	PPLI-D	SURV	SURV	SURV	SURV	SURV	SURV	SURV	SURV	SURV	MM/WC	MM/WC	A/C-U	A/C-B	A/C-B	EW	EW	IMG	IMG	VOA	VOA															
		NPG	3	5	6	6	TY	7	7	7	7	7	7	7	7	8	TY	9	9	10	10	11	11	12	12	TY															
		Net Number	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	127	127	127	0	0	0	0	0	127															
		TSEC Variable	1	1	1	1	1	1	1	1	1	1	1	1	1	122	1	1	1	1	1	1	1	1	1	1															
		MSEC Variable																																							
		Access Mode	4	D	B	D											18	17	D	D	D	D	D	R	R	9	9	8	R	PTT											
		Packing Limit	RTT	P2SP	P2SP	P2SP	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P4	P2SP	P4	P4	P4	P4	P4	P4	P4															
		Per Unit Slots/Frame																																							
		Total Slots/Frame	8	8	64	32	32	1											16	4	8	8	8	32	32	24	24	32	32	112	112										
Row	ID#	Participant ID	Name	USN	TSDF	NETE	DNet																																		
1	1-6	USMC_UAS(1)/6	VMU	0	35.4	Y	0	T	R	T	R	R											R	R	R	R	T/R	R	T	R	T	R	T	R	T	VY					
2	7-8	TAOM(1)/2	TAOC/EWC	1	30.6	Y	0	T	R	R	T/R	R											R	T/R	R	R	R	R	T	R	T	R	R	R	T	VY					
3	9	CDLSM(1)	CDLS	0	34.9	Y	0	T	R	R	T/R	R											R	T/R	R	R	R	R	T	R	T	R	T	R	T	VY					
4	10	JRE_USMC-M(1)	NTR/RE	0	31.3	Y	0	T	R	R	T/R	R											R	T/R	R	R	R	R	T	R	T	R	T	R	R	T	VY				
5	11-12	USMC_GRND_STT(1)/2	EWCC	0	30.4	Y	0	T	R	R	T/R	R											R	R	R	R	T/R	R	T	R	T	R	T	R	R	T	VY				
6	13-14	JRE_USMC(1)/2	TAOC/EWC	3	34.2	Y	0	T	R	R	T/R	R											R	T/R	R	R	R	R	T	R	T	R	T	R	T	R	VY				
7	15-18	EA-6B(1)/4	USMC/USN	0	32.4	Y	0	T	T/R	T	R	R											T	T	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
8	19	F35B_C(1)	USMC/USN	0	35.3	Y	0	T	R	T	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
9	20-21	Gen_Tanker(1)/2	Generic	0	53.7	Y	0	T	R	R	T/R	Y											R	R	Y	R	R	R	R	R	R	R	R	R	R	R	T	VY			
10	22	Gen_Tanker(3)	Generic	0	27.1	Y	0	T	R	R	T/R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
11	23	E3(1)	AWACS	0	57.8	Y	0	T	R	R	T/R	Y											T	T	R	Y	R	R	R	R	R	T	Y	T	R	T	Y	T	VY		
12	24	JSTARS(1)	JSTARS	0	60.7	Y	0	T	R	R	T/R	Y											T	T	R	Y	R	R	R	R	R	T	Y	T	R	T	Y	T	VY		
13	25-26	ABN_C2(1)/2	Generic	0	60.7	Y	0	T	R	R	T/R	Y											R	R	Y	R	R	T/R	R	T	Y	T	T	Y	T	T	Y	T	VY		
14	27	R(1)	RJ	0	55.4	Y	0	T	R	R	T/R	Y											R	R	Y	T	R	T/R	R	R	Y	T	R	R	Y	T	Y	T	VY		
15	28	F15C_S7(1.1.1)	F15C	0	3.85	Y	0	T	R	T	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
16	29	F15C_S6(1.1.1)	F15CS6	0	3.85	Y	0	T	R	T	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
17	30	F15E_S7(1.1.1)	F15ES7	0	7.43	Y	0	T	R	T	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
18	31	F15E_S6(1.1.1)	F15ES6	0	7.43	Y	0	T	R	T	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
19	32	F16(1)	F16	0	3.1	Y	0	T	R	T	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
20	33	F22A(1)	F22A	0	0	N	0	R	R	R	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
21	34	F35A(1)	F35A	0	31.8	Y	0	T	R	T	R	R											R	R	R	R	R	R	R	R	R	R	R	R	R	R	T	VY			
22	35-36	GROUND_C2(1)/2	Generic	0	34.9	Y	0	T	R	R	T/R	R											R	T/R	R	R	R	R	R	T	R	T	R	T	R	T	R	T	VY		
23	37-38	GROUND_C2(3)/2	Generic	0	34	Y	0	T	R	R	T/R	R											R	R	R	R	R	T/R	R	T	R	T	R	T	R	T	R	T	VY		
24	39	E2C(1)	E2C	1	61.5	Y	0	T	R	R	T/R	Y											T	T	R	Y	R	R	O	T	Y	T	R	T	Y	T	Y	T	VY		
25	40	BACN(1)	BACN	0	51.4	Y	0	T	R	T	R	Y											R	T/R	Y	R	R	R	O	T	Y	T	R	T	Y	T	Y	T	VY		
26	41	BACN_LMS(1)	BACN_LMS	0	51	Y	0	T	R	R	T/R	Y											R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	Y	T	VY	
27	42-43	EA18G(1)/2	EA18G	0	37.4	Y	0	T	R	T	R	R											R	R	R	R	T/R	R	R	R	R	R	R	R	R	R	T	T	R	T	VY

Joint Network Design Aid



- The Joint Network Design Aid (JNDA) 
 - Exclusively used by all US Network Design Facility's
 - Sold under Foreign Military Sales (FMS) to nearly 20 Allied Nations
 - JNDA has been under continuous development over the previous 27 years as Link 16 has evolved
 - As new and / or enhanced capability's are fielded the JNDA software must keep pace
 - As platforms and system integrate Link 16 the JNDA software must keep pace
 - As the Operating Forces develop new and innovated Tactics, Techniques and Procedures (TTPs) the JNDA software must keep pace



Link 16 Pulse Deconfliction

- **Link 16 Deconfliction is the process of maintaining Link 16 pulse density at or below authorized limits for a geographic area within the United States & Possessions**
 - **This requirement stems from a formal agreement between the DoD, FAA and NTIA**
 - **The Link 16 Pulse Deconfliction Server (LPDS)**
 - **The LPDS provides the operating forces with centralized system to perform Link 16 Deconfliction**
 - **The LPDS provides the FAA, DoD and with centralized system to perform Link 16 operations spectrum use monitoring and management**
 - **The current LPDS was developed in the late 1990's and is now under redesign**



MC NDF JNDA Support Needs

- **Review and Analysis of JNDA Software Program Change Proposals (SPCRs) to determine USMC acceptability**
 - **Does the SPCR adversely impact the Marine Corps?**
 - **Does the SPCR Technical Approach meet the intent of the need?**
 - **Does the SPCR adversely or negatively impact other JNDA functionality?**
 - **Does the SPCR introduce the risk of cyber vulnerabilities?**
 - **Is there a better, more efficient way to implement the SPCR?**
- **Provide support as part of the JNDA Government Acceptance Testing**
 - **Includes conducting BETA testing**



MC NDF Link 16 Testing Needs

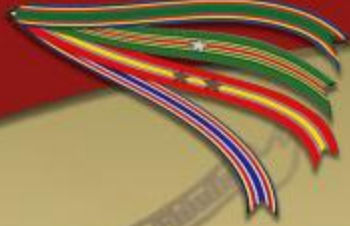
- **As new capability's are fielded, Load Files must support use of the capability**
- **As new systems and platforms integrate Link 16 the Load Files must be created and baselined**
- **As Link 16 terminals hardware and / or software is upgraded the terminals need to be tested**
- **For all the above conditions:**
 - **Conduct review and analysis of the changes to determine needed changes to current platform / system Load Files**
 - **Assist in the development of test plans, scripts and procedures to ensure “no negative impact” to USMC systems**
 - **Participate and support testing of the changes**



MC NDF LPDS Support Needs

- **Review and Analysis of LPDS Software Program Change Proposals (SPCRs)**
 - **Does the SPCR adversely impact the Marine Corps?**
 - **Does the SPCR Technical Approach meet the intent of the need?**
 - **Does the SPCR adversely or negatively impact other LPDS functionality?**
 - **Does the SPCR introduce the risk of cyber vulnerabilities?**
 - **Is there a better, more efficient way to implement the SPCR?**
- **Provide support as part of the LPDS Government Acceptance Testing**
 - **Includes conducting BETA testing**

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*Good
Day*