

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response
1	CDRLS	15	SOW 3.1.5.2.1	N/A	A Enterprise Change Request (CDRL A011) does not cite a DID.	Add DID requirement for CDRL A011.	Completeness.	There is no DID for an Enterprise Change Request (ECR) as this is a PEO C4I- specific form which will be provided and posted on e-Commerce.
2	CDRLS	38	Block 4	1	S Does the TSRD CCEP GCRS, and associated A034 CDRL, provide all needed NSA security requirements and contractor documentation sufficient for NSA certification of the embedded COMSEC? Prior embedded COMSEC certifications utilized a Telecommunications Security Requirements Document (TSRD) and an Information Assurance Security Requirements Document (IASRD) as requirements, and have required an extensive list of CDRLs for evaluation and approval"	Recommend review of the Information Assurance CDRLs and update if required per the TSRD.	Information assurance CDRL clarification	A034 CDRL has been amended to include the necessary NSA requirements.
3	RFP	1	SF 33	Block 5 & Block 9	S The DRAFT RFP indicates industry will only have approximately 30 days to prepare responses after RFP release. This duration will not be sufficient for industry to satisfactorily respond and provide the Government with a Best Value solution. The Draft RFP includes not only a significant development effort, but also requires production pricing (prior to the completion of the design) for 7 years of production, across 3 different system variants.	Recommend the Government consider providing at least 75 days for contractors to respond to this proposal.	In order to commit to a 7 year production at firm fixed prices, industry must complete a bid level design and obtain firm quotations from their suppliers. Firm supplier quotes are not typically feasible in <45-60days for all items. Further, Primes require time to review those quotes for accuracy and reasonableness prior to Executive Review of an offer. While competitors may seek their quotations prior to RFP release based upon the draft information provided by the Navy, simple RFP, SOW or Specification changes that are revealed in a final RFP typically require re-quotation after the RFP. Although procedures vary across industry, a proposal of this magnitude that includes a commitment to Firm Fixed Price production, prior to design, over 7 years requires Industry to develop firm bids that are reviewed at high executive levels of the company, in many cases the CEO level. Industry can spend 3 weeks (21 of 30 days) reviewing commitment to 7 years of FFP production with a Vice President, a President and a CEO.	The Government intends to provide 45 calendar days for industry to respond to RFP. We have provided two draft RFPs early to allow industry to take whatever efforts to comply with the proposal timeline.
4	RFP	2	ITEM NO 0001		A 0001 is identified as "CPFF". With incorporation of "B-3 DETERMINATION OF INCENTIVE FOR SCHEDULE PERFORMANCE" will this be changed to CPIF?	Clarify if "INCENTIVE FOR SCHEDULE PERFORMANCE" will be fee arrangement <u>in addition</u> to negotiated CPFF for CLIN 0001	Cost-plus fixed-fee FAR requirements could conflict with FAR incentive fee intentions.	No.
5	RFP	3	-	-	A CLIN 0005 Description reads "DT/OA Support Services IAW SOW para 3xxx"	Please identify the applicable SOW section; 3.2.15	Clarification needed	Updated.
6	RFP	20	Table B2		S In the paragraph above Table B2, the text identifies a maximum qty of 10 each per CLIN per each ordering period. This quantity may limit the government's flexibility to fulfill future acquisition needs.	Increase the maximum order per variant per CLIN per ordering period.	Provides flexibility in future acquisition needs.	The Government will consider.

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7	RFP	23	b-3	Incentive Fee	A Customer notes table for values to be earned attributed to schedule performance of CLIN 1. Is any incentive fee part of total evaluated price ?	No inclusion of incentive fee	By definition this is a performance incentive, not a differentiation of proposed costs	Schedule incentive fee has been removed from the RFP
8	RFP	23	B-3		S Section M does not identify how an offer will be evaluated in light of the target dates provided in this section. If two offerors propose the same Cost, but Offer A projects EDM Delivery at < 20 MACA and thus, due to the potential incentive award, would be 6% more expensive than Offer B, which promises delivery at 30 months, how will you evaluate schedule and cost?	Provide guidance in Section M on how an offer will be evaluated in light of the schedule incentive.	Provides clarity to the bidding community.	Schedule incentive fee has been removed from the RFP
9	RFP	30	52.211-8 Time of Delivery		S The table indicates production output beginning 12 months after receipt of order. This lead time falls short of the typical longest lead time items for the types of above deck equipment (e.g. maritime antenna systems) required by the SPS. Further, the rate of 2 systems/month/Variant combined with the quantities provided in Section M (maximum of 2 units in any single CLIN) necessitate production of all expected units in one month, making production breaks a near certainty.	Increase the time to first delivery to 18 months Allow industry to propose rates other than 2 systems per month.	The methods industry will use to address the shorter lead time (e.g. build inventory) will increase government cost. Industry can attempt to schedule deliveries to minimize or eliminate costs related to breaks in production (e.g. loss-of-learning).	The Government will consider.
10	RFP	30	Section F		A FAR 52.242-17 Government Delay of Work is incorporated for fixed-price contract. There is no "H" clause referenced to cover delays regarding cost-type contract efforts.	Incorporate ""H" Clause to cover "Government Delay of Work" for cost-type contract efforts.	Incorporate ""H" Clause to cover "Government Delay of Work" for cost-type contract efforts.	The Government does not intend to create a special clause for cost reimbursable CLINs.
11	RFP	34	5252.216-9210	B-3	A DETERMINATION OF INCENTIVE FOR SCHEDULE PERFORMANCE (Applicable to CLIN 0001 only) conflicts with 5252.216-9210 TYPE OF CONTRACT "This is a Cost Plus Fixed Fee and Firm Fixed Price contract"	Clarify if "INCENTIVE FOR SCHEDULE PERFORMANCE" will be fee arrangement <u>in addition</u> to negotiated CPFF for CLIN 0001	Clarify if "INCENTIVE FOR SCHEDULE PERFORMANCE" will be fee arrangement <u>in addition</u> to negotiated CPFF for CLIN 0001	Schedule incentive fee has been removed from the RFP
12	RFP	37	H-1 PIOs		A Page 37 of 118: Paragraph (d) of PIO clause contains a reference to the same paragraph (d), which appears to be in error. Please clarify.	This appears to be a circular reference. Please clarify the reference. We believe it should be paragraph c.	Provides Clarification	Updated

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13	RFP	38	PGI 245.103-70 GFP	-	C	Why add 18-month <u>GFS</u> technical and schedule risk for EDUI and LMS software?	Provide risk reduction options for EDUI and LMS as <i>Contractor</i> Furnished Software (<u>CFS</u>) [O] rather than <u>GFS</u> [T].	Significant reduction in technical, schedule and cost risks when government/contractor IPTs develop specifications, e.g., LCI IDD and EDUI IDD (not yet released?), and contractor develops EDUI and LMS software and hardware.	The Government intends to keep the EDUI and LMS as GFS.
14	RFP	42	5252.217-9203	-	A	Exercise of option list of Items and Option Exercise Dates does not include CLINS 0004 and 0005	Include option exercise dates in the table	A full understanding of the government timeline allows industry to prepare the most cost effective offer.	Updated.
15	RFP	51	Section I	-	A	DFARS 252.227-7013 and 252.227-7014 are referenced within various section of the contract, but are not included in Section I	Include DFARS 252.227-7013 and 252.227-7014 in Section I by Reference.	Provides Clarification and consistency	Updated.
16	RFP	89	L-317-6	-	A	Item 2, Format, states: "Type size shall be Times New Roman and no smaller than 12 point in the text, 10 point in spreadsheets, and 6 point on drawings, figures, and tables." (1) Rather than Times New Roman, may we use a sans serif font style such as Arial and/or Arial Narrow for graphics? (2) Will sans serif fonts also be permissible for other non-body text (non-paragraph text) items such as tables, captions for figures and tables, and section headings?	Recommend allowing sans serif fonts for graphics. If possible, consider allowing sans serif fonts for other non-body text items.	(1) In graphics, sans serif fonts such as Arial are easier to read than Times New Roman. (2) In the proposal document text, non-body text (such as headings, tables, and captions) are more distinguishable from body text when a different font is used.	No, this is SPAWARs standard clause.
17	RFP	90	L-317.7	-	A	The proposal format table lists a "Limitation" of "Thirty (30) pages maximum (excluding Subfactor 4 (Small Business Utilization)" for Factor 2 Management Approach. However, Subfactor 4 has a limitation listed of "5 pages." Please clarify what does and does not count toward the page limit for Subfactor 4.	Please clarify.	Clarification needed.	Updated.
18	RFP	92	Subfactor 1.4	-	A	The reference to the internal and external interconnections diagram cites the incorrect SPS figure Number	Change the text from (NTCDL SPS Figure 3-7) to (NTCDL SPS Figure 3-6)	Aligns the RFP with the SPS	Updated.

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19	RFP	92	Subfactor 1.4 - System-Level Design	C	Add an NTCDL RFP Proof of Concept (POC) Demonstration Subfactor 1.5 to mitigate contractor selection risk.	Add Subfactor 1.5 with POC Demo within 60 days of Proposal submission to demonstrate subset of Subfactor 1.1 through 1.4 capabilities plus two key SOW 3.1.6.2 Risk Management critical design areas, e.g., d. shipboard electromagnetic interference; and k. Information Assurance and Communications Security (COMSEC) compliance of CCM or other crypto device.	Improve contractor offerings by proving a subset of Technical Volume I Factor 1 claims. This has been done on other PEO C4I acquisition programs to add early, real-world rigor and readiness to the paper evaluation.	No additional subfactors will be added.
20	RFP	93	L-317.7	A	Section L, Subfactor 2.1 - Program Management requires delivery of IMS in MS Project. Assumption is that electronic copy is a deliverable. Please clarify whether government also wants a hard copy of the MS Project. Can the offeror include a non-page counted appendix of the hard copy print-out of the MS Project IMS?	Recommendation is to maintain the 10 page allocation for summarizing program schedule management, deliverables, milestones and performance. Additionally, allow inclusion of the complete IMS Project print-out in an appendix with unlimited page count.	Clarification needed.	Government requires electronic copy and two hard copies of the entire proposal as provided in the RFP. Therefore, the page numbers within the electronic copy must be the same as the hard copy. Increased the page count for Subfactor 2.1 to 13 pages.
21	RFP	93	Subfactor 2.3 Para # 1	S	Most of Industry is likely to include commercial items from third parties in the deliverables. It is our understanding that such third party vendors and subcontractors will not agree to provide the commercial equivalent of Government Purpose Rights, as such rights are much more expansive than commercial rights which generally limit use to the end user for operation of the deliverable. Commercial items are generally obtained at a lower price than noncommercial items, and that cost savings is passed on to the Government. In exchange for such cost savings, the rights provided are typically limited to the use and operation of the deliverable. Our understanding of a commercial equivalent of Government purpose rights suggests an expansion of the customary grant described above to permit additional users to use the commercial items for other Government contracts, which would decrease the value of such commercial items in the marketplace. This in turn could adversely affect the vendor or subcontractor's ability to continue to provide the commercial items in question. In view of the above, it is highly unlikely that any commercial vendors will agree to these terms. Without the use of commercial products, the solution proposed by Industry would be very expensive.	In an effort to assist the Government in obtaining rights it needs in deliverables, please clarify the Government's proposed use of commercial items.	An understanding of such would enable Industry to communicate with its vendors and subcontractors to obtain pricing for such additional non-standard license requests. We anticipate that most vendors will not price this, as it is akin to valuing their entire business. And note that while Industry may be able to obtain pricing from such vendors and subcontractors for a grant of such rights, it anticipates that such amounts will be significant for the expanded rights requested, as in many cases such rights would eliminate a potential customer base for such third party vendors and subcontractors.	The Government seeks to acquire, at a minimum, GPR/commercial equivalent of GPR so that it can distribute the subsequent TDP (at a level three drawings) to a subsequent third party with sufficient detail and with sufficient data rights/license rights to allow for production and sustainment efforts for NTCDL. If GPR cannot be provided, then the vendor shall price GPR. For commercial TD/CS/CSD, if the commercial equivalent of GPR cannot be provided, then the vendor shall price the commercial equivalent of GPR. If the Offeror believes that alternative data rights/licensing terms would meet the Government's needs, then the Offeror could list such terms as part of its offer. However, if the Offeror is not willing to provide GPR/commercial equivalent of GPR, not willing to price GPR/commercial equivalent of GPR and not willing to propose alternative licensing terms that meet the Government's needs, then the Offeror runs the risk of offering an undesirable data rights scheme.
22	RFP	94	Subfactor 2.3 Para # 3	S	Please clarify whether the Government anticipates that the Offeror list license fees in the Firm Fixed Price CLINS (Variant A Production CLINS 1001, 2001, 3001, 4001, 5001, 6001, 7001; Variant B Production CLINS 1002, 2002, 3002, 4002, 5002, 6002, 7002; Variant C Production CLINS 1003, 2003, 3003, 4003, 5003, 6003, 7003; and PIO CLINS 1004, 2004, 3004, 4004, 5004, 6004, 7004) , as those fees would ordinarily not be separately itemized, yet would be part of the fees charged.	Please clarify and indicate why FFP CLINS must itemize this	FFP CLINS do not normally itemize these fees.	Yes, if there are license fees. This is part of the evaluation.

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23	RFP	94	Subfactor 2.3 Para # 3	S	Due to the anticipated use of commercial products, license fees will be charged by third party vendors and subcontractors. Generally, such fees are significantly less than the costs the Government would incur if it purchased a noncommercial product. Please clarify the Government's intent in potentially excluding such costs from the resulting contract, as those costs would normally be passed on to the Government as part of the costs to create the deliverable. Similarly, there may be instances where the costs associated with receipt of Government Purpose Rights (GPR) are significantly higher than the costs associated with the receipt of less than GPR. Is it the Government's intention to potentially exclude costs associated with the receipt of GPR from the resulting contract in the event that the Government determines that the receipt of less than GPR is a better value decision for those items?	Please clarify for industry.	Although evaluation sub-factor 4 (Cost) is clearly listed as less important than sub-factor 2.3 (Data Rights), the magnitude of the price differences does not enable industry to predict how these costs will impact the overall evaluation of an offer.	Yes.
24	RFP	95	2.4	S	Is small business Utilization Plan for targets to be prepared for EMD, inclusive of all likely qty evaluated production over all order years, and / or all CLIN (including Spares and Eng Service CLIN	Small Business Utilization plan to be written to EMD CLIN Evaluated Price	Clarity of content and specifics of scope to be addressed. Includes representative portion of total as deliverable EMD HW	Small Business Utilization is over the entire contract effort (all CLINs).
25	RFP	98	Section L-317 Cost Volume	A	The description of costing and pricing under "Cost Proposal Format" and the usage of Attachment 8 requires clarification. Based on the detail typical for fixed pricing, it appears that Attachment 8 should only contain CPFF CLIN data. e.g.: CLINS 0001, 0003, 0004, 1005, 2005, 3005, 4005, 5005, 6005 and 7005.	Provide clarification of which CLINs should be included in Attachment 8. Modify Attachment 8 IAW recommended template. An attached template is provided with a suggested file tab structure.	Allows for simplified pricing roll-up to CLINs by separating cost plus from fixed fee CLINs, and removes overlap between pricing tables.	Yes, most of Attachment 8 is pertaining to cost CLINs; however, the CLIN summary tab is for all CLINs.
26	RFP	99	2	A	" Cost Proposal Format" Requires any Major Subcontractor's (greater than 10% of prime offeror's proposed cost) shall be provided in complete detail with cost breakout. Please clarify if this is 10% of TEP or 10% of basic EMD work	Clarify to 10% EMD Basic Work.. This eliminates variabls of speres, Eng Services and likely qtls to a known task set	Allows customer evaluation of major subcontractors with representative end item deliveries and NRE inclusive in EMD	The Government intends to only evaluate the major subcontractors (greater than 10% of prime offeror's proposed cost). Some of the CLINs such as engineering services, the Government has provided a not to exceed amount so all a vendor is providing is the labor categories, hours, direct and indirect rates that equal the total not to exceed amount.
27	RFP	99	2	A	"Substantiation" Substantiation is required for all costs included in the cost volume. However in Engineering Services CLIN (1005, 2005, etc.) there are fixed NTE values . Also SOW para is 3.3.6 not 3.5 (as references in Schedule B)	* Substantiation be clarified to ensure clarity of the quantum of services that would be affordable within the NTE amount. There is no labor rationale or substantiation. * Can customer provide guide of expected split of customer s site work to be required of total	Allows customer evaluation of amount of eng services that can be procured	Government will evaluate the hours proposed within the Government NTE amounts for these CLINs.

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28	RFP	101	Section L-317.8 Material		A For offerors to be FAR compliant, we must submit a consolidated BOM. Is it the government's intention to also require the BOM to be broken out by WBS as described herein.	Clarification requested.	Clarification needed.	The RFP requires vendors to propose the consolidated BOM by WBS. To provide something different may be considered inadequate and/or unacceptable.
29	RFP	105	Volume III	Section D	A L-339 "Notice of Organizational Conflict of Interest" is called out but is not included in the RFP.	Provide L-339	Provide L-339	Updated.
30	RFP	107	RFP Section M	N/A	S System-Level Design and Cost/Price criteria does not include the impact on installation costs including reuse or deinstallation costs of legacy equipment.	De-installation costs of legacy equipment and installation costs of new NTCDL equipment should be factors in the technical approach and cost evaluation of proposals.	Reuse of legacy equipment and innovative mounting concepts could provide significant savings to the government in de-installation and installation costs.	Subfactor 1.4 addresses System Level design. Removal and installation costs are not a part of this acquisition.
31	RFP	107	RFP Section M	N/A	S System-Level Design and Cost/Price criteria does not include the impact on logistics of reuse and commonality with legacy equipment.	Logistics cost saving through reuse and commonality with legacy equipment should be factors in the technical approach and cost evaluation of proposals.	Reuse and commonality with legacy equipment could provide significant savings to the government in logistics costs.	The NTCDL program desires parts commonality within the NTCDL variants, vice legacy systems.
32	RFP	107	RFP Section M	N/A	S Evaluation criteria of Objective Requirements are missing.	Remove Objective Requirements or provide evaluation weighting.	Bidders can perform trade studies to achieve additional objective capabilities. This will provide the optimum solution to the Government.	The Government may give strength(s) and/or major strength(s) to offerors that meet objective requirements.

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33	RFP	107	RFP Section M	na	S	Evaluation criteria of Objective Requirements are missing.	Provide calculation of how proposals which include Objective requirements will be scored against proposals which exclude Objective requirements. Inclusion of objective requirements within the baseline award increases cost efficiency during development, as opposed to iterative design.	Many competitors have demonstrated Broadband Directional Mesh Networking, including NRW, which makes the development low-risk.	The Government may give strength(s) and/or major strength(s) to offerors that meet objective requirements.
34	RFP	108	RFP Section M	N/A	S	All subfactors for Factor 1 are in descending order of importance.	Make all technical approach subfactors equal evaluation weighting.	Current weighting underemphasizes the importance of system level design while overemphasizing the importance of waveforms. The waveforms are not unique to NTCDL and industry will ensure interoperability. The system level design is unique to NTCDL and includes features that are critical to meeting current and future CONOPS. Likewise RF performance and scalability/modularity are of big importance to the NTCDL program to ensure mission success for all planned variants.	Subfactors are weighted as intended.
35	RFP	108	RFP Section M	N/A	S	All subfactors for Factor 2 are in descending order of importance.	Make all management approach subfactors equal evaluation weighting.	Current weighting underemphasizes the importance of data rights to the NTCDL program. The Government's ability to have at least Government Purpose Rights offers the lowest total cost of ownership for NTCDL.	Factor 2 is correct. All subfactors are in descending order of importance with Program Management being the most important.
36	RFP	108	Section M	-	C	Subfactor 1.4 System-Level design evaluation importance weighted too low given GFS, red/black and crypto risks.	Recommend changing evaluation criteria from: SubFactor 1.1 > 1.2 > 1.3 > 1.4 to: Sub-Factor (1.1 = 1.4) > 1.2 > (1.3 = 1.5 POC demo) where unproven SF 1.3 scalability claims are weighted the same as a proven SF 1.5 POC demo at the time of contract award.	System Design Sub-factor 1.4 involving red/black CDS and crypto security, 3rd party GFS, multiple RF/antenna chain and mitigating the fourteen significant SOW 3.1.6.2 risks is equal in importance to proven, commodity Sub-factor 1.1 CDL waveform interoperability OTA.	Subfactors are weighted as intended.

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37	RFP				S The RFP CLIN Structure and SOW Paragraph 3.3.1.1 indicate that the Government expects sell-off of any NTCDL Variant to be at the system level, at the contractor's facility. Will NTCDL undergo a PITCO at a government location? Will the government allow industry to propose alternate delivery options to provide best value?	Allow contractor to propose alternate production delivery options.	Allows contractors to propose delivery options that reduce government cost. For a system of NTCDL's complexity, items are likely to be manufactured at many geographically diverse locations. We participate in multiple government contracts that allow for testing and sell-off of major sub-components at those points of manufacture. The items can then be sent directly to the government without incurring the cost of handling, shipment and storage at a central gathering point for an entire system. Additionally, this approach often eliminates duplicate testing and related test equipment.	The Contractor shall designate a selloff location that is to be used for all selloff events. The SOW has been modified to reflect this.
38	SOW	21	3.1.6.6		S Requires monthly Obsolescence Reports in the Contractor's Progress Status Management Report.	Recommend changing reporting period from monthly to annually	Monthly tracking of parts obsolescence on complex systems with high part counts increases government cost with only incremental value above quarterly or yearly reports.	The SOW has been clarified describing that Obsolescence reports should be included as part of the quarterly PMR which is reported via CDRL A001.
39	SOW	22	3.1.7.1		S SOW indicates that all tech data, including COTS drawings, fab and assembly sheets, routing instructions, etc. are required as part of TDP submitted at conclusion of EDM	COTS items should not be subject to submittal with TDP.	Most suppliers have routing sheets and work instructions that are part of standard processes and procedures that span across a product line. Industry is unlikely to get this level of data rights from all suppliers, and some suppliers are likely not to even offer a price if the government wanted to exercise an option to purchase these rights.	The TDP package is for the entire NTCDL system, to include COTS hardware. The SOW has been amended to be more specific.
40	SOW	29	3.1.9.5		S Some facilities do not have SIPRNET access. Additionally, some facilities with SIPRNET have been limited by auditors to only use that SIPRNET for a particular contract. NTCDL may require installation of a new SIPRNET access specifically for the program. A new installation can take on the order of 2 years	Define an alternate means for NTCDL transfers that can be used while a SIPRNET installation and approval takes place.	Allows for the NTCDL program to proceed with development while a SIPRNET is installed. Industry may be able to offer cost effective alternative classified collaboration tools.	No alternate means for SIPRnet access will be provided.
41	SOW	30	3.2.1		S JITC website states two phases of testing consisting of lab test, and airborne testing.	Clearly state that the first phase (Lab Test) is required for First Article Testing and the second phase (airborne testing) is performed by the Government during Development Testing/Operational Assessment (DT/OA)	The airborne assets are not part of the Government's GFE list, therefore it is assumed the testing will be performed by the Government at a Government facility.	The JITC website is not a part of this acquisition. JITC waveform compliance testing is specified in the SOW. Flights required for FAT will not be provided as GFE.

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42	SOW	30		-	C Reduce the 48-month EDM development effort down to 30 months.	Push for a QRC-like 24 months to FAT, with a tightly managed 6 months to cover parallel EQT and 3-month DT/OA support.	Lean down the EDM development to get to the Variant B and C, and PCE spins earlier.	Alternate schedule proposals are allowed; however, depending on the program's funding profile, the Government may not be able to accept due to a potential increase in evaluated development costs per year.
43	SOW	30		-	S What is the JTIC test availability for BE-CDL Rev [B] modes?	Add to program risk list, or rewrite as: Joint Interoperability Test Center (JITC) Waveform Certification for all available CDL waveforms is required prior to initiation of FAT testing.	Mitigate availability of JTIC testing for new BE-CDL waveform modes.	JITC will be able to test all required NTCDL BE-CDL Rev B modes. It is the contractor's responsibility to schedule the waveform certification testing with JTIC.
44	SOW	31		-	S Which CLINs apply for the \$20M EVMS limit?	Please clarify.	Agile overhead incentive.	The EVMS applies to CLIN 0001.
45	SOW	35	3.2.3	-	S Item "a" in the list associated with the last sentence in the paragraph identifies High Gain Antennas capable of meeting the five link requirement . This statement seems misaligned with the SPS which does not require that High Gain Antennas meet the five link requirement.	Suggest removing the following words: "capable of meeting the five link requirement"	Makes SOW consistent with SPS	SOW modified to align with SPS requirement.
46	SOW	35	3.2.3.1 MOSA/OA	-	A Clarification needed on CDL specs and legacy interfaces that may not be published as open standards (e.g., IEEE, IETF, ITU).	If Std-CDL and BE-CDL are themselves a MOSA exception, please make that clarification upfront.	If contractors are required to cite exceptions to MOSA's desirable open standards and interfaces, be sure to note any upfront exceptions mandated by the NTCDL CDD and SPS, e.g., CDL specifications themselves, legacy user interface SkyLynx box interfaces per SPS 3.3.3.1.1.	No

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47	SOW	36	3.2.3.1 MOSA/OA	-	A Are LMS and EDUI GFS software interfaces MOSA-compliant?	If LMS LCI IDD xml isn't RFC 6241/6020 NETCONF/YANG compliant, and EDUI IDD (not yet released) contain custom control interfaces, these should be identified as MOSA exceptions.	Important to note any upfront MOSA exceptions mandated by the NTCDL SPS itself.	Yes
48	SOW	38	3.2.3.5 IPTs	-	S Reduce government/contractor IPT coordination and overhead.	Move EDUI and LMS GFS to CFS, and look for other Agile optimizations among the government/contractor team.	There is a considerable need for inter-IPT coordination without introducing software dependencies. There may be other efficiencies and cost./risk reductions to be found by agilely reducing the "touch points" handled by both teams.	The Government intends to keep the EDUI and LMS as GFS.
49	SOW	48	3.2.6.1.4 RRD	-	C Risk Reduction Demonstration (RRD) at CDR is too late.	Similar to performing a concept (PoC) demonstration as part of NTCDL proposal submission, moving up highest risk capabilities to an RRD at PDR timeframe will pay highest dividends.	Performing RRD at PDR allows critical re-design changes, if necessary, before CDR rather than after.	RRD can be conducted anytime prior to CDR.
50	SOW	51	3.2.7.3.1 GFS Integration	-	S Will there be an EDUI IDD at RFP release?	Either change EDUI (and LMS) from GFS to CFS, or release the EDUI IDD with the NTCDL RFP to allow contractors to properly scope the design and BOEs associated with this software element.	LMS and EDUI IDDs help the contractors assess the scope of associated LCS and user/network interfaces to NTCDL.	No. The Government intends to keep the EDUI and LMS as GFS. The EDUI interfaces with the LMS, another GFS sub-system. As such, the LMS/EDUI interface will be documented in Government design documentation and will not be made available as GFI.
51	SOW	52	3.2.7.4	S	The paragraph title calls for an EDM TDP while the paragraph requests production technical data	Recommend the paragraph request a production TDP delivery taking place at the end of production. If desired earlier, suggest Production TDP be provided after delivery of a minimum of one full production order	Provides the government with a mature production TDP.	The Government requires an EDM TDP and updates to be issued upon the implementation of any ECP. SOW wording has been clarified.

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52	SOW	55	3.2.8.3.3		C As part of First Article Testing (FAT) this paragraph requires simulated operational testing with individuals representing typical Navy operators.	Recommend deletion of paragraph 3.2.8.3.3 or move to paragraph 3.2.15.	Simulated operational testing is usually part of Developmental Test and Operational Assessment	The vendor will be expected to coordinate flight tests and facilities to satisfy NTCDL FAT. SPS Section 4.2.6 was added to specify the parameters for FAT flight testing. SOW Section 3.2.8.3.3 was updated.
53	SOW	57	3.2.8.3.6		C Termination of test after 1 major or 2 minor failures and computing MTBF is confusing due to the fact additional testing may be required in order to pass MTBF.	Recommend deleting the sentence "The Reliability Test shall be terminated after one major failure or two minor failures, and the contractor shall calculate the predicted Mean Time Between Failure (MTBF)"	MIL-HDBK-781A allows for extrapolation of Reliability growth data but limiting to one major failure may not provide enough data to project reliability growth accurately.	Amended SOW to read: "The Reliability Test shall be terminated after one major or critical failure."
54	SOW	57	3.2.8.3.6		A Paragraph states "The Reliability Test shall be terminated after one major failure or two minor failures".	Reword the sentence to read "The Reliability Test shall be terminated after one major failure."	The reliability requirement is in terms of MTBCF. This usually means only major failures that result in a loss of mission capability are chargeable during the test. Minor failures which do not impact the mission would be excluded from the MTBCF calculation.	See comment #53
55	SOW	57	3.2.8.3.6		A Paragraph states in part "contractor shall calculate the predicted Mean Time Between Failure (MTBF)"	Reword the sentence to read "contractor shall calculate the predicted Mean Time Between Critical Failure (MTBCF)."	The reliability requirement is in terms of MTBCF. The test should be measuring system performance to the same parameter.	See comment #53
56	SOW	66	3.2.10.3		S The ITSD (Qty 3) is an EDM delivery. There are no production CLINS for the ITSD. Why is there a requirement for a Production Acceptance test on the ITSD?	Recommend removing the requirement for Production Acceptance Test	EDM quality units (CLIN 0001) are expected to fulfill the ITSD requirements. There are no production CLINS for the ITSD	PAT Testing is required for the ITSD per SOW Section 3.3.4. The ITSD is listed under the PIO CLINS.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
57	SOW	71	3.3.5	2nd para	S	SOW states that spares selloff is conducted at Contractor facility	Extend authorization for selloff of spares to supplier facility if there is no value-add provided by Contractor	Contractor may not have facilities, resources or test equipment to sell off parts at lower level (i.e., CCA's or power supplies)	The Contractor shall designate a selloff location that is to be used for all selloff events. The SOW has been modified to reflect this.
58	SOW	22-23	3.1.7.1	c. - 3) - 10)		SOW is requesting a level of detail, such as Manufacturing Processes, Assembly Instructions, Non-Commercial (e.g. custom) Tooling Data Packages, that many vendors consider Proprietary and will not release to Primes of the Government for sharing with competitors. Many industry competitors have no issue providing a comprehensive TDP, which will provide all drawings, parts lists, Hardware, Firmware & Software Manufacturing, Quality and Test Requirements necessary for a competent manufacturer to produce any item, using their own processes.	Remove or reword. 3) COTS Fabrication Tooling Lists - Includes all commercially available tooling equipment required to fabricate the parts. All tooling equipment shall be identified with sufficient detail to support unambiguous procurement from commercial suppliers. (e.g. machining, PCB milling machine, screwdriver). 4) COTS Fabrication Tooling Configuration Settings / Files / Instructions - Includes all COTS tooling configuration files / instructions required to achieve all applicable fabrication ready states. (e.g., PCB NC drill file, 3D printer file, PCB pick and place files). 5) Non Commercial Fabrication Tooling Data Packages - Includes the data package required to reproduce tooling equipment that cannot be purchased off-the-shelf (e.g., Antenna element mold, antenna casing casting, PCB drill fabrication drawing / instructions). 6) Part Fabrication Instructions - Includes step-by-step procedures for part fabrication using items. Procedures shall demonstrate concordance with design drawing lists,	3) deletion - by definition, a competent manufacturer will either have their own suite of equipment, or procure that necessary to suite their business needs, which could be equal or superior to the Production Baseline. 4) deletion - the TDP will provide all necessary drawings, Gerber files, test requirements, etc for a competent manufacturer to fabricate the units, but very possibly using different equipment, with different initialization file requirements. 5) reword - Agree that Data Packages for molds and castings are appropriate, but other proprietary tooling used by the vendor for assembly, for which COTS equipment or manual labor could complete the same process, need to be excluded. 6) reword - Step by step procedures and tooling equipment procedures are generally proprietary. By definition, a competent manufacturer will be able to implement the TDP, complete with all necessary drawings, Gerber files, test requirements, etc, to fabricate the part(s). 7), 8), 9) & 10) deletion - All test requirements are necessary and appropriate, but a competent manufacturer will be able to implement their own methodology based on their existing or selected suite of equipment.	The TDP level of detail is specified as intended.
59	SOW		3.2.9.3		A	CDRL A078 is a duplicate of A032	Change A078 to A032 here and throughout the document as well as in the CDRL list in the RFP	A078 is a duplicate of A032	Duplicative CDRL was deleted.
60	SPS	5	2.1 Gov't Docs	101	S	Why no NTCDL CDD reference?	Add NTCDL CDD to list of Government documents, and provide prior to final RFP release.	This important reference provides operational context underlying tables of antenna and waveform parameters, and to be consistent with other NTCDL document references, e.g., NTCDL LCI IDD.	All NTCDL requirements trace to higher-level CDD requirements. Therefore, there is no need to provide the CDD.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
61	SPS	14	3.2.1	146	S	Call out specific "preferred" NRW non-Ku frequency bands from line 138-145 above rather than CDL specs.	Std-CDL and BE-CDL specs call out as low as UHF band.	Avoid potential conflict with other communication services.	The SPS was modified to read: "If proposed, the NRW [shall] operate in the frequencies supported by NTCDL without an increase to SWaP."
62	SPS	16	3.2.2.2	195	S	Table 3-4 specifies more antennas than Threshold links. Can additional modems be paired with the unused antennas to exceed threshold link count requirement.	Clarify credit for exceeding threshold requirements by the addition of more modems.	For marginal additional cost, the Navy can get more links by adding more below-deck equipment.	Threshold link requirements must be operational 360-degrees about the ship. According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
63	SPS	16	3.2.2.2 NTCDL Link Requirement s		S	Why "NRW links will only count as one link towards the objective link quantities listed in Table 3-3"?	Allow objective NRW as a means to extend Table 3-3 Simultaneous Link requirements.	Single or tandem NRW links could provide objective multi-link expansion without a linear, per-link increase in NTCDL system cost (modems, antennas, etc.).	The purpose of the objective link count requirement is to obtain a higher amount of CDL links, not NRW links. NRW links are above and beyond the CDL link requirements of the NTCDL specification.
64	SPS	19	3.2.3.1.1	241	S	PTFF on STD-CDL is used only on certain waveforms above 45Mbps. SSM/MSM-PTFF is incorrectly referenced. Missing Ethernet/GFP and IP Routing	Declare which waveforms require PTFF (137/274). Change Ethernet/GFP/SSM-PTFF and Ethernet/GFP/MSM-PTFF to simply Ethernet/GFP/PTFF. Add rows for Ethernet/GFP and IP Routing.	Compliance with CDL Spec	NTCDL requires Ethernet/GFP on all Std-CDL waveform modes. The Std-CDL specification of Ethernet/GFP is equivalent to SSM-PTFF. Currently, published Std-CDL waveform documentation does not define MSM-PTFF. In the absence of this guidance the NTCDL program has dropped the MSM-PTFF requirement from the SPS.
65	SPS	24	3.2.3.1.5	362-363	S	No Microphone input is required of LMS HW, but this requirement calls out such an input	Include Microphone requirement in LMS section 3.3.7.1	Missing requirement	The line cited by the commenter has been amended to read: "The LMS hardware [shall] support the CDL audio data channels as defined in Std-CDL H-2, Appendix A.5.[T]" The LMS hardware table has been modified to include a microphone/headset jack.
66	SPS	25	3.2.3.2.1 Open Published Waveform	382	S	"If an NRW is proposed, the NTCDL NRW [shall] be an open published waveform and listed on the approved DoD CIO Waveform list found in DoDI 4630.09.[T]" This is inconsistent with SOW 3.2.8.1.1 "Non CDL Waveform Compliance" which provides for DoDI 4630.09 approval at the time of FAT TRR.	Change SPS to: If an NRW is proposed, the Operational NTCDL NRW [shall] be an open published waveform and/or listed on the approved DoD CIO Waveform list found in DoDI 4630.09.[F O]	Don't preclude CDL-based NRW or open published COTS-based NRW solutions. Moreover, don't restrict forward-looking 2020 NTCDL NRW solutions to 2005 era DoD CIO waveforms.	The requirement is worded as intended.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
67	SPS	25	3.2.3.2.2	387	S	SPS does not address timing requirements for NRW	Recommend to add a new network timing requirements section in addition to the "3.2.3.2.2". Timing section would include "NTCDL will continue to fully operate in a Global Positioning System (GPS) denied environment". In addition, timing section should include requirements to address time synchronization and network time management functions (to support operational quality timing resolution).	Network timing and synchronization affect design.	The Government is looking for NRW solutions which satisfy the characteristics listed in Section 3.2.3.2 of the SPS. In addition to the proposed NRW waveform, the vendor needs to propose their own timing solution if required.
68	SPS	30	3.3.1 Antenna and RF Subsystem Performance Requirements	484	S	Section 3.3.1 EIRP, G/T, out-of-band suppression performance requirements should be supported with desired operational rate/reach requirements.	Provide operational rate/reach requirements to augment the detailed power requirements.	Specifying operational requirements (possibly as [O]) in addition to component performance requirements allows for best-value contractor-specific differentiation and enhancements.	The antenna performance parameters were calculated using data rate and range values. If the vendor meets the specified G/T and EIRP, they will have met NTCDL's data rate and range requirements.
69	SPS	30	3.3.1.2	515	S	NTCDL must generate ship's pitch, roll, yaw and heave during all acquisition and tracking operations. Is a particular variant or ship planned to use NTCDL driving this requirement?	Delete the NTCDL requirement to use self-generated ship's pitch, roll, yaw, and heave during all acquisition and tracking operations. Replace the deleted requirement with use of ship provided NAVSSI data during all acquisition and tracking operations. If a limited Class or number of ships drive this requirement, rewrite the requirement to apply only for those specific ships.	Requiring this capability will increase system cost with no performance benefit on ships that can supply navigation data. The added cost of an Inertial Navigation System (\$75-100K) will only be incurred on a limited number of units.	The values for ship's pitch, roll, yaw, and heave were taken from an aggregation of worst case scenarios for variant A, B, and C platforms in sea state five conditions. Also, ship provided pitch, roll, yaw, and heave data may be subject to latency and therefore would not provide timely position data for pointing and acquiring operations. The LCI IDD contains messages for passing NAV data, but it is not intended for pitch, roll, and yaw compensation.
70	SPS	31	3.3.1.2	519	S	Table 3-9 states conditions are for Sea State 5 which is not consistent with section 3.12.13 line 2532 that states the equipment shall be designed to operate in all attitudes covered by DoD-STD-1399 which includes up to Sea State 8.	Modify paragraph 3.12.13 from "operate in all attitudes covered by DoD-STD-1399 (Navy) Section 301A, Ship Motion and Attitude" to "operate in attitudes up to See State 5 covered by DoD-STD-1399 (Navy) Section 301A, Ship Motion and Attitude, as defined in Table 3-9	Provides Sea State consistency in the SPS	Section 3.12.13 requires that NTCDL survive conditions up to and including Sea State 8. Table 3-9 specifies conditions in which NTCDL is required to operate (maintain link) through. Section 3.12.13 was amended to read: "NTCDL equipment [shall] be designed to survive attitudes covered by DoD-STD-1399 (Navy), Section 301A, Ship Motion and Attitude, while power is applied. [T]"
71	SPS	32	3.3.1.3.1.1	539	S	This requirement states that "The SCE FL X-Band EIRP [shall] be no more than 3 dB down from the proposed EIRP at elevation angles of 30-degrees or higher [T], 45-degrees or higher [O], relative to the horizon."	Remove the "or higher" qualifier from both threshold and objective requirements	For higher elevation angles, the link will require less EIRP to meet performance due to reduced range.	The SPS has been changed to read: "...be no more than 3 dB down from the proposed EIRP at elevation angles above 30-degrees [T], above 45-degrees [O], relative to the horizon."

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
72	SPS	32	3.3.1.3.1.1	542		The Ku-Band SCE FL EIRP requirements paragraph does not distinguish between the EIRP for the medium gain and the high gain antennas. Do the stated values of +43 dBW [T] and +45 dBW [O] EIRP apply to both Ku-Band medium and high gain antennas?	Provide separate values for all parameters for SCE FL, SCE RL, PCE FL & PCE RL for Ku-Band Medium and High Gain Antennas	Clarity of requirements	Ku-Band EIRP requirements reflect the medium gain use case which was calculated using the medium range mission scenario. This driving scenario was applied to both medium and high gain.
73	SPS	32	3.3.1.3.1.1	544	S	This requirement states that "The SCE FL Ku-Band EIRP [shall] be no more than 3 dB down from the proposed EIRP at elevation angles of 30-degrees or higher [T], 45-degrees or higher [O], relative to the horizon."	Remove the "or higher" qualifier from both threshold and objective requirements	For higher elevation angles, the link will require less EIRP to meet performance due to reduced range.	The SPS has been changed to read: "...be no more than 3 dB down from the proposed EIRP at elevation angles above 30-degrees [T], above 45-degrees [O], relative to the horizon..."
74	SPS	32	3.3.1.3.1.1	539, 544	C	Reduced EIRP at high elevation angles reduces performance.	Give objective credit for full EIRP at higher elevation angles up to elevation maximum of the antenna.	Full EIRP at all elevation angles maximizes link margin needed for mission critical communications.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
75	SPS	32	3.3.1.3.1.1	541 thru 543	S	The EIRP specified is the same for high gain Ku-Band and medium gain Ku-Band. This appears to be inconsistent paragraph number 3.3.1.4.1.2, lines 641 through 644, which provides separate G/T requirements for high gain Ku-Band and medium gain Ku-Band	Specify that the 43 dBW [T], 45 dBW [O] EIRP is for high gain Ku-Band. Add a lower medium gain Ku-Band EIRP requirement.	Consistency with G/T requirements and reduction of system cost.	EIRP and G/T are specified as intended.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response
76	SPS	32	3.3.1.3.1.2	548	S MIL-STD-461F CE106 refers to testing by breaking the connection between antenna and transmitter, at the transmitter output.	Specify power spectral density at frequencies of interest in direction of own ship receivers considering path loss	CE106 is not applicable to AESA.	Refer to MIL-STD-461F, Section 5.6.1. which reads: "The requirement is not applicable to equipment designed with antennas permanently mounted to the EUT."
77	SPS	33	3.3.1.3.2	572	S The X-Band beamwidth requirement is inconsistent with other requirements.	Change beamwidth requirement to 7 degrees [T].	The beamwidth requirement for X-band SCE FL is overly specified and out of line with the required EIRP of 41 dBW and the corresponding beamwidth requirements for Ku-band SCE FL. In addition, the number of assets that require X-band are fewer than Ku-band, limiting the amount of frequency reuse needed.	The beamwidth requirements are specified as intended. The beamwidth requirement is to support LPI/LPD requirements.
78	SPS	33	3.3.1.3.2	574	S The X-Band beamwidth requirement at a 45-degree scan angle is inconsistent with other requirements.	Change beamwidth requirement to 10 deg [T] at a 45-degree scan angle.	The beamwidth requirement for X-band SCE FL is overly specified and out of line with the required EIRP of 41 dBW and the corresponding beamwidth requirements for Ku-band SCE FL. In addition, the number of assets that require X-band are fewer than Ku-band, limiting the amount of frequency reuse needed.	The beamwidth requirements are specified as intended. The beamwidth requirement is to support LPI/LPD requirements.
79	SPS	33	3.3.1.3.2	586	S Sidelobes within 15 degrees of the main beam are not specified	Add an objective sidelobe requirement of -12 dB within 15 degrees relative to the peak of the main beam	Lack of sidelobe control reduces the amount of frequency available for reuse in a congested spectrum. Higher sidelobes also collect unwanted multipath and interfering signals, including jamming, degrading link margin needed for mission critical communications.	The sidelobe values are specified as intended.
80	SPS	33	3.3.1.3.2	571, 586	S Requirement for adaptive nulls generated by AESA antennas during transmit is missing.	Add an objective requirement for the generation of up to 4 nulls in any quadrant and at any frequency within the operating band with a nulling depth of 22 dB relative to the peak of the main beam.	Control of static sidelobe levels is not the only way to mitigate link degradation due to interfering signals. Techniques may be employed to dynamically control the beam characteristics by placing nulls on the platforms associated with other NTCDL links, or on known adversary locations to reduce detection.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response
81	SPS	33	3.3.1.3.2	574, 589	C A degraded transmit beam width at a 45-degree scan angle reduces RF performance and impacts low probability of detection, frequency reuse, and additional power will be required to make up for the wider beam width	Do not degrade 45-degree scan angle performance. If degradation is allowed, then give Objective credit for no off-axis degradation.	A broader transmit beam makes the ship more vulnerable to enemy detection. Broader beams reduce the amount of frequency available for reuse in a congested spectrum. The lower gain associated with a broader beam requires a larger amplifier and affects cooling and power consumption.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
82	SPS	33	3.3.1.3.2	592 - 598	The sidelobe performance parameters for the SCE FL (transmit) mode are specified in units of dBi, but there is no mainlobe antenna gain parameter to reference the sidelobe against.	The sidelobe should be stated relative to the main beam center value or the main lobe gain should be specified explicitly.		The sidelobe values are specified as intended.
83	SPS	34	3.3.1.4.1.1	621	S Ku-band SCE RL maximum power density has been increased 18 dB from the previous Draft SPS resulting in a range of 86 dB between maximum and minimum power density. This 86 dB range far exceeds the RL simultaneous dynamic range requirement of 60 dB [T] on (line 659) of the March 4 SPS.	Please clarify whether the receive power density values are correct as specified	Multiple carriers at high receive power will drive the RF front end electronics to have exceptionally high Third-order Intercept (TOI) requirements. Reducing receive power levels in line with the required dynamic range will allow contractors to implement a minimum SWaP and cost design	The Ku-Band SCE RL maximum power density value is specified as intended.
84	SPS	35	3.3.1.4.1.1	638, 645	C A degraded G/T_{sys} at 35-degree and higher scan angle reduces performance.	Give objective credit for full G/T_{sys} at higher elevation angles up to elevation maximum of the antenna.	Full G/T_{sys} at all elevation angles maximizes link margin needed for mission critical communications.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
85	SPS	35	3.3.1.4.1.2	638	S This requirement states that "The SCE RL X-Band G/T_{sys} [shall] be no more than 3 dB down from the proposed G/T_{sys} at elevation angles of 30-degrees or higher [T], 45-degrees or higher [O], relative to the horizon."	Remove the "or higher" qualifier from both threshold and objective requirements	For higher elevation angles, the link will require less G/T to meet performance due to reduced range.	The SPS has been changed to read: "...be no more than 3 dB down from the proposed EIRP at elevation angles above 30-degrees [T], above 45-degrees..."
86	SPS	35	3.3.1.4.1.2	645	S This requirements states that "The SCE RL Ku-Band G/T_{sys} [shall] be no more than 3 dB down from the proposed G/T_{sys} at elevation angles of 30-degrees or higher [T], 45-degrees or higher [O], relative to the horizon." □	Remove the "or higher" qualifier from both threshold and objective requirements	For higher elevation angles, the link will require less G/T to meet performance due to reduced range.	The SPS has been changed to read: "...be no more than 3 dB down from the proposed EIRP at elevation angles above 30-degrees [T], above 45-degrees..."

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
87	SPS	35	3.3.1.4.1.3	649	S	Receiver sensitivity in bandwidth agnostic terms by specifying "dBm/Hz" is insufficient for various waveforms. For example, Eb/No required for Std-CDL and BE-CDL differ for a given data rate. This would imply that different noise figure requirements exist for different waveforms.	Specify sensitivity in terms of PER at a received level in dBm/Hz for each waveform type. This covers Eb/No on rate-agnostic basis for each waveform type, including implementation loss allocation.	Making this change makes the requirement waveform type and mode agnostic.	The receiver sensitivity requirement is specified as intended.
88	SPS	36	3.3.1.4.1.5	662	S	MIL-STD-461F CS104 refers to testing by breaking the connection between antenna and receiver, at the receiver input.	Specify a power density to tolerate at a given offset frequency or frequency range. Most appropriate power density requirement would be in units of dBW/m ² or W/m ² .	CS104 is not applicable to AESA.	Refer to MIL-STD-461F, Section A.5.9: "Due to the wide diversity of subsystem designs being developed, the applicability of this type of requirement and appropriate limits need to be determined for each procurement." The vendor is discouraged from altering their design specifically to allow for the execution of this test.
89	SPS	36	3.3.1.4.1.6	672	S	Is jammer the same modulation as the desired signal?	Specify jammer bandwidth in terms of desired signal	Bandwidth of jammer, without specifying jammer modulation, is ill-defined. For example a CW jammer has no significant bandwidth.	Yes. Jammer bandwidth will not be specified in terms of the desired signal.
90	SPS	36	3.3.1.4.1.6	676	S	If jammer is a CDL-modulated signal, the spectral mask allows modulation density to be -40 dB in the region specified.	Identify what spectral density exists within the desired signal BW due to the jammer	This would significantly degrade desired signal.	The jammer is the same modulation as the desired signal. The power level and bandwidth is per the test requirements which includes the spectral mask definition.
91	SPS	37	3.3.1.4.2	695	S	The Government's responses to Industry Questions provided with the current DRAFT RFP, response number 94, states that the S-band gain requirement has been removed from the SPS. However the updated DRAFT SPS dated 4 March 2015 still includes the S-band gain requirement.	Delete the S-band gain requirement.	Compliance to G/T and EIRP specified profiles ensure desired system operational performance. Adding the S-band gain profile over constrains antenna design and may add cost with no added system benefit.	The gain requirement was re-specified as a gain profile and was not removed.
92	SPS	37	3.3.1.4.2	702	S	The Government's responses to Industry Questions provided with the current DRAFT RFP, response number 99, states that the C-band gain requirement has been removed from the SPS. However the updated DRAFT SPS dated 4 March 2015 still includes the C-band gain requirement.	Delete the C-band gain requirement.	Compliance to G/T and EIRP specified profiles ensure desired system operational performance. Adding the C-band gain profile over constrains antenna design and may add cost with no added system benefit.	The gain requirement was re-specified as a gain profile and was not removed.
93	SPS	37	Figure 3-5 J/S Bandwidth separation for J/S Requirement	689	S	Why not specify adjacent channel interference requirements?	Re-specify as adjacent channel or (adjacent channel + 1) interference requirement.	As currently specified, a narrowband interferer (i.e., interferer BW < desired signal BW) would fall within the desired signal waveform bandpass rather than one or more adjacent channels away from the signal.	The J/S requirements are specified as intended.
94	SPS	38	3.3.1.4.2	725	S	Both elevation and azimuth half-power beamwidths are specified the same.	Allow the elevation beamwidth to increase to 4 degrees [T].	Relaxing the elevation beamwidth provides flexibility in antenna design. As long as G/T _{sys} requirements are met, this should not impact operations.	The beamwidths are specified as intended.
95	SPS	38	3.3.1.4.2	727	S	Both elevation and azimuth half-power beamwidths are specified the same at a 45-degree scan angle.	Allow the elevation beamwidth to increase to 6 deg at 45-degree scan angle [T].	Relaxing the elevation beamwidth at a 45-degree scan angle provides flexibility in antenna design. As long as G/T _{sys} requirements are met, this should not impact operations.	The beamwidths are specified as intended.
96	SPS	38	3.3.1.4.2	735	S	Requirement for sidelobes between 30 and 60 degrees of the main beam is excessive.	Change to +8 dBi [T]	This change allows flexibility in antenna selection and has a negligible impact on link performance.	The sidelobe values are specified as intended.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response
97	SPS	38	3.3.1.4.2	707, 721	S Requirement for adaptive nulls generated by AESA antennas during receive is missing.	Add an objective requirement for the generation of up to 4 nulls in any quadrant and at any frequency within the operating band with a nulling depth of 35 dB relative to the peak of the main beam.	Control of static sidelobe levels is not the only way to mitigate link degradation due to interfering signals. Techniques may be employed to dynamically control the beam characteristics by placing nulls on the platforms associated with other NTCDL links or known interference sources.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
98	SPS	38	3.3.1.4.2	708, 722, 723	S Overall link performance of Systems with good RF front end performance are determined by G/T_{sys} . For systems such as these, it is possible to meet G/T_{sys} but not the specified gain requirement.	Modify or remove the gain requirement, or make an allowance for systems with good front end performance.	By imposing a gain requirement on top of the half power beamwidth and G/T_{sys} requirements, the system designer is constrained in a way that is both not cost effective and not necessary. The system designer can determine how to trade pattern gain against loss/noise characteristics, which depend on the implementation. This allowance does not impact either beamwidth or G/T_{sys} and does give the designer greater freedom to develop an optimal design from the perspectives of both cost and performance. In fact, the portion of the specification pertaining to the Tx aperture does not define a pattern gain since EIRP and beamwidth are sufficient.	The Government is specifying gain as well as G/T . The approach in specifying gain and G/T values is to ensure that NTCDL meets LPI/LPD, system modularity, and system range/rate/mission profile requirements.
99	SPS	38	3.3.1.4.2	711, 727, 731	C A degraded receive beam width at a 45-degree scan angle impacts frequency reuse and has a higher susceptibility to multipath and other unwanted signals.	Do not degrade 45-degree scan angle performance. If degradation is allowed, then give Objective credit for no off-axis degradation.	A broader receive beam reduces the amount of frequency available for reuse in a congested spectrum. A broader beam also collects unwanted multipath and interfering signals, including jamming, degrading link margin needed for mission critical communications.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
100	SPS	39	3.3.1.4.2	739	S Requirement for sidelobes between 90 and 180 degrees of the main beam is excessive.	Change to -3 dBi [T]	This change allows flexibility in antenna selection and has a negligible impact on link performance.	The sidelobe values are specified as intended.
101	SPS	39	3.3.1.5.1.1	751, 756	C Reduced EIRP at high elevation angles reduces performance.	Give objective credit for full EIRP at higher elevation angles up to elevation maximum of the antenna.	Full EIRP at all elevation angles maximizes link margin needed for mission critical communications.	Full EIRP at elevation angles above 30 degrees is not required. According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."

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102	SPS	41	3.3.1.6.2	810, 812, 813	S Overall link performance of Systems with good RF front end performance are determined by G/T_{sys} . For systems such as these, it is possible to meet G/T_{sys} but not the specified gain requirement.	Modify or remove the gain requirement, or make an allowance for systems with good front end performance.	By imposing a gain requirement on top of the half power beamwidth and G/T_{sys} requirements, the system designer is constrained in a way that is both not cost effective and not necessary. The system designer can determine how to trade pattern gain against loss/noise characteristics, which depend on the implementation. This allowance does not impact either beamwidth or G/T_{sys} and does give the designer greater freedom to develop an optimal design from the perspectives of both cost and performance. In fact, the portion of the specification pertaining to the Tx aperture does not define a pattern gain since EIRP and beamwidth are sufficient.	The Government is specifying gain as well as G/T . The approach in specifying gain and G/T values is to ensure that NTCDL meets LPI/LPD, system modularity, and system range/rate/mission profile requirements.
103	SPS	44	3.3.3.1.1 Legacy Data Channels	944	S Why specify a specific SkyLynx interface solution for legacy ATM signals?	Specify an ICD for legacy ATM user interfaces.	Point solution requirement presents potential MOSA and DMSMS life cycle issues.	SkyLynx is the required device for interfacing with DCGS-N.
104	SPS	45	3.3.3.1.1 Legacy Data Channels	971	S Unclear "If ATM and high data rate channels are processed external to the radio terminal, NTCDL [shall] provide a Legacy Egress Access Node (LEAN).[T]"	Remove the requirement or remove the "if" and provide an ICD.	Clarify legacy user interface requirements.	SPS reorganized for clarity. Support for legacy data channels is required and can be provided internal OR external to the radio. ICD not required.
105	SPS	45	3.3.3.1.1.1 ATM EMCON	978	S Why impose legacy ATM EMCON requirements on NTCDL?	Impose legacy ATM requirements on the aforementioned, clarified SkyLynx or LEAN interfaces.	Clarify legacy user interface requirements.	CDL ATM EMCON requirements are the responsibility of the NTCDL vendor. The requirement is specified to satisfy legacy CDL ATM communication requirements. This includes operation when the link is not working simultaneously in both directions.
106	SPS	47	3.3.4	1035	S Existing cryptos are available as a backup to the CCM.	Add objective requirement for a crypto solution based on KGV-135A.	Currently approved crypto mitigates schedule risk to the Government.	Only CCM solutions will be acceptable for CDL procurements. All other crypto solutions will be viewed as non-compliant.

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107	SPS	48	3.3.5.2 Link Control	1084	S	Multiple LCS link discovery peer requirements unclear. Vendor clarification: Comment #22 should have been against SPS lines 1088-90 rather than 1084. More Clarification: We infer that the SPS 3.3.1.7.1.3 (page 42, SPS lines 839-853) maximum antenna acquisition times are not part of the SPS line 1088-1090 requirement requiring the LCS to establish a new connection with a remote platform whose current location is known within 55 seconds [T], 30 seconds [O]. Is this correct?	Clarify whether this requirement is allocated to the LCS, the external LMS, etc. particularly in consideration of 3.3.1.7.1.3 maximum antenna acquisition times based on varying search windows.	Clarify handling of multiple remote peer discovery in dense environments.	SPS Section 3.3.1.7.1.3 has been modified to reflect requirements for Antenna search vice antenna acquisition. The 55 seconds to establish a connection, does not include antenna search time.
108	SPS	49	3.3.5.2	1097	C	RSSI accuracy requirement will be difficult to verify	Change "This relative measurement [shall] be accurate to within ± 0.25 dB.[T]" to "This relative measurement [shall] be reported in 0.25 dB steps or finer.[T]"	Testing accuracy of measurement to 0.25dB will require extensive calibration at minimal value.	The SPS has been modified to read: "The LCS [shall] provide the LMS with a relative receive signal strength and report it in dBm.[T] This measurement [shall] be accurate to within ±0.25 dB [T], ±0.1 dB"
109	SPS	58	Table 3-17 EDUI Ethernet Switch Port Allocations	1364	S	With 48 PT and 48 CT ports, this implies an EDUI red/black separation of two security levels.	Specify whether the EDUI needs to support multiple PT security levels to match its ADNS user enclaves.	MILS is a potential cost driver.	The SPS (Table 3-17) has been modified to make clear that there will be a separate EDUI (server and switch) to support either the PT enclave or the CT enclave.
110	SPS	64	3.3.7.2 LMS Firewall Appliance	1444	S	Firewall capacity unspecified.	Specify firewall performance in terms of number of flows, data rate, red/black traffic observation, etc.	Clarify firewall capacity requirements given wide disparity in number of NTCDL links, link data rates, and red/black classification levels.	The firewall is specified as intended. This firewall appliance is intended to protect the LMS from control side application attacks; it does not reside in the data path.
111	SPS	68	3.4.2.2	1543	S	3.4.2.2 Chilled Water Interface If water cooling is required, the NTCDL antenna [shall] be cooled using the ship's chilled water cooling system, as defined in DoD-STD-1399 (Navy), Section 532.[T]	Recommend the SPS clearly state the temperature range of the chilled water (e.g. 15C)	The term "chilled water" used on other ship systems refers to approximately 15C. This temperature is consistent with the title of the paragraph.	The current requirement is for systems that can make use of "Cooled Water" which is 40°C (104°F). The SPS has been modified to also include an allowance for the use of "Chilled Water" which is 7.2°C (45°F).

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112	SPS	69	3.5.2 System Security Design Criterial	1584	S	NTCDL MILS requirements unclear.	Specify the number of simultaneous MILS required, i.e., S+U or TS+U or SCI+U vs. S+U or TS+S+U or SCI+TS+S+U, S+SR[1..4]+U.	Clarify NTCDL MILS scope.	The SPS has been modified to reflect the required minimum number of PT and CT links.
113	SPS	69	3.5.2 System Security Design Criterial	1590	C	CNSSI 1253 CIA=MMH security controls cost implications.	Specify preliminary minimum cyber security controls and STIGs required by NTCDL.	Allow contractors to bid a baseline set of RMF controls.	NTCDL is HMM for CIA. Since STIGs are subject to change based on system design, selected hardware, and DISA policies, NTCDL STIGs need to be applied based on the NTCDL specified CNSSI 1253 system classifications (high, moderate, etc).
114	SPS	70	3.5.2.1.1	1613	S	Section 3.5.2.1.1 of SPS states "Binary or machine executable public domain software products, and other software products with limited or no warranty such as those commonly known as freeware or shareware, [shall] not be used.[T]"	Recommend updating to say "...[shall] not be used without prior government approval"	Clarity	The SPS has been amended to cite NIST 800-53, SI-7, Control Enhancement (13).
115	SPS	72	3.5.4.1	1686	S	Limits 440V to single phase	Recommend changing 440V single phase to three-phase.	Three-phase operation allows for smaller diameter and more flexible cables.	SPS section 3.5.4.1 has been modified.
116	SPS	74	3.5.4.15	1753	S	Thermal Contact Hazards: The spec requires internal case hot spots to be <140F. This seems restrictive based on typical military specifications.	Under normal operating and maintenance conditions, the NTCDL equipment shall not have user accessible surface temperatures that exceed 140F at an ambient temperature of 77F. Front panel and operating control temperatures shall not be higher than 120F or lower than 53.6F at an ambient temperature of 77F, using MIL-HDBK-454B, Guideline 1, Section 4.4, Temperature	Supports cost effective design while maintaining safe operation.	Modified the SPS to read: "NTCDL [shall] conform to MIL-HDBK-454B, Guideline 1, Section 4.4, Temperature.[T]"
117	SPS	77	3.6.2.1 Flat Panel Antenna Configuration	1841	S	Need Variant B, C small deck flat panel configuration options in Table 3-21.	Add small deck flat panel configurations in support of Variant B and C platforms.	Allow maximum scalability and modularity in contractor antenna bids.	Flat panel SWaP will not be provided for variants B nor C.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
118	SPS	79	3.6.2.5	1880	S	Variant A - Flat panel or small radome should be 4 based on threshold link requirement.	Update Table 3-24 for Variant A to allow for 4 small radome antennas.	Consistency with Table 3-4.	The SPS has been modified to allow for small RADOME SWaP on Variant A.
119	SPS	79	3.6.2.5 Allocated Antenna SWaP by Variant	1881	S	Need Variant B, C small deck flat panel configuration options in Table 3-21.	Add small deck flat panel configurations in support of Variant B and C platforms.	Allow maximum scalability and modularity in contractor antenna bids.	Flat panel SWaP will not be provided for variants B nor C.
120	SPS	79	3.6.3 Below Deck Physical Characteristics	1883	S	What's driving the 5-rack requirement?	Provide Objective [O] requirement less than 5 racks.	Challenge/incent bidders to reduce footprints both above and below deck.	Below deck footprints cannot exceed current CVN CDL systems rack footprint allocation. According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
121	SPS	80	3.6.5	1897	S	The objective power consumption of 3420 watts is excessive.	Add a objective power consumption requirement of 800W per link.	Lower the objective power consumption results in less required ships power, reduced cooling requirements, and eases the infrastructure needed for non-ship installations.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."

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122	SPS	82	3.7.1.5.2	1947	S Note 2 in Table 3-26 specifies that microcircuits and semiconductors shall not exceed junction temperatures of 105 degrees F.	Recommend that you remove this requirement. Industry will meet the reliability requirements for the system.	The System reliability requirement is a sufficient requirement.	The SPS has been amended to read: "De-rating guidelines for selection and application of parts [NT7250] shall be in accordance with the Reliability Engineer's Toolkit dated April 1993 Commercial Practices Edition Topic D1 (severe environment and best commercial practices)." The de-rating table has been removed.
123	SPS	93	3.11.1.1	2305	S Antenna reliability is in terms of MTBF while system is in terms of MTBCF	Change MTBF to MTBCF on line 2305 (for the antenna).	Change would make the system and antenna reliability requirements consistent.	The NTCDL CDD calls out a MTBF for topside equipment and a MTBMCF for a "system-wide" measure of reliability. The values and terminology will remain as specified.
124	SPS	93	3.11.1.2	2310	C Degraded operation does not take into account 360 degree coverage.	Add objective requirement to maintain 360 operation when one aperture is unavailable.	It is important for NTCDL to maintain 360 degree coverage even when 1 of the apertures fails due to battle damage or other causes.	The requirement does take 360-degree coverage into account. Section 3.11.1.1 states: "The system [shall] be considered to be operational (i.e., not in a "failed state") if the system can support a single Ku-band link operation with a full 360-degree coverage.[T]" The degraded mode of operation requirement is intended to convey that a single LRU shall not cause a critical failure.
125	SPS	97	3.11.3	2443	C Document needs to specify MLDT in order to calculate Ao. MLDT is required in addition to MTBCF and MTTR in order to calculate Ao.	Include a specification for system MLDT.	Ao cannot be calculated without the MLDT term.	MLDT will not be specified because all of the other Ao formula variables are specified. To arrive at a .92 Ao, the MLDT shall be no more than 103.59 hours.
126	SPS	99	3.12.11	2517	S The specification states "NTCDL performs a mission critical function" (e.g. essential) and is classified as Grade B, which is contradictory to MIL-S-901D definition of Grade A and B. Essential systems are classified as Grade A.	Recommend changing the specification to use the Grade A Shock classification, and in conjunction with the Grade A change, increase the above decks weight requirement by 25% to allow for stiff structures. Alternatively, provide clear evaluation advantage to an offer that provides a Grade A Shock compliant solution (while total cost remains an independent evaluation factor)	This change will be consistent with a mission critical (Essential) system per MIL-S-901D, and is consistent with NAVSEAINST 9072.1A for Communication systems Allows industry to evaluate designs that reduce non-recurring cost, provide competitive recurring cost and superior survivability performance.	The NTCDL program office has determined that NTCDL will be designated as Grade B, mission essential. The SPS has been modified to reflect mission essential.
127	SPS	104	4.2.3	#####	S Table 4-4 is missing.	Provide table 4-4	Missing information	SPS references to table 4-4 have been renamed to the "Verification Cross-Reference Matrix." This document will be added to Section J of the RFP

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
128	SPS	106	4.3.2.2	2721	S	Objective number of links is inconsistent with Table 3-3.	Change to 12 objective links.	Consistency with design requirement.	The tables reflect the requirement(s) as intended. Table 3-3 addressed the 360-degrees about the ship requirement. Table 4-1 addresses a test case for links in a 90-degree sector.
129	SPS	108	4.3.3.3	#####	S	A SkyLynx box is required for legacy end to end channel distribution. SkyLynx is not part of the NTCDL system and is not listed as Government Furnished Equipment (GFE) Item.	Recommend adding three SkyLynx boxes to the GFE list to support First Article Testing (FAT).	Since the SkyLynx is not part of the NTCDL system, this asset should be provided as GFE	SkyLynx will not be made available as GFE. SkyLynx will be made available to the vendor at SSC Pacific.
130	SPS	116	4.3.11.1	3045 3053	S	The requirement to maintain the ambient conditions of 50C and 75% humidity for all testing will increase the duration of the test. When a chamber is opened, extra test time will be required to bring the chamber back to the state conditions, thus extending overall test time.	Recommend reducing the 50C to 30C and remove the 75% humidity requirement	Reduces government cost to perform the test. Individual temperature and humidity tests are included in the requirements and are tested during FAT.	The testing requirements are specified as the Government intends.
131	SPS	116	4.3.11.2	3069	A	Conflict with SOW in terms of number of candidate faults and demonstrated faults	Change number of candidate faults to 30 and demonstrated faults to 15 to match SOW.	Consistency.	SPS Section 4.3.11.2 has been modified to align with the SOW.
132	SPS	-	-	-	S	Some FAT tests require the use of government facilities. Examples include RCS at Pt Mugu, Topside Emitter at Dahlgren, RS105 EMI testing at Pax River, and JITC testing.	Define these as Government run tests with Contractor support	Recommendation based on contractor experience on similar Government test programs	The vendor is expected to coordinate with Government test facilities.
133	SPS	107 108 109 110	4.3.3.1.2 4.3.3.1.7 4.3.3.5 4.3.4.2	2756 2792 2824 2846		During First Article Testing (FAT) All these sections require live flight testing. Since there is no one airborne asset that operates over all the required bands (C,S,X,and Ku) multiple flights are needed and weeks of flight testing are required. The flight test assets are also not listed as GFE, requiring the contractor to acquire and coordinate airborne assets.	Recommend the Government generate a separate section specifically for flight testing. Recommend the Government add the flight test assets as GFE and that the flight tests be performed by the Government at a Government facility with contractor support. Recommended GFE list for flight test: X Band flight asset, C Band flight asset, S Band flight asset, Ku Band flight asset	Consolidating flight tests will reduce the overall government test cost and test time.	The vendor will be expected to coordinate flight tests and facilities to satisfy NTCDL FAT. Section 4.2.6 was added to the SPS to specify the parameters for FAT flight testing.
134	SPS	33 & 38	3.3.1.3.2 &3.3.1.4.2	592 &734		The SCE FL & RL close in sidelobe requirements are specified over different elevation angle windows, i.e., 15-30 deg vs 10-30 deg. Is this correct?	Verify correctness of requirement range and values and make them consistent for FL & RL modes.		The sidelobe values are measured from the main beam for any beam position at the horizon (not elevation angles). The regions (10-30 degrees vs 15-30 degrees) are specified as intended.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response
135	SPS	33 33 38 38	3.3.1.3.1.1 3.3.1.3.1.1 3.3.1.4.2 3.3.1.4.2	576-581 591-598 713-718 733-740	S Sidelobe requirements cause additional complexity for AESA solutions.	Change requirement to the previous sidelobe requirements in the 25 September 2014 SPS.	Relaxing the sidelobe requirements allows flexibility in the affordability of the design. For AESA antennas they can form adaptive nulls which mitigate some of the relaxed sidelobe requirements. These dynamic nulls address interfering signals and frequency reuse that were previously enhanced by static sidelobe requirements.	The sidelobe values are specified as intended.
136	SPS	33 38		573 710	The Maximum Azimuth & Elevation beamwidths for X-Band SCE-FL are narrower than SCE RL, even though the SCE FL frequencies are lower than the SCE RL. For a fixed antenna structure, the beamwidths would normally be expected to be narrower at higher frequencies, not at lower frequencies.	Verify correctness of the beamwidth requirement versus the specified frequency ranges for X-Band, SCE and PCE modes.		The beamwidth requirements are specified as intended; requirement is to support LPI/LPD requirements.
137	SPS	33 33 38 38		588 726 588 730	The Maximum Azimuth & Elevation beamwidths for Ku-Band SCE-FL are wider than SCE RL, even though the SCE FL frequencies are higher than the SCE RL. For a fixed antenna structure, the beamwidths would normally be expected to be narrower at higher frequencies, not at lower frequencies.	Verify correctness of the beamwidth requirement versus the specified frequency ranges for Ku-Band, SCE and PCE modes.		The beamwidth requirements are specified as intended; requirement is to support LPI/LPD requirements.
138	SPS	35, 38	3.3.1.4.2, 3.3.1.4.1.2, 3.3.1.4.1.3	723, 643,65 1	S Specs are inconsistent, and emphasize implementation rather than system-level requirements. Gain and G/T as stated provide a large allocation to noise figure, and de-emphasize low noise figure.	A specification closer to that given in the former CDLS spec is more appropriate: specify maximum BER for each waveform and data rate at a threshold received signal level in dBm.	This addresses antenna gain, G/T, and Eb/No unambiguously.	The Government desires to specify gain as well as G/T. The approach in specifying gain and G/T values is to ensure that NTCDL meets LPI/LPD, system modularity, and system range/rate/mission profile requirements.
139	SPS	78- 79	3.6.2.2 3.6.2.3	1868 1880	S The SWaP specifications of Figure 3-7 and Table 3-22 combined with the SWaP allocation of Table 3-24 limit the industry trade space for achieving a modular, scalable design across variants	Provide a total volume and weight budget for the NTCDL Radomes rather than hard limits for Large and Small Radomes. The variant B Radomes shall not exceed a total volume of 975000 cubic inches (approximate from figure 3-7). All variant B radomes shall fit within the volume limits of a Large Antenna as shown in figure 3-7.	Allows industry to consider antenna solutions that reduce the number of radome and antenna designs across variants, reducing NRE and RE cost and increasing commonality for maintenance. This could allow industry to offer a single radome design across all variants that occupies significantly less total volume than 2 large and 2 small radomes.	The SWaP requirements are specified as intended.
140	SPS	Multiple	Multiple	Multiple	A Spec calls out 1000BASE-TX	1000BASE-TX is outdated recommend use 1000BASE-T	Much lower cost equipment and wiring.	All occurrences of "1000BASE-Tx" have been changed to Gigabit Ethernet in the SPS.
141	SPS	na	na	na	S SPS does not address NRW multiple security categories or coalition network protections.	Recommend requirements addition to support multiple security categories and secure data routing for mixed US only/Coalition network members.	Security categories and coalition networking requirements affect design.	No additional requirements will be added. The NTCDL architecture, in accordance with MOSA requirements, does not prohibit links (CDL or NRW) in a "coalition" security enclave, but may require additional equipment.

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142	SPS	various	various	-	A Remove NRW "if proposed" language.	NRW [O] language is unambiguous. An alternative to inexact "if proposed" would be to designate "Design-Only" language for NRW and other select Objective capabilities to ensure their inclusion in the NTCDL (CDR) Design Baseline without committing funding to the Product Baseline EDM implementations.	Use unambiguous "[O]" language, or adopt "Design-Only" language and meaning used on other PEO C4I programs.	The "if proposed" language will not be removed and is used as intended.
143	SPS				S SPS and SOW: Several of the NTCDL Reference documents are classified and are not easily accessible.	Create an NTCDL "Reading Room" where potential bidders may travel to read these documents prior to the RFP and eventual award	Enables all of industry to have equal access to the government requirements.	Instructions for how to obtain these documents will be provided with the RFP.
144	SPS				The Verification Cross Reference Matrix (VCRM) is not included in this document.	Add the VCRM.	The VCRM is required for proposing system verification test.	SPS references to table 4-4 have been renamed to the "Verification Cross-Reference Matrix." This document will be added to Section J of the RFP
145	SPS				There appear to be parameters that are inconsistently specified or omitted for Ku and X band, SCE and PCE modes, medium gain and high gain, FL and RL modes leading to possible misinterpretation of the spec requirements.	To ensure consistent compliance, please ensure that values are provided for all parameters (i.e., beamwidth, sidelobes, etc.) for all modes that are appropriate so that there is no speculation as to the parameter value.		The antenna performance parameters are specified as intended.
146	_Main	58 47	3.3.6.1 3.3.3.4	1357- 1364 1031- 1034	S The data in Table 3-17 and Section 3.3.3.4 implies the conclusion that the PT EDUI Switch provides multi-level security separation. Should vendors presume that the tunneling software called out in section 3.3.6.1 is providing the Multiple Levels of Security (MLS) separation like an MLS switch?	Provide more details of what functionality will be provided with EDUI GFS.	Remove ambiguity from what functionality vendor needs to provide.	The SPS (Table 3-17) has been modified to make clear that there will be a separate EDUI (server and switch) to support either the PT enclave or the CT enclave.
147	_Main	79	3.6.3	1884- 1885	S These lines describe a sixth dedicated rack for an SCI Mission. Do all ship variants require a SCI Rack, or is it a requirement for a subset of the Variants	Provide clarification of where this requirement is applicable.	Specification Completeness	The requirement for a TS SCI rack has been removed.
148	_Main	88	3.10.1	2130- 2131	S Unable to locate documents: - NAVSEA Letter Ser 05P1/C357 Radar Cross Section Requirements for NTCDL, dated 18 December 2014	Please provide, or provide further clarification for how to obtain	Required Reference Documents	The NAVSEA Letter can be obtained via classified mail from the NTCDL program. Please notify the NTCDL PCO to request the document.
149	_Main	88	3.10.2	2139	S We do not believe any component will be installed in locations within the main beam of transmitters for Navy ships.	Remove the reference to Table 2 of MIL-STD-464C.	The equipment should be designed to meet the intended operational environment.	The requirement is specified as intended.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response
150	_Main	33, 38	3.3.1.3.2, 3.3.1.4.2	572-575, 587-590, 709-712, 725-732	S Arrays can be sized to support different installation locations. Allowing flexibility in the aspect ratio of azimuth and elevation beamwidths that still meet G/T and EIRP requirements enables this.	Replace "... the maximum elevation and maximum azimuth half-power beamwidths shall be no greater than X degrees..." with "... the product of the maximum elevation and maximum azimuth half-power beamwidths shall be no greater than X^2 degrees^2...".	G/T and EIRP requirements can still be met as specified and not have any significant impact on link performance, if beamwidth requirements are changed as follows. Make the product of elevation and azimuthal beamwidths a constant. For example, allow what was only 3 degrees azimuth/elevation beamwidth allowance to also be 9 degrees elevation and 1 degree azimuth beamwidth. We anticipate significant cost savings by implementing an aperture with narrower azimuthal beamwidth and wider elevation beamwidth.	Azimuth and elevation parameters for beamwidth are specified as intended. Proposed recommendation would not satisfy requirements.
151	_Main	39	3.3.1.5.1.1	754	S If PCE application is for ship-ship comms, Link Budget analysis for LOS indicates significant relaxation of EIRP is justified.	Change PCE Ku-band EIRP requirement from 37 dBW to 31 dBW.	Assuming 200 ft altitude, max LOS is approximately 34 nmi. Link budget analysis, assuming NTCDL SCE medium gain compliant Rx at 274 Mbps, indicates only 31 dBW is needed.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
152	_Main	39	3.3.1.5.1.1	749	S If PCE application is for ship-ship comms, Link Budget analysis for LOS indicates significant relaxation of EIRP is justified.	Change PCE X-band EIRP requirement from 35 dBW to 26 dBW.	Assuming 200 ft altitude, max LOS is approximately 34 nmi. Link budget analysis, assuming NTCDL SCE medium gain compliant Rx at 274 Mbps, indicates only 26 dBW is needed.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
153	_Main	40	3.3.1.6.1.2	783-785	S If PCE application is for ship-ship comms, Link Budget analysis for LOS indicates significant relaxation of antenna gain and G/T is justified.	Change Ku-band high gain and medium gain G/T to -7 dB/K	Assuming 200 ft altitude, max LOS is approximately 34 nmi. Link budget analysis, assuming NTCDL SCE EIRP compliant Rx at 274 Mbps, indicates only -7 dB/K G/T is needed.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
154	_Main	40	3.3.1.6.1.2	779	S If PCE application is for ship-ship comms, Link Budget analysis for LOS indicates significant relaxation of antenna gain and G/T is justified.	Change X-band G/T from -3 dB/K to -14 dB/K	Assuming 200 ft altitude, max LOS is approximately 34 nmi. Link budget analysis, assuming NTCDL SCE EIRP compliant Rx at 274 Mbps, indicates only -14 dB/K G/T is needed.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
155	_Main	41	3.3.1.6.2	813	S If PCE application is for ship-ship comms, Link Budget analysis for LOS indicates significant relaxation of antenna gain and G/T is justified.	Change Ku-band high antenna gain from 33 dBi to 21 dBi, medium antenna gain from 30 dBi to 18 dBi	Assuming 200 ft altitude, max LOS is approximately 34 nmi. Link budget analysis, assuming NTCDL SCE EIRP compliant Rx at 274 Mbps, indicates only 21 dB is needed. Medium gain assumed for lower data rates with accompanying -3 dB.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
156	_Main	41	3.3.1.6.2	810	S If PCE application is for ship-ship comms, Link Budget analysis for LOS indicates significant relaxation of antenna gain and G/T is justified.	Change X-band antenna gain from 28 dBi to 17 dBi	Assuming 200 ft altitude, max LOS is approximately 34 nmi. Link budget analysis, assuming NTCDL SCE EIRP compliant Rx at 274 Mbps, indicates only 17 dB antenna gain is needed.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
157	_Gen	SO W 8	3.1.3.1	N/A	A Project files are being requested in MS Project 2010 format, and to also be backward compatible to MS Project 2007.	Delete the MS Project 2010 requirement to be backward compatible with MS Project 2007, as this feature is not available from Microsoft.	MS Project 2010 is not backward compatible with MS Project 2007.	No. MS Project 2010 allows files to be saved in MS Project 2007 format.
158	_Gen	RF P 93	L317.8	N/A	A Project files are being requested in MS Project 2010 format, and to also be backward compatible to MS Project 2007.	Delete the MS Project 2010 requirement to be backward compatible with MS Project 2007, as this feature is not available from Microsoft.	MS Project 2010 is not backward compatible with MS Project 2007.	No. MS Project 2010 allows files to be saved in MS Project 2007 format.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
159	_Main	20	3.2.3.1.1	243	C	BE-CDL Mode 103 at 622Mbps requires instantaneous bandwidth of 900MHz which drives overall system cost.	Limit the objective BE-CDL Mode 103 requirement to a maximum data rate of 400Mbps.	There are other BE-CDL modes providing 622Mbps (and higher) data rates without requiring the high instantaneous bandwidth and its associated cost.	The SPS specifies in section 3.2.3.1.1 that modes 103-105 support data rates "...support all data rates up to 274 Mbps [T]" Regarding the objective data rate: According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
160	_Main	20	3.2.3.1.1	243	S	The maximum data rate supported by a single available CCM channel is fixed.	Limit the maximum objective BE-CDL data rate to a rate that can be supported by a single CCM channel.	Limiting the data to that supported by a single available CCM channel will reduce system complexity and pose the least schedule, technical, and cost risk to the program.	The objective BE-CDL data rates are specified as intended.
161	_Main	22	3.2.3.1.2.1	312	C	Can the government define the use case for PCE operation and limit that operation to specific allocations of the defined X and Ku-band frequency spectrum?	Define the use case and frequency plan for concurrent SCE / PCE operation.	For the use case definition, if operation is limited to ship-to-ship communications, there are design trade-offs that could optimize performance and reduce overall system complexity and cost. If frequency spectrum limitations can be defined, such as limiting PCE operation to X-band while SCE operation is conducted in Ku-band, overall system performance could be optimized and overall system cost can be reduced.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
162	_Main	16 19 20	3.2.2.2 3.2.3.1.1 3.2.3.1.1	190 241 243	S	S-Band and C-Band communications with the specified RF performance and higher data rates have limited range. More cost effective solutions are available if the data rate is limited.	Specify a threshold maximum data rate of 45 Mbps for S-Band and C-Band, with no objective requirement.	Assuming the remote terminal has similar or slightly better RF performance as NTCDL in S-Band and C-Band, there is limited range at higher data rates. 45 Mbps supports approximately 25 nmi while 274 Mbps supports approximately 7 nmi. These shorter ranges do not appear useful and do not justify the additional hardware complexity required to support the higher data rates. Additionally, the threshold frequency bandwidths for S-Band (2.2 - 2.5GHz) and C-Band (4.4 - 4.99GHz) do not support wider bandwidth waveforms.	The SPS has been modified to read: "S and C-Band operations [shall] support all data rates up to 45 Mbps.[T] All other bands [shall] be capable of 274 Mbps, full duplex.[T]"
163	_Main	40	3.3.1.6.1.2	783- 785	S	If PCE application is for ship-ship comms, Link Budget analysis for LOS indicates significant relaxation of antenna gain and G/T is justified.	Change Ku-band high gain and medium gain G/T to -7 dB/K	Assuming 200 ft altitude, max LOS is approximately 34 nmi. Link budget analysis, assuming NTCDL SCE EIRP compliant Rx at 274 Mbps, indicates only -7 dB/K G/T is needed.	PCE mode of operations is not solely intended for the ship-to-ship use case. The antenna performance requirements are specified as intended
164	RFP	97 - 98			S	FACTOR 4 - COST PROPOSAL (VOLUME II) - The NTCDL RFP requires submittal of cost and pricing data at the 5th WBS level for Hardware and Software and only at the 3rd level for other activities. Bidding at 5th WBS level requires segregation of bidding data into very small elements of BOEs and greatly increases the volume and number of BOEs required. This will not only increase Industry proposal preparation duration, but also the duration and cost of DCMA/DCAA and customer review.	Require bidding all elements at the third level with contractor discretion to add sufficient supporting data for government proposal evaluation.	Industry bidding, and government review of proposals, will be more efficient, better supporting a short competitive timeline.	The WBS breakdown is as intended.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response	
165	SPS	3.6.2.5	1880	S	Table 3-24 Allocated SWaP by Variant eliminates "Flat Panel (or similar)" from Variant B and C. This constrains the System design for modularity and commonality between variants and, potentially, the trade space for meeting Objective Requirements.	Modify Table 3-24 to allow up to 4 "Flat Panel (or similar)." for Variant B and C. Articulate target SWaP reductions, overall, relative to Variant A.	This will promote modularity and commonality while opening the Trade Space for industry to provide overall lower SWaP and/or objective requirements.	The SWaP requirements are specified as intended.	
166	SPS	3.6.2.5	1866	S	Table 3-21, Figure 3-7 and Table 3-22 allocate SWaP (Volume and Weight) very specifically to flat panels, large radome and small radome solutions. Variant B specifically indicates 2 each of 2 different size Radomes (Large and Small). This tight specification of Radome types may force industry to introduce an additional antenna type at the expense of modularity and reuse across variants.	Recommend Table 3-24 be amended for Variant B to indicate a total of 4 radomes may be used with stated limitations: 1. No radome may exceed the volume of a large radome 2. If flat panels are used, they must meet the conditions of Table 3-21 AND the allowance for radomes will be reduced by 2 3. The total volume of radomes and panels will not exceed the total volume currently specified (2 large + 2 small radomes) Recommend that table 3-24 similarly state weight restrictions: 1. No radome may exceed the weight of a large radome 2. If flat panels are used, they must meet the conditions of Table 3-21 AND the allowance for radomes will be reduced by 2 3. The total weight of radomes and panels will not exceed the total weight currently specified (2 large + 2 small radomes)	This will promote modularity and commonality while opening the Trade Space for industry to provide overall lower SWaP and/or objective requirements.	The SWaP is specified as intended.	
167	SPS	44	3.3.3.1.1	942-943	S	The SkyLynx Box supports an ethernet interface. The NTCDL system could use this SkyLynx interface rather than ATM and HDR	Remove ATM and HDR interface requirements	The SkyLynx box already supports the ethernet interface. Ethernet is the more modern interface and it is more open and modular, consistent with NTCDL MOSA requirements.	Some airborne CDL terminals transmit in legacy channel formats (ATM, high speed serial); thus the NTCDL system must be capable of presenting the ATM/HSS interfaces to the SkyLynx.
168	SPS	33	3.3.1.3.2	591 - 598	S	The half-power beamwidth requirements immediately pre-ceding the sidelobe requirements are specified both at boresight (lines 587, 588) and at scan (lines 589, 590). However there is no boresight / scan distinction made for the sidelobe requirements (lines 591 - 598).	Suggest that the existing sidelobe requirements be designated as the requirements at boresight. Also suggest adding a 3 dB relaxation to existing requirements to serve as a production margin.	Existing sidelobe requirements are consistent with antenna sizing based on EIRP and beamwidth requirements for non-scanned conditions. Designating these requirements as boresight requirements eliminates the risk of an antenna provider adding size (cost) to the antenna design to meet these requirements for a scanned condition. Production margin is suggested to add the required tolerance in transitioning from theoretical performance to production performance.	The sidelobe requirements are specified as intended.
169	SPS	38, 39	3.3.1.4.2	733 - 740	S	The half-power beamwidth requirements immediately pre-ceding the sidelobe requirements are specified both at boresight (lines 725, 726) and at scan (lines 727, 728). However there is no boresight / scan distinction made for the sidelobe requirements (lines 733 - 740).	Suggest that the existing sidelobe requirements be designated as the requirements at boresight. Also suggest adding a 5 dB relaxation to existing requirements to serve as a production margin.	Existing sidelobe requirements are consistent with antenna sizing based on G/T and beamwidth requirements for non-scanned conditions. Designating these requirements as boresight requirements eliminates the risk of an antenna provider adding size (cost) to the antenna design to meet these requirements for a scanned condition. Production margin is suggested to add the required tolerance in transitioning from theoretical performance to production performance.	The sidelobe requirements are specified as intended.

Doc	Pg	Para #	Line#	T	Comment	Recommendation	Rationale	Response										
170	SPS	33	3.3.1.3.2	599, 600	S The axial ratio requirement at the designated scan angle drives cost for viable NTCDL antenna technologies.	<p>NTCDL Increment 1 equipment will interoperate with legacy equipment that typically achieves an axial ratio of 2.0 dB. The current NTCDL 45 degree scan requirement is 3.0 dB which results in a polarization mismatch link budget loss (2.0 dB axial ratio matched to 3.0 dB axial ratio) of 0.35 dB. Recommend relaxing the 45 degree scan axial ratio requirement to 6.0 dB which only adds a 0.5 dB link degradation as compared to the 2.0 dB axial ratio matched to a 3.0 dB axial ratio.</p> <p>OR</p> <p>Recommend opening the antenna design space by allowing compensation for axial ratio degradation relative to the 3.0 dB requirement at 45 degrees by adding margin to required EIRP. For example:</p> <table border="1"> <thead> <tr> <th>Axial Ratio, dB</th> <th>Required EIRP Margin</th> </tr> </thead> <tbody> <tr> <td>3.0</td> <td>0.0</td> </tr> <tr> <td>4.0</td> <td>0.2 dB</td> </tr> <tr> <td>5.0</td> <td>0.4 dB</td> </tr> <tr> <td>6.0</td> <td>0.5 dB</td> </tr> </tbody> </table>	Axial Ratio, dB	Required EIRP Margin	3.0	0.0	4.0	0.2 dB	5.0	0.4 dB	6.0	0.5 dB	<p>Relaxation of the 45 degree scan axial ratio requirement to 6.0 dB mitigates the risk that axial ratio adds cost to viable NTCDL antenna technologies.</p> <p>OR</p> <p>Allowing design flexibility to use EIRP margin reduces the risk that axial ratio adds cost to the antenna and maintains the required operational performance.</p>	NTCDL SPS will be revised to address axial ratio issue.
Axial Ratio, dB	Required EIRP Margin																	
3.0	0.0																	
4.0	0.2 dB																	
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171	SPS	39	3.3.1.4.2	741, 742	S The axial ratio requirement at the designated scan angle drives cost for viable NTCDL antenna technologies.	<p>NTCDL Increment 1 equipment will interoperate with legacy equipment that typically achieves an axial ratio of 2.0 dB. The current NTCDL 45 degree scan requirement is 3.0 dB which results in a polarization mismatch link budget loss (2.0 dB axial ratio matched to 3.0 dB axial ratio) of 0.35 dB. Recommend relaxing the 45 degree scan axial ratio requirement to 6.0 dB which only adds a 0.5 dB link degradation as compared to the 2.0 dB axial ratio matched to a 3.0 dB axial ratio.</p> <p>OR</p> <p>Recommend opening the antenna design space by allowing compensation for axial ratio degradation relative to the 3.0 dB requirement at 45 degrees by adding margin to required G/T. For example:</p> <table border="1"> <thead> <tr> <th>Axial Ratio, dB</th> <th>Required EIRP Margin</th> </tr> </thead> <tbody> <tr> <td>3.0</td> <td>0.0</td> </tr> <tr> <td>4.0</td> <td>0.2 dB</td> </tr> <tr> <td>5.0</td> <td>0.4 dB</td> </tr> <tr> <td>6.0</td> <td>0.5 dB</td> </tr> </tbody> </table>	Axial Ratio, dB	Required EIRP Margin	3.0	0.0	4.0	0.2 dB	5.0	0.4 dB	6.0	0.5 dB	<p>Relaxation of the 45 degree scan axial ratio requirement to 6.0 dB mitigates the risk that axial ratio adds cost to viable NTCDL antenna technologies.</p> <p>OR</p> <p>Adding the requested design flexibility reduces the risk that axial ratio adds cost to the antenna and maintains the required operational performance.</p>	NTCDL SPS will be revised to address axial ratio issue.
Axial Ratio, dB	Required EIRP Margin																	
3.0	0.0																	
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172	SPS	36-37	3.3.1.4.1.6	675-680	S	The text specifying Jammer and Signal Bandwidth is not consistent with Figure 3-5. The figure suggests the Jammer and Signal have equivalent bandwidth. The text allows for the Jammer to have a bandwidth independent of the signal BW. The text would allow for a 274 Mbps signal next to a 10.7 Mbps jamming signal offset by 21 Mhz.	Recommend stating: NTCDL [shall] be capable of resolving the desired signal in the presence of a jamming signal when J/S is 40 dB [T], 60 dB [O] and the frequency offset between 'J' and 'S', given that the BW of both J and S are equivalent, is equal to or greater than twice the jamming signal's waveform bandwidth.	The modification clarifies the text so that it is consistent with the figure.	The J/S requirements are specified as intended. Figures 3-4 and 3-5 have been removed.
173	_Main	26 26 46 61 61 64 69	3.2.3.2.10 3.2.3.2.13 3.3.3.1.2 3.3.6.3.1.1 3.3.6.3.1.1 3.3.7.1 3.5.2	420 431 991 1411 1414 1443 1581	S	1000BaseTx may require the use of custom equipment and higher cost.	Allow the option of 1000BaseT or FO.	1000BaseTx is not an industry standard interface and has lesser availability.	1000BaseTx has been replaced with "Gigabit Ethernet"
174	_Main	16	3.2.2.2	194	S	The objective requirement for simultaneous on-deck links is 2.	Make the objective requirement for simultaneous on-deck links to be 4.	The operational tempo of a carrier strike group is currently heavy and will only increase in the future. The CSG OPTEMP will be limited by the On-deck link capability if not increased from the current objective requirement of 2.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."
175	_Main	16	3.2.2.2	184	S	A logical antenna provides 360 degree coverage around the ship.	Clarify that all links satisfying the threshold and objective requirements must be capable of simultaneously operating in the same 90 degree quadrant around the ship.	Many of the same links will be in the same 90 degree quadrant.	The threshold requirement is for five 360-degree links (without relative bearing considerations). If vendors want to propose objective links above and beyond 5, they do not have to operate in the same 90-degree quadrant.
176	_Main	43	3.3.1.7.2	875	S	There is no objective requirement for negligible tracking loss.	Change "Losses associated with antenna tracking [shall] not exceed 0.5 dB.[T]" to "Losses associated with antenna tracking 874 [shall] not exceed 0.5 dB.[T], 0.1 dB [O]."	Lower tracking loss increases the range of the link.	According to Section "M" of the NTCDL RFP, "The Government will evaluate the extent to which the proposed system architecture and system design (including hardware, software and associated subassemblies) meet and/or exceed the performance, environmental, and interface requirements as provided in the NTCDL SPS, SOW, and the relevant incorporated references cited therein."