STATEMENT OF OBJECTIVES (SOO)

For

Building 19 Wing Operations Center (WOC) Audio Visual (A/V) and VTC Modernization

Spangdahlem Air Base, Germany

27 July 2026

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Table of Contents

1. Purpose
- **1.1 Acronym List**

2. Background

3. Scope

4. Program Objectives

5. Operating Constraints & Security Requirements

6. Period and Place of Performance

7. Applicable Regulations and Standards

8. Installation & Integration Standards

9. Testing and Acceptance
- **9.1 Quality Assurance (QA) Inspections**
- **9.2 System Acceptance Testing (SAT)**
- **9.3 Punch List and Final Acceptance**

10. Training Requirements

11. Deliverables (CDRLs)
- **11.1 Project Management and Installation Plan (CDRL A001)**
- **11.2 Safety and Health Plan (CDRL A002)**
- **11.3 Configuration Control Management Plan (CDRL A003)**
- **11.4 Quality Control Program (CDRL A004)**
- **11.5 Rack Elevation Drawings (CDRL A005)**
- **11.6 Cable Test Reports (CDRL A006)**
- **11.7 O&M Training Materials and Sign-in Sheet (CDRL A007)**
- **11.8 Final As-Built Documentation Package (CDRL A008)**
- **11.9 Workmanship and Manufacturer Performance Warranties (CDRL A009)**

12. Warranty

1. Purpose

The purpose of this project is to replace and modernize the outdated Audio Visual (A/V) and Video Teleconferencing (VTC) equipment within the Primary Wing Operations Center (WOC), Crisis Action Team (CAT), and Emergency Operations Center (EOC) facilities located in Building 19.

1.1 Acronym List

Acronym	Definition
A/V	Audio Visual
ACBN	Allied Coalition Border Network
ASI	Authorized Service Interruption
BICES	Battlefield Information Collection and Exploitation System
BYOD	Bring Your Own Device
CAT	Crisis Action Team
CDRL	Contract Data Requirements List
CE	Civil Engineer
COP	Common Operating Picture
EMSEC / TEMPEST	Emission Security / Transient Electromagnetic Pulse Emanation Standard
EOC	Emergency Operations Center
ISP	Inside Plant (Cabling)
KVM	Keyboard, Video, Mouse
NIAP PP	National Information Assurance Partnership Protection Profile
NIPRNet	Non-Classified Internet Protocol Router Network
OEM	Original Equipment Manufacturer
SAT	System Acceptance Testing
SIPRNet	Secret Internet Protocol Router Network
SOO	Statement of Objectives
VTC	Video Teleconferencing
WOC	Wing Operations Center

2. Background

The Primary WOC serves as the central hub for the dissemination of early warning information and maintains critical connectivity to NATO partner shared BICES information systems and Early Warning Systems. The current A/V and VTC equipment is obsolete, failing to meet complete mission requirements. Modernization is vital to executing senior leadership directives, specifically ensuring aircraft and air space deconfliction in a CBRNE environment, and

maintaining distributed Command and Control (dC2) continuity for the strategic movement of War Reserve Materiel (WRM) per Higher Headquarters (HHQ) directives. Furthermore, the CAT and EOC operate with shared synergy during crises, necessitating an operational extension of display upgrades to maintain a Common Operating Picture across all facilities.

3. Scope

The contractor shall provide all hardware, software, integration, and installation services required to completely replace the existing A/V and VTC infrastructure in the Building 19 WOC, CAT, and EOC. The modernized system must support seamless integration with classified networks (specifically SIPRNet and BICES/Early Warning) while adhering to strict visual security protocols.

ISP Cabling Dependency: This A/V modernization is completely dependent on the successful completion of the “Building 19 ISP Fiber Optic and Copper Cabling” project. The A/V contractor shall utilize the infrastructure provided by the ISP contractor, and the A/V contractor's scope will define the “last mile” boundary of the installation.

4. Program Objectives

The contractor shall propose a solution that achieves the following operational and technical objectives:

- **Visual Coordination & Information Cross-Flow:** Enable dynamic visual displays to ensure the seamless cross-flow of information between the Command Post (CP), CAT, and EOC, satisfying the mandates of DAFMAN 10-207, Paragraph 5.2.6.5.
- **Advanced Display Capabilities:** Provide high-resolution, computer-generated, geospatial display capabilities for critical C2 data (e.g., Force Protection Conditions (FPCON), Base Grid Maps) in accordance with DAFMAN 10-207, Paragraphs 3.2.7.2.10.7 and 3.2.7.2.10.8.
- **Common Operating Picture (COP):** Ensure EOC display capabilities are integrated with the CAT and WOC to maintain a synchronized and unified COP in alignment with AFI 10-2501, Air Force Emergency Management Program, facilitating seamless emergency response and recovery operations.
- **Secure Processing & Visual Security:** Deliver a system capable of supporting classified integration (SIPRNet and BICES) while physically and technically maintaining visual security from un-cleared personnel per DAFMAN 10-207, Paragraphs 5.2.6.1 and 3.2.7.2.10.8.
- **Cross-Room Video Routing:** The system must require dynamic, any-to-any video routing. Workstations in the main WOC must be able to display on the CAT video wall, and vice versa.
- **5-Network Integration & Expansion:** The system must support the simultaneous, secure display of five (5) independent networks: NIPRNet, SIPRNet, Allied Coalition Border Network (ACBN), plus two (2) additional networks for future expansion (requiring at least 40% unused port capacity on the baseline hardware).

- **Extended Desktop & Cross-Facility Presentation:** Every operator workstation within the WOC and CAT must support extended desktop (multi-monitor) presentation capabilities across all five (5) integrated networks. The A/V routing system must allow an operator to seamlessly present an application on their local video wall—or push it to the video wall in the adjacent facility—while simultaneously working on a different application on their local monitors within the same network domain. The contractor's solution (e.g., dual-head secure KVMs and matrix encoders) must support this independent multi-tasking without mirroring limitations or disrupting the operator's localized workflow.
- **Multi-Domain VTC and BYOD Integration:** Both the WOC and CAT must be fully equipped with dedicated Video Teleconferencing (VTC) capabilities. The system must include independent, dedicated hardware CODECs for the NIPR, SIPR, and ACBN networks in each room. Furthermore, the system must support secure "Bring Your Own Device" (BYOD) integration. This must allow operators to connect government-issued NIPR or SIPR laptops to the room's A/V peripherals (cameras, microphones, and speakers) to conduct web-based collaborative sessions (e.g., Microsoft Teams) on their respective networks, seamlessly switching between the dedicated CODECs and the BYOD inputs.

5. Operating Constraints & Security Requirements

- **Regulatory Compliance:** The solution must comply with all applicable requirements outlined in DAFMAN 10-207, Command Posts, and AFI 10-2501.
- **Security:** The installation must meet all necessary DoD and DAF requirements for processing classified information up to the SECRET (SIPRNet) and NATO SECRET (BICES) levels. The hardware and installation must comply with applicable TEMPEST/EMSEC requirements for Building 19.
- **Operational Disruption:** Installation must be phased or scheduled to minimize downtime to the 24/7 continuous operations of the WOC.
- **Air-Gap & NIAP Compliance:** To display 5 isolated networks on shared screens, the contractor must use Multi-Viewer Processors or Secure KVMs certified to NIAP Protection Profile v4.0 to prevent data spillage.
- **Peripheral Sharing Security (BYOD):** Because the room's cameras, microphones, and speakers will be shared between dedicated CODECs (NIPR/SIPR/ACBN) and BYOD laptops (NIPR/SIPR), all USB peripheral switching must comply with NIAP Protection Profile v4.0 (or the latest standard) to ensure an air-gap is maintained and audio/video data cannot be covertly bridged.
- **RED/BLACK Separation:** The contractor must ensure physical separation distances and isolated conduits/pathways for unclassified (BLACK) vs. classified (RED) processing equipment, adhering strictly to Building 19 TEMPEST/EMSEC guidelines.
- **Civil Engineer (CE) Approvals:** The contractor is required to submit structural calculations to the Base Civil Engineer for approval prior to drilling for video wall mounts or altering the existing "floor tanks."
- **Site Security & Escorts:** All contractor personnel are subject to constant Government escort. Prohibited items (e.g., cell phones, smartwatches) are strictly forbidden in the

space. The contractor must perform daily site cleanup, returning the 24/7 space to a mission-ready state after every shift.

6. Period and Place of Performance

- **Place of Performance:** Work will be conducted on-site at Spangdahlem Air Base, Germany, Building 19 (WOC, CAT, and EOC facilities).
- **Period of Performance:** The Period of Performance shall commence *after* certified completion and Government acceptance of the concurrent Building 19 ISP cabling project.

7. Applicable Regulations and Standards

The contractor's design, hardware selection, and installation shall comply with the latest versions of the following regulations and standards:

- DAFMAN 10-207: Command Posts
- AFI 10-2501: Air Force Emergency Management Program
- NIAP Protection Profile: Peripheral Sharing Device (PSD) Version 4.0 (or latest DoD-approved equivalent for secure KVMs and AV switching)
- AFMAN 17-13012: Emission Security (EMSEC) / TEMPEST Requirements
- UFC 3-580-01: Telecommunications Building Cabling Systems Planning and Design
- TIA/EIA-568: Commercial Building Telecommunications Cabling Standards (for locally installed patch cables)

8. Installation & Integration Standards

- **Equipment Cabinets & Power:** The A/V contractor must coordinate with the ISP contractor's rack space. The A/V contractor shall calculate total power draw, UPS needs, and BTU (cooling) output for their integrated equipment.
- **Workstation Video Outputs:** The A/V contractor must account for dual-video outputs from the host PCs across all 5 networks. The contractor must provide NIAP Protection Profile v4.0 certified Dual-Head Secure KVMs at the operator stations to allow one video output to remain local for private work, while the second video output is encoded and sent to the video wall matrix.

9. Testing and Acceptance

9.1 Quality Assurance (QA) Inspections

The Government will conduct periodic QA inspections throughout the installation phase. The contractor shall be required to correct any identified deficiencies—including, but not limited to, improper cable management, lack of RED/BLACK physical separation, or missing labels—prior to proceeding to the next installation phase.

9.2 System Acceptance Testing (SAT)
Upon completion of the physical installation, the contractor shall execute a comprehensive System Acceptance Test (SAT) witnessed by Government representatives. The SAT must successfully demonstrate the following capabilities without error or data spillage:

- Seamless, artifact-free video routing across all five (5) networks.
- Successful cross-room video matrixing (WOC to CAT displays, and vice versa).
- Verification of "Extended Desktop" multitasking capabilities utilizing the Dual-Head Secure KVMs.
- Demonstration of VTC call quality on dedicated hardware CODECs (NIPR, SIPR, ACBN).
- Demonstration of BYOD capabilities, proving that room peripherals (cameras/mics) can switch securely between the dedicated CODECs and laptop inputs in compliance with NIAP standards.

9.3 Punch List and Final Acceptance
Following the SAT, the Government will provide a discrepancy "Punch List" if any issues are identified. Final project acceptance, and authorization for final invoicing, will only be granted once all Punch List items are resolved, system training (CDRL A007) is complete, and the Final As-Built Documentation Package (CDRL A008) is approved by the Government.

10. Training Requirements

The contractor shall develop and deliver formal Operations and Maintenance (O&M) training tailored to two distinct groups: Tier 1 (Operator) and Tier 2 (Administrator) training as explicitly detailed in CDRL A007.

11. Deliverables (CDRLs)

The contractor shall provide the following deliverables to the Government for review and approval.

CDRL Identifier	Deliverable Title	SOO Ref	Submission Timeline
A001	Project Management and Installation Plan	11.1	15 days post-contract award
A002	Safety and Health Plan	11.2	15 days post-contract award
A003	Configuration Control Management Plan	11.3	15 days post-contract award
A004	Quality Control Program	11.4	15 days post-contract award
A005	Rack Elevation Drawings	11.5	Pre-Installation (with design submittal)

A006	Cable Test Reports	11.6	Prior to System Acceptance Testing (SAT)
A007	O&M Training Materials & Sign-In Sheet	11.7	10 days prior to scheduled training
A008	Final As-Built Documentation Package	11.8	Upon completion of SAT
A009	Workmanship & Manufacturer Warranties	11.9	At project closeout

11.1 Project Management and Installation Plan (CDRL A001)

The contractor shall submit a comprehensive Project Management and Installation Plan detailing the project schedule, milestones, and phased installation approach. Due to the 24/7/365 nature of the Building 19 facilities, this plan must explicitly outline how the contractor will mitigate operational downtime and detail the timeline for any necessary Authorized Service Interruptions (ASIs). The plan must also demonstrate coordination with the separate Inside Plant (ISP) Cabling contractor.

11.2 Safety and Health Plan (CDRL A002)

The contractor shall provide a Safety and Health Plan compliant with applicable OSHA, DoD, and Host Nation (Germany) safety regulations. The plan shall address hazard mitigation during the removal of legacy equipment, handling of A/V components, and any required modifications to walls or floor tanks.

11.3 Configuration Control Management Plan (CDRL A003)

To ensure strict security and network integrity, the contractor shall submit a Configuration Control Management Plan. This plan must detail how the contractor will manage, track, and document all hardware firmware versions, software configurations, IP address assignments, and system baselines for the A/V and VTC systems, particularly concerning the isolation of the five separate networks.

11.4 Quality Control Program (CDRL A004)

The contractor shall submit a Quality Control (QC) Program detailing their internal inspection and testing procedures. The program must outline how the contractor will conduct Quality Assurance sampling, identify defects, and ensure all installation work adheres to EMSEC/TEMPEST standards and RED/BLACK separation guidelines prior to Government inspection.

11.5 Rack Elevation Drawings (CDRL A005)

The contractor shall submit detailed Rack Elevation Drawings for all equipment installed in the Telecommunications Rooms or local equipment cabinets. These drawings must depict the exact placement of A/V equipment within the racks provided by the ISP project. The submission must include calculated power draw, BTU (cooling) output, and weight for all integrated equipment.

11.6 Cable Test Reports (CDRL A006)

The contractor shall provide comprehensive test reports for all locally installed A/V cabling (e.g., HDMI, SDI, CAT6a patch cables, AV-over-IP links). Testing must verify bandwidth capabilities, signal integrity, and termination quality to ensure artifact-free video routing across all networks.

11.7 O&M Training Materials and Sign-in Sheet (CDRL A007)

The contractor shall develop and deliver formal Operations and Maintenance (O&M) training tailored to two distinct groups: Tier 1 Operators (WOC/CAT personnel utilizing the touch panels and VTC) and Tier 2 Administrators (52 CS/SCXP personnel maintaining the system). The contractor shall submit all training slides, user guides, and a finalized attendance sign-in sheet validating that Government personnel received the training.

11.8 Final As-Built Documentation Package (CDRL A008)

Upon system completion, the contractor shall deliver a complete As-Built Documentation Package. This package must include comprehensive single-line block diagrams, signal flow diagrams across all five networks, physical floor plans showing final equipment locations, and proof of RED/BLACK physical separation. All documentation must accurately reflect the final, installed state of the system, matching the physical labels applied to the cables and hardware.

11.9 Workmanship and Manufacturer Performance Warranties (CDRL A009)

The contractor shall provide a formal warranty document that guarantees all installation workmanship for a minimum of one (1) year from the date of final Government acceptance. Additionally, the document must include the transfer of all Original Equipment Manufacturer (OEM) warranties to the Government, detailing the warranty periods and the process for initiating Return Merchandise Authorizations (RMAs).

12. Warranty

In accordance with Section 11.9, the contractor must guarantee a minimum of a 1-year workmanship and hardware pass-through warranty to cover the installation and any associated manufacturer obligations upon final Government acceptance.