

STATEMENT OF WORK

Classroom Audiovisual Upgrades

Naval Postgraduate School Monterey, California

1. Background/Scope:

The Naval Postgraduate School operates classrooms with audiovisual (AV) presentations systems including video projectors, signal routing, and control equipment. A number of the systems (21 rooms) are based on analog technology and contractor support is required to modify the systems to support digital AV signals.

2. Campus Access:

The Naval Postgraduate School is a DOD facility is subject to the security and access restrictions typical of any United States Naval base. The Contractor is responsible for ensuring that all staff employed by the contractor who will be involved in work on the NPS campus are eligible for unescorted access to the NPS campus and have the appropriate identification, and that all motor vehicles used by the Contractor meet requirements for use on a facility operated by the United States Navy.

3. Work Site:

The work site includes various classrooms, auditoria and conference rooms on the campus of the Naval Postgraduate School in Monterey, California. Furniture in the rooms may include fixed or moveable tables and chairs with or without casters. Most rooms are equipped with a non-mobile lectern that is not affixed to the floor but is tied to the AV system via various cables. T-bar drop ceilings are typical but some rooms may have exposed concrete ceilings or concrete ceilings covered with acoustic tiles. There is no loading dock or staging area available at the work site and no parking directly adjacent to the buildings. Parking is distributed around the campus, but parking spaces are heavily used and available spaces may be some distance from the building. Access to ground level entrances is via paved roadways and/or concrete walkways. Above ground level entries are equipped with ADA compliant ramps. The classrooms, auditoria and conference rooms are located on various floors of multi-storied buildings.

4. Timetable and Scheduling:

The Contractor shall perform the work according to the prioritized requirements of the Government:

4.1 The installation sites are functioning classrooms that are in use daily for varying amounts of time, Monday through Friday. Installation work may not interfere with scheduled classes or other pre-scheduled uses. The Contractor shall work during the available open time blocks to complete installation. This may require that work be interrupted and the worksite rendered safe and clean by the contractor for scheduled events, with work resuming at the next open time block. Open time blocks may be from one to several hours long, and will vary from room to room. Some rooms will not be available on some days during any given week. The Contractor is responsible to communicate with the Government's classroom scheduler (831-656-2064) and to schedule installation work accordingly.

4.2 The Contractor shall plan and execute the installation work to ensure that no classroom is without a fully functional AV system for scheduled classes. This may require that at least some of the installation work be performed outside normal business hours, or that the work in a particular classroom be broken down into smaller tasks performed during open time blocks and strategically planned so that the transition between the existing system and the new system occurs within open time blocks. Any work outside normal business hours (0800-1630, Monday through Friday excluding federal holidays) must be scheduled not less than 5 business days in advance to allow the Government to make necessary staffing arrangements.

4.3 The Contractor shall develop a schedule for installation and shall present that schedule to the Government at least two weeks prior to start of installation. Adjustments to the schedule, if required, will be agreed upon prior to the start of installation. Any work outside normal business hours (0800-1630, Monday through Friday excluding federal holidays) will be approved based on availability of Government facilities and resources and must be requested not less than 5 business days in advance to allow the Government to make necessary staffing arrangements.

4.4 The Contractor shall be ready to begin work not later 30 days from the date of contract award. All work shall be performed, acceptance tested, and ready for full operation within 90 days from the installation start date.

5. Contractor Minimum Qualifications:

The Contractor shall be an audiovisual systems integration specialist (10 years' experience minimum) and be an OEM authorized reseller of Extron Electronics and Crestron audiovisual integration products.

6. Government Furnished Equipment:

Product	Quantity
Extron DTP Crosspoint 84 Scaling Switcher	21
Extron Ultra-series HDMI Cables in 6 to 9 foot lengths	42
Crestron 8G CAT6 STP Cable	As needed
Crestron 8G RJ45 Connectors	84

Note: The Contractor shall furnish any and all cables, connectors, fasteners, labels, miscellaneous hardware and other ancillary items as needed, above and beyond any GFE described herein, to complete the work described in this SOW. Any contractor furnished items are to be new, first quality goods offered by the manufacturer for sale in the United States of America, and in original equipment manufacturer's unopened packaging including all warranties, software, hardware, cables, power supplies, manuals and miscellaneous end items normally included by the manufacturer. Any deviations or substitutions must include an explanation, and must meet or exceed performance of the item being replaced. The Government reserves the right to refuse substitutions based on related requirements that may not be stated herein. NOTE: The quantities in the Bill of Materials may exceed the quantities identified for installation in this SOW. Any quantities in excess of the installation requirements shall be delivered to the Government as loose goods.

7. Tasks: The tasks below shall be performed in each of the 21 classrooms:

7.1 The Contractor shall remove and surrender to the Government the following existing GOE:

7.1.1 Extron MLS406 switchers and related obsolete cables from the equipment rack and lectern in each classroom.

7.1.2 Existing VGA jumper cables located within the instruction console and/or equipment rack (number varies per room).

NOTE: The existing analog RGB signal cable and RS232 control cable between the equipment rack and the video projector shall be left in place and **SHALL NOT BE REMOVED OR ALTERED**.

7.2 Install and terminate two Crestron 8G digital media cable runs between the classroom instruction console and the ceiling-mounted video projector (One cable serves as the AV and control signal transport to the video projector's Digital Link input; the second cable serves as a spare and shall be terminated but not connected to equipment.)

7.3 Provide a 3 foot service loop at each end of the cables to ensure that connected equipment can be repositioned for rear access during troubleshooting

7.4 Install HDMI cables in the instruction console and connect to local console equipment per the attached system diagram (exhibit A).

7.5 Install Extron DTP Crosspoint 84 switcher in the instruction console equipment rack and connect to the DTP Crosspoint 84 switcher's remote RS232 port

7.6 Create a control configuration for RS232 control of the DTP Crosspoint 84 switcher and Panasonic PRT-RZ370 video projector using Extron Global Configurator software

7.7 Upload the control configuration to the existing MLC226IP controller per OEM guidelines (NOTE: do not alter IP settings), using the most current version of Extron's Global Configurator software available at the time of installation.

7.8 Configure the MLC226IP to match the Government's standard configuration.

7.9 Remove existing Extron AAP plates to allow installation of the HDMI Laptop Input cable in the cable-cubby pass-through plates; reinstall after HDMI laptop input cable is installed.

7.10 Provide a list identifying the OEM serial numbers, brand, and model of all active electronic components furnished by the Contractor. Any component below \$100 in cost may be excluded from the list.

7.11 Provide backup copies of all software on a CD-ROM disc readable by Windows and Mac OSX computers, in a format ready for upload to the control system hardware using normal OEM procedures, without further modification. Software backups shall include all un-compiled files necessary to enable the Government to edit the programming to make future modifications to control system and GUI.

7.12 Perform a reload of all custom programming and GUI files using the backup copy to be furnished to the Government. Fully test system after reload. Note: Government technical personnel shall be present during the performance of this task.

7.13 Provide a one year warranty against failure caused by defect or faulty installation of any and all custom software, installation hardware, fasteners, raceways, connectors, cables, and cable/connector terminations (including but not limited to soldered connections, crimped connections, screw terminal connections, captive screw connections). The Contactor shall repair any such defects or failures at no cost to the Government. See acceptable quality level for warranty below for additional details.

8. Acceptable Quality Level(s)

8.1 All system components are installed in accordance with OEM specifications, cables terminated in accordance with Crestron specifications, and interconnected as illustrated in the System Block Diagram.

8.2 All cables are terminated at each end using termination tools that are designed by the OEM to be compatible with the GOE Crestron 8G RJ45 connectors.

8.3 All field-terminated CAT5e STP is tested to meet CAT5e specifications with a cable analyzer such as the Fluke DSX5000 or equivalent.

8.4 Video projector control is accomplished through the projector's Digital Link input. Control signals are transported via the DTP Crosspoint 84 switcher's "RS232 OVER TP" connector.

8.5 The MLC226IP's IP settings are not altered.

8.6 Software: All software copies are the final tested versions used during acceptance testing. Software backups include all files and software elements necessary to restore the control system to full operational status following repair or replacement of any control system hardware due to malfunction.

Data Rights: Any and all custom software or software configurations, if any, created by the contractor and required for control, configuration and/or operation of the system shall, upon acceptance, become property of the Government including unrestricted rights to duplicate, modify, reverse engineer and re-utilize to meet the needs of the Government.

8.7 Warranty:

All commercial off the shelf equipment (COTS) provided by the contractor shall be covered by the standard warranties provided by the original equipment manufacturer (OEM). Warranty coverage of all CFE shall begin on the date of acceptance by the Government.

During the warranty period the Contractor shall be prepared to deploy a field technician to the Naval Postgraduate School during the normal Government business hours of 0800-1630 Pacific Time within 24 hours of being notified by the Government of a warranty repair requirement. Repairs under warranty shall be completed within 24 hours (Saturday & Sunday excepted) starting from the time the field

technician arrives at the worksite, except in the event that failed equipment must be returned to an OEM service center. Upon receipt of a request for warranty service the Contractor shall have a field technician on site at the Naval Postgraduate School within 24 hours and between the hours of 0800-1630, or at a later time and date as specified by the Government.

In the event of failure of any system component still covered by OEM warranty but which cannot be repaired in the field, the Contractor shall make all necessary arrangements for repair at an authorized OEM repair facility including packaging and shipping the equipment to the OEM authorized repair center. Upon receipt of the repaired component the Contractor shall re-install and test the repaired equipment for proper operation. The contractor shall maintain and report to the Government all tracking information required for tracking outbound and equipment shipments. During the warranty period the Contractor is responsible for all costs related to returning any equipment to an OEM service center for warranty repair including packaging, shipping and labor required to remove and reinstall the equipment. No billable action shall be undertaken by the Contractor without a payment authorization, purchase request or modification to the purchase order from an authorized Government purchasing agent.

The warranty period shall begin at 1200 hours pacific time on the date of acceptance by the Government, and shall expire at 1200 hours pacific time, on same day of the month, one year hence.

EXHIBIT A: System Diagram

