



HEADQUARTERS, UNITED STATES FORCES, KOREA
UNIT# 15237
APO AP 96205-0010

REPLY TO
ATTENTION OF:

JCISA

11 December 2003

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Command and Control Audiovisual (A/V) System Policy and Standards for the Korean Theater

1. The Theater Secure Video System – Korea (TSVS-K) and the Command Information Display System (CIDS) are the Commander, Combined Forces Command (CFC) secure video-teleconferencing (VTC) and display systems used for command and control (C2) coordination between component commanders located through out Korea. Both normally operate at a ROKUS Secret classification.
2. The Joint Command Information Systems Activity (JCISA), as the responsible agency for the installation and maintenance (I&M) of the TSVS-K and CIDS, is the single agency authorized to develop, engineer, and field any A/V system that by design will permanently function as part of the TSVS-K or CIDS.
3. All installations connecting to the TSVS-K network will follow the enclosed JCISA-defined standards and guidelines before being approved for connection. Similarly, all Command Post primary displays (such as “video walls”) installed for the purpose of displaying the GCCS-K Common Operational Picture will follow the enclosure. Compliance with these specifications is mandatory for such A/V systems whether fielded by JCISA or independent from JCISA.
4. Agencies wanting to independently field solutions that will connect/permanently function as part of the existing TSVS-K or CIDS, must submit a request for exception to this policy prior to initiation of the project. If JCISA grants the exception, the project design must still follow the JCISA technical specifications and standards. The intent is not to limit an agency’s support options, but to promote interoperability and provide minimum performance and sustainment standards for C2 across the theater. The request for exception to policy must clearly articulate why an independent project is desired.
5. Agencies granted an exception will submit one complete set of engineering documentation for the proposed solution for technical review and acceptance by JCISA prior to project implementation. Failure to obtain written technical acceptance, in addition to the exception to policy, may result in denial of subsequent connection to the TSVS-K network, or connection of a CIDS-type installation to the supporting infrastructure of the Global Command and Control System – Korea (GCCS-K).

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6. It is vitally important to ensure these complex systems receive proper support and maintenance following installation. Normally, JCISA is funded to maintain these systems at the component level and above. The support and sustainment for each system must be established prior to installation. If an agency independently fields a system, the follow-on support must be sourced as part of that project independent of JCISA as well.

7. This policy is effective immediately and remains in effect until rescinded or superceded.



RICHARD J. PETRASSI

Colonel, USAF

Chief, Joint Command Information

Systems Activity

1 Enclosure:

JCISA Audiovisual Standards, Guidelines and Recommendations

DISTRIBUTION:

A

JCISA Audiovisual Standards, Guidelines and Recommendations

1. Standards:

For the purpose of this document, standards are defined as: A ratified technical specification pertaining to the physical or electrical characteristics of communication interfaces, protocols, or algorithms. For further details regarding the listed standards or their applicability to a particular application, reference the published standard.

Compliance with the listed standards is mandatory for all A/V systems that will interface with TSVS-K, CIDS, DCTS, or GCCS-K.

- a. Video Teleconferencing Codecs: (ITU-T recommendations)
 - i. H.320 (Narrow-band visual telephone systems and terminal equipment)
 - 1. Video: H.263 (will be replaced with H.264 in FY 06)
 - 2. Audio: G.722
 - 3. Control: H.230; H.231
 - 4. Communication Procedure: H.241 and H.242
 - ii. H.323 (Packet-based multimedia communications systems)
 - 1. Video: H.263 (will be replaced with H.264 in FY 06)
 - 2. Audio: G.722
 - 3. Control: H.225 and H.245
- b. Video inputs and outputs must meet NTSC standards
- c. Audio inputs and outputs must be at mic and/or line level as described in AES standards
- d. Communications connections will utilize *both* 100Base-TX (EIA/TIA-568b; IEEE 802.3u) and serial (EIA/TIA-449) standard interfaces connected through a secure network
- e. Encryption will be accomplished by NSA endorsed Type 1 encryptors

2. Guidelines:

Guidelines are intended to be an amplification of standards that ensure system level integrity and promote uniformity of system capabilities of the TSVS-K and CIDS. Inclusion of an element as a guideline meets one or both of the following two criteria:

Inclusion is necessary in order to meet an operational capability requirement as expressed or identified by the J3. For example, for the units that are *required* to display the "High-Resolution COP" the system shall be capable of displaying a 3072 X 1536 resolution image in its entirety.

The guideline specifies a system parameter or characteristic that if not met could adversely affect the performance of the entire TSVS-K network, CIDS or individual conferences (for example, fielding of a system with non-PTT microphones).

Compliance with the following guidelines is mandatory for all A/V systems that will interface with TSVS-K, CIDS, DCTS, or GCCS-K.

- a. Codec components include:
 - i. An RS-449/530 serial port connector and a 100 base-TX network port
 - ii. All sites will be an H.320 conference at a maximum rate of 384Kbps
 - iii. Codecs will be connected to the GCCS-K network for monitoring of equipment and network link status.
- b. COMSEC/Crypto devices:
 - i. Must be interoperable with KG-194, SG-94, or KIV-19 devices
 - ii. All sites must obtain the appropriate ROK/US Secret COMSEC keying material from JCISA (or J6/Allied COMSEC Management Office (ACMO))
- c. Audio components include:
 - i. Mutable microphones
 - ii. Audio Mixer capable of sending 1Khz test tone
 - iii. Operator monitor-speaker capable of audio and visual indications of transmit and receive audio signals
 - iv. Loud-speaker system capable of providing intelligible audio to all viewers
 - v. Infra-red audio headset system for secondary audio listening (at all sites with combined ROK and US personnel only)
 - vi. No recording devices are allowed without written approval of conference POC
- d. Video components include:
 - i. NTSC camera with IR remote control capabilities
 - ii. NTSC video display device, i.e. TV, plasma, projector, etc
 - iii. Local operator video display system for monitoring all TSVS-K operations and video signals
 - vi. No recording devices are allowed without written approval of conference POC

e. Network components include:

i. All sites will utilize ISDN service (PRI or BRI). If ISDN is not available then dedicated circuits will be engineered by JCISA. 1st Signal Bde will be the service provider for all in-country ISDN service.

ii. IP Phone with mute capable headset at each site for the VTC operator to join into the VTC operator conference call during each conference over the GCCS-K network

iii. LAN switch capable of at least 12 drops with QOS implementation at the Layer 2 level and capable of providing power to IP phones to be connected to the GCCS-K network

f. Data Components include:

i. A GCCS-K or SABRE compliant computer capable of receiving and displaying the TSVS-K briefing slides across the GCCS-K network

ii. A GCCS-K compliant computer capable of receiving and displaying the Common Operating Picture (COP) across the GCCS-K network

iii. A GCCS-K or SABRE compliant computer capable of providing send and receive audio for support of Korean language broadcast across the GCCS-K network

iv. Rack mount monitor/keyboard/mouse and KVM system will used for local operator control of PC's

g. CIDS Systems:

i. Video Walls must have a native resolution of XGA per cube and be able

1. To support DVI inputs. Each wall must be able to display a 3024 x 1536
2. Image in its native resolution without pixel mapping

ii. Video Wall Controllers must be able to support the TCP_IP Screen Scraping technology used by JCISA to support Tier 1 Conference Rooms.

iii. A/V control systems must allow control of all system components via RS232, IR or via a ROKUS Secret TCP_IP link.

iv. Computer matrixes must support RGBHV inputs and use industry accepted audio follows video technology.

v. Line level NTSC matrixes must support base band video inputs and use industry accepted audio follows video technology.

vi. Digital Mixers must be linkable thus supporting expansion requirements and must capable of interfacing with camera systems.

- vii. Microphones must provide the option to select PTT or lock on/off operation.
- viii. Equalizers are required for any A/V system and must provide for squelch and over modulation protection
- ix. Amplifiers must support either standard 8 ohm or 70 volt speakers
- x. Speakers must be either standard 8 ohm or 70volt
- xi. Monitor speakers are used for system operators and must be a powered speaker with a volume adjustment.
- xii. VCR or DVD players are purchased from the local PX to allow in country service support.
- xiii. Multi-Head video cards used to develop the high resolution COP must provide at least six XGA outputs capable of being configured as a 3 x 2 array with a total resolution of 3024 x 1536. Driver compatibility with the current operating system of the GCCS-K network must be verified.

3. Recommendations:

Compliance with a recommendation is not mandatory, but encouraged to facilitate operation and maintenance, likeness of capabilities between organizations, and adherence to theater best practices as defined by JCISA. For example, specifying microphones with the capability to select between PTT operation and "on-off" to appeal to senior officer preference.

CIDS Systems Recommendations

Microphones with selectable PTT / On-Off functionality

A/V system controller capable of centrally controlling all individual components

Strongly urge use of LCD displays rather than plasma displays to prevent burn in of images. Plasma displays are susceptible to this while LCD displays are not.