Minimum Technical Specifications **– Cameras, Network and Security**

All cameras deployed shall be color cameras, shall be installed according to manufacturers specifications, shall have clear in-focus images, shall have good image brightness and contrast as specified, and shall be maintained in compliance with this policy. Refer to section 2.4 of the Facility Specification Guideline. http://www.utexas.edu/its/campus-security/files/280000%20Electronic%20Security%20Guide%20Specification.pdf

A. **Digital Video Recorder (DVR), Network Video Recorder(NVR):**
1. Any DVR/NVR system shall have the ability to transcode video to at least one of the following: mpeg4, mpeg2, H.264, or H.263. It is recommended that this ability is natively built into the system and does not require the use of additional software or equipment.
2. Systems should have the ability to record at a minimum of 15 frames per second at a minimum resolution of 640x480 pixels.
3. Recommend that systems have dual power supplies and be connected to a UPS or backup building power.
4. Recommended that all DVR/NVR systems use RAID storage.
5. Recommended that all DVR/NVR systems be placed in a network or telecommunication closet with BACS card access. At a minimum the system shall be in a locked enclosure or (preferably) room with controlled access to the system and or room.

B. **IP Cameras:**
1. All existing IP cameras must meet the technical specifications herein within one fiscal year of approval of this policy. Exceptions would require ISO approval. All new IP camera deployments must adhere to the technical specifications of this policy.
2. Minimum resolution of 640x480, mpeg 4 or h.264 compression format; multi-stream capability – ability to provide more than one video stream; minimum of 15 frames/second recording capability; Power Over Ethernet (POE) preferred.
3. Cameras shall have at a minimum1/4 inch imager with light sensitivity of at least 1 lux to at least 10,000 lux.
4. Cameras installed in exterior locations shall have the ability to switch from Day to Night mode automatically. Infra-Red (I/R) auto illuminators are recommended.
5. Cameras shall feature at minimum a ¼-inch wide-dynamic-range CCD or CMOS imager. If the camera is to feature a removable lens it shall accept either C, CS, or PL-mount lenses. Lenses featuring electronic connectivity to camera for automatic iris exposure control are recommended.
6. Cabling installations for video cameras will be done by ITS trained staff and cables will be tracked in the ITS Cable Management system.

7. Patch cords from the camera to the network jack shall not be easily accessible and must be within 6 feet of the camera.
8. Per minimum security standards, all cameras and recording systems must be patched with latest secured version of firmware/software and must be supported by the vendor.
9. If video is to be recorded onto a DVR/NVR-type storage system, use of RAID storage is recommended.
10. Refer to section 2.4 of the Facility Specification Guideline.
    http://www.utexas.edu/its/campus-security/files/280000%20Electronic%20Security%20Guide%20Specification.pdf
11. Cameras must be registered to Net Contacts.

C. **CCTV Cameras:**
1. It is recommended but not required that all existing CCTV cameras meet the technical specifications herein within one fiscal year of approval of this policy. All new CCTV camera deployments must adhere to the technical specifications of this policy.
2. The CCTV shall be compatible with a NTSC (National Television System Committee) video recorder.
3. Cameras will be adjusted to produce 1.0-volt peak to peak video, 0.4 volt negative sync with no blooming, streaking, or noticeable lag.
4. Cameras shall provide a color image with a horizontal resolution of at least 470 lines when operating in daytime mode.
5. Camera & Lens system shall provide a minimum light sensitivity such that the system can render a scene 75% lit with an average ambient light level of 1.0 lux to an average NTSC level of 30IRE without the use of more than 18dB of electronic gain while maintaining a minimum frame rate of 5 frames per second when the lens is at widest aperture.
6. CCTV Cameras shall feature at minimum a ¼-inch wide-dynamic-range CCD or CMOS imager. If the camera is to feature a removable lens it shall accept either C, CS, or PL-mount lenses. Lenses featuring electronic connectivity to camera for automatic iris exposure control are recommended.
7. Cameras installed in exterior locations shall have the ability to switch from Day to Night mode automatically. Infra-Red (I/R) auto illuminators are recommended.
8. Refer to section 2.4 of the Facility Specification Guideline.
    http://www.utexas.edu/its/campus-security/files/280000%20Electronic%20Security%20Guide%20Specification.pdf

D. **Network Requirements**
1. Bandwidth consumption: Off campus sites or sites not in compliance with minimum network standards must consult with networking prior to installation of cameras. For installations of 50 or more cameras, or when

building camera count reaches that amount, ITS must be consulted for proper networking architecture compliance.

2. POE switches are recommended to be used in direct consultation with local TSC and ITS Networking (must adhere to minimum network standards).
3. Network based cameras and recording systems may only be connected to the new Video FacNet network, in consultation with Networking. Portals accessing this FacNet must be approved by ITS NT (ex: VPN group or Proxy).
4. Cable numbers must be mapped in TSC tools to their corresponding switch ports.
5. Identification device descriptions are required in TSC tools for port descriptions.
6. Black patch cables, appropriately labeled, should be used in network/data/IDF closets.

E. **ISO Requirements** - **Cameras connected to the Network**
   1. Recommendation: Life safety security systems including video security require a higher level of reliability since the images may be used by law enforcement in investigation and prosecution of crimes and to enhance safety on campus. Security cameras and recorders are required to use the ITS managed video facilities network. Access to the video facilities network will be restricted on and off campus. Access will be via approved portals and VPNs with EID-like authentication with no shared access/passwords. Exceptions would be reviewed by ITS Networking and Telecommunications and ISO on an as needed basis.
   2. Access sessions to video (live or stored) shall be individually authenticated/authorized and logged (no shared access/passwords). Logs will follow retention policies (6 months) and be made available to ISO upon request.
   3. A centrally administered university credentialing system (EID) shall be used to ensure proper account strengths and reviews, and auto deletion of employees no longer working for university.
   4. Procedures must be in place for regular (yearly) auditing of a user's video access rights.
   5. Security video operators must schedule reviews for new and biannual reviews for existing, network based cameras, storage, and recording systems with the ISO.
   6. Minimum security standards must be followed (software and firmware updates, cameras and recorders must have vendor support – http://www.utexas.edu/its/policies/opsmanual/secstd.php).
   7. Video security operators must have their duties listed in their written job descriptions for which they are evaluated.
   8. Departments shall develop processes to periodically monitor cameras for functionality (not content, image quality- not just network reachability) and

the operator should have a written SLA for repair (better than 4 business days). Recording systems should also have processes developed to monitor recording functionality and written SLAs for repair (1 business days or better).

9. Departments managing their own video security will also adhere to standards and best practices as mentioned in above.

F. **Signage Requirements (http://www.utexas.edu/policies/hoppm/02.A.07.html) section VII.C.:**

1. Signage for video and CCTV locations is required at main entrances to areas with video security, such as building entrances and elevator landing areas. The signage language should say: "This Area Subject to Video Surveillance".

    a. Sign size to be 3 ½" X 11", custom sized Sign Type 102 as per UT Interior Signage standards, http://www.utexas.edu/pmcs/staff/documents/UTInteriorSignStandards_000.pdf. Font: Trebuchet, letter height 65pt. Signs can be purchased through the UT Sign Shop http://www.utexas.edu/pmcs/services/signshop.html or Austin Architectural Graphics http://www.austinarchitecturalgraphics.com/

    b. Signs will be placed so the bottom of the sign is 60" above finished floor (ie. just above the light switch level.)

    c. Signs will be placed in locations where they can readily be seen by someone entering the space. Guidance for signage placement is as follows:

        i. Immediately inside or outside the entrance door to the building lobby or other building entrances.

        ii. Above the elevator call buttons in the elevator lobby.

        iii. On walls and not on doors.