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TOR Appendix 5 – Security Electronic Environment – Security and Communication Systems - Definitions

CSC SMI Administration Building Renovation

For:

Correctional Service Canada
Stony Mountain Institution
Stony Mountain, Manitoba

PWGSC WBS#: R.069417.001

September, 2015

www.pwgsc-tpsgc.gc.ca

TOR Appendix 5

SECURITY ELECTRONIC ENVIRONMENT – SECURITY AND COMMUNICATION SYSTEMS - DEFINITIONS

The following security, communications, and operational systems are typically deployed throughout a Maximum, Medium or Multi-level Institution:

1. **Security Systems**
    a. Perimeter Intrusion Detection System (PIDS)
        i. Motion Detection System (MDS)
        ii. Fence Disturbance System (FDS)
        ii. PIDS Public Address System (PIDS PA)
        iii. PIDS Closed Circuit Television (PIDS CCTV)
    b. Facility Alarm Annunciation System (FAAS)
    c. Personal Portable Alarm System (PPA)
    d. Personal Portable Alarm - Locatable System (PPAL)
    e. Fixed Point Alarms (FPA)
    f. Supplementary Intrusion Detection System (SIDS) CCTV
    g. General Closed Circuit Television (CCTV)

2. **Communications Systems**
    h. Radio System
    i. Telephone System
    j. Public Address System (PA)
    k. Intercom System
    l. Messaging System
    m. Operational Voice Logger
    n. Cell Call System

3. **Operational Systems**
    a. Guard Tour System
    b. Door Control System
    c. Inmate Voice Intercept and Recording System

These systems are usually managed and monitored at one of a number of Control Posts distributed throughout the Institution.

SECURITY SYSTEMS

Perimeter Intrusion Detection System (PIDS)

The PIDS is a combined system consisting of four (4) main elements installed at the perimeter of the institution. The PIDS is managed by the PIDS Integration Unit (PIU), consisting of a processor and monitor installed in the MCCP.

Motion Detection System (MDS)

The MDS of an institution consists of sensor cables buried below ground between the fences around its perimeter. These sensor cables generate a magnetic field that, when disrupted, detects conductive materials (e.g. people) above them. The cables are connected to sensor modules which transmit information to the Application Server. The Application Server, in turn, processes, analyses, interprets, and stores that information as well as input from the PIU. The operator of the PIU is able to manage some of the attributes of the MDS sensors.

Fence Disturbance System (FDS)

The FDS features sensor cables that are attached to the inner of the two fences at the perimeter of the institution. These sensors detect vibrations in the fence (e.g. someone climbing). The information from the sensor cables pass to sensor modules that provide sensor-specific signal processing for each sector of the fence and sends the results to the Application Server. The Application Server sends that data on to the PIU where the operator is informed of changes of sensor state and where the operator can manage some attributes of the FDS sensors.

PIDS Public Address System (PIDS PA)

The speakers of the PIDS PA are attached to the inner of the two fences installed around the perimeter of the institution. These speakers are used to alert potential escapees that they have been detected and must be apprehended. The operator at the MCCP Console uses a microphone connected to the PIU to address potential escapees on a sector by sector basis.

PIDS Closed Circuit Television (PIDS CCTV)

The PIDS CCTV systems is comprised of cameras mounted close to the inner and outer fences of the institution in positions that allow them to provide a clear view of the sensor zones between the fences and inside the inner fence. PIDS CCTV Video Application Servers record and archive video data from the cameras under the control of the MCCP operator through the PIU.

Facility Alarm Annunciation System (FAAS)

The FAAS is an alarm reporting system that collects, presents, and logs alarms and events from most of the security and operational systems deployed at an institution. The FAAS collects alarms and events from:

- Interior Motion Sensors,
- Fixed Point Alarms,
- Door Position Switches,
- Personal Portable Alarms,
- Locatable Personal Portable Alarms,
- Cell Call Systems,
- Voice Cell Call Systems,
- Guard Tour Systems,
- Access Control Systems, and
- CCTV Systems.

Connections to individual devices are typically made using twisted pair wiring while connections to systems are typically provided through a serial protocol such as Starcom. The FAAS interface resides in the MCCP Console where its many systems are incorporated into a single management unit.

Personal Portable Alarm System (PPA)

Portable Transmitters are worn or carried by correctional officers and can be activated by pressing a button on the device. PPA Transmitters broadcast radio signals which are captured by a small number of receivers located within the institution. Receivers are connected to an Application Server, which processes the signals when a Transmitter is activated. The operator of the MCCP Console is then alerted that a Transmitter has been activated through the FAAS. The PPA system does not provide a location for the Transmitter that has been activated.

Personal Portable Alarm – Locatable System (PPAL)

Portable Transmitters are worn or carried by correctional officers and can be activated by pressing a button on the device. PPA Transmitters broadcast radio signals which are captured by a series of distributed receivers located strategically within the institution to provide wide coverage. Receivers are connected to an Application Server, which processes the signals when a Transmitter is activated. The operator of the MCCP Console is then alerted that a Transmitter has been activated through the FAAS. The operator of the MCCP Console is then alerted that a Transmitter has been activated through the FAAS. The PPAL system provides a location for the Transmitter that has been activated, typically to within a room and on a specific floor.

Fixed Point Alarms (FPA)

FPA are typically large push buttons in rooms where inmates and officers or other staff members may be put at risk. When activated, alarms associated with these push buttons must be displayed on the FAAS in the MCCP. These alarms can, in some cases be wired into the FAAS or in other cases, consist of a "fixed" PPA transmitter.

Supplementary Intrusion Detection System (SIDS) CCTV

The SIDS consists of CCTV cameras installed at strategic outdoor locations around the buildings at an institution. These cameras are powered and controlled over cables or fibres connecting them to Servers in the CER. The SIDS is managed by the MCCP Console operator through a user interface installed in the MCCP Console.

General Closed Circuit Television (CCTV)

In any given institution, Ranges must have CCTV cameras that are strategically located to capture evidentiary video footage of common areas on the Range. These Range cameras are not typically viewable from the MCCP.

General purpose assessment CCTV cameras, on the other hand are installed in locations inside or outside the buildings at the institution that view other strategic locations that are not a part of the Ranges. These cameras are powered and controlled over cables or fibres connecting them to Servers in the CER. The CCTV system is managed by the MCCP Console operator through a user interface installed in the MCCP Console.

COMMUNICATIONS SYSTEMS

Radio System

The Radio System deployed at every institution allows officers and correctional staff to communicate with each other at all times throughout the institution, indoors and outdoors. The Radio System consists of the following elements:

- Hand-Held Radios,
- Vehicle Mounted Mobile Units,
- Base Station,
- Base Station Controller (Centracom),
- Desktop Remotes, and
- Antenna.

The hand-held radios and vehicle mounted mobile units are, by definition, portable. The base station, including transmitting and receiving electronics, is located in the CER and the base station controller, where an operator can manage the system, is housed in the MCCP Console.

Telephone System

The Telephone System consists of a Private Branch Exchange and telephone sets of various types distributed throughout the institution for CSC staff purposes. There is a switchboard that is staffed during normal day time hours. The telephone system, including the switching equipment and telephones, is leased from the local Service Provider. A telephone set is present in the MCCP Console.

Public Address System (PA)

The Public Address system allows officers at selected locations, typically the MCCP or other Control Posts, to broadcast audio from a microphone or a telephone handset to Public Address Speakers located in selected areas around the institution. These speakers are used to advise inmates of various scheduled or unscheduled activities. The system is typically configured to allow officers to select and use PA speakers in specific areas of the institution as a predefined group.

Limited Call Intercom System (LCIS)

The Limited Call Intercom System allows staff members and other authorized individuals to alert an officer at a Control Post that they would like to communicate with them, typically for movement control purposes, through an intercom station strategically located on the wall, typically near a door. Intercom systems often allow communications between Control Posts as needed. The LCIS system is typically configured to allow officers to select and use Intercoms stations in specific areas.

Messaging Systems

A number of Institutions are equipped with Messaging Systems that can be integral parts of the PA System or installed as "add-ons". The Messaging System is designed to allow an operator to initiate the broadcast of prerecorded messages to selected areas of the Institution, or to all areas depending on the operational requirement through user interface located in the MCCP. The Messaging System typically supports the creation of pre-recorded messages and hybrid messages in both French and English.

Operational Voice Logger

The Operational Voice Logger consists of a multichannel audio recording device that connects to:

- The Telephone System (at specific operational positions),
- The PIDS PA system, and
- The Radio System.

The Operational Voice Logger records the data from each of these systems automatically when an audio channel is activated and in use. Data is stored on the Voice Logger and may be archived on a regular basis to free up storage space for ongoing recordings. The Security Intelligence Officer (SIO) typically manages access to the stored audio data. Personnel retrieving data from the Operational Voice Logger can review and archive all of the recorded voice data at the MCCP Console.

Cell Call Systems

A Cell Call System provides inmates with the ability to alert an Officer in a Control Post to an urgent need by pushing a button in their Cell. The officer is required to acknowledge the cell call and to ensure that a staff member goes to the Cell in question to determine the status of the inmate and to "cancel" the cell

call by means of a device outside the cell. The Cell Call Systems are typically monitored and managed in Living Unit Control Posts. In the event that a Cell Call is not acknowledged or cancelled within a predetermined time, the cell call is escalated to the MCCP.

OPERATIONAL SYSTEMS

Guard Tour System (GTS)

The Reader/Key Switch based Guard Tour System is designed to record living unit security patrols (Static Patrols) and generates reports for assessment and follow-up. It is also used for other monitored security and fire patrols throughout the institution (Dynamic Patrols) that do not have specific timing requirements. The system typically consists of:

- A number of wall mounted Key Switches operated by keys carried by officers,
- One or more Security Patrol Status Displays,
- One Security Patrol Monitoring Display,
- Application Server, and
- Infrastructure elements such as wires, cables, conduits, ducts, etc.

The Guard Tour System provides information to a data logger and is managed from the MCCP Console, Living Unit Control Posts, and the Correctional Manager's Office.

Door Control and Monitoring System (DCMS)

The Door Control System allows Officers to monitor and manage the state of the Doors, Barriers and Gates that are within the span of control of the DCMS associated with Living Unit or other defined area of an Institution. In many cases the Door Control System includes the ability to allow Officers to enable and disable lights, power outlets and environmental controls. The system typically consists of:

- Operator User Interfaces in a Control Post that show the state of all monitored conditions and allow Operators to open and close doors, barriers and gates,
- Interfaces to the Motors or Actuators that drive the doors,
- Interfaces to Power and Environmental Systems,
- An Application Server, and
- Infrastructure elements such as wires, cables, conduits, ducts, etc.

Inmate Voice Intercept and Recording System (IVIRS)

The Inmate Voice Intercept and Recording System enables Operational Staff in the V&C control post and SIO's Office, as appropriate to their span of control, to:

- set up, start and stop audio recordings of visits between inmates and visitors,
- make audio records of visits where authorized,
- manage CCTV assessment cameras, and
- review CCTV as required, and control doors where required.

The System must allow V&C staff and SIO staff to select conversations from any table or tables, listen to conversations at the tables and route the audio data to a digital recorder provided for that purpose.

The system typically consists of:

- Operator User Interfaces in the V&C Control Post that show the state of all monitored conditions and allow Operators to allocate tables, start and stop voice recording, select CCTV cameras and to open and close doors, barriers and gates,
- Interfaces to the Motors or Actuators that drive the doors,
- Interfaces to the CCTV Systems,

- Interfaces to the Voice Logging Systems,
- An Application Server, and
- Infrastructure elements such as wires, cables, conduits, ducts, etc.