

Working Title Communication Systems Technologist		Name	
Position Number	Reports to Position No., Class & Level	Division, Branch/Unit	Ministry
			Public Safety and Emergency Services
Present Class		Requested Class	
Dept ID	Program Code	Cost Centre	

PURPOSE: Give a brief summary of the job, covering the main responsibilities, the framework within which the job has to operate and the main contribution to the organization (see Non-Management Job Description Writing Guide [Pages 7-8](#)).

The Communications Systems Technologist provides expert radio and communications support to the Sheriffs Branch Technology and Information Systems Unit (TISU). TISU provides radio and communications services to the enforcement and peace officer agencies across the Government of Alberta. The expert support provided by a Communications Systems Technologist includes the installation, programming, troubleshooting, repair, and maintenance of technology and communications systems, which include Land-Mobile Radio (LMR), wired and wireless Internet Protocol (IP) networks, mobile and body-worn audio and video recording devices, and end user computing devices. The position is also responsible for consulting with end users and management to develop and implement best practices, research and development of communications systems, and developing and providing training.

RESPONSIBILITIES AND ACTIVITIES: The purpose of the job can be broken down in different responsibilities and end results. Each end result shows what the job is accountable for, within what framework and what the added value is. Normally a job has 4-8 core end results. For each end result, approximately 3-6 activities should be described (see Writing Guide [Pages 9-10](#)).

1. The Communications Systems Technologist is responsible for supporting radios and radio systems throughout the Sheriffs Branch, Ministry, and other Ministry and government bodies. They ensure the end-users have the appropriate equipment, supplies, systems, and training for efficient and effective communication. This includes:
 - Programming portable, mobile and base station radios with current agency/unit code plug
 - Programming customizable data into portable, mobile, and base station radios
 - Installing mobile and base station radios
 - Modifying agency code plugs as updates occur
 - Making necessary changes to Sheriffs radio system databases in order to provision changes to the radio fleet
 - Installing and program repeater and distributed antenna systems (DAS)
 - Installing and program radio consoles
 - Installing and program voice logging systems
 - Maintaining an accurate of Sheriffs Branch communications equipment assets
 - Arranging for private sector involvement as required
 - Integration of different systems for interoperable communications
2. The position is responsible for ensuring the ongoing functionality of the radios and radio systems by providing expert troubleshooting, problem solving, diagnosis, and repair to equipment and systems, which includes:

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- Providing troubleshooting support to end users for basic problems. Recall equipment to TISU when required
- Performing bench repairs on radios, repeaters, accessories, and other equipment as needed
- Analyzing radios, repeaters, and other equipment using the appropriate test instruments in order to find problems and ensure that equipment is operating within specifications. Calibrate equipment as required
- Reviewing programming of radios and radio systems for accuracy
- Performing testing of repaired equipment prior to redeployment
- Troubleshooting radio coverage gaps and provide solutions to rectify
- Performing preventative maintenance of radios and radio systems
- Performing regular tests of repeater and DAS systems to ensure proper operation
- Carrying out inventory rotation so that radios can be brought back to TISU and calibrated
- Performing system and firmware updates as required

3. The Communications Systems Technologist supports compliant radio communication use, ensuring that equipment and systems are working as expected on frequencies that are appropriate and compliant, by:
 - Analyzing the RF spectrum to determine causes of interference
 - Liaising with Industry Canada on spectrum use and licensing
 - Maintaining accurate records of radio equipment for Industry Canada licensing compliance
4. The position is required to provide end users with the training and knowledge necessarily to properly and safely use the equipment and systems provided to the end user, by:
 - Providing end user training on radio operation
 - Providing end user training on console operation
 - Creating training syllabus and training materials as required
5. The Communications Systems Technologist designs, installs, maintains, and supports specialized end user computing devices, networking devices, and mobile and body-worn audio and video surveillance devices for the Sheriffs Branch, for a wide range of applications. This includes:
 - Programming end user devices to interface with various systems and databases
 - Installing computers, monitors, switches, and wireless access points
 - Performing testing of computers and networks both prior to use and while in service
 - Perform bench repairs on audio and video recording devices equipment as needed
 - Performing system updates as required
 - Providing troubleshooting support to end users for basic problems
 - Maintaining an accurate inventory of devices and programming
6. The position requires knowledge of a wide range of technologies and it is critical that the position stays current with changes and developments to those technologies, and is required to consider how those changes and developments can be best implemented. The position's expert knowledge will be used to provide opinions and input for future planning. The position will accomplish this by:
 - Research new applicable technologies that may be of use to TISU clients
 - Perform testing of new features and accessories applicable to TISU clients
 - Make informed recommendations on radio and radio communication systems based on policy, review, and studies
 - Maintain a current knowledge of technical innovations and changes as they pertain to communications equipment and methods supported by TISU
 - Attend technical training and seminars to remain current in the field of radio and wireless communications
 - Review implementation plans for new or upgraded radio communications systems for Sheriff use

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- Help develop TISU standard operating procedures and best practices

SCOPE: List specific information that illustrates the challenges, problem solving and creativity requirements and decision-making capacity of the position. Also identify the internal or external areas the job impacts (see Writing Guide [Pages 11-12](#)).

The Communication Systems Technologist provides ongoing functional support to front-line users and uses its expertise to quickly understand and analyze user issue/problems to:

- Diagnose issues with complex systems
- Implement temporary fixes and/or workarounds
- Collaborate with other Technologists, manufacturer technical support, or other resources to develop permanent solutions
- Enhance processes and reports to provide users with high performing systems and information need to make program-planning decisions
- Design systems and processes to meet user needs and perform iterative testing to ensure those needs are met
- Maintain data integrity of multiple detailed systems, inclusive of contributing, purging, and troubleshooting information

KNOWLEDGE, SKILLS & ABILITIES: Include information on required diplomas and degrees along with identifying the most important knowledge factors, including knowledge about practical procedures, administrative, technical or professional techniques, technical, scientific or program related processes, etc. Detail specific training if there is an occupational certification/registration requirement for the position. Specify the type of experience required for the position (see Writing Guide [Pages 12-14](#)).

The Communication Systems Technologist requires a post-secondary education (degree or diploma) in a related field (e.g. electronics, electrical engineering, software engineering, IT systems, etc) with 2-3 years of directly related experience.

The Communication Systems Technologist requires:

- Extensive knowledge of digital electronic test equipment such as Communications Analyzers, Spectrum Analyzers and Digital Multi-meters
- Extensive knowledge of wireless communications systems, applications, theories and technologies, especially as they relate to first responder environments
- Extensive experience in the implementation, installation, programming, management, maintenance, troubleshooting, and repair of communications and computer systems
- Extensive knowledge of radio frequency spectrum analysis
- Extensive knowledge of Harris and Motorola radios and radio systems
- Strong knowledge of Industry Canada Radio Frequency licensing processes
- Strong knowledge of the P25 radio standard
- Strong knowledge of computer systems, networking, and troubleshooting
- Strong knowledge of Government of Alberta and Ministry policies, processes and practices, especially as they relate to the delivery of security programs and services
- Experience programming and managing a large and diverse radio fleet, with complex codeplugs
- Knowledge of telecommunications industry standards, methods, rules, and best practices
- Knowledge of Government of Alberta structure and relevant Ministry functions, reporting relationships and business processes

The Communication Systems Technologist also requires strong and demonstrated:

- Interpersonal and consulting skills to interact effectively with persons at all levels in the Government of Alberta, including the ability to present and defend analysis, opinions, and conclusions to decision makers
- Verbal and written communication skills, particularly in terms of developing briefings, reports and providing advice to program managers and other stakeholders

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- Analytical, research and problem solving skills, including the ability to investigate complex technical issues and concerns
- Conflict resolution and negotiation skills
- Project management, time management, priority setting and organizational skills in order to organize and manage the assigned workload and manage complex projects
- Ability to lead and manage contract resources
- Professional judgment, including the ability to exercise tact, diplomacy and discretion, particularly in dealing with sensitive security issues and information
- Ability to work independently as well as contribute effectively in a team environment
- Ability to maintain a strategic focus while delivering results at the technical, operational, and consultative level

The Communication Systems Technologist requires an enhanced security clearance and may require other levels of clearance as situations may dictate

Having a professional designation such as CET or PMP is considered an asset to this position

CONTACTS: Identify the main contacts the position communicates with and the purpose of the communication (See Writing Guide [Pages 14-15](#)).

Ministry & other end-users: To provide advice, direction, support, training, coaching on the use and access to data/information. To work with end-users to understand business requirements and processes.

Technical support & vendors: To exchange and obtain information. To collaborate and support the development of system enhancements, improvements and fixes.

Working groups: To exchange and share information regarding systems functionality and to improve effective usage of the systems.

SUPERVISION EXERCISED: List position numbers, class titles, and working titles of positions directly supervised (see Writing Guide [Page 15](#))

The position does not supervise but may lead an end-user team to gather, identify and assess issues and problems.

CHANGES SINCE LAST CLASSIFICATION REVIEW: Identify significant changes, that have impacted the responsibilities assigned to your position since the last review (see Writing Guide [Pages 15-16](#)).

The scope and duties of this position have changed through the creation of Sheriffs Branch Operational Support Services, which was created to support all Sheriff business units centrally and has resulted from the integration of the Fish & Wildlife and Commercial Vehicle Enforcement Branches into the Sheriffs Branch. The position has expanded from a narrow focus on radios to now support a larger range of communication technologies, including vehicle modems, in-car and body-worn audio and video surveillance, and speciality end user computing needs not covered by standard EUC processes. This role has been performed by the incumbents, during which time it was identified that the scope, duties, and knowledge required exceeded the original job description.

A comparable position is within the Transportation Ministry - Field Support Tech.- 126TN02

ORGANIZATION CHART: An organization chart that includes supervisor, peers and staff **MUST** be attached (see Writing Guide [Page 17](#)).

This information is being collected under the authority of Section 10 of the Public Service Act and will be used to allocate positions within a classification plan and to manage the Alberta government human resources program. If you have any questions about the collection of this information, contact the Job Evaluation Unit, 6th Floor, Peace Hills Trust Tower, 10011 - 109 Street, Edmonton, Alberta, T5J 3S8, phone 780/408-8400 or contact your Ministry Human Resource Office.