



## CLASSIFICATION STANDARD

### **COMMUNICATIONS**

#### **administrative support category**



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PREFACE

This standard describes the plans to be used in classifying and evaluating positions in the Communications Group, and in selecting personnel for appointment to them.

The classification and evaluation plan provides a quantitative method for determining the relative value of positions in the group, and the selection plan describes the method to be used for determining the qualifications required of candidates and assessing the extent to which they possess them. Bench-mark position descriptions are provided which serve both as a reference for position evaluation and for selection.

The standard is designed for use by classification officers, staffing officers and line managers who are involved in the classification and staffing of Communications Group positions.

It is the responsibility of the line manager to determine and describe the duties and responsibilities of a position, and the qualifications required of its incumbent. During the process the personnel officer will provide advice and assistance to the line manager as required.

Subsequent to the development of a position description it will be the responsibility of the personnel officers to ensure that legislative and delegated authorities are effectively discharged. Wherever feasible the line manager or other line officers should actively participate in the classification and staffing process.

CATEGORY DEFINITION

Occupational categories were repealed by the Public Service Reform Act (PSRA), effective April 1, 1993. Therefore, the occupational category definitions have been deleted from the classification standards.

GROUP DEFINITION

For occupational group allocation, it is recommended that you use the [Occupational Group Definition Maps](#), which provide the 1999 group definition and their corresponding inclusion and exclusion statements. The maps explicitly link the relevant parts of the overall 1999 occupational group definition to each classification standard.

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PART I

POSITIONS CLASSIFICATION

AND

EVALUATION PLAN

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PART I

POSITION CLASSIFICATION AND EVALUATION PLAN INTRODUCTION

This part of the standard consists of an introduction, factor definitions and point-rating scales. Bench-Mark Position Descriptions are located in Part III.

Point rating is an analytical, quantitative method of determining the relative value of jobs. Essentially, point rating plans define characteristics or factors common to the jobs being evaluated. They define degrees of each factor and allocate point values to each degree. The total value determined for each job is the sum of the point values assigned by the raters.

All methods of job evaluation require the exercise of judgment and the orderly collection and analysis of information in order that consistent judgments can be made. The point-rating method facilitates rational discussion and resolution of differences in determining the relative worth of jobs.

Factors

The combined factors do not describe all aspects of jobs. They deal only with those characteristics that can be defined and distinguished and that are useful in determining the relative values of jobs.

The following six factors are used in this plan:

Skill and Knowledge

Complexity

- Scope for Initiative and Judgment
- Variety of Work

Consequence of Errors

Responsibility for Contacts

Conditions of Work

- Attention
- Physical Effort
- Environment

Supervision

- Nature of Supervisory Responsibility
- Number of Employees Supervised



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### Point Values

The maximum point value assigned to each factor reflects its relative importance. Similarly, point values have been assigned to the degrees of the factors.

Point values increase arithmetically as the degrees of the factor increase. The minimum point value for each of the factors, with the exception of Supervision, is one-fifth of the maximum value, and the minimum value for Supervision is one-tenth of the maximum value. The ranges of point values are

	Minimum	Maximum
Skill and Knowledge	60	300
Complexity	60	300
Consequence of Errors	10	50
Responsibility for Contacts	10	50
Conditions of Work		
Attention	10	50
Physical Effort	10	50
Environment	10	50
Supervision	15	150
	185	1,000

### Bench-mark Positions

Bench-mark position descriptions are used to exemplify degrees of each factor or element. Each description consists of a brief summary, a list of the principal duties with the percentage of time devoted to each, and a specification describing each of the point-rating factors and elements as it appears in the job. The bench-mark positions have been evaluated, and the degree and point values assigned to each factor are shown in the specifications.

The ratings scales identify the bench-mark position descriptions that exemplify each degree. These descriptions are an integral part of the point-rating plan and are used to ensure consistency in application of the rating scales.

### Use of the Standard

There are six steps in the application of this classification standard.

1. The position description is studied to ensure understanding of the position as a whole and of each factor. The relation of the position being rated to positions above and below it in the organization is also studied.

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2. Allocation of the position to the category and the group is confirmed by reference to the definitions and the descriptions of inclusions and exclusions.
3. Tentative degrees of each factor in the job being rated are determined by comparison with degree definitions in the rating scales. Uniform application of degree definitions requires frequent reference to the descriptions of factors and the notes to raters.
4. The description of the factor in each of the bench-mark positions exemplifying the degree tentatively established is compared with the description of the factor in the position being rated. Comparisons are also made with descriptions of the factor in bench-mark positions for the degrees above and below the one tentatively established.
5. The point values for all factors are added to determine the tentative total point rating.
6. The position being rated is compared as a whole to positions to which similar total point values have been assigned, as a check on the validity of the total rating.

### Determination of Levels

The ultimate objective of job evaluation is the determination of the relative value of jobs in each occupational group in order that employees carrying out the jobs may be paid at rates consistent with the relationship indicated. Jobs that fall within a designated range of point values will be regarded as of equal difficulty and value and will be allocated to the same level.

Communications

RATING SCALES

COMMUNICATIONS GROUP

FACTOR WEIGHTS

SKILL AND KNOWLEDGE	300
COMPLEXITY	300
CONSEQUENCE OF ERRORS	50
RESPONSIBILITY FOR CONTACTS	50
CONDITIONS OF WORK	150
SUPERVISION	150
	1,000

CLASSIFICATION LEVELS

POINT BOUNDARIES

Points	Levels
-230	1
231-340	2
341-450	3
451-560	4
561-670	5
671-790	6
791-910	7

SKILL AND KNOWLEDGE FACTOR

This factor is used to measure the difficulty of work in terms of the skill requirements to operate communication facilities and for knowledge of communications systems and procedures.

Notes to Raters

The degrees of this factor are exemplified by bench-mark position descriptions. The bench-mark positions are assigned to a degree by considering the following characteristics.

- The nature and range of skills required to operate and carry out minor maintenance to communication, cryptographic, and associated equipment.
  
- The requirement to understand and apply abbreviations, symbols and other code forms.
  
- The requirement to apply subject matter knowledge of traffic in order to recognize security requirements, inaccuracies and need for clarification or repeat of message, to assign priorities, route and distribute traffic, initiate commands in response to computer-generated reports, extract data from incoming un addressed messages, compile bulletins for transmission, and select format, mode of transmission or method of encryption.
  
- The requirement for knowledge pertaining to the administration and management of a communication organization and communications systems, system capabilities, procedures and formats to effect the transmission, relay, interchange and delivery of messages.

Any one characteristic is only an indication of the skill and knowledge required of the work and the whole context within which the work is performed is to be considered.

The degree to be assigned within this factor is to be determined by considering the four broad skill and knowledge areas listed above. The degree tentatively selected is then confirmed by comparing the duties of the position being rated with the duties and specifications of the bench-mark positions.

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RATING SCALE - SKILL AND KNOWLEDGE FACTOR

Skill and Knowledge	Points	Bench-mark Position Descriptions		
			No.	Page*
1	60	Telex Operator, UIC	1	1.1
		Telex Operator	2	2.2
		Communicator Message Centre, DND	3	3.2
		Communicator, Tape Relay Centre, DND	5	5.2
2	108	Communicator, Message Centre, M&I	4	4.2
		Communicator, Comm. Centre, DSS	6	6.2
		Comcentre Communicator, DND	7	7.3
3	156	Communicator, Marine Aeradio Station	8	8.2
		Communicator, Cryptocentre, DND	9	9.1
		Communications Centre Communicator, EA	10	10.2
4	204	Control Centre Communicator, ADIS, MOT	11	11.2
		Communicator, Weather Office, EC	12	12.3
		Senior Communicator, Kuala Lumpur, EA	13	13.2
		Supervisor, Tape Relay, DND	16	16.2
5	252	Supervisor, Headquarter Comcentre, MOT	14	14.2
		Shift Supervisor, Comm. Centre, EA	15	15.2
6	300	Chief Supervisor, Montreal Weather Office, EC	17	17.2
		Chief Supervisor, Communications Centres, Paris EA	18	18.2
				1

\*All Page numbers refer to Part III.

COMPLEXITY FACTOR

This factor is used to measure the difficulty of the duties in terms of the scope for initiative and judgment and the variety of the work performed.

Notes to Raters

Four degrees of "Scope for Initiative and Judgment are illustrated and refer to the freedom to take particular courses of action within the framework of instructions, regulations and established procedures; the availability of direction or supervision; and the degree of authority delegated by superiors.

Three degrees of the "Variety" element are illustrated by the bench-mark position descriptions. The following characteristics of work are to be considered in determining a tentative degree of this element.

- The number and nature of duties performed and the relationship or difference of duties.
- The number of communication procedures and systems used or for which the incumbent is responsible.
- The diversity and complexity of the equipment operated or for which the incumbent is responsible.

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RATING SCALE - COMPLEXITY

Scope for Initiative and Judgment

Methods and procedures are prescribed in detail or are standardized. There is little scope for independent Judgment.

Degree of Variety

Methods and procedures are well defined, Initiative and Judgment are required in selecting appropriate procedures or courses of action and in coping with diverse operational problems.

Initiative and Judgment are required in interpreting instructions and procedures, making modifications to *resolve* operational problems, recommending *changes* in procedures and in organizing and directing current operations,

Initiative and Judgment are required in interpreting and adapting instructions and procedures and in planning, organizing and directing current and long term operations of a large centre. Recommendations are made to senior telecommunication authority to effect changes in communication procedures, equipment and organization.

	A	B	C	D
	Page*	Page*	Page	Page*
	60	110	160	210
Degree 1	1 Telex Operator, UIC 1.2 2 Telex Operator 2.2 3 Communicator Message Centre, DND 3.2 5 Communicator, Tape Relay Centre, DND 5.2			
	105	155	205	255
Degree 2	4 Communicator, Message Centre, M&I	6 Communicator Comm. Centre, DSS 6.3 7 Concentre Communicator, DND 7.3 8 Communicator Marine Aeradio Station 8.3	13 Senior Communicator, Kuala Lumpur, EA 13.3 14 Supervisor, Head-quarter Concentre MOT 14.3 16 Supervisor, Tape Relay, DND 16.2	
	150	200	250	300
Degree 3		9 Communicator, Cryptocentre, DND 9.2 10 Communications Centre Communicator, EA 10.3 11 Control Centre Communicator, ADIS, MOT 11.3 12 Communicator, Weather Office, EC 12.4	15 Shift Supervisor Comm. Centre, EA 15.2	17 Chief Supervisor, Montreal Weather Office, EC 17.3 18 Chief Supervisor, Communications Centre, Paris EA 18.3

\*All Page numbers refer to Part III.

CONSEQUENCE OF ERRORS FACTOR

This factor is used to measure the job responsibility as indicated by the consequence of an error that the employee might reasonably make in the performance of his duties. The factor is expressed in terms of the impact of errors on the flow and handling of traffic and the effective utilization of the communications system.

Notes to Raters

All positions will be given at least the minimum of 10 points under this factor.

Raters should also bear in mind that they are considering the consequence of an error that is quite possible, and that they are not rating the impact of an error that is only remotely possible.

The factor is intended to serve as a measure of the consequence of an error that may occur in spite of the exercise of due care by a competent employee. The possible impact of gross neglect or incompetence is not to be evaluated.



RATING SCALE - CONSEQUENCE OF ERRORS

Consequence of Errors, and Degree	Points	Bench-mark Position Description	Page*
		No.	
Errors result in requests for repeats of traffic and can cause minor delays.	1 10	1 Telex Operator, UIC 2 Telex Operator 3 Communicator Message Centre, DND 4 Communicator, Message Centre, 21&I 5 Communicator, Tape Relay Centre, DND 6 Communicator, Comm. Centre, DSS 7 Comcentre Communicator, DND	1.2 2.2 3.2 4.3 5.2 6.3 7.4
Errors result in interference with the flow of traffic in a system disrupting traffic schedules or jeopardizing the security of messages.	2 30	8 Communicator, Marine Aeradio - Station 9 Communicator, Cryptocentre, DND 10 Communications Centre Communicator 12 Communicator, Weather Office, EC	8.3 9.2 10.3 12.4
Errors arising from failure to correctly apply, interpret and communicate procedures to staff result in the incorrect handling of traffic causing serious disruption of traffic flow, or endangering the security of the system.	3 50	11 Control Centre Communicator, ADIS, MOT 13 Senior Communicator, Kuala Lumpur, EA 14 Supervisor, Headquarter Comcentre, 15 Shift Supervisor, Comm. Centre, EA 16 Supervisor, Tape Relay Centre, DNA 17 Chief Supervisor, Montreal Weather Office, EC 18 Chief Supervisor, Communications Centres, Paris, EA	11.3 13.3 14.3 15.3 16.3 17.3 18.3

\*All Page numbers refer to Part III.

RESPONSIBILITY FOR CONTACTS FACTOR

This factor is used to measure the difficulty and importance of contacts that occur as an integral part of the work and the requirements imposed by these contacts to work and communicate with others in person, by telecommunications media, or in writing.

Notes to Raters

Only those contacts that are in integral part of the work and that result from the duties assigned or sanctioned by management are to be considered. Contacts between subordinate and supervisory personnel within a communications Centre are not to be considered in this factor.

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RATING SCALE - RESPONSIBILITY FOR CONTACTS

Nature of Contacts, and Degree	Points	Bench-mark Position	Descriptions	Page*
To give and obtain information requiring tact and courtesy.	1	No.		
		1	Telex Operator, UIC	1.2
		2	Telex Operator	2.3
		3	Communicator, Message Centre, DND	3.2
		4	Communicator, Message Centre, M&I	4.3
		5	Communicator, Tape Relay Centre, DND	5.3
		6	Communicator, Comm. Centre, DSS	6.3
		7	Comcentre Communicator, DND	7.4
		8	Communicator, Marine Aeradio Station	8.3
		9	Communicator, Cryptocentre DND	9.2
		10	10 Communications Centre Communicator, EA	10.3
		12	12 Communicator, Weather Office, EC	12.5
To give and obtain information requiring explanation, interpretation of procedures and instructions or other operational details.	2	30	11 Control Centre Communicator, ADIS, MOT	11.3
			15 Shift Supervisor, Comm. Centre, EA	15.3
			16 Supervisor, Tape Relay Centre, DND	16.3
To give and obtain information requiring an appreciation of user requirements and a thorough knowledge of communication operations; to give explanation and advice on the service provided by the system; and to obtain cooperation on services essential to improve or maintain the operational efficiency of the system.	3	50	13 Senior Communicator, Kuala Lumpur, EA	13.3
			14 Supervisor, Headquarter Comcentre, MOT	14.3
			17 Chief Supervisor, Montreal Weather Office, EC	17.4
			18 Chief Supervisor, Communications Centre, Paris, EA	18.4

\*All page numbers refer to Part III.

CONDITIONS OF WORK FACTOR

This factor is used to measure the attention and physical effort that are required and the effect of the environment in which the duties are performed.

Definitions

"Attention" refers to the demands for attention and concentration made by the frequency of traffic, the variety of activities, and other operational requirements.

"Physical effort" refers to the frequency, intensity and duration of muscular stress associated with the duties.

"Environment" refers to the conditions under which the duties are performed and includes such things as the noise and heat level in the work area and the requirement to work in confinement or isolation.

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RATING SCALE - CONDITIONS OF WORK FACTOR

Attention

Degree	Points
1 Work requires normal attention. Concentrated attention may be required during peak periods of message traffic.	10
2 Work requires sustained concentration and attentiveness in handling high volumes of message traffic during peak periods, which occur frequently.	30
3 Work requires continuous concentration and attentiveness in handling a high volume of regularly scheduled and closely timed message traffic or a high volume of message traffic where accuracy is essential.	50

Physical Effort

Degree	Points
1 Work requires little physical effort. Much of it is done while seated, but there is some standing or walking.	10
2 Work requires moderate physical effort. Some of it is done while seated, but there are long periods of standing or walking.	30
3 Work requires considerable physical effort. Constant walking or standing is required.	50

Environment

Degree	Points
1 Duties are performed in an office environment.	10
2 Duties are performed in a machine room environment, with high noise and heat level, which may be segregated from other work areas due to operational or security requirements OR in an office environment, but where security measures require that work be done in isolation and confinement.	30
3 Duties are performed in a machine room environment with a high noise and heat level and where top security measures require that work be done in isolation and confinement.	50

SUPERVISION FACTOR

This factor is used to measure the responsibility that the employee must assume for the work and guidance of others. It applies to the continuing responsibility for employees reporting directly or through subordinate supervisors. It also applies to the responsibility for occasionally showing other employees how to perform specified tasks or duties. The two elements of the factor are the nature of the supervisory responsibility and the number of employees supervised directly or through subordinates.

Definition

"Nature of supervisory responsibility" refers to the extent to which supervisory positions have such responsibilities as controlling the quantity and quality of work, assigning of work, allocating of staff, evaluating employee performance, training and disciplining staff, and making recommendations on the number and classification of positions needed to perform the work.

Notes to Raters

In all positions there is some requirement for showing others how to perform tasks or duties; therefore, all positions will be assigned a minimum of 15 points ( $A_1$ ), regardless of the number of employees involved.

In rating positions all the elements outlined for each degree of supervisory responsibility must be considered. Generally speaking, the criterion for the assignment of a position to a degree is that it must include most of the elements of the degree to which it is assigned.

The rating scale shows the point values assigned for four degrees of the Nature of Supervisory Responsibilities element. These degrees, which are designated only as A, B, C, and D on the scale, are defined in the following table:

Communications

SUPERVISION

Mature of Supervisory Responsibility and Degree	No.	Pages
Shows other employees how to perform tasks or duties.	1 Telex Operator, UIC	1.2
	2 Telex Operator	2.3
	3 Communicator, Message Centre, DND	3.3
	4 Communicator, Message Centre, M&I	4.3
	5 Communicator, Tape Relay Centre, DND	5.3
	6 Communicator, Comm. Centre, DSS	6.3
	7 Comcentre Communicator, DND	7.5
	8 Communicator, Marine Aeradio Station	8.4
	9 Communicator Cryptocentre, DND	9.3
	A 10 Communications Centre Communicator, EA	10.4
	11 Centre Communicator, ADIS, MOT	11.4
	12 Communicator, Weather Office, EC	12.5
Assumes limited supervisory responsibilities such as - instructing employees in work and procedures, assigning or distributing work to ensure maintenance of work flow, - giving advice and guidance to other employees on work problems, reporting to more senior supervisor on employee performance and punctuality, makes short-term allocations of staff to cope with emergency workload situations.	13 Senior Communicator, Kuala Lumpur, EA	13.4
Directly or through a subordinate supervisor - allocates staff to cope with fluctuations in workload or absences, - ensures that established standards of quality and quantity of work are maintained, - evaluates the performance of subordinates and informs them of strengths and weaknesses of day to day performance, - proposes disciplinary action, - advises superior on the adequacy and nature of staff required to conduct operations, - counsels staff on the resolution of work problems.	B 15 Shift Supervisor, Comm. Centre, EA	15.4
Through subordinate supervisors - allocates staff to shifts or to units within a communication organization to ensure the adequate manning of functions, - establishes standards of quality and quantity of work, - establishes priorities and work schedules, determines the duties and responsibilities to be assigned positions and the order in which rotational functions are to be performed. Evaluates the performance of employees and reviews the reports of performance evaluations conducted by subordinate supervisors, Interviews and counsels employees who present problems of attitude and performance and recommends disciplinary action if required. Develops and conducts programs of formal or on the job training to ensure the effective utilization and development of staff. Maintains a continuing review of workload and as required recommends changes in the number of classification of positions.	C 14 Supervisor, Headquarter Comcentre, MOT 16 Supervisor, Tape Relay, Centre DND 17 Chief Supervisor, Montreal Weather Office, EC 18 Chief Supervisor, Communications Centre, Paris, FA	14.4 16.4 17.4 18.4

\*All page numbers refer to Part III.

RATING SCALE - SUPERVISION FACTOR

Number of Employees Supervised, and Degree		Nature of Supervisory Responsibility, and Degree			
		A	B	C	D
Any number of Employees	1	15			
1 - 3	2		33	51	69
4 - 10	3		60	78	96
11 - 25	4		87	105	123
26 and over	5		114	132	150



Communications

Part II

SELECTION PLAN

July 1976

PART II

SELECTION PLAN

INTRODUCTION

The Selection Plan includes the Selection Standard for this Group developed pursuant to Section 12 of the Public Service Employment Act, with instructions for adapting it to the requirements of individual positions in the form of a Statement of Qualifications.

Section 6 of the Public Service Employment Regulations requires that a Statement of Qualifications be prepared for each position to which an appointment is to be made. Each Statement of Qualifications is to specify and differentiate between those qualifications that are essential and those qualifications, if any, that are desirable for the performance of the duties and responsibilities of a position.

Qualifications refer to any training, ability, knowledge, accomplishment or personal attribute that is essential or desirable for performance of the duties and responsibilities of a position.

Qualifications vary with the job content requirements of individual positions. They must be identified for each position for which staffing action is intended. They are to be based on the duties and responsibilities of the position concerned and expressed in the form of a Statement of Qualifications. These qualifications then become the criteria against which selections are made for that staffing action.

The following pages contain an explanation of the various parts of a Statement of Qualifications, a description of qualifications for positions in this Group, a Rating Guide and a description of the methods to be used in assessing the qualifications of candidates for these positions. Examples of Statements of Qualifications for positions in this Group based on Bench-Mark Position Descriptions are presented in Part III of this Standard.

STATEMENT OF QUALIFICATIONS

Structure

The basic structure of a Statement of Qualifications is as follows:

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- Education Factor
- Occupational Certification Factor
- Achievement, Skills or Aptitudes Factor
- Language Requirement Factor
- Experience Factor

RATED REQUIREMENTS

- Knowledge Factor
- Abilities Factor
- Personal Suitability Factor

DESIRABLE QUALIFICATIONS

- (Individual qualifications that are desirable, if any.)

## Communications

### Definitions

A Statement of Qualifications consists of two components:

ESSENTIAL QUALIFICATIONS - This Component provides for the inclusion of qualifications which a person must possess in order to adequately perform the duties and responsibilities of a position. It consists of two sub-components:

BASIC REQUIREMENTS - This sub-component provides for the inclusion of those essential qualifications that are used for initial screening purposes. Applicants must meet the Basic Requirements before consideration can be given to their other qualifications. Basic Requirements are minimum criteria and are not rated by degree. Basic Requirements include the following five Selection Factors:

Education - (a) Refers to a background in academic, vocational or technical studies and training which is recognized through the actual or imminent conferring of a degree, diploma, certificate or other official document by an approved educational institution or agency.

(b) Acceptable performance on tests prescribed by the Public Service Commission may be an alternative, when specified.

Occupational Certification - Refers to the possession of or eligibility for occupational credentials in the form of a license, certificate, registration, letter, papers or other documents which constitute official recognition of occupational competence.

Achievement, Skills or Aptitudes - Refers to special examinations or tests used to assess achievement, skills or aptitudes which are basic to the performance of the duties and responsibilities of a position.

Language Requirement - Refers to the need for a knowledge of either the English language, the French language, either one or the other or both in relation to the performance of the duties and responsibilities of a position.

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Experience - Refers to actual participation or practice in activities related to the duties and responsibilities of a position. It means the acquisition or exercise of knowledge or abilities in vocational or avocational circumstances including voluntary work; and it is conditioned by the achievement realized during its acquisition and by the environment in which it is gained. Experience requirements must not be expressed in terms of a specific number of years.

NOTE: Pre-employment medical examination requirements are to be in accordance with Appendix 13 of the Staffing Manual and are not to be included in the Statement of Qualifications.

RATED REQUIREMENTS - This sub-component provides for the inclusion of those essential qualifications which are used for the rating and ranking of candidates who have met the Basic Requirements. Rated Requirements include the following three Selection Factors:

Knowledge - Refers to information concerning facts, theories, systems, practices, regulations and other subject-matter relevant to the performance of the duties and responsibilities of a position.

Abilities - Refers to competence in the use of tools, materials, and equipment or the application of methods, systems, techniques, practices, policies, regulations and other subject-matter relevant to the performance of the duties and responsibilities of a position.

Personal Suitability - Refers to personal traits or characteristics which condition the utilization of knowledge and abilities in the performance of the duties and responsibilities of a position.

DESIRABLE QUALIFICATIONS - This component provides for the inclusion of qualifications which, although not essential, may further contribute to or enhance a candidate's performance of the duties and responsibilities of a position. The use of Desirable Qualifications is optional, but they must not be used for screening purposes. When they are applicable, they are to be included in the Statement of Qualifications at the same time as the Essential Qualifications are specified, and they are to be assessed only as part of the rating and ranking of candidates who have met both the Basic Requirements and Rated Requirements for the position. Any job-related qualifications other than knowledge of a second official language may be used as Desirable Qualifications, but they should be used sparingly, if at all.

SELECTION STANDARD - COMMUNICATIONS GROUP

Qualifications applicable to positions in the Communications Group are as follows:

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

Education Factor

This factor is applicable to all positions in this Group. Based on the duties and responsibilities of the position, include in the Statement of Qualifications a description of the Education considered necessary.

The minimum education qualification for the Communications Group is:

- Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1.

NOTE: Possession of the "successful completion of two years of secondary school" qualification is normally to be determined on the basis of information provided on applications or in personal inventories. Further evidence, if required, may be found in documents such as a school leaving certificate or an official school report card.

Achievement, Skills or Aptitudes Factor

This factor is applicable to all positions in this Group. Based on the duties and responsibilities of the position, include in the Statement of Qualifications a description of the Achievement, Skills or Aptitude considered necessary.

OPERATORS

For positions requiring experienced communications operators, the basic equipment operation skill requirement is:

- Skill in operating teleprinter key-board equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.

## Communications

### TRAINEES

For positions used for trainees, the basic equipment operation skill requirement is:

- Skill in typing at a speed of at least 40 wpm with not more than a 5 percent error rate.

NOTE: Possession of such equipment operation skill qualifications is to be determined on the basis of:

- required performance on PSC Typing or Teleprinter Keyboard tests; or
- required performance on typing or teleprinter keyboard tests used by Canada Manpower Centres; or
- a graduation diploma, a certificate or equivalent document issued by an approved training organization.

Experienced persons having proven competence in these skills may be accepted without testing.

### Language Requirement Factor

This factor is applicable to all positions in this Group.

From the qualifications listed below, determine which one is applicable to the position to be staffed.

- A knowledge of the English language is essential for this position. - A knowledge of the French language is essential for this position.
- A knowledge of either the English language or the French language is essential for this position.
- A knowledge of both the English language and the French language is essential for this position.

### Experience Factor

This factor is applicable to positions in this Group for which it is considered necessary to have had previous experience related to the duties and responsibilities involved. Based on the duties and responsibilities of the position, include in the Statement of Qualifications a description of the Experience considered necessary. Following is an Experience qualification:

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"Experience - Experience in operating ancillary teleprinter equipment."

NOTE: (a) To raise Basic Requirements for positions in this Group above the minima prescribed, special permission must be obtained from the Public Service Commission.

(b) When used in regard to Basic Requirements, terms such as "recognized", "eligibility", "approved", "accredited" or "equivalent" refer to acceptability for staffing purposes as regulated by the Public Service Commission through the PSC Staffing Program concerned.

(c) The assessment of Basic Requirements is to be based on performance demonstrations involving the use of tests or examinations, educational or occupational credentials, or other evidence available at the time of the screening process.

RATED REQUIREMENTS

Knowledge Factor

This factor is applicable to all positions in this group except those used for developing inexperienced personnel where the duties and responsibilities of the position do not warrant use of the Knowledge Factor.

Based on the duties and responsibilities of the position, include in the Statement of Qualifications a description of the Knowledge considered necessary. Following is an example of a Knowledge qualification.

"Knowledge\_ Knowledge of the Murray Code."

Abilities Factor

This factor is applicable to all positions in this group except those used for developing inexperienced personnel where the duties and responsibilities of the position do not warrant use of the Abilities factor.

Based on the duties and responsibilities of the position, include in the Statement of Qualifications a description of the Abilities considered necessary. Following is an example of an Abilities qualification.



"Abilities - Ability to check messages for garble, number sequence and precedence."

Personal Suitability Factor

This factor is applicable to all positions in this Group. Based on the duties and responsibilities of the position, include in the Statement of Qualifications a description of the Personal Suitability considered necessary. Following is an example of a Personal Suitability qualification:

"Personal Suitability - Initiative and alertness."

DESIRABLE QUALIFICATIONS

Based on the duties and responsibilities of the position, include in the Statement of Qualifications a description of those qualifications considered desirable, if any. Following is an example of a Desirable Qualification:

"- Experience in operating cryptographic equipment."

PREPARATION OF A STATEMENT OF QUALIFICATIONS

The steps involved in preparing a Statement of Qualifications are as follows:

1. Gain a thorough understanding of the duties and responsibilities for the position to be staffed.
2. Review this selection plan carefully.
3. Examine the examples of Statements of Qualifications presented in Part III of this Standard in order to become familiar with the format and sorts of qualifications required for positions in this Group.
4. Based on the duties and responsibilities of the position, describe the qualifications required for the position under the appropriate Component, Sub-Component, and Selection Factor headings.

NOTE: The Examples of Statements of Qualifications provided in this Standard are for illustrative purposes only. It is not necessary, therefore, to adhere to the qualifications specified in the examples when staffing positions on which the Bench-Mark Position Descriptions are based, or when staffing positions of a similar nature.

In determining which qualifications are to be included in the Statement of Qualifications, the prime considerations are:

- a) their relevancy to the duties and responsibilities of the position;
- b) their assess ability for selection purposes; and
- c) their value in differentiating between candidates.

In arranging qualifications within each Selection Factor they should be laid out in a style and in patterns that:

- a) combine closely-related qualifications;
- b) obviate unnecessary duplication and verbiage;
- c) emphasize salient features; and
- d) facilitate assessment and selection.

The completed Statement of Qualifications specifies the qualifications for staffing the position, and the contents are to be used as a basis for:

- (a) advertising notices;
- (b) initial screening of applicants;
- (c) developing a selection rating guide; and
- (d) rating and ranking of candidates.

RATING GUIDE

In assessing the qualifications of candidates for a position, a narrative or numerical rating plan may be used.

Following is an illustration of a format for a selection rating guide using qualifications contained in the Example of a Statement of Qualifications for BMPD No. 14. Basic Requirements are not included in the rating guide, since, as minimum criteria, they will have been taken into account during the initial screening to determine which applicants were qualified for further consideration. The ranking of the remaining candidates is accomplished through rating them on the Rated Requirements, and the Desirable Qualifications, if any, that are specified in the Statement of Qualifications for the position being staffed.

Suggested Format

ALLOTTED RATING	PASS RATING	MAXIMUM RATING
--------------------	----------------	-------------------

A. RATED REQUIREMENTS

Knowledge Factor

Knowledge of:

1. The standards, practices, and procedures of national, international and commercial communications networks and associated systems.
2. Personnel policies and regulations.

Total Knowledge Factor

Communications

ALLOTTED RATING	PASS RATING	MAXIMUM RATING
--------------------	----------------	-------------------

Abilities Factor

Ability to:

1. Interpret and modify instructions and improve procedures and equipment.
2. Organize and control Centre operations, maintain Centre supplies, determine work priorities and schedules, and select, train and evaluate staff communicators.
3. Conduct briefings and discussions, and prepare operating reports and correspondence.

Total Abilities Factor

Personal Suitability Factor

1. Initiative and judgment.
2. Tact and courtesy particularly in dealing with management and commercial suppliers.

Total Personal Suitability Factor

Total Rated Requirements

B. DESIRABLE QUALIFICATIONS

Experience in:

1. Supervision. N/A

Communications

ALLOTTED  
RATING

PASS  
RATING

MAXIMUM  
RATING

Total Desirable Qualifications

Rating for:

Rated Requirements

Desirable Qualifications

COMBINED RATING

COMMENTS:

ASSESSMENT INSTRUCTIONS

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

Basic Requirements are assessed as minimum criteria on a pass/fail basis and are not to be rated by degree. Applicants must meet at least the minimum standard required for each applicable Selection Factor, or they are eliminated from further consideration.

RATED REQUIREMENTS

The relative importance of Selection Factors and Qualifications related to the duties and responsibilities of the position being staffed is determined by those administering the selection process. The weightings which may be applied to Selection Factors and Qualifications in the case of a numerical rating plan, and the differences in emphasis which may be assigned to Selection Factors and Qualifications when a narrative rating plan is used, must be applied consistently throughout the assessment process.

In assessing Rated Requirements candidates must achieve an overall pass rating on the aggregate of Qualifications contained within each Selection Factor. Where a numerical rating plan is used candidates must achieve a pass mark of at least sixty per cent on each applicable Selection Factor. In the case of a narrative rating plan candidates must meet at least the minimum degree of Qualifications required for each applicable Selection Factor. Candidates who fail to gain an overall pass rating on each applicable Selection Factor are eliminated from further consideration.

DESIRABLE QUALIFICATIONS

Once candidates have met the Rated Requirements, any credit given for Desirable Qualifications specified in the Statement of Qualifications is to be added to the rating for Rated Requirements to reach a composite assessment. As credit given for Desirable Qualifications has an effect on the ranking of individuals, Desirable Qualifications must be assessed with the same care and consistency as that given to Rated Requirements. The total maximum marks allowed for Desirable Qualifications must not exceed ten per cent of the total maximum marks allowed for Rated Requirements. This percentage may also serve as a guide in establishing the degree of emphasis that may be given to Desirable Qualifications when a narrative rating plan is used.

Communications

PART III

BENCH-MARK POSTIONS DESCRIPTIONS

AND

STATEMENTS OF QUALIFICATIONS

July 1976

PART III

BENCH-MARK POSITION DESCRIPTIONS

AND

STATEMENT OF QUALIFICATIONS

INTRODUCTION

Bench-Mark Position Descriptions are intended to exemplify the degrees of each classification factor and element in the position classification and evaluation plan. They are based on actual positions allocated to the Communications Group but, because they serve to exemplify degrees, their value for that purpose continues even when the actual positions undergo changes.

The contents of Bench-Mark Position Descriptions serve to illustrate the type of information used as a basis for the classification of positions and the development of Statements of Qualifications for the selection of people to fill those positions.

Examples of Statements of Qualifications are intended to illustrate the selection factors and qualifications provided for in the selection plan, which are relevant to the Bench-Mark Position Descriptions. When staffing a position on which a Bench-Mark Position Description is based, the example of a Statement of Qualifications provided for that Bench-Mark Position Description may be used as shown or modified to meet current requirements. For other positions, a suitable Statement of Qualifications must be prepared.



Communications

BENCH-MARK POSITION DESCRIPTION AND  
EXAMPLE STATEMENT OF QUALIFICATIONS INDEX  
In Alphabetical Order

LEVEL	DESCRIPTIVE TITLE	BMPD/ S of Q No.	BMPD PAGE No.*	S of Q PAGE No.*	TOTAL POINTS
7	Chief Supervisor, Communications Centre, Canadian Embassy, Paris, EA	18	18.1	18.5	873
7	Chief, Supervisor, Montreal Weather Office, EC	17	17.1	17.5	873
3	Comcentre Communicator, DND	7	7.1	7.6	388
4	Communications Centre Communicator, EA	10	10.1	10.5	521
3	Communicator, Communications Centre, H.Q., DSS	6	6.1	6.4	388
4	Communicator, Cryptocentre, DND	9	9.1	9.4	541
4	Communicator, Marine-Aeradio Station	8	8.1	8.5	456
2	Communicator, Message Centre, Montreal Metro Office, M&I	4	4.1	4.4	298
2	Communicator, Message Centre, Montreal Metro Office, M&I	4(T)	4.1	4.6	298
1	Communicator, Message Centre, DND, Halifax	3	3.1	3.4	205
1	Communicator, Message Centre, DND, Halifax	3(T)	3.1	3.6	205
5	Communicator, Montreal Weather Office, EC	12	12.1	12.6	569
2	Communicator, Tape Relay Centre, DND, Halifax	5	5.1	5.4	265

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III-(b)

\*All page numbers refer to Part III.

Communications

LEVEL	DESCRIPTIVE TITLE	BMPD/ S of Q No.*	BMPD PAGE No.*	S of Q PAGE No.*	TOTAL POINTS
5	Control-Centre Communicator, Automatic Data Interchange System, MOT	11	11.1	11.5	589
5	Senior Communicator, Kuala Lumpur, EA	13	13.1	13.5	612
6	Shift Supervisor, Communications Centre, EA	15	15.1	15.5	757
6	Supervisor, Headquarter Comcentre, MOT	14	14.1	14.5	730
6	Supervisor, Tape Relay Centre, DND, Halifax	16	16.1	16.5	689
1	Telex Operator	2	2.1	2.4	185
1	Telex Operator, Head Quarters, U.I.C., Ottawa	1	1.1	1.3	205
1	Telex Operator, Head Quarters, U.I.C., Ottawa	1(T)	1.1	1.5	205

Communications

BENCH-MARK POSITION DESCRIPTION AND  
EXAMPLE STATEMENT OF QUALIFICATIONS INDEX

LEVEL	DESCRIPTIVE TITLE	<u>In Ascending Order of Level</u>		BMPD PAGE No.*	S of Q PAGE No.*
		BMPD/ S of Q No.	TOTAL POINTS		
1	Telex Operator, Head Quarters, U.I.C., Ottawa	1	205	1.1	1.3
1	Telex Operator, Head Quarters, U.I.C., Ottawa	1(T)	205	1.1	1.5
1	Telex Operator	2	185	2.1	2.4
1	Communicator, Message Centre, DND, Halifax	3	205	3.1	3.4
1	Communicator, Message Centre, DND, Halifax	3(T)	205	3.1	3.6
2	Communicator, Message Centre, Montreal Metro Office, M&I	4	298	4.1	4.4
2	Communicator, Message Centre, Montreal Metro Office, M&I	4(T)	298	4.1	4.6
2	Communicator, Tape Relay Centre, DND, Halifax	5	265	5.1	5.4
3	Communicator, Communications Centre, DSS	6	388	6.1	6.4
3	Comcentre Communicator, DND	7	388	7.1	7.6
4	Communicator, Marine-Aeradio Station	8	456	8.1	8.5
4	Communicator, Cryptocentre, DND	9	541	9.1	9.4
4	Communications Centre Communicator, EA	10	521	10.1	10.5
5	Control-Centre Communicator, Automatic Data Interchange System, MOT	11	589	11.1	11.5

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III-(d)

\*All page numbers refer to Part III.

Communications

LEVEL	DESCRIPTIVE TITLE	BMPD/ S of Q No.	TOTAL POINTS	BMPD PAGE No.*	S of Q PAGE No.*
5	Communicator, Montreal Weather Office, EC	12	569	12.1	12.6
5	Senior Communicator, Kuala Lumpur, EA	13	612	13.1	13.5
6	Supervisor, Headquarter Comcentre, MOT	14	730	14.1	14.5
6	Shift Supervisor, Communications Centre, EA	15	757	15.1	15.5
6	Supervisor, Tape Relay Centre, DND, Halifax	16	689	16.1	16.5
7	Chief Supervisor, Montreal Weather Office, EC	17	873	17.1	17.5
7	Chief Supervisor, Communications Centre, Canadian Embassy, Paris, EA	18	873	18.1	18.5

July 1976

III-(e)

\*All page numbers refer to Part III.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 1

Level: 1

Descriptive Title: TELEX OPERATOR,  
HEADQUARTERS,  
UNEMPLOYMENT INSURANCE COMMISSION,  
OTTAWA

Point Rating: 205

Summary

Under the supervision of the Supervisor, Mail and Coding Unit, operates Telex equipment to transmit and receive messages and performs related duties; such as, logging messages, sorting messages for subsequent distribution, and reporting equipment malfunctions to commercial carrier.

Duties % of Time

Transmits messages using Telex equipment

- by typing message on Telex keyboard to produce a perforated tape,
- by inserting tape into transmitter, dialing subscriber number, checking acknowledgement and actuating switch to start automatic transmission,
- by scanning automatic page print for accuracy and checking with original message, and 60
- by occasionally typing and transmitting directly on the Telex without the use of tape.

Receives, sorts and forwards messages for subsequent distribution

- by monitoring Telex receiver and removing original copies of messages,
- by soundex-coding and sorting messages, and
- by requesting clarification or repeat of unclear or garbled messages. 30

Performs related duties; such as, logging incoming and outgoing messages, amending directories and operating manuals, reporting equipment malfunctions to commercial carrier, and showing replacement or relief operators how to perform duties. 10

Specifications Degree Points

Skill and Knowledge

The work requires the ability to type on a Telex keyboard and operate ancillary equipment including perforator, page printer and transmitter, together with the ability 1 60

Degree Points

to maintain message logs and traffic statistics. The transmission of messages requires a knowledge of departmental communications operations and procedures, department organization, and instructions regarding the routine and format of messages.

#### Complexity

The work, involving standard incoming and outgoing message routines, is performed in accordance with established departmental procedures. Circuit difficulties and message discrepancies are reported to the commercial carrier.

A<sub>1</sub> 60

#### Consequence of Errors

Errors result in requests for repeats of messages causing minor delays in handling subsequent traffic.

1 10

#### Responsibility for Contacts

The work requires contacts with departmental officers and with message originators and addressees for the purpose of correcting and clarifying messages requiring tact and courtesy. Contacts with representatives of commercial carriers to report circuit malfunctions are also required.

1 10

#### Conditions of Work

Attention - The handling of high volumes of message traffic during frequently recurring peak periods requires sustained concentration and attentiveness.

2 30

Physical - Most of the work is performed while seated with short periods of walking or standing.

1 10

Environment - Duties are performed in an office environment.

1 10

#### Supervision

There is a requirement to show other employees how to perform duties for the purpose of temporary replacement or relief.

A<sub>1</sub> 15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS FOR

B.M.P.D. No. 1: TELEX OPERATOR, HEADQUARTERS,  
UNEMPLOYMENT INSURANCE COMMISSION, OTTAWA (CM-1)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in operating ancillary teleprinter equipment including a perforator, page printer and transmitter.   |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of instructions concerning the routing and format of messages. |
|-----------|--|

Abilities - Ability to log and sort incoming messages,  
and amend directories and manuals.

Personal Suitability - Alertness and dependability.

NOTE: The above example is for an experienced operator; see next page for an  
example of trainee requirements.



EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 1: TELEX OPERATOR,,HEADQUARTERS,I  
UNEMPLOYMENT INSURANCE COMMISSION, OTTAWA (CM-1)  
(For Selection of Trainees)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                     |   |
|-------------------------------------|---|
| Education                           | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills<br>or Aptitudes | - Skill in typing at a speed of at least 40 wpm with not more than a 5 percent error rate.  |
| Language Requirement                | - A knowledge of both the English language and the French language is essential for this position.  |

RATED REQUIREMENTS

- |                      |  |
|----------------------|--|
| Abilities            | - Ability to maintain message logs and traffic statistics. |
| Personal Suitability | - Alertness and dependability.                             |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 2

Level: 1

Descriptive Title: TELEX OPERATOR

Point Rating: 185

Summary

Under the supervision of the Administrative Officer transmits and receives messages via telex and performs related and clerical duties.

Duties

% of Time

Transmits plain-language messages

- by operating a Telex keyboard to produce a perforated tape,
- by inserting tape in transmitter, dialing subscriber number obtained from appropriate directory, and actuating switch to start automatic transmission,
- by monitoring transmission and comparing original copy with original message, and
- by occasionally typing and transmitting directly on Telex without the use of tape.

45

Receives, distributes, and relays messages

- by monitoring telex machine and removing tapes and original copies of incoming messages,
- by routing messages according to destination indicated in heading,
- by re-transmitting incorrectly received messages or other messages requiring relay,
- by relaying messages by telephone to Departmental or other offices not having Telex facilities, and
- by requesting clarification or repeat of unclear or garbled messages.

35

Performs other duties related to message transmission such as; logging messages, maintaining statistical records, filing original copies of messages or distributing copies to originators, operating a photocopier to produce copies of messages, and replacing paper, ribbons and tape in machine.

15

Occasionally performs clerical duties such as, amending manuals, filing, sorting mail, and typing letters, reports and other documents.

5

Specifications

Degree Points

Skill and Knowledge

The work requires: the operation of a Telex unit comprising a keyboard, page printer, perforator and a dial transmitter distributor; typing in accordance with established proficiency standards; the operation of a photocopier; the ability to change paper, ribbons and tape in the machine; and the ability to relay messages by telephone.

1 60

The transmission and receipt of messages requires a knowledge of message format and operating requirements utilizing a limited range of procedures. A knowledge of the names and locations of Departmental units and officials together with the names and locations of other organizations served by telephone relay is also required.

Complexity

Work is performed in accordance with instructions provided by Telex Directory, manuals and established Departmental procedures and guidelines. There is a requirement to recognize unclear or garbled messages to request retransmission and to recognize appropriate addressees from subject matter or content of message. On occasions when traffic is particularly heavy incumbent is required to determine transmission priority.

A<sub>1</sub> 60

A limited number of procedures are required in the operation of telex and photocopy equipment; in logging, filing and distributing messages; in maintaining traffic records; and in replacing paper, ribbons and tape in machine.

Consequence of Errors

Errors, comprising incomplete, incorrect or misdirected messages, are normally detected during transmission or by the originators or addressees and result in requests for retransmission or clarification and cause minor delay and inconvenience.

1 10

	Degree	Points
Responsibility for Contacts		
Contacts are normally with officials of own or user departments to receive and transmit messages or to provide information relative to such messages requiring tact and courtesy.	1	10
Conditions of Work		
Attention - The work requires normal attentiveness in operating telex and photocopy equipment with concentrated attention required during periods of heavy traffic.	1	10
Physical Effort - The major portion of the work is performed while seated with intermittent periods of standing and walking.		10
Environment - Duties are performed in an office environment.	1	10
Supervision		
The incumbent is required to show other employees how to perform duties for leave or temporary replacement purposes.		15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR  
B.M.P.D. No. 2: TELEX OPERATOR (CM-1)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wmp with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |
| Experience                       | - Experience in operating ancillary teleprinter equipment including a perforator, page printer and transmitter.   |

RATED REQUIREMENTS

- |                      |  |
|----------------------|--|
| Knowledge            | - Knowledge of message format and operating procedures.                    |
| Abilities            | - Ability to log messages, maintain statistical records and file messages. |
| Personal Suitability | - Alertness and dependability.   |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 3

Level: 1

Descriptive Title: COMMUNICATOR,  
MESSAGE CENTRE,  
DEPARTMENT OF NATIONAL DEFENCE,  
HALIFAX

Point Rating: 205

Summary

Under the supervision of a shift supervisor in a message centre, transmits messages by teletype to a relay centre for onward transmission through a major network; processes incoming messages; and performs related duties.

Duties

% of Time

Transmits messages by teletype

- by typing directly on the keyboard of a teletypewriter to produce perforated tape, and
- by inserting tape in the slot of the appropriate transmitter-distributor for automatic transmission.

80

Processes incoming messages appearing automatically on a combination teleprinter and reperforator

- by taking tape from machine,
- by scanning messages on printed copy and perforated tape for accuracy, completeness and sequence of message numbers,
- by sorting messages according to precedence's and classifications,
- by recording their receipt on check sheets, and
- by reserving tape required for extra copies and for correcting garbled messages.

15

Performs related duties such as checking outgoing messages for clarity and authorization, performing accompanying clerical routines and replacing paper, ribbons and tape in teletype machines, perforators and reperforators as required.

5

Specifications	Degree	Points
<p>Skill and Knowledge</p> <p>The work requires a knowledge of common communications terminology, message format and operating requirements for sending and receiving traffic in a message centre utilizing a limited range of procedures. The incumbent also requires a knowledge of the Murray code to read addressees and to verify security warning prosigns. It requires the ability to type on a teletypewriter keyboard in accordance with established proficiency standards and to operate perforators, reperforators and transmitter distributors.</p>	1	60
<p>Complexity</p> <p>The work is done in accordance with precise and detailed instructions and follows standardized work routines. Guidance is immediately available from a supervisor, to whom complicated or difficult messages and operational problems are referred. The work includes performing normal incoming and outgoing message routines, following departmental operating procedures and operating standard sending, receiving and duplicating equipment.</p>	A <sub>1</sub>	60
<p>Consequence of Errors</p> <p>Errors in perforating tape, omissions and misdirection are normally detected by addressees, result in requests to repeat individual messages, and cause minor delay.</p>	1	10
<p>Responsibility for Contacts</p> <p>The work requires contact with message originators and other communicators to give and obtain information.</p>	1	10
<p>Conditions of Work</p> <p>Attention - The work requires normal attention to details in the transmission of messages with periods of concentrated attention while scanning incoming traffic.</p>	1	10

	Degree	Points
Physical Effort - The large portion of the work is performed while seated, but some periods of standing are required to monitor incoming messages, operate duplicating equipment, and sort messages.	1	10
Environment - The work is performed in a tele-communications machine room where operating and security measures require separation from other organizational units but not from other communications staff.	2	30
Supervision		
The work requires occasional demonstration of work methods and procedures to communicators in training.	A <sub>1</sub>	15



EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 3: COMMUNICATOR, MESSAGE CENTRE,  
DEPARTMENT OF NATIONAL DEFENCE, HALIFAX (CM-1)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40` wpm with not more than a 2 percent error rate.                                     |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |
| Experience                       | - Experience in operating ancillary teleprinter equipment including a perforator, reperforator and a transmitter distributor.                                     |

RATED REQUIREMENTS

- |           |   |
|-----------|---|
| Knowledge | - Knowledge of communications terminology, and message formats. |
|-----------|---|

Abilities - Ability to check, sort and file messages.

Personal Suitability - Dependability, and alertness.

NOTE: The above example is for an experienced operator; see next page  
for an example of trainee requirements.

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 3: COMMUNICATOR, MESSAGE CENTRE,  
DEPARTMENT OF NATIONAL DEFENCE, HALIFAX (CM-1)  
(For Selection of Trainees)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in typing at a speed of at least 40 wpm with not more than a 5 percent error rate.  |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |

RATED REQUIREMENTS

- |                      |   |
|----------------------|---|
| Abilities            | - Ability to check, sort and file messages. |
| Personal Suitability | - Dependability and alertness.              |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 4

Level: 2

Descriptive Title: COMMUNICATOR, MESSAGE CENTRE,  
MONTREAL METRO OFFICE,  
MANPOWER AND IMMIGRATION

Point Rating: 298

Summary

Under the supervision of the Message Centre Supervisor operates Telex and teletype equipment to receive, transmit and relay messages; and performs related duties.

Duties

% of Time

Operates Telex and teletype equipment to receive and transmit messages over commercial and dedicated facilities and to relay messages to and from Metro outstations, mainly Canada Manpower Centres, which have only teletype capability

- by scanning original copy of incoming messages for garble, completeness, misdirection, and sequence of message numbers,
  - by initiating or replying to service messages regarding garbled transmissions and other message irregularities,
  - by recording receipt of incoming messages and sorting messages according to precedence and classification,
  - by passing messages to appropriate distribution point for delivery,
  - by processing outgoing messages according to priority or time of reception,
  - by preparing perforated tape for Telex transmissions or by "on-line" typing to transmit messages by teletype to one or more outstations, following the various formats specified for different types of messages such as, orders cancellations, general messages, radio advertisements and press releases,
  - by re-typing and re-transmitting messages received via Telex or teletype which require relay over the other media,
  - by receiving and transmitting messages on behalf of other departments such as, the Department of the Environment and the Department of Indian Affairs, and
- 90

% of Time

- by relaying misdirected messages to appropriate specialized placements units, utilizing a basic knowledge of occupational groupings and the activities of the respective units, or by raising service messages to advise originating stations of correct station addresses or unit functions.

Performs related duties such as; logging incoming and outgoing messages to facilitate subsequent enquiries or tracing actions, reporting circuit and equipment irregularities to commercial carriers, compiling daily-traffic statistics, and operating duplicating equipment to make additional copies of messages.

10

Specifications

Degree Points

Skill and knowledge

The work requires the ability to type on both off-line Telex and on-line teletype keyboards and to operate ancillary equipment such as reperforators, transmitters and a photocopier.

The transmission of messages requires a knowledge of common communications terminology, various message formats, and the operating requirements for receiving, transmitting and relaying messages by Telex and teletype. The work requires a good knowledge of the Manpower organization in the Metro area including the functions of specialized placement units. A knowledge of the requirements for the transmission of messages on behalf of other departments is also required.

2

108

Complexity

The work is performed in accordance with detailed instructions and follows standardized work routines. Guidance is immediately available from a supervisor, to whom complicated or difficult messages and operational problems are referred. The work involves the operation of off-line Telex and on-line teletype keyboards, and ancillary equipment. The incumbent is required to determine the priority of outgoing messages, clarify garbled and improperly addressed messages, and relay messages to specialized units using basic knowledge of occupational groupings and unit functions.

A<sub>2</sub>

105

Degree Points

Consequence of Errors

Errors in perforating tape or in typing directly on teletype, omissions and misdirection are normally detected by addressees, result in requests to repeat individual messages and cause minor delays. 1 10

Responsibility for Contacts

Contacts are with originators or addressees of messages to give and obtain information requiring tact and courtesy, and with commercial suppliers to report equipment irregularities. 1 10

Conditions of Work

Attention - The work requires normal attention to the performance of routines for the transmission of messages with concentrated attention required during peak periods of traffic. 1 10

Physical Effort - Most of the work is performed while seated with short period of walking or standing. 1 10

Environment - Duties are performed in a machine-room environment with a high noise level, which is segregated from other work areas due to operational requirements. 2 30

Supervision

The work requires the occasional demonstration of work methods and procedures to communicators in training. A<sub>1</sub> 15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 4: COMMUNICATOR, MESSAGE CENTRE,  
MONTREAL METRO OFFICE,  
MANPOWER AND IMMIGRATION (CM-2)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in operating ancillary tele printer equipment such as a reperforator transmitter, and a photocopier.   |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of communications terminology and message formats. |
|-----------|--|

- Knowledge of local departmental functions and organizations structure.

Abilities

- Ability to check message contents for garble, completeness, misdirection and message number sequence.

- Ability to compile message traffic statistics.

Personal Suitability

- Tact and courtesy particularly in dealing with departmental personnel and commercial suppliers.

- Alertness and reliability.

NOTE: The above example is for an experienced operator; see next page for an example of trainee requirements.



EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 4: COMMUNICATOR, MESSAGE CENTRE, MONTREAL METRO OFFICE,  
MANPOWER AND IMMIGRATION (CM-2)  
(For Selection of Trainees)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in typing at a speed of at least 40 wpm with not more than a 5 percent error rate.  |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |

RATED REQUIREMENTS

- |                      |   |
|----------------------|---|
| Abilities            | - Ability to record message traffic statistics. |
| Personal Suitability | - Alertness and reliability.                    |

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 5

Level: 2

Descriptive Title: COMMUNICATOR, TAPE RELAY CENTRE,  
DEPARTMENT OF NATIONAL DEFENCE,  
HALIFAX

Point Rating: 265

Summary

Under supervision of shift supervisor, relays messages over a teletype communications network, and performs related duties such as; preparing additional tapes for multiple addressees, correcting tapes, logging traffic, and replacing rolls of tape in reperforators.

Duties

% of Time

Relays messages over teletype communications network

- by checking messages emerging from 18 incoming circuits for garbles, errors and misrouting,
- by requesting repeat of garbled messages,
- by checking number sequence, noting routing indicators and priority on incoming tapes,
- by placing tapes in designated location on routing board for retransmission, and
- by inserting tapes into appropriate transmitters of 18 outgoing circuits, taking into account priorities, time of receipt, routing and security classification and referring to a "State Board" as necessary when relaying messages for ships and mobile forces.

60

Prepares additional tapes required for multiple-addressee messages

- by determining number and distribution of tapes from message heading,
- by inserting original tape in transmitter of Routing Line Segregator and actuating appropriate switches, and
- by removing copies of tape and placing them in designated locations for re-transmission.

10

Repairs tapes by operating keyboard of teletypewriter to correct garbles, insert omissions or make other changes.

10

Performs related duties such as; logging messages to

	% of Time			
facilitate tracing action, making periodic channel checks to ensure circuits are functioning properly, and replacing tapes, ribbons and paper rolls in machines.	20			
Specifications	Degree	Points		
Skill and Knowledge				
The work requires the ability to operate a teletypewriter keyboard to repair tapes, the ability to operate reperforators, page printers, and transmitters associated with 36 circuits together with the operation of a Routing Line Segregator. The ability to change tapes, ribbons and paper in machines is also required.	1	60		
The relaying of messages requires a knowledge of departmental procedures relating to message, routing, precedence and security. The work also requires a knowledge of the Murray Code to read addressees, and a knowledge of the "State Board" to re-transmit messages for ships and mobile forces.				
Complexity				
The work is done in accordance with detailed instructions and normally consists of repetitive operations. Guidance is immediately available from the supervisor on the resolution of problems. The work requires the operation of reperforators, reperforators, page printers and transmitters associated with 18 incoming and 18 outgoing circuits, together with the operation of a Routing Line Segregator to prepare additional tapes.	A <sub>1</sub>	60		
Consequence of Errors				
Errors result in repeats of traffic causing minor delays in the relay or in the U.K., U.S., or NATO transfer circuits.	1	10		

	Degree	Points
Responsibility for Contacts		
Contacts are with comcentre or other relay centre personnel to clarify garbles, rectify number discrepancies, and answer traffic inquiries requiring tact and courtesy.	1	10
Conditions of Work		
Attention - The work requires close attention for extended periods to clear heavy traffic through the relay centre.	2	30
Physical Effort - The monitoring and relay of messages necessitates constant standing and walking.	3	50
Environment - The work is performed in a machine room environment with 36 circuits creating a high noise level. Work area is separated from other areas due to operational and security requirements.	2	30
Supervision		
The work requires occasional demonstration of work methods and procedures to new communicators.	A <sub>1</sub>	15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 5: COMMUNICATOR, TAPE RELAY CENTRE,  
DEPARTMENT OF NATIONAL DEFENCE, HALIFAX (CM-2)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40: .wpm with not more than a 2 percent error rate.                                    |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |
| Experience                       | - Experience in operating ancillary teleprinter equipment such as reperforators, page printers, and transmitters.   |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of departmental procedures relating to message routing, precedence and security. |
|           | - Knowledge of the Murray Code.  |

Abilities

- Ability to select appropriate transmitters for relaying messages.

- Ability to repair tapes and make channel checks.

Personal Suitability

- Tact and courtesy particularly in dealing with relay centre personnel.

- Reliability and alertness.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 6

Level: 3

Descriptive Title: COMMUNICATOR, COMMUNICATIONS CENTRE,  
HEADQUARTERS,  
DEPARTMENT OF SUPPLY AND SERVICES

Point Rating: 388

Summary

Under supervision receives, transmits and relays messages on Telex and teletype equipment in both the main and satellite communications centres and performs related duties.

Duties

Z of Time

Receives messages for addressees in both the Ottawa/Hull and Port Credit/Toronto Regional Offices by **teletype**, Telex and by commercial telegram and cable

- by checking incoming messages for completeness, garbles and misrouting,
- by removing messages from appropriate circuit and date/stamping message using automatic machine,
- by attaching perforated tapes to page copies when messages require retransmission to sub-offices, and
- by passing messages requiring retransmission to appropriate circuit or placing messages requiring delivery in distribution basket.

30

Transmits and relays messages to addressees in Canada, United States and overseas using Telex, teletype circuits, commercial telegram and cable, and by Canadian Forces Communications Network, and External Affairs Network, by tieline

- by checking the message to ensure that it is signed by the originator and that the text is complete and legible,
- by determining the most expeditious and economical means of transmission including teltex and commercial telegrams consistent with the degree of precedence specified by the originator referring to such source material as Department of National Defense Routing Publications and Telex Directories,
- by recording on each single or multiple address message a reference number using a manually operated numbering machine,

60

% of Time

- by operating a Telex or teletype keyboard to transcribe messages onto a perforated tape employing procedures and format specific to the mode of transmission or to the relaying agency,
- by placing tape in Telex or teletype transmitter and activating the transmitter to send messages,
- by proofreading message during transmission against the originators typed copy and making necessary corrections,
- by attaching file copy to original message and filing in numerical sequence, and
- by passing original page copy of message to distribution clerk for return to originator.

Performs related duties such as; logging incoming and outgoing messages, compiling and verifying daily traffic summary sheets, amending publications including unclassified publications issued by Department of National Defense, answering telephone queries regarding incoming and outgoing messages, consulting with originators concerning special instructions for the delivery of messages, operating patching equipment to replace faulty equipment or connect reperforating equipment when necessary to obtain tapes of incoming messages and relieving as operator in either of two subsidiary stations located in separate buildings.

10

Specifications

Degree Points

Skill and Knowledge

The work requires the knowledge of and ability to operate Telex and teletype equipment including perforators, reperforators, page printers, transmitters and a circuit switching panel. The work requires a knowledge of departmental communications procedures and instructions relating to priority, routing of messages and message formats by Telex and teletype. It also requires a knowledge of the formats and procedures of Department of National Defense and External Affairs communications systems to effect the correct relay of messages.

2 108



	Degree	Points
<p>Complexity</p> <p>The work is performed in conformity with detailed methods and procedures. Normally, operational problems such as machine malfunctions, circuit difficulties and message discrepancies are referred to the supervisor. As work is checked from the printed copy only after the message has been transmitted, there is a responsibility for ensuring the accuracy of messages to prevent repeat transmissions or rejections by the relaying agencies. During rotational duty at subsidiary stations where work is done without direct technical supervision, there is a requirement to determine whether messages should be sent by teletype, Telex, telegram, cable or telephone and how they should be routed to provide fast and economical service. The incumbent is responsible for the operation of Telex and teletype equipment associated with 14 circuits.</p>	B <sub>2</sub>	155
<p>Consequence of Errors</p> <p>Errors result in incomplete, incorrect and misrouted messages, necessitating requests for repeats of message and cause minor delays.</p>	1	10
<p>Responsibility for Contacts</p> <p>Contacts are with originators or addressees to amend or clarify messages.</p>	1	10
<p>Conditions of Work</p> <p>Attention - The work requires sustained concentration and attentiveness in handling high volumes of message traffic during peak periods, which occur frequently.</p> <p>Physical Effort - Some of the work is done while seated but there are long periods of standing or walking while accepting, routing, transmitting and distributing messages and monitoring incoming transmissions.</p> <p>Environment - The work is performed in a machine room environment with a high noise level.</p>	2 2 2	30 30 30
<p>Supervision</p> <p>There is the occasional requirement to show other employees how to perform duties.</p>	A <sub>1</sub>	15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS FOR

B.M.P.D. No. 6: COMMUNICATOR, COMMUNICATIONS CENTRE, HEADQUARTERS,  
DEPARTMENT OF SUPPLY AND SERVICES (CM-3)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |  |
|----------------------------------|--|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievements of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                       |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.   |
| Experience                       | - Experience in operating auxiliary tele printer equipment such as perforators, reperforators, page printers, transmitters and circuit switching panels.           |

RATED REQUIREMENTS

- |           |   |
|-----------|---|
| Knowledge | - Knowledge of departmental communications procedures and instructions relating to priorities, message routing and message formats. |
|-----------|---|

- Knowledge of the Department of National Defense and the Department of External Affairs communications systems.

Abilities

- Ability to determine methods and routes by which messages should be sent.
- Ability to record and check message traffic statistics and amend publications.
- Ability to maintain appropriate records.

Personal Suitability

- Tact and courtesy particularly in dealing with originators and addressees concerning the amendment and clarification of messages.
- Thoroughness and good judgment.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 7

Level: 3

Descriptive Title: COMCENTRE COMMUNICATOR,  
DEPARTMENT OF NATIONAL DEFENSE

Point Rating: 388

Summary

Under supervision of a shift supervisor transmits and receives messages and performs associated duties such as; logging messages, assigning routing codes, allocating internal distribution, duplicating messages for primary and secondary distribution, filing copies of messages, and taking and passing messages by telephone, on a rotational basis.

Duties

% of Time  
Rotational\*

Logs and routes messages requiring transmission

- by recording each message on control sheet, date/time stamping messages and annotating messages with station serial number,
- by checking messages for precedence, security classification and releasing officer's signature, sorting messages according to precedence, and tagging priority messages,
- by assigning correct Routing Codes as indicated by single, multiple or collective addresses or general message, and
- by determining whether messages require encoding and transmission over classified circuits in accordance with instructions provided by instruction manuals.

Transmits messages over six high-speed circuits

- by typing messages on keyboard of teletypewriter to produce perforated tape according to Departmental or International format,
- by inserting tape in page printer to produce a copy and verifying copy to original message,
- by aligning tape in the transmitter-distributor head of the appropriate circuit,
- by automatically or manually transmitting such identifying information as; channel identification, log station serial number, precedence, and operator's number, and
- by actuating switch to start automatic transmission of message.

Receives incoming messages and determines internal distribution

- by monitoring original copies of incoming messages off six high-speed circuits for garble, completeness, routing and security violations,
- by notifying supervisor of receipt of special priority messages, receipt of classified messages on unclassified circuits, and circuit interruptions,
- by segregating incoming messages according to priority,
- by indicating internal distribution on each message, referring to message instructions, analyzing message content and subject matter, or using message distribution directory as applicable, and
- by passing messages requiring relay to the transmitting area.

Monitors outgoing messages preparatory to transmission for errors and breaches of security

- by producing an original copy of message from perforated tape using page printer,
- by checking the monitor copy against the original for discrepancies, breaches of security or other mishandling, and
- by attaching tape to message and passing message to transmit position.

Maintains comcentre message files

- by filing monitor copy and original message in numerical sequence in accordance with intra-office instructions,
- by filing incoming messages according to date or date-time group as appropriate, and
- by transferring copies of incoming messages to special storage at specified intervals.

Reproduces copies of messages according to specific instructions layed down in intra-office procedural manual

- by operating photocopy equipment to produce specified number of copies, and
- by making minor adjustments to and cleaning photocopy equipment.

Sorts messages according to intra-office instructions regarding priority and handling

- by separating distribution and file copies,

% of Time  
Rotational\*

- by marking individual copies to indicate the destined directorate, office or section,
- by placing the messages in pigeon holes, wallets, or tubes as applicable,
- by logging high precedence traffic on appropriate log sheet and passing to Duty Officer during silent hours, and
- by preparing outgoing mail.

Receives and delivers messages over telephone

- by assisting originators in assigning proper message addresses using knowledge of Allied Communication Publications,
- by replying to queries from message addressees, and
- by maintaining relevant log sheet for incoming and outgoing phonograms.

\* NOTE: This statement describes eight duties. The incumbents of positions may be assigned to perform any of these duties within a shift. The time devoted to each duty varies in accordance with priorities for work.

Specifications

Degree Points

Skill and Knowledge

The work requires the operation of teletypewriters and ancillary equipment such as; teleprinters, reperforators, transmitter-distributors and photocopy equipment utilizing a limited range of procedures, together with the ability to type in accordance with established proficiency standards. The incumbent is also required to read perforated tapes (Murray Code) to verify security warning prosigns. The receipt and transmission of messages require a knowledge of departmental, inter-departmental, commercial, and inter-service procedures, including the Commonwealth, U.S., and NATO communications procedures and their demands on the comcentre operation, involving such aspects as; routing, security, priority, distribution, and special handling.

2 108

Complexity

The work is performed in accordance with defined methods and procedures. Normally circuit difficulties and message discrepancies are referred to the supervisor. However, the

Degree Points

volume of traffic handled and the necessity to perform diverse duties often requires the selection of procedures and courses of action for the resolution of operational problems without reference to the supervisor. The work requires the operation and surveillance of teletypewriters and ancillary equipment associated with **six** incoming and six outgoing circuits. The work also entails the assigning of Routing Codes as indicated by single, multiple or collective addresses, sorting messages according to precedence, and determining whether messages require encoding and transmission over classified circuits. The incumbent is also required to perform a variety of other duties essential to the operation of a large comcentre including logging messages, assigning distribution to incoming messages, operating photocopy equipment, filing comcentre copies of messages, and receiving and passing messages by telephone.

B<sub>2</sub> 155

#### Consequence of Errors

Errors in the addressing or routing procedures can result in incorrect handling and minor delays in processing and transmission.

1 10

#### Responsibility for Contacts

Contacts are with originators and addressees to receive and transmit messages, clarify messages, and to provide relative information, requiring tact and courtesy.

1 10

#### Conditions of Work

Attention - The work requires sustained concentration and attentiveness in handling high volumes of traffic during frequently recurring peak periods.

2 30

Physical Effort - The work is performed on a rotational basis necessitating extended periods of sitting, standing or walking.

2 30

	Degree	Points
Environment - Duties are performed in a machine room environment with a high noise level, which is segregated from other work areas due to operational and security requirements.	2	30
Supervision		
Limited supervision is required when performing monitoring duties. Assists new employees in performance of their duties.	A <sub>1</sub>	15



EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 7: COMCENTRE COMMUNICATOR  
DEPARTMENT OF NATIONAL DEFENCE (CM-3)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in operating auxiliary teleprinter equipment including teleprinters, reperforators, transmitter-distributors and photocopiers.                       |

RATED REQUIREMENTS

- |           |   |
|-----------|---|
| Knowledge | - Knowledge of departmental, inter-departmental, commercial and inter-service message procedures. |
|           | - Knowledge of the Murray Code.   |

Abilities

- Ability to identify and resolve operational problems,

- Ability to assign Routing Codes.

- Ability to maintain files and compile message statistics.

Personal Suitability

- Tact and courtesy particularly in dealing with originators and addressees to amend and clarify messages and to provide information.

- Initiative and judgment.

- Work effectively under pressure of peak traffic conditions.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 8

Level: 4

Descriptive Title: COMMUNICATOR,  
MARINE-AFRADIO STATION

Point Rating: 456

Summary

Under supervision of the shift supervisor transmits, receives and relays: operational messages relating to air-traffic safety and control, and marine-radio-station activities, administrative messages on behalf of several government departments, CN/CP paid commercial messages, and coded meteorological data between different communications systems; extracts pertinent data from incoming messages for local requirements and performs related duties.

Duties

% of Time

Transmits: messages related to air-traffic safety and control, and marine-radio-station fixed activities; administrative messages on behalf of several government departments; CN/CP domestic and international messages; and coded weather information; over integrated domestic and international networks, the national meteorological network, the national telex system, and over local circuits

- by typing on standard communications, meteorological and telex keyboards to produce 5 and 8 level perforated tapes in accordance with specific formats,
- by inserting tapes in appropriate transmitter, working to rigid time schedules when transmitting meteorological data,
- by checking original copy during transmission to ensure correct routing, message-number sequence, and conformity with text of original message, and
- by date stamping and filing copies of message transmissions.

10

Receives messages for re-transmission or for local delivery

- by monitoring incoming messages to detect garbling, ensure correct number sequence, and to determine priority and address,
  - by removing printed copies and tapes according to priority, recording message numbers, time stamping and distributing or relaying as required,

40

of Time

- by verifying word counts of commercial traffic to determine message charges, and
- by selecting appropriate undressed messages and weather information for local requirements.

Relays messages

- by examining location indicators on tapes or page copies to ascertain message destination,
- by determining the correct outgoing circuits, from memory or by reference to station-routing list,
- by inserting tape in transmitter, or perforating and transmitting additional tapes where routing requires such action, and
- by scanning incoming undressed weather data and relaying to appropriate circuits as required.

35

Performs related duties such as; originating and replying to service messages relative to number discrepancies and to lost, miss-routed and mutilated messages, notifying supervisor of circuit and equipment failures and outages so that corrective action may be taken, maintaining message logs, and performing minor maintenance on equipment.

15

Specifications

Degree Points

Skill and Knowledge

The work requires the ability to operate standard communications, meteorological and Telex keyboards and ancillary equipment such as reperforators, page printers, transmitters and tape translators.

A general knowledge of departmental telecommunications operations is required together with a thorough knowledge of the formats and circuit procedures specified by the International Civil Aviation Organization and by Marine Telecommunications. A knowledge of the various procedures and formats used in the transmission of meteorological data, CN/CP commercial messages, Notices to Airmen, and administrative and service messages is also a requirement of this position. The work requires subject matter knowledge sufficient to select appropriate undressed messages and weather information for local requirements and to recognize inaccuracies and request corrections.

3

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Complexity

The work is performed in conformity with methods and procedures which are detailed in the operating manuals of the department and which govern the transmission and receipt of messages on Canadian and International circuits. Though the work is normally done under supervision, the volume of traffic and the need for quick transmission often preclude obtaining advice or referring to manuals to select procedures and resolve diverse problems. There is a requirement to divert traffic to alternate circuits, answer queries and institute tracing action. Some of the work such as meteorological data transmission is performed according to extremely tight schedules. The work requires the operation and surveillance of Telex and teletype equipment associated with 9 circuits including perforators, reperforators, printers, transmitters and tape translators.

B<sub>2</sub> 155

Consequence of Errors

Errors in addressing or routing procedures can result in delays in the delivery of traffic to destinations and disrupt the scheduling of traffic in other message centres.

2 30

Responsibility for Contacts

Contacts are normally with other stations by telecommunications media to trace, amend, or request repeats of messages.

1 10

Conditions of Work

Attention - The requirement for accurate preparation and transmission of messages, rigid schedules, the need to monitor a variety of equipment, and heavy flow of traffic with frequent peak periods, require sustained concentration and attentiveness.

2 30

Physical Effort - The work, involving the operation of 20 pieces of equipment, requires long periods of standing and walking.

2 30

	Degree	Points
Environment - The work is performed in a machine room environment with a high noise and heat level.	2	30
Supervision		
The work occasionally requires showing newly assigned communicators how to perform duties.	A	15

1

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 8: COMMUNICATOR, MARINE-AERADIO STATION (CM-4)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |
| Experience                       | - Experience in operating ancillary teleprinter equipment including a perforator, page printer and transmitter.   |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of departmental telecommunications operations.   |
|           | - Knowledge of the formats and procedures used for air, marine and meteorological data transmission. |

Abilities

- Ability to select appropriate transmitter.
  
- Ability to monitor incoming messages.
  
- Ability to recognize message inaccuracies and request corrections.
  
- Ability to select appropriate undressed messages and weather information for local requirements.

Personal Suitability

- Tact and courtesy particularly in contacting other stations to trace, amend or repeat messages.
  
- Initiative and judgment.
  
- Work effectively under pressure of peak traffic loads.



BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 9

Level: 4

Descriptive Title: COMMUNICATOR, CRYPTOCENTRE,  
DEPARTMENT OF NATIONAL DEFENCE

Point Rating: 541

Summary

Under the supervision of a Shift Supervisor, ciphers, decipherers, transmits, receives, duplicates and distributes classified messages.

Duties

% of Time

Ciphers and transmits classified messages on an integrated national and international network

- by assigning correct routing codes as indicated by single, multiple or collective addresses,
- by selecting appropriate cryptographic system and varying associated teletype format to be used in encoding messages,
  - by typing on various cryptographic machines to produce an encoded version of message,
- by operating a teletype keyboard to produce a perforated tape of encoded message, and
- by inserting tape in transmitter head and actuating switch to start automatic transmission of message.

50

Receives and decipherers messages

- by removing page copy and perforated tape from teletype machine,
- by typing on various cryptographic machines to decode message,
- by removing decoded tape from monitor reperforator and inserting tape in transmitter distributor if message requires onward transmission, and
- by passing copies of message for local addressees to duplicating position.

45

Performs other duties such as operating photocopiers to produce additional copies of messages according to specific procedural instructions; sorts copies of messages for distribution; and files commenter copies of messages.

5

Specifications

Degree Points

Skill and Knowledge

The work requires the ability to operate a teletypewriter keyboard and ancillary equipment, photocopiers, and a

3

156

variety of cryptographic equipment. The operation of complex cryptographic equipment requires a high degree of accuracy.

A thorough knowledge of departmental, interdepartmental and world-wide communications, operations and procedures, including all Allied and NATO Communications Publications, is required together with a knowledge of all cryptographic equipment including security and departmental administrative publications.

#### Complexity

The work is performed in accordance with standards and procedures relating to message encryption, transmission, handling and distribution contained in Departmental, Allied and NATO communications publications. Initiative and judgment are required in selecting coded routing indicators to ensure messages arrive at correct destinations, and in selecting the appropriate cryptographic system and teletype format. The transmission of classified traffic requires the operation of complex cryptographic and the complete range of teletype equipment. Responsibility for checking rests with each communicator when encoding, perforating, monitoring and transmitting to prevent security violations.

B<sub>3</sub> 200

#### Consequence of Errors

Errors in perforating tapes and selecting teletype formats result in incomplete or incorrect messages, lost messages and misdirection of messages necessitating, requests for repeats of transmission and minor circuit delays. Cryptographic errors result in delays in processing, and possible breaches of cryptographic and transmission security jeopardizing the transmission of classified information.

2 30

#### Responsibility for Contacts

Contacts are with users of cryptocentre to clarify or amend messages and advise on their preparation and ultimate disposal.

1 10

Degree Points

Conditions of Work

Attention - The work involves the continuous ciphering and deciphering of messages and therefore requires concentration and attention to attain a high degree of accuracy essential to this operation. 3 50

Physical Effort - The work requires moderate physical effort with long periods of standing or walking. 2 30

Environment - The work is performed in a machine room environment isolated from other work areas and other communications staff due to top security requirements. 3 50

Supervision

Assists new employees in the performance of their duties and has limited supervisory responsibility while employed on checking duties. A<sub>1</sub> 15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 9: COMMUNICATOR, CRYPTOCENTRE,  
DEPARTMENT OF NATIONAL DEFENCE (CM-4)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in operating ancillary teleprinter equipment.  |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of departmental, inter-departmental and world-wide communications operations and procedures. |
|-----------|--|

Abilities

- Ability to select coded routing indicators,  
and teletype formats.

- Ability to check encoding, perforating,  
monitoring and transmitting to ensure  
messages meet security requirements.

Personal Suitability

- Initiative and judgment.

- Tact and courtesy particularly in  
dealing with users of the cryptocentre.

- Work effectively under pressure of peak  
traffic conditions.

DESIRABLE QUALIFICATIONS

- Experience in operating cryptographic  
equipment.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 10

Level: 4

Descriptive Title: COMMUNICATIONS CENTRE COMMUNICATOR,  
EXTERNAL AFFAIRS, OTTAWA

Point Rating: 521

Summary

Under the supervision of a Shift Supervisor, ciphers and deciphers classified messages, and receives, transmits, relays and duplicates classified and unclassified messages on behalf of officials of own and user departments and agencies; these and other related duties are performed on a rotational basis in Ottawa.

Duties

% of Time

Ciphers classified messages using off-line cryptographic equipment and manual cipher systems to render classified information secure for transmission

- by typing the classified message on keyboard of teletypewriter to produce plain-language perforated tape,
- by inserting tape into page printer and comparing original copy to original message,
- by operating off-line cryptographic equipment which employs one-time keying material following prescribed format and procedures, or
- by selecting proper One-Time-Pad and basic cipher book, ciphering message employing specified mathematical process and typing ciphered message onto perforated tape, and
- by delivering ciphered message to appropriate circuit for transmission.

35

Deciphers classified messages

- by selecting proper One-Time-Pad to be used in conjunction with the basic decipher book and applying specified mathematical process,
- by typing on teletypewriter keyboard to produce original copy of messages and tapes if onward transmission is required, or
- by selecting proper keying material to be used with incoming, ciphered perforated tape; operating cryptographic equipment that automatically decodes message; and producing original copy for distribution and if required a plan-language perforated tape.

30

Transmits and receives classified messages over on-line cipher equipment and unclassified messages by teletype and telex

- by typing message onto perforated tape and inserting tape in appropriate transmitter,
- by removing incoming perforated tape from machine, checking the number sequence and precedence, and scanning the tape for garbles and requesting repetition as necessary,
- by producing original copy on page printer for duplication and delivery to addressees, and
- by transferring tape to appropriate circuit for further relay.

30

Performs other duties such as: operating photocopiers to produce copies of messages for file, originator and secondary distribution; filing copies of messages; maintaining appropriate circuit log sheets; recording cryptographic material consumed during operation; performing communicator duties in satellite comcentres in Ottawa on a rotational basis; replacing tape, paper and ribbons in machines; ensuring that press-service teleprinters are functioning properly; performing messenger duties in emergency situations; and occasionally setting-up on-line cryptographic equipment.

5

Specifications

Degree Points

Skill and Knowledge

The work requires the ability to operate telex, teletype and ancillary equipment, photocopiers, and to employ manual and mechanical cryptography. It also requires the ability to recall from memory a large number of authorized abbreviations, call signs and procedures related to both the cryptographic and transmission facilities employed in the comcentre.

3

156

The work requires a knowledge of departmental organizations and administration and a good knowledge of departmental communications systems and capabilities. It also requires a good knowledge of local procedures in satellite comcentres operated on behalf of other departments and agencies. A good knowledge of world-wide routing, time zones, and alternative means of transmission is also required.

Complexity

The work is performed in accordance with operating and procedural instructions contained in several cryptographic and telecommunications manuals as well as local procedures which are frequently subject to change to meet specific requirements. Initiative and judgment are required in the application of telecommunications procedures, the close scheduling of transmissions via leased circuit and telex facilities, and the designation of routings and relay points in accordance with precedence, address and time zone factors. The processing of a large volume of classified and unclassified messages within a complex international network necessitates the use of on-line, off-line, and manual cryptographic systems, the operation of perforators, reperforators, page printers, transmitters and photocopiers. The incumbent is required to perform a variety of duties, in rapid succession, to make the most effective use of telecommunication facilities necessitating the scheduling of the various phases of message processing, transmission, relay and distribution.

B3 200

Consequence of Errors

Errors in routing or in applying procedures can result in incorrect handling, delays in processing and transmission or incorrect delivery causing repeats of traffic and minor delays. Errors in cryptography result in garbling of remaining transmission requiring re-encryption and re-transmission of complete message and possible cryptographic compromise.

2 30

Responsibility for Contacts

Contacts are with other comcentres in the network to request message confirmation, repeats, acknowledgements and recapitulations. There is the occasional requirement to answer general enquiries from the public requiring tact and courtesy.

1 10



	Degree	Points
Conditions of Work		
Attention - The work requires sustained concentration and attention in handling high volumes of messages and in applying a variety of procedures in the operation of cryptographic systems and transmission facilities.	2	30
Physical Effort - Operating and monitoring a large number of teletype and cryptographic machines involves constant walking and standing and requires considerable physical effort.	3	50
Environment - Duties are performed in a machine room environment with a high noise level, which is segregated from other work areas due to security requirements.	2	30
Supervision		
There is a requirement to show new employees how to perform duties.	A <sub>1</sub>	15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 10: COMMUNICATIONS CENTRE COMMUNICATOR,  
EXTERNAL AFFAIRS, OTTAWA (CM-4)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in operating ancillary teleprinter equipment.  |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of world-wide routing, time zones and alternative means of transmission. |
|-----------|--|

- Knowledge of communications procedures used by federal government departments.

- Knowledge of authorized abbreviations, call signs and transmission facilities.

Abilities

- Ability to check messages for garble, number sequence and precedence.

Personal Suitability

- Initiative and judgment.

- Tact and courtesy particularly in dealing with the general public or employees of other communication centres.

- Work effectively under pressure of peak traffic loads.

DESIRABLE QUALIFICATIONS

- Experience in operating cryptographic equipment.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 11

Level: 5

Descriptive Title: CONTROL-CENTRE COMMUNICATOR,  
AUTOMATIC DATA INTERCHANGE SYSTEM,  
MINISTRY OF TRANSPORT

Point Rating: 589

Summary

Under the supervision of the Shift Network-Control Supervisor, controls the flow of aeronautical traffic over a computerized, store-and-forward, teletypecommunications system and takes remedial action to correct operating abnormalities; monitors network operations to maintain high operating standards and efficiency; and liaises with counterparts in the U.K. and in the U.S. and with the operating staff of the remote computer on matters of procedures and conditions affecting traffic flow, traffic interchange and circuit irregularities.

Duties

% of Time

Controls the flow of aeronautical traffic over a computerized, teletype-communications system connecting 221 domestic field-station circuits and 9 major circuits to the U.K., U.S.A., Iceland and Greenland, and takes remedial action to correct operating abnormalities, utilizing knowledge of domestic and international network configurations, user requirements and computer capabilities

- by monitoring computer-generated reports indicating abnormalities and determining action required,
- by typing commands for computer, recalling from memory 25 primary international-routing indicators, 65 computer codes and responses, and the greater proportion of 532 domestic-routing indicators and 278 station mnemonics,
- by advising the Shift Supervisor of network conditions which indicate a need for review of circuit capacities or configurations,
- by co-coordinating the closing and re-opening of circuits or stations,
- by instructing out stations to withhold traffic or implementing necessary measures by computer command, and
- by effecting emergency alternate routing of incoming data at the Control Centre by means of switching panel equipment.

50

% of Time

Monitors network operations to maintain system efficiency and high operating standards

- by recognizing problem areas and communicating by message with out stations to correct problems,
- by receiving and transmitting, on a closely-scheduled basis, number comparisons and circuits checks between the Canadian system and major international relay and domestic stations to ensure circuit continuity, and
- by liaising with counterparts in the U.K. and in the U.S. and with the operating staff of the remote computer on matters of procedures and conditions, concerning computer malfunctions, traffic flow and circuit irregularities, via "hot line" and long distance telephone.

35

Performs related duties, such as observing and recording traffic volumes and transit delays, maintaining circuit and station "outage logs", assisting in the compilation of statistical reports, and acting for the Shift Supervisor in his absence.

15

Specifications

Degree Points

Skill and Knowledge

The work requires the ability to type rapidly and accurately in giving commands to the computer to effect message retrieval, diversion, alternate or emergency routing or holding of traffic. The ability to make quick decisions and communicate orally and by service message is also required.

The control of traffic requires a detailed knowledge of Domestic and International network configurations, user requirements and computer capabilities. It also requires the ability to recall from memory and employ 65 computer codes and responses; 25 primary international routing indicators; and the greater proportion of 532 domestic-routing indicators and 278 station mnemonics.

4 204

Complexity

The incumbent must respond to computer-generated circuit condition reports and message irregularities involving high-priority aeronautical traffic. Duties are performed according to established procedures contained in various domestic and international operating manuals, guides, and circuit configuration charts. Speed, accuracy and decision making abilities are required to establish priorities and select courses of action necessary to resolve problems related to traffic flow over the entire network. Computer actions such as message retrieval, diversion, alternate or emergency routing, and the holding of traffic require the initiation of computer commands. The Control Centre Communicator has limited responsibility for ensuring that some 500 communicators in 221 domestic field stations adhere to established standards. Procedures used include service messages to the computer and field stations, open line telephone links to the computer maintenance staff in Montreal and with the U.S. computer staff in Kansas City. Communication with the U.K. computer staff is by commercial telephone facilities.

B<sub>3</sub> 200

Consequence of Errors

Errors caused by failure to correctly apply or interpret procedural changes to staffs of out-stations, implement correct computer commands, interpret computer output advisory material, and check station serviceability can result in traffic disruptions and equipment blockages in the U.K., U.S., and other major centres and cause lost or seriously delayed traffic.

3 50

Responsibility for Contacts

Contacts are with the Montreal, Kansas City and London computer control staffs and with domestic field stations connected to the computer system to interpret and advise on procedures concerning traffic flow and circuit irregularities.

2 30

Degree Points

Conditions of Work

Attention - The work requires continuous concentration and attentiveness in order to observe some 900 computer per shift and to respond immediately to those which indicate circuit irregularities or malfunctions by the selection and issuance of accurate commands to the computer for corrective action. 3 50

Physical Effort - The majority of the work is done while seated, however monitoring operations necessitates periods of walking and standing. 1 10

Environment - Duties are performed in a machine room environment with a continuously high noise level. The control room is separated from other work areas due to operational requirements. 2 30

Supervision

There is the occasional requirement to show other employees how to perform work for leave purposes and as part of "in-service" training program. A 1 15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 11: CONTROL-CENTRE COMMUNICATOR,  
AUTOMATIC DATA INTERCHANGE SYSTEM, MINISTRY OF TRANSPORT (CM-5)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |
| Experience                       | - Experience in the operation of a computerized teletype communications system.   |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of Domestic and International network configurations, user requirements and computer capabilities. |
|-----------|--|



- Knowledge of computer codes and responses, primary international-routing indicators and domestic-routing indicators.

Abilities

- Ability to monitor network operations.

- Ability to maintain records and prepare statistical reports.

Personal Suitability

- Initiative and judgment.

- Tact and courtesy particularly in dealing with computer staffs in the U.K. and the U.S.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 12

Level: 5

Descriptive Title: COMMUNICATOR, MONTREAL WEATHER OFFICE,  
DEPARTMENT OF THE ENVIRONMENT

Point Rating: 569

Summary

Under the supervision of a shift supervisor in a meteorological communications centre receives, distributes, transmits and relays undressed coded weather information over Telex and teletype circuits and between different communications systems; extracts meteorological data from incoming "Collection Circuit" transmissions and from National Weather Bulletins and re-transmits data over Press, Telbec and other circuits; receives and transmits weather charts using facsimile transceiving equipment; relays Terminal Forecasts internationally; and performs related duties, such as monitoring transmissions over Collection Circuit to ensure adherence to operating procedures, and answering enquiries from news media, Wire Chiefs and industry.

Duties

% of Time

Receives, distributes, transmits and relays undressed coded weather information over Telex and teletype circuits and between different communications systems, utilizing knowledge of distinctive formats, applicable procedures and the various meteorological codes together with the knowledge of national and international station and traffic identifiers, traffic priorities and timings

- by scanning incoming traffic to detect garbling, omissions and discrepancies and requesting corrections or repeat transmissions as required,
- by distributing original copies of incoming traffic to the various sections of the Montreal Weather Office such as briefing, forecasting and map plotting according to message content and/or origin,
- by perforating 5 or 8 level tapes for all locally originated traffic, such as meteorological bulletins, public, aviation and marine forecasts, and weather observations and amendments in French and English and transmitting over appropriate circuits,

55

- by assigning appropriate priorities of traffic to ensure the timely transmission according to the nature of the traffic,
- by routinely relaying over the Meteorological Network certain Terminal Forecasts received over the Automated Data Interchange System (ADIS),
- by decoding and encoding meteorological data preparatory to transmission as required by non-departmental users or by the equipment limitations of data originators or addressees,
- by addressing and re-transmitting repeats of meteorological data when requested by sub-system control, and
- by occasionally taping and transmitting administrative traffic to small, off-net posts.

Extracts meteorological data from incoming "Collection Circuit" transmissions and from National Weather Bulletins and re-transmits to Telbec (private commercial organization) and Press circuits and to other destinations such as the meteorological station at St. Hubert,

- by arranging in prescribed format specific portions of coded weather data extracted from Collection Circuit transmissions and from Weather Bulletins originated in the various Regional Offices, and
- by re-transmitting data over appropriate circuit.

15

Receives and transmits weather charts using facsimile transceiving equipment

- by mainline switching at precise times to join the National Network or to separate the regional stations from the National Network,
- by setting up and adjusting transmitters in accordance with meter readings obtained for individual charts,
- by adjusting automatic recorders in accordance with incoming signal characteristics,
- by occasionally operating recorders manually to improve quality of incoming charts, and
- by recording quality of incoming charts and reporting irregularities to Wire Chief of commercial carrier.

12

Relays internationally Terminal Forecasts required by domestic and foreign airlines

- by receiving requests from Canadian or foreign stations over the Meteorological or ADIS network,

8

of Time

- by converting request to ADIS or Meteorological Code and format as required,
- by locating appropriate data on file or by initiating service message to the international computer in Brussels, and
- by addressing and transmitting data to requesting station, re-converting reply if required.

Performs related duties such as: answering enquiries from news media, Wire Chiefs, and industry; maintaining files of meteorological traffic; recording circuit outages and monitoring transmissions over the Collection Circuit to ensure adherence to operating procedures.

10

Specifications

Degree Points

Skill and Knowledge

The work requires the ability to operate and perform minor maintenance on Telex and teletype equipment including 5 and 8 level meteorological and commercial keyboards, reperforators, page printers, transmitters, translators, and drum-type facsimile transceivers.

The work, involving the distribution of incoming traffic, the extracting, collating and relaying of meteorological data, the scanning of incoming traffic and the monitoring of Collection Circuit procedures, requires a thorough knowledge of meteorological codes such as the aviation weather code, surface synoptic codes and the upper air codes together with a thorough knowledge of the formats and procedures applicable to the various circuits and systems. The ability to read 5 and 8 level codes used on perforated tapes is also required. The transmission of data nationally and internationally requires knowledge of both the Meteorological and the ADIS computer-controlled communications systems together with the knowledge and ability to recall from memory a large number-of-domestic and foreign routing indicators, traffic and station identifiers and the details of chronographic schedules for the transmission of meteorological data.

4

204

Complexity

The work is performed in accordance with instructions contained in operating manuals and publications covering local, national and international procedures, routings, formats, systems, traffic content, schedules and distribution as well as national and international station identifiers. The transmission of meteorological data over 12 circuits associated with two computerized systems and including the Regional collection, Press, Telbec and other National and Regional circuits requires the incumbent to operate or monitor a variety of Telex, tele type and facsimile transceiving equipment including 5 and 8 level meteorological keyboards. The work also requires the encoding and decoding of meteorological data based on user requirements or equipment limitations of originators. The work also involves the distribution of incoming traffic according to content or originator, the extraction and re-transmission of meteorological data and the relay of National and International Terminal Forecasts as required by domestic or foreign airlines. Initiative and judgment are required in monitoring transmissions over the Collection Circuit to ensure compliance with established standards and procedures and maintain circuit discipline, evaluating quality of weather charts received over the three facsimile systems and reporting discrepancies to Wire Chiefs of commercial carriers, and in contacting employees of airlines, news media and other users to provide information. Some of the operations such as the transmission of weather observations and weather charts is performed in accordance with rigid time schedules.

B<sub>3</sub> 200,

Consequence of Errors

Errors in transmitting meteorological data on schedule can result in failure to complete transmissions over a sub-system that exists only for short, specified periods or can delay programmed transmissions over the computerized system.

2 30

	Degree	Points
Responsibility for Contacts		
Contacts are with employees of news media and airlines to provide information and with Wire Chiefs to report irregularities, requiring tact and courtesy.	1	10
Conditions of Work		
Attention - The work requires sustained concentrations during regularly recurring peak periods.	2	30
Physical Effort - The work involving constant walking and standing requires considerable physical effort.	3	50
Environment - The work is performed in a machine room environment with a high noise level and segregated from other work areas due to operational requirements.	2	30
Supervision		
Supervision involves explaining procedures to new employees and showing them how to perform tasks and duties.	A <sub>1</sub>	15

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 12: COMMUNICATOR, MONTREAL WEATHER OFFICE,  
DEPARTMENT OF THE ENVIRONMENT (CM-5)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in operating ancillary teleprinter equipment and in transmitting meteorological data.  |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of meteorological codes.<br><br>- Knowledge of computer controlled communications systems. |
|-----------|--|

- Knowledge of domestic and foreign routing indicators, traffic and station identifiers and details of chronographic schedules.

Abilities

- Ability to extract and rearrange meteorological data for re-transmission to other destinations.
- Ability to monitor transmissions and detect discrepancies in operating procedures.

Personal Suitability

- Initiative and judgment.
- Tact and courtesy particularly in providing information to the news media and airlines.
- Work effectively under pressure of peak traffic loads.



BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 13

Level.: 5

Descriptive Title: SENIOR COMMUNICATOR, KUALA LUMPUR,  
EXTERNAL AFFAIRS

Point Rating: 612

Summary

Under the technical direction of the Director, Telecommunications Division, Ottawa, and the Administrative direction of the Administrative Officer at the Canadian High Commission , , Kuala Lumpur, is responsible for the activities of the post's communications centre which include the encryption and decryption of classified messages and the receipt, transmission, relay reproduction and distribution of classified and unclassified messages on behalf of the Departments of External Affairs, Manpower and Immigration, Industry, Trade and Commerce and the Canadian International Development Agency and performs related communications and administrative duties.

Duties

% of Time

Supervises the operation of a two-man, multi-operation communications centre

- by establishing systems and procedures for the ciphering, deciphering, receipt, transmission, relay, processing, reproduction and distribution of messages within prescribed guidelines, and by interpreting and implementing changes in procedures,
- by establishing effective procedures to maintain cryptographic security, physical security of classified equipment, documents and comcentre accommodation, and security of contents of classified messages in accordance with directives, guidelines and instructions,
- by establishing priorities and work schedules, and ensuring that standards for quality and quantity of work are maintained,
- by reporting on the work performance of a subordinate,
- by compiling and checking traffic statistics, and verifying accounts for telex, cable, leased circuit and equipment services,
- by arranging, with representatives of local commercial - telecommunications companies, for the maintenance, repair and modification of leased circuit and telex equipment,
- by selecting alternate routings or modes of transmission to meet specific or emergency requirements in accordance with the dictates of security, speed and economy,

40

% of Time

- by explaining the capabilities and the limitations of the system and the services provided to officials of "user" departments and agencies and influencing the adoption of special procedures to meet specific local requirements, and  
- by monitoring the telex transmissions from Singapore for which the centre has relay responsibility.  
Operates Telex, teletype and cryptographic equipment and performs associated duties as required to cope with predictable periods of high traffic levels and to man the comcentre for the daily "open-hours" specified. 55

Performs other duties such as; supervising the preparation of outgoing diplomatic bags and the opening and verification of the contents of incoming bags, and assisting Diplomatic Couriers through airport arrival and departure procedures. 5

Specifications

Degree Points

Skill and Knowledge

The work requires the operation of Telex, teletype page printers, perforators, reperforators, transmitter distributors, switching panels and duplicating equipment. In addition there is a requirement to use manual cipher systems and operate electronic cipher equipment to transmit, receive and relay messages within the cryptographic systems employed at the post.

The work requires a good knowledge of departmental communications systems and procedures as well as those controlled by other governments and commercial carriers. Such knowledge is necessary in order to select alternative facilities in the event of emergencies due to system disruption. Knowledge of alternative routing is also of importance to ensure the economy of line usage. Subject matter knowledge is required in order to recognize the significance of messages in terms of security, need for clarification, priority, routing or distribution and take appropriate action.

4 204

Complexity

The work is performed in accordance with published directives and established procedures. As immediate technical directions is not available, because of the Post's location, the incumbent is delegated authority to introduce, interpret and modify procedures, and resolve operational problems such as those that occur because of circuit disruptions and require the selection of alternate routing of traffic. The work includes the processing, transmission, receipt, reproduction and distribution of classified and unclassified messages applying different cryptographic systems and operating a variety of communications equipment to ensure security, speed and economy. Administration of the communication centre requires the scheduling of own work and that of a subordinate, arranging for the maintenance and modification of equipment by a technician or with telecommunication companies, verifying accounts submitted by commercial carriers, compiling traffic statistics and conducting the Post's record management system.

C<sub>2</sub> 205

Consequence of Errors

Errors in planning and deciding on alternate routing procedures or in correctly interpreting procedural changes can result in incorrect handling and delays in processing and transmitting messages. Errors in the selection and application of appropriate cryptographic methods and procedures could endanger the security of the cryptographic system.

3 50

Responsibility for Contacts

Contacts are with officials of own and "user" departments to explain the capabilities and limitations of the systems, and with representatives of local commercial telecommunications companies regarding the maintenance and modification of leased circuit and telex equipment.

3 50

	Degree	Points
Conditions of Work		
Attention - The majority of work requires normal attention. Concentration <b>is</b> necessary when encoding and decoding messages during peak periods of traffic.	1	10
Physical Effort - Some of the work is performed while sitting but there are periods of standing and walking.	1	10
Environment - Duties are performed in a machine room environment and where top security measures require that the work be done in isolation and confinement.	3	50
Supervision		
The work requires direct supervision of one other communicator involving the assignment of work, instruction in methods and procedures, the monitoring of telex transmissions from a small out-station for which the centre has responsibility, and the review of comcentre operations to ensure that established standards of quality and quantity of work are maintained.	B <sub>2</sub>	33

EXAMPLE OF A  
STATEMENT OF  
QUALIFICATIONS  
FOR

B.M.P.D. No. 13: SENIOR COMMUNICATOR, KUALA LUMPUR,  
EXTERNAL AFFAIRS (CM-5)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |
| Experience                       | - Experience in operating ancillary teleprinter keyboard and cryptographic equipment.   |

RATED REQUIREMENTS

- |           |   |
|-----------|---|
| Knowledge | - Knowledge of departmental communications systems and procedures and of those controlled by other governments and commercial carriers. |
|           | - Knowledge of security measures and cipher systems.  |



Abilities

- Ability to organize and control the work of the centre, arrange and account for supporting services, and supervise one communicator.
  
- Ability to introduce, interpret and modify procedures and resolve operational problems.
  
- Ability to compile statistics, and prepare records and correspondence.

Personal Suitability

- Initiative, judgment, and reliability.
  
- Tact and courtesy particularly in providing information to own and user departments and commercial telecommunications companies.





BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 14

Level: 6

Descriptive Title: SUPERVISOR, HEADQUARTER COMCENTRE,  
Title: MINISTRY OF TRANSPORT

Point Rating: 730

Summary

Under general supervision of the Communications Planning and Methods Officer, supervises the 24 hour operation of the Headquarters Communication Centre responsible for transceiving operational and administrative messages and facsimiles over six networks employing a variety of teletype, telex, and telephone equipment; resolves operational problems; and performs related duties.

Duties

% of Time

Supervises the 24 hour operation of the Headquarters Communication Centre responsible for transceiving operational and administrative messages and facsimiles utilizing a wide range of communication equipment

- by establishing operating procedures within the framework of general operating instructions, and interpreting and implementing changes in methods and procedures,
- by allocating a staff of 11 communicators to provide for a 24 hour operation and accommodate fluctuating workloads,
- by evaluating the performance of the comcentre staff and recommending changes in the number and levels of positions,
- by training or directing the training of new communicators,
- by monitoring operations to ensure effective use of manpower and equipment and compliance with established procedures, priorities and formats, and
- by periodically preparing reports and compiling statistics pertaining to such operational aspects as; traffic, outages and personnel overtime.

60

Resolves operational problems

- by initiating and replying to service messages dealing with traffic-handling matters,
- by designating alternate means of transmission due to circuit outages or equipment,

30

% of Time

- by reporting equipment or line failures to commercial carriers, and
- by communicating orally and in writing with Departmental officials to exchange information concerning user requirements and equipment capabilities and to establish or improve the departments communications.

Performs related duties such as; certify charges from commercial carriers and forwarding bills for payment; maintaining comcentre supplies; and amending operational manuals.

10,

Specifications

Degree Points

Skill and Knowledge

The work requires the skill and knowledge to organize and supervise the operation of the Ministry of Transport's Ottawa Headquarters Communications Centre by scheduling, coordinating and assigning the duties of a staff of 11 communicators. A thorough understanding of and the ability to apply pertinent administrative personnel regulations, policy, instructions and the communicators' contract are essential. The ability to effectively communicate orally and in writing with middle and senior managers and with subordinates is also required. The work requires the knowledge of and ability to supervise staff operating teletypewriter, printers and transmitters, Telex, facsimile transceivers and related equipment; to establish work standards; and to monitor operations and train operators.

5

252

A thorough knowledge of the standards, practices and procedures relating to the Automated Data Interchange System, the world wide Aeronautical Fixed Telecommunications Network, the U.S. Federal Aviation Agency and the commercial communications network is required. A good knowledge is also required of operating procedures used in associated systems such as a Canadian Forces communications system and the Air Canada telecommunications system. An understanding of airspace reservation messages and the use made of the NOTAM information is necessary. Knowledge

is required of the Ministry of Transport organization and operations sufficient to effect immediate delivery of incoming administrative, service and operational messages.

Complexity

The work is performed in accordance with the department's telecommunications maintenance and operational standards. The incumbent is responsible for interpreting instructions and procedures to staff and making modifications to resolve operational problems. Recommendations are made to the Communications Planning and Methods Officer to effect changes in procedures and equipment which improve the operation of the communication centre. The incumbent is responsible for anticipating workloads and scheduling staff accordingly. Initiative and judgment are also required in the selection of alternate routings that are economical and appropriate for the priority and nature of the traffic handled. Operations supervised include the transmission, receipt and relay of ARCO, service, NOTAM and administrative messages and facsimiles, over 6 separate telecommunications networks. In addition the incumbent is also responsible for monitoring operations to ensure compliance with established standards for procedures, priorities and formats, compiling statistics and preparing operating reports, and advising headquarters officials on matters relevant to the receipt and transmission of messages.

C<sub>2</sub> 205 ,

Consequence of Errors

Errors arising from the incorrect interpretation and implementation of changes in procedure can result in incorrect message handling and cause serious delays in traffic flow.

3 50

Responsibility for Contacts

Contacts are with officials of own department to resolve problems related to the handling of messages and to provide advice relative to the various telecommunications

3 50

facilities; with supervisors of other communication centres regarding message transmission; and with commercial suppliers to maintain the operational capability of equipment and systems and clarify telecommunications charges.

Conditions of Work

Attention - Work requires normal attention. Concentrated attention is occasionally required to resolve operational problems. 1 10

Physical Effort - Work requires little physical effort, most of the work is performed while seated. 1 10

Environment - Work is performed in a machine room environment which is segregated from other work areas due to operational requirements. 2 30

Supervision

Work entails the establishing of standards of quality and quantity of work, allocating staff of 11 communicators to provide manning for a 24 hour 3 shift operation, training or directing the training of staff and evaluating the performance of subordinates, and recommending changes in the numbers and levels of positions. D<sub>4</sub> 123

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS

FOR

B.M.P.D. No. 14: SUPERVISOR, HEADQUARTER COMCENTRE,  
MINISTRY OF TRANSPORT (CM-6)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in operating ancillary equipment and in transceiving messages over a variety of telecommunications networks.   |

RATED REQUIREMENTS

- |           |   |
|-----------|---|
| Knowledge | - Knowledge of the standards, practices, and procedures of national, international and commercial communications networks and associated systems. |
|-----------|---|

- Knowledge of personnel policies and regulations.

Abilities

- Ability to interpret and modify instructions and improve procedures and equipment.

- Ability to organize and control Centre operations, maintain Centre supplies, determine work priorities and schedules and select, train and evaluate staff communicators.

- Ability to conduct briefings and discussions, and prepare operating reports and correspondence.

Personal Suitability

- Initiative and judgment.
- Tact and courtesy particularly in dealing with management and commercial supplier.

DESIRABLE QUALIFICATIONS

- Experience in supervision.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 15

Level: 6

Descriptive Title: SHIFT SUPERVISOR,  
COMMUNICATIONS CENTRE,  
EXTERNAL AFFAIRS DEPARTMENT,  
OTTAWA

Point Rating: 757

Summary

Under the general supervision of a chief supervisor, supervises the operations of the Ottawa Communications Centre of the Canadian diplomatic communications system during a shift; ensures prompt processing, transmission, relay, reproduction and distribution of traffic, and designates alternative means for processing and forwarding traffic in the event of equipment failure, line outages or overloaded circuits; ensures the effective performance of staff on duty and trains newly assigned personnel; and performs related duties.

Duties

% of Time

Under the general supervision of a chief supervisor, acts as shift supervisor in the Ottawa communications centre of a world-wide, international communications network, which utilizes a wide range of cryptographic and tele communications systems and equipment

- by supervising a staff of 15 communicators,
- by ensuring, through senior communicators and by spot-checking traffic following dispatch, that prescribed priorities, formats and control procedures are adhered to,
- by ensuring that traffic is processed and dispatched according to established standards of security, priority, efficiency and economy, and
- by allocating staff to meet fluctuating demands.

65

Resolves operational problems concerning cryptographic and traffic-handling matters

- by initiating and replying to service messages dealing with crypto corruptions, garbled messages, mutilated tapes and requests for reprocessing and retransmissions,
- by designating alternative methods of processing or routing in the event of failure of cryptographic or transmission facilities, and

15

% of time

- by reporting failures to technicians and initiating repair action in the event of equipment breakdown. Performs related duties, which include overseeing the maintenance of cryptographic and physical security measures, instructing new staff members in tasks, duties and communications procedures any: is security measures and fire prevention, compiling duty rosters and traffic statistics, and acting for the chief supervisor in his absence.

Specifications Degree Points

Skill and Knowledge

The work requires knowledge of departmental and international communications procedures and operations and of various cryptographic systems and equipment. It requires knowledge of switching facilities, of complex routing and operating procedures, and of alternate procedures sufficient to make decisions without delay to maintain the flow of traffic when normal facilities are out of service. The work requires a knowledge of departmental operations and organization sufficient to effect immediate and appropriate delivery of incoming messages. It requires a knowledge of and the ability to operate cryptographic equipment, teletype page printers, perforators, reperforators, transmitter-distributors, telex, and related equipment. Experience is required in supervising staff and in training subordinate employees, to ensure effective utilization of staff resources.

5 252

Complexity

The work requires supervising the shift operation of a major communication centre to effect the processing, receipt, transmission, relay, reproduction and distribution of classified and unclassified messages in accordance with requirements for security, speed and economy. The transmission of messages on behalf of own and user departments requires the use of 5 cryptographic systems and the complete range of Telex and teletype equipment. The work is performed in accordance with established procedures but initiative and judgment are required in selecting appropriate cryptographic systems, rerouting

C<sub>3</sub> 250



	Degree	Points
messages, and in allocating staff and facilities to meet peak demands and to adjust to emergency or special conditions.		
Consequence of Errors		
Failure to correctly interpret and communicate changes in procedures to subordinate staff, errors in designation of routes, or errors in checking procedures that may compromise a cryptographic system can result in serious delays in processing and transmission and loss or incorrect delivery of messages.	3	50
Responsibility for Contacts		
Contacts are with departmental officials to explain and interpret departmental procedures for the transmission and distribution of message traffic.	2	30
Conditions of Work		
Attention - The work requires normal attention to oversee and direct centre operations. Concentrated attention is required during periods when operational problems are encountered.	1	10
Physical Effort - The work requires moderate physical effort. Some of the work is performed while seated, with long periods of walking and standing while overseeing operations in dispersed cryptographic, transmission and reproduction sections.	2	30
Environment - Duties are performed mainly in a machine room environment with high noise level, which is segregated from other work areas because of security requirements.	2	30

Degree Points

Supervision

The work requires supervision of a staff of 15 communicators and requires the allocation of staff to meet fluctuating work demands during a shift. Detailed work processes are monitored through subordinates to ensure that established standards of quality and quantity of work are maintained. Instructions and guidance on duties and procedures are given to subordinates and new employees, and the performance of subordinates is discussed with the chief supervisor.

C4 105

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS

FOR

B.M.P.D. No. 15: SHIFT SUPERVISOR, COMMUNICATIONS CENTRE,  
EXTERNAL AFFAIRS DEPARTMENT, OTTAWA (CM-6)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in the operation of ancillary teleprinter equipment and in using international communicating procedures and cryptographic systems.                   |

RATED REQUIREMENTS

- |           |   |
|-----------|---|
| Knowledge | - Knowledge of switching facilities, routing and operating procedures, cryptographic systems and security measures. |
|-----------|---|

- Knowledge of department operations and organization.

Abilities

- Ability to supervise operations and resolve cryptographic and traffic handling problems.

- Ability to determine work priorities and schedules, and train and evaluate staff communicators.

- Ability to prepare operating reports and correspondence.

Personal Suitability

- Tact and courtesy particularly in dealing with department officials.

- Initiative, judgment, and dependability.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 16

Level: 6

Descriptive Title: SUPERVISOR, TAPE RELAY CENTRE,  
DEPARTMENT OF NATIONAL DEFENCE,  
HALIFAX

Point Rating: 689

Summary

under general supervision of the Broadcast and Relay Superintendent and through subordinate shift supervisors, supervises the 24 hour operation of a Tape Relay Centre responsible for relaying military traffic between communications centres, ships, mobile forces and between Canada and the U.K.; performs related duties such as sitting on selection boards, preparing time sheets and providing advice to subordinates on personnel matters.

Duties

% of Time

Supervises the 24 hour operation of a Tape Relay Centre responsible for the relay of military traffic between communications centres, ships, mobile forces, and between Canada and the U.K.

- by determining workload and allocating staff of 21 communicators to provide a three shift, continuous manning of the relay centre, taking into account anticipated increases in workload due to National or International exercises,
- by interpreting and ensuring implementation of changes in operating procedures and monitoring relay centre operations to ensure compliance with directives and procedures relating to such aspects as; security, priority, routing, transmission and logging of messages and security of equipment, publications and the relay centre,
- by establishing standards of quality and quantity of work, formally evaluating the performance of subordinates, and making recommendations regarding size and level of staff,
- by establishing an on-job-training program and training or directing the training of new communicators,
- by designating alternate routings when circuit failures occur,

85

% of Time

- by ensuring that relative publications and the relay centre "State Board" (location or broadcast of ships) are kept current,
- by recommending changes in schedules, procedures and equipment to Headquarters, and
- by ensuring the maintenance of tape relay equipment by Departmental technical staff, and contacting commercial carriers to arrange the correction of circuit outages.

Performs related duties such as: advising subordinates on leave, grievances, appeals and other personnel matters; preparing daily time sheets; and sitting on selection boards for new communicators.

15

Specifications

Degree Points

Skill and Knowledge

The work requires instructing subordinates in the operation of teletypewriter and ancillary equipment such as reperforators, page printers, transmitters and a Routing Line Segregator. Experience is required in allocating work and supervising staff to cover a continuous 24 hour operation subject to a fluctuating workload.

4

204

The work requires a thorough knowledge of the Departmental communications system, including shore and ship establishments together with a knowledge of the procedures and format of the U.K., U.S. and NATO networks to enable the passing of traffic to military forces operating on these networks, and the re-routing of traffic due to circuit outages. A sound working knowledge of conditions of work and personnel policies is required in supervising staff.

Complexity

The work is performed in accordance with established methods and procedures governing the operation of the relay centre which is primarily concerned with the receipt and re-transmission of taped traffic between fixed and

Degree Points

mobile centres. The incumbent allocates a staff of 21 communicators and 5 supervisors to shifts that provide continuous manning and meet the contingencies of a fluctuating work load, absences and position vacancies. Responsibilities include the interpretation of operational, administrative and personnel regulations for staff and ensuring their compliance. Initiative and judgment are exercised to resolve such operational problems as the selection of alternate means of passing traffic in the event of circuit failures or overloading, analyzing and reporting on traffic, examining candidates for selection or promotion, scheduling the replacement of equipment or arranging for repairs and ensuring sufficient equipment is available to patch garbled or torn tapes. The work also includes safeguarding records and classified publications, developing a training program for new staff, recommending changes to publications and maintaining a "State Board" showing broadcast or location of ships.

C<sub>2</sub> 205

#### Consequence of Errors

Failure to correctly interpret and communicate changes in procedures to subordinate staff and errors in designating alternate routes can result in serious delays in traffic flow and loss of messages.

3 50

#### Responsibility for Contacts

Contacts are with officials of telecommunications suppliers to report and arrange correction of circuit outages and with personnel of other comcentres to provide alternate routing and answer procedural queries.

2 30

#### Conditions of Work

Attention - The work requires normal attention to oversee and direct the operations of the relay centre.

1 10

Physical Effort - The major portion of the work is performed while seated, with some standing and walking.

1 10

Degree Points

Environment - Work is performed in a machine room environment with a high noise level. The area is separated from other work areas for operational and security reasons.

2 30

Supervision

The work involves the supervision of 21 communicators through 5 subordinate supervisors. The incumbent is responsible for establishing standards of quality and quantity of work, training and allocating staff to provide 24 hour manning of relay centre, formally evaluating performance of subordinates, and making recommendations regarding changes in number and levels of staff.

D<sub>5</sub> 150



EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 16: SUPERVISOR, TAPE RELAY CENTRE,  
DEPARTMENT OF NATIONAL DEFENCE, HALIFAX (CM-6)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of the English language is essential for this position.   |
| Experience                       | - Experience in the operations of a Communications Centre and experience in supervision.<br><br>- Experience in Operating cryptographic equipment.                |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of the departmental communications system. |
|-----------|--|

- Knowledge of the procedures and format used by the U.K., U.S. and NATO networks.

- Knowledge of operational, administrative and personnel regulations.

Abilities

- Ability to plan for, organize and control a communications service.

- Ability to resolve operational problems, and devise and improve on operating procedures and standards.

- Ability to determine work priorities and schedules and select, train and evaluate staff communicators.

- Ability to prepare operational reports and correspondence.

Personal Suitability

- Initiative, judgment and reliability

- Tact and courtesy particularly in dealing with suppliers and personnel of other communication centres.

BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 17

Level: 7

Descriptive Title: CHIEF SUPERVISOR,  
MONTREAL WEATHER OFFICE,  
DEPARTMENT OF THE ENVIRONMENT

Point Rating: 873

Summary

Under the general supervision of the Meteorologist in charge of the Montreal Weather Office, supervises through subordinate supervisors the operation of a major communications centre responsible for the collection, relay and dissemination, via teletype and facsimile, of Meteorological data over local, national and international circuits; monitors the operations of the centre to assess its efficiency and adequacy; and recommends changes in procedures, equipment and staffing to improve operating efficiency.

Duties

% of Time

Supervises the operation of a major communications centre responsible for the collection, relay and dissemination, via teletype and facsimile, of Meteorological data over local, national and international circuits

- by assigning centre staff comprising 5 subordinate supervisors and 10 communicators to provide a 3 shift, 7 days/week operation, and preparing associated work and leave schedules,
- by planning the implementation of new work, issuing directives, standing orders or other instructions; and explaining new procedures and how the work is to be scheduled or integrated,
- by assessing training needs, arranging for ASTS training or coordinating and conducting on-the-job training, assigning new and partially-trained communicators to shifts with experienced staff, and preparing, giving and marking proficiency examinations,
- by assessing performance of subordinate supervisors and reviewing and approving performance reports prepared on operating staff, discussing ratings with staff and providing counsel and suggestions for improvement, and recommending the granting or denial of salary increases based on performance appraisals,

80

of Time

- by making formal recommendations for disciplinary action, and
- by preparing and maintaining circuit-guide charts which list traffic alphabetically and indicate the required distribution.

Monitors the operations of the comcentre to assess its efficiency and adequacy

- by checking circuits and keeping performance logs on a wide variety of communications equipment and notifying commercial suppliers when performance is below standard, 10
- by checking circuit outage logs, analyzing data and preparing reports on problems encountered, and
- by checking traffic flow charts to ensure that equipment layout is the most efficient and productive.

Recommends changes in procedures, equipment and staffing to the Regional Communications Officer to meet developing needs for data transmission or to improve operating efficiency 10

- by consulting with originators and users of data such as the Senior Weather Observer, the Forecasting Supervisor and with airline officials,
- by analyzing\_ traffic flows, equipment malfunctions and projected workloads, and
- by participating in the testing and evaluation of new equipment.

Specifications

Degree Points

Skill and Knowledge

The work requires the ability to plan, organize, assign duties and administer the technical operation of a major communications centre, together with the ability to understand, interpret and apply a variety of administrative and personnel regulations; policies and instructions. The ability to communicate effectively both orally and in writing is also required. Experience in supervising a large staff is also a requirement of this position.

6 300

Degree Points

The work requires a thorough knowledge of the regulations, practices and procedures relating to Meteorological Communications; a good knowledge of the technical procedures used in associated communications systems such as the Aeronautical Fixed Telecommunications Network, the U.S. Federal Aviation Agency, and the World Meteorological Organization; and a good knowledge of the use of meteorological data.

#### Complexity

The work requires planning and directing the operation of a large communications centre to effect the collection, relay and dissemination of Meteorological data over local, national and international circuits. A high degree of initiative and judgment is required in allocating staff to provide 24 hour manning of the comcentre, in interpreting and directing the application of a variety of administrative, operational and personnel regulations, policies and instructions, and in resolving problems related to the comcentre operation and communication facilities involving more than 35 pieces of equipment associated with 12 circuits. The work also entails the conducting of checks and studies related to traffic flows and circuit outages, analyzing data, and recommending changes in schedules, procedures and equipment to improve efficiency. The incumbent is also required to meet with originators and users of data such as; the Senior Weather Observer, the Forecasting Supervisor and with airline officials, to develop systems and procedures required to improve traffic flow or meet developing needs for data.

D3 300

#### Consequence of Errors

Errors in correctly interpreting procedures to staff and implementing procedures, or errors in the preparation of circuit-guide charts could lead to the misrouting of traffic, the failure to obtain or to distribute weather data, and delays in processing traffic. The consequence

3 50

Degree Points

of these would disrupt the weather communication system which is dependent upon adherence to rigid schedules and the provision of complete and accurate meteorological information.

Responsibility for Contacts

Contacts are with such users or originators of meteorological data as; the Senior Observer, the Forecasting Supervisor, airline officials, and with officials of commercial suppliers to improve traffic flow, to affect changes in the data transmitted or procedures to meet developing needs, and to maintain operating efficiency of telecommunications equipment.

3 50

Conditions of Work

Attention - The work, largely administrative in nature, requires normal attention.

1 10

Physical Effort - Most of the work is done while seated with some walking or standing.

1 10

Environment - The work is performed in a machine room environment with a high noise level.

2 30

Supervision

The supervision of 15 communicators including five subordinate supervisors entails; establishing work standards and work schedules, allocating staff, training and evaluating performance of subordinates, interpreting and implementing new procedures, and recommending disciplinary action. Acts as the Regional Communications Officer during absence.

D4 123

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 17: CHIEF SUPERVISOR, MONTREAL WEATHER OFFICE;  
DEPARTMENT OF THE ENVIRONMENT (CM-7)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in the operations of a communications centre including the transceiving of meteorological data, and experience in supervising.                       |

RATED REQUIREMENTS

- |           |   |
|-----------|---|
| Knowledge | - Knowledge of the regulations, practices and procedures relating to Meteorological Communications. |
|-----------|---|

- Knowledge of technical procedures used in associated communications systems such as the Aeronautical Fixed Telecommunications Network and World Meteorological Organization.

- Knowledge of personnel policies and regulations.

Abilities

- Ability to plan for and direct the operations of a communications service.

- Ability to resolve operational problems and to devise and improve operating systems, procedures and standards related to traffic flows or new data needs.

- Ability to determine work priorities and schedules, and select, train and evaluate staff communicators.

- Ability to conduct discussions, briefings and studies, and prepare operating reports and correspondence.

Personal Suitability

- Reliability, judgment, and initiative.

- Tact and courtesy particularly in dealing with users or originators of meteorological data.



BENCH-MARK POSITION DESCRIPTION

Bench-mark Position Number: 18

Level: 7

Descriptive Title: : CHIEF SUPERVISOR,  
COMMUNICATIONS CENTRE,  
CANADIAN EMBASSY, PARIS

Point Rating: 873

Summary

Under the direction of the Regional Telecommunications Officer, supervises the operation of the Communications Centre at the Canadian Embassy in Paris; recommends changes in schedules, procedures and equipment; maintains effective working relations with officials of own and other departments who are users of the system; and supervises a regional courier service and centre maintenance staff.

Duties

% of Time

Under direction of the Regional Telecommunications Officer, supervises through subordinate supervisors the operation of the Communications Centre at the Canadian Embassy in Paris, with a staff of 15 utilizing telecommunications equipment and cryptographic systems

- by ensuring, through subordinate supervisors, that operational procedures and instructions are adhered to,
- by interpreting and explaining changes in procedures,
- by ensuring the effective use of manpower and equipment through observation of operations, traffic checks, and reviews of operational and statistical records,
- by ensuring the availability of crypto keying material and its issuance, handling and destruction according to regulations,
- by monitoring the operations of 24 other communications posts which operate through the centre,
- by allocating staff to cover a 24 hour operation and to meet fluctuating workloads,
- by assessing training needs, and planning and implementing training programs for staff of the centre,

65

% of Time

- by enforcing procedures to maintain cryptographic security, physical security of equipment, documents and quarters, and protection of classified information, and
- by supervising the compilation and checking of traffic statistics and monthly and quarterly accounts for telex cable, leased circuits and equipment services.

Recommends changes in schedules, procedures and equipment to the Regional Telecommunications Officer by estimating future workloads, analyzing operational problems and equipment failures, and investigating availability and costs of leased circuits and Telex rentals to improve operations of the comcentre. 10

Maintains effective working relations with officers of own and user departments and with local communications agencies

- by explaining the capabilities of the system and the service provided, and 5
- by discussing operational problems and obtaining co-operation for their solution.

Supervises a regional courier service to Europe and the Middle East by drawing up service schedules, allocating staff and making adjustments, as required, for adverse weather conditions and transportation difficulties. 10

Supervises the maintenance of centre cryptographic and telecommunications equipment by overseeing a scheduled maintenance program and by checking on equipment failures. 5

Performs other related duties such as assessing performance of and discussing assessment with staff of the centre, approving leave rosters, and acting for the Regional Telecommunications Officer in his absence. 5

Specifications

Degree Points

Skill and Knowledge

The work requires a good knowledge of departmental organization and administration and a thorough knowledge of departmental and international communications systems and

Degree Points

operating practices and alternative commercial facilities available for use. It requires a thorough knowledge of all cryptographic systems employed in the department and of various types of communications equipment, including telex and teletype page printers, perforators, reperforators, transmitters, switching panels, cryptographic and duplicating equipment. It requires experience in planning work and in supervising and training staff.

6 300

#### Complexity

The work requires planning and directing the operations of a communications centre under the direction of a regional communications officer to effect the processing, receipt, transmission, relay and distribution of classified and unclassified messages rapidly and economically, and in accordance with requirements for security. The work involves processing a fluctuating workload of highly sensitive traffic, requiring the use of several cryptographic systems and transmission facilities. Details of procedure and methods are well-established, but there is a requirement to exercise judgment and initiative in interpreting, advising on and monitoring the application of regulations at the centre and for monitoring operations of the 24 posts transmitting through the centre. Judgment and initiative are also required in anticipating and scheduling workloads and in solving a variety of problems related to the operation and maintenance of equipment, re-routing of traffic under conditions posed by foreign environment, provision of courier service, and supervision of staff. Recommendations are made to the Regional Telecommunications Officer with regard to staff and equipment requirements and changes to effect improvements in comcentre procedures.

D<sub>3</sub> 300

#### Consequence of Errors

Errors in planning and defining re-routing procedures, in correctly interpreting changes in procedures defined by headquarters, or errors in checking procedures that may compromise a cryptographic system can result in incorrect handling, delays in processing and transmission and loss or incorrect delivery of messages.

3 50

Degree Points

Responsibility for Contacts

The work requires contacts with officials of own and other departments for the purpose of explaining communications facilities and procedures and obtaining information necessary for modifying procedures to meet user requirements in specific circumstances.

3 50

Conditions of Work

Attention - The work requires normal attention to supervisory duties, with periods of concentration when dealing with operational emergencies.

1 10

Physical Effort - The major portion of the work is performed while seated, with a limited amount of walking while observing operational activities.

1 10

Environment - The work requires exposure to machine room heat, vibration and noise for a major part of the time.

2 30

Supervision

The work requires supervision of a staff of 5 shift supervisors and 10 communicators, including allocation to meet the demands of a 24-hour daily operation, maintenance of quality and production standards, assessment of work performance, interviewing to discuss evaluations and problems of performance and attitude, and making formal recommendations to superiors for disciplinary action.

D<sub>4</sub> 123

EXAMPLE OF A  
STATEMENT OF QUALIFICATIONS  
FOR

B.M.P.D. No. 18: CHIEF SUPERVISOR,, COMMUNICATIONS CENTRE,  
CANADIAN EMBASSY, PARIS (CM-7)

ESSENTIAL QUALIFICATIONS

BASIC REQUIREMENTS

- |                                  |   |
|----------------------------------|---|
| Education                        | - Successful completion of two years of secondary school education according to provincial standards or achievement of a satisfactory score on PSC Examination 1. |
| Achievement, Skills or Aptitudes | - Skill in operating teleprinter keyboard equipment at a speed of at least 40 wpm with not more than a 2 percent error rate.                                      |
| Language Requirement             | - A knowledge of both the English language and the French language is essential for this position.  |
| Experience                       | - Experience in the operation of a communications service including the use of cryptographic equipment, and experience in supervision.                            |

RATED REQUIREMENTS

- |           |  |
|-----------|--|
| Knowledge | - Knowledge of departmental organization structures, functions, and administrative procedures. |
|-----------|--|

- Knowledge of departmental and international communications systems, operating practices and alternative facilities.

- Knowledge of cryptographic systems.

Abilities

- Ability to plan for, organize and control the operations of a communications centre.

- Ability to resolve operational problems, devise and improve operating system procedures and standards, and administer an equipment maintenance program.

- Ability to determine work priorities and schedules, and select, train and evaluate staff communicators and couriers.

- Ability to conduct discussion and dependability.

Personal Suitability

- Tact and courtesy particularly in dealing with users and local communications agencies.