INFORMATION TECHNOLOGY (IS) SPECIALIST

ADMINISTRATIVE PROCEDURES

CLASSIFICATION/RECLASSIFICATION

- Positions are evaluated using the HAY point rated method.

- The classification request is received by Compensation Services and an acknowledgement is sent out to the requestor.

- The Compensation Services Officer responsible for the classification request reviews the position description and may conduct a position audit.

- A quorum of three (3) Compensation Services Officers will review and rate the position description using the Hay point rated method and consensus is reached.

- The classification decision will be confirmed to the requestor in writing by the Compensation Services Branch.

INFORMATION TECHNOLOGY SPECIALIST SERIES

PREAMBLE

This six level series covers positions that have an ongoing responsibility for using technology as a tool to develop data systems for others. Positions involved in the planning and analysis, design, development and implementation of the Information Technology function, on an ongoing basis are included in the series. Positions at the first four levels within this series typically work on a project management basis and, therefore, supervision of staff will not normally impact on the level of the position.

In defining technology, a computer system is defined as the actual hardware which typically consists of the processor unit, operator console, input devices, output devices, auxiliary storage devices, applications and systems software and all hardware and software related to digital communications. Technology also includes the software systems which are complete program modules written to aid the operation of data communications.

Minimum Qualifications

Demonstrated capacity for work in the information technology field combined with the ability normally required to complete post-secondary education. For most positions there is a requirement to know and apply the theory of the discipline where positions would require post secondary education either at the university or community college level.

INCLUSIONS

Positions allocated to this series are those with continuing responsibility for one or more key information technology functions as their primary function as defined below. Positions require the exercise of discretion in the application of the principles, practices and techniques related to planning and analysis; design; development and implementation; maintenance; support; and management of information technology functions.

Responsibilities include, but are not restricted to the following functions.

➢ **Planning and Analysis**

Includes gathering and developing information technology requirements; conceptualizing information technology solutions; assessing system levels and capabilities; investigating alternative information technology options; and recommending information technology solutions.

➢ **Design**

Physical definition of the information system to serve the business need. This involves defining the data; how it will be stored and retrieved; who will access that data; how data is maintained, protected, distributed; security of the data and system; and defining the hardware and software to be used to operate the system.

➢ **Development and Implementation**

Includes developing the program code; developing instructions through manipulation of software; assembling and testing the hardware and software components; and documenting how the entire system fits together and operates. This also includes educating the user on how the systems function and how to use hardware and software.

➢ **Maintenance**

This encompasses monitoring, fixing and modifying existing hardware, software and/or interconnect requirements. Modification will involve at a minimum development and implementation activities and could also involve re-design, planning and re-analysis.

➢ **Support**

Positions assist users with the use of systems by performing functions such as help desk or trouble-shooter. *(This program area does not include positions that function as the prime or expert user that assist other users with the application of the business function.)*

EXCLUSIONS

Positions which work in operations which involve the mechanical functions of automated record keeping are excluded. Some examples of such positions are computer operators, data entry and word processors. Also excluded are those positions:

➢ That use technology/computer systems in support of a primary job function;

➢ Are responsible for assessing and determining business requirements; or

➢ Where the primary duties and responsibilities are included in the definition of any other category.

GUIDE CHART FOR EVALUATING

KNOW-HOW

Definition: Know-How is the sum total of every kind of knowledge and skill, however acquired, needed for acceptable job performance. Know-How has three (3) dimensions - the requirements for:

1. **Specialized Know-How** - Practical procedures, specialized techniques, or scientific disciplines.

and

2. **Management Know-How** - Planning, organizing, co-ordinating, integrating, staffing, directing and controlling the activities and resources associated with an organizational unit or function, in order to produce the results expected of that unit or function. This knowledge and skill may be exercised consultatively ("thinking like a manager") as well as directly.

and

3. **Human Relations Skills** - Active, practicing, person-to-person, skills in the area of human relationships.

<u>**Measuring Practical Technical Know-How**</u>: This type of knowledge and skill may be characterized by breadth (variety) or depth (complexity) or both. Jobs require, in varying combinations, some knowledge about many things or a good deal of knowledge about a few things. Thus, the measuring of Practical, Technical Know-How requires an understanding of *"how much knowledge is needed about how many things and how complex are they?"*

Specialized Know-How

➢ **Advanced Vocational:** Knowledge of practical procedures or systems which are moderately complex and/or specialized skills which require some technical (usually non-theoretical) knowledge to apply.

or

➢ **Basic Specialized or Varied:** Basic understanding of theory and principles in a scientific or similar discipline OR a combination of a sound understanding and skill in several activities which involve a variety of practices and procedures.

or

➢ **Seasoned Specialized or Diverse:** Extensive knowledge and skill gained through broad or deep experiences in a field (or fields) which require a command of either scientific theory and principles OR involved, diverse practices and precedents OR both.

Managerial Know-How

> **Minimal:** Direction of activities which are similar as to content and objectives with appropriate awareness of other activities.

or

> **Diverse:** Direction of an important unit with varied activities and objectives OR guidance of important sub functions or several significant elements across several organizational units**.**

Human Relations Skills

> **Important:** Understanding and influencing people are important requirements in the job.

or

> **Critical:** Alternative or combined skills in understanding and motivating people are important in the highest degree.

Definition: Problem Solving is the amount and nature of the thinking required in the job in the form of analyzing, reasoning, evaluating, creating, using judgment, forming hypotheses, drawing inferences, arriving at conclusions and the like.

Problem Solving has two (2) dimensions:

1. The environment in which the thinking takes place - the extent to which assistance or guidance is available from others or from past practice and precedents.

and

2. The challenge of the thinking to be done - the novelty and complexity of the thinking required.

Note: The evaluation of Problem Solving should be made without reference to the job's authority to make decisions or take action; this is measured on the Accountability Chart.

Measuring Problem Solving: All thinking requires the presence of knowledge in the form of facts, principles, procedures, standards, concepts, etc. This is the raw material to which the thinking processes are applied.

Problem Solving measures the degree to which thinking processes must be applied to the required knowledge in order to obtain the results expected of the job.

To the extent that thinking is limited or reduced by job demands or structure, covered by precedent, simplified by definition, or assisted by others, Problem Solving is diminished and results are obtained by the automatic application of the thinking processes to knowledge.

Thinking Environment

Thinking guided and circumscribed by:

➢ **Standardized:** Thinking within clear but substantially diversified procedures; precedents covering many situations and/or access to assistance.

or

➢ **Clearly Defined:** Thinking within a well-defined frame of reference and toward specific objectives in situations characterized by functional practices and precedents.

or

➢ **Generally Defined:** Thinking within a general frame of reference toward functional objectives, in situations with some nebulous, intangible or unstructured aspects.

Thinking Challenge

> ➢ **Interpolative:** Differing situations requiring search for solutions within area of learned things.

or

> ➢ **Adaptive:** Variable situations requiring analytical, interpretive, evaluative and/or constructive thinking.

ACCOUNTABILITY

General: Accountability is the answerability for action and for the consequences thereof. It is the measured effect of the job on end results. It has three (3) dimensions in the following order of importance:

1. **Freedom to Act** - the degree to which personal or procedural control exists, as defined below.

<div align="center">**and**</div>

2. **Impact** - as defined below.

<div align="center">**and**</div>

3. **Magnitude** - the size of the unit or function (as indicated by the dynamic, annual dollars) most clearly affected by the job.

Freedom to Act

➢ **Generally Regulated:** These jobs are subject, wholly or in part to practices and procedures covered by precedents or well defined policies. Supervisory review.

<div align="center">**or**</div>

➢ **Directed:** These jobs are subject to broad practices and procedures covered by functional precedents and policies. Achievement of a circumscribed operational activity. Managerial direction.

Impact - The degree to which the job affects or brings about the results expected of the unit or function being considered.

➢ **Primary:** Controlling impact - the position has effective control over the significant activities and resources which produce the results, and is the position (at this level of freedom to act) which must answer for the results.

<div align="center">**or**</div>

➢ **Contributory:** Interpretive, advisory, or other supporting services for use by others in achieving results.

<div align="center">**or**</div>

➢ **Remote:** Informational, recording or other facilitating services for the use by others in achieving results.

Magnitude

    (M)   **Minimal:**   under $50,000

                          or

    (1)   **Very Small:** $50,000 - $500,000

                          or

    (2)   **Small:** $500,000 - $5.0 million

                          or

    (3)   **Medium:** $5.0 million - $50.0 million

                          or

    (4)   **Large:** $50.0 million - $500 million

LEVEL DESCRIPTORS

The series is cumulative and therefore each higher level would also require similar academic preparation combined with either a further specialized body of knowledge attained either through additional study or through training and experience in the field.

Information Technology Specialist 1

This is the first working level. Positions at this level are advanced vocational knowledge, specialized skills requiring some technical (usually non-theoretical) knowledge to apply. Positions at this level carry out diverse functions such as first level user support, office automation support or support other activities of more senior programmer. This level is also used as an underfill level for incumbents that have not attained either the experience required at the working level or for incumbents who have in place an approved development plan and have not completed the academic, training and experiential requirements.

Information Technology Specialist 2

This is the full working level of the series in which positions provide service in the discipline of computer science. Positions may provide generalist service in an area such as programming, applications development, network design, basic systems analysis, second level user support. Positions require a specialized body of knowledge normally acquired through post secondary education either at the community college or university level. Positions at this level require understanding of the theoretical discipline. Problem solving is typically interpolative, based on knowledge of the principles of the discipline. Some examples of positions typical to this level are programmers and programmer/analysts.

Information Technology Specialist 3

This is the advanced working level. Some positions may supervise other professional staff either on a project or on a continuous basis. At this level positions may begin to specialize in a stream of computer science or have broad generalist knowledge of the field and its practices and principles. Positions at this level may conduct feasibility studies, develop system requirements by employing standard systems development life cycle methodology; plan, configure, and implement networks, including security, backup and recovery procedure. Some examples of positions typical to this level are technical analysts and project leaders.

Information Technology Specialist 4

These are positions requiring basic specialized or varied knowledge, adaptive problem solving and broad experience in the particular stream of information technology. Positions at this level are required to manage projects from inception through to roll out; or are responsible for the full range of database administration or other technical activities. Positions at this level typically manage staff on a project basis and may or may not have staff reporting to them on an ongoing and organizational basis. Senior technical positions often do not have supervisory responsibilities. Some typical positions at this level are senior database administrators, senior technical architects, and senior project managers.

<u>Information Technology Specialist 5</u>

This is an excluded level which applies to the central ICT organization and is currently in the process of being updated to reflect the new centralized structure.

<u>Information Technology Specialist 6</u>

This is an excluded level which applies to the central ICT organization and is currently in the process of being updated to reflect the new centralized structure.