Australian Government

CPPSSI4035 Apply GIS software to spatial problems

Release: 1

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Modification History

Release 1   This version first released with CPP Property Services Training Package Release 12.0.

This unit supersedes and is equivalent to CPPSIS4035 Apply GIS software to solve spatial data problems.

Application

This unit specifies the skills and knowledge required to use geographic information system (GIS) software applications to show spatial patterns and relationships for identified issues. It includes integrating various sources of spatial information using spatial overlay techniques and analysis of data.

The unit also includes using univariate statistics to explore datasets, and spatial and attribute queries to generate results and reports.

This unit is suitable for entry-level technicians who use a broad range of cognitive, technical and communication skills to select and apply a range of methods, tools, materials and information to complete routine and non-routine activities and provide and transmit solutions to a variety of predictable and sometimes unpredictable problems.

Surveying and spatial information skills are applied in a range of industry contexts, including town planning, civil construction, mining, engineering, health, agriculture and defence.

All work must be carried out to comply with workplace procedures, in accordance with relevant state/territory regulations that govern surveying work, as well as work health and safety (WHS) legislation and regulations that apply to the workplace.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil.

Unit Sector

Surveying and Spatial Information Services

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.

1	Prepare for spatial analysis.	1.1	Clarify task requirements to address the issue under consideration with appropriate persons.
		1.2	Apply appropriate work practices for safe screen-based work.
		1.3	Access, interpret and manipulate spatial datasets to confirm they are in acceptable format to meet task requirements.
		1.4	Identify and resolve routine spatial data problems or irregularities with geometry and attributes and resolve with appropriate persons.
		1.5	Use spatial and attribute queries to select features from vector and aspatial text databases.
		1.6	Determine accuracy of query results on vector and raster datasets by cross-referencing in tabular and cartographic view.
		1.7	Generate and use univariate statistics to explore the dataset.
2	Undertake spatial analysis.	2.1	Manipulate existing data and integrate new data according to task requirements.
		2.2	Use vector and raster geoprocessing techniques to generate results relating to spatial task.
		2.3	Check that outputs of analysis are correct and applicable.
3	Produce reports.	3.1	Compile information on the limitations and assumptions of the datasets and the geoprocessing techniques used according to task and organisational requirements.
		3.2	Present summary statistics and results using tabular, cartographic and graphic methods according to task requirements.
		3.3	Incorporate results for all sources into reports according to organisational requirements.
		3.4	Comply with legislative and ethical requirements for producing reports based on spatial data analysis.

4 Finalise data analysis.	4.1	Check output spatial data for completeness and manipulate where necessary according to organisational requirements.
	4.2	Create metadata according to organisational requirements.
	4.3	Store spatial data in a secure location and record details according to organisational requirements.
	4.4	Comply with organisational requirements for documentation and storage relating to audit trails, naming standards, templates and version control.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPPSIS4035 Apply GIS software to solve spatial data problems.

Links

Companion volumes to this training package are available at the VETNet website - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6f3f9672-30e8-4835-b348-205dfcf13d9b