ICTTEN515 Dimension and design a radio frequency identification system

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to carry out installation, maintenance and upgrade of information and communication technology (ICT) networks.

It applies to individuals employed by telecommunications and ICT networking provisioning companies specialising in radio frequency identification (RFID) technology. These individuals might work on upgrades to existing systems or be involved in implementation of new logistical or security networks using RFID technology according to design specifications.

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

Unit Sector

Telecommunications – Telecommunications Networks Engineering

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Prepare to dimension and design an RFID system	1.1 Obtain the client's business requirements of the intended RFID system to effectively inform the new design 1.2 Research RFID technologies, their functionalities and different implementations of configurations 1.3 Select suitable software and hardware types to ensure the proposed system is designed to meet business requirements 1.4 Conduct a survey of available interrogators or readers, tags and wireless units

ELEMENT	PERFORMANCE CRITERIA
2. Dimension and design RFID system	2.1 Select the most appropriate interrogators or readers for the given specification to ensure their compatibility with current network infrastructure, if applicable
	2.2 Minimise interrogator to interrogator interference
	2.3 Verify antenna geometry and footprint are consistent with the chosen design
	2.4 Minimise sources of interference
	2.5 Incorporate use of anti-collision protocols into the RFID design
	2.6 Customise appropriate tag to client requirements
	2.7 Predict performance for read distance, write distance and tag response time to confirm these conform with client requirements
	2.8 Select optimal locations for an RFID tag to be placed on an item
	2.9 Prepare a design proposal for the RFID system including specifications
	2.10 Prepare a report containing design solutions and recommendations of preferred products, including justification for recommendations
	2.11 Submit report to client for approval
3. Document specified design	3.1 Complete documentation according to client requirements
	3.2 Inform client of standards applying to the design
	3.3 Secure sign-off of RFID design from appropriate person

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.2	• Organises, evaluates and critiques technical documentation from a range of complex texts
Writing	2.9, 2.10, 3.1	• Prepares clear and concise workplace documentation including reports and design solutions incorporating technical language to communicate complex information clearly and effectively

Oral Communication	1.1	• Uses active listening, observational and questioning techniques to identify different perspectives and confirm, clarify or revise understanding
Numeracy	1.2, 2.7, 2.9	• Uses mathematical formulae and geometric calculations to interpret and record technical specifications and evaluate possible design solutions
Interact with others	1.1, 2.11, 3.2, 3.3	• Selects appropriate communication protocols and conventions in a broad range of work contexts
Get the work done	1.3, 1.4, 2.1-2.6, 2.8	• Uses a combination of formal, logical planning processes and an increasingly intuitive understanding of context for complex, high-impact activities with strategic implications • Implements actions according to a predetermined plan, making adjustments if necessary and addressing unexpected issues • Selects and uses digital technologies and systems to achieve work goals and enhance work processes • Uses formal analytical and lateral thinking techniques for identifying issues, generating and evaluating possible solutions

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTTEN515 Dimension and design a radio frequency identification system	ICTTEN5203A Dimension and design a radio frequency identification system	Updated to meet Standards for Training Packages Minor changes to performance criteria for clarity	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -
https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2

     PwC's Skills for Australia