Australian Government

Department of Education, Employment and Workplace Relations

ICTCBL3052A Cut over new systems and equipment on customer premises

Release: 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

ICTCBL3052A Cut over new systems and equipment on customer premises

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to cut over new customer premises systems and equipment.
	This may include communications applications in telephony, broadband, data, video, radio frequency identification (RFID), security and computer networks, including local area networks (LAN), wide area networks (WAN) and multimedia.
	Licensing, legislative, regulatory and certification requirements apply to working at heights. If an elevated work platform (EWP) is required, verify state law requirements for a licence to operate an EWP. Users should confirm requirements with the relevant federal, state or territory authority.
	If working at heights, achievement of the unit 'CPCPCM2015A Work safely on roofs' from the CPC08 Construction and Plumbing Services Integrated framework training Package fulfils this requirement.

Application of the Unit

Application of the unit	Technicians or lineman installers whose work involves cut over of new customer premises systems and equipment apply the skills and knowledge in this unit.
	They may install or upgrade an existing customer installation to include applications in emerging technologies, including internet protocol (IP) based equipment, RFID units, IP security and computer networking.
	This unit applies to indoor and outdoor installation within customer premises and may be a domestic, commercial or industrial installation.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the system and equipment cut over	1.1. Obtain *relevant legislation*, *codes*, *regulations and standards*
	1.2. Scope the work by obtaining project plan from *appropriate personnel* and arrange for site access to comply with security arrangements
	1.3. Notify appropriate personnel of identified *safety hazards* at the worksite
	1.4. Determine cable route and type of *cable* and *equipment* from project plan and identify and avoid *other services*
	1.5. Obtain *plant*, *tools and safety equipment* and material to perform tasks safely and efficiently
	1.6. Prepare an implementation plan with *cut over tasks* based on identified nature of job and seek customer approval
	1.7. Notify customer and network carrier of proposed *cut over details* and arrange for customer representation
2. Cut over the system or equipment into service	2.1. Perform cut over tasks and connect network facilities as with approved plan following occupational health and safety (*OHS*) *and environmental requirements* for the given work
	2.2. Test all cable connections, equipment and facilities as instructed in technical manuals and specifications
	2.3. Evaluate *test* results to ensure proper system operation and performance and rectify if required
3. Complete project documentation	3.1. Record test results for future reference and complete reports on cut over installation and design amendments according to enterprise requirements
	3.2. Recover obsolete materials and equipment and return to appropriate point for disposal
	3.3. Restore site according to the requirements of enterprise or approving authority and to customer satisfaction
	3.4. Notify appropriate personnel of job completion and obtain sign off

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to evaluate test results
- communication skills to liaise with internal and external personnel on technical and operational matters
- literacy skills to interpret technical documentation, such as equipment manuals and specifications
- numeracy skills to take and analyse measurements
- planning and organisational skills to:
    - organise and maintain equipment
    - scope work and develop implementation plan for cut over project
- safety awareness skills to:
    - apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
    - select and use required personal protective equipment conforming to industry and OHS standards
- task management skills to work systematically with required attention to detail and adherence to all safety requirements
- technology skills to:
    - perform fault clearance
    - use diagnostic equipment
    - use hand and power tools

Required knowledge

- cabling types, connectors and cabling structures
- legislation, codes of practice and other formal agreements that impact on the work activity
- manufacturer's requirements for safe operation of equipment
- overview knowledge of customer premise equipment
- specific OHS requirements relating to the activity and site conditions
- test methods and performance requirements, including features and operating requirements of test equipment
- typical issues and challenges that occur on site

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • read and interpret plans • develop and implement a cut over work plan • install customer premises equipment • configure and test systems and equipment • apply relevant regulations and standards.
Context of, and specific resources for assessment	Assessment must ensure: • sites where installation of systems and equipment involving cut over may be conducted • use of installation equipment currently used in industry • relevant regulatory and equipment documentation that impact on work activities.
Methods of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct observation of the candidate performing cut over of systems and equipment • review of plans and reports completed by the candidate outlining system and equipment cut over and test results • oral or written questioning to assess knowledge of planning, types of systems and issues associated with cut over.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTCBL2068A Install telecommunications service to a building • ICTCBL3067A Modify and cut over cable. Aboriginal people and other people from a non-English

EVIDENCE GUIDE	
	speaking background may have second language issues.
	Access must be provided to appropriate learning and assessment support when required.
	Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed.
	In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.
	Where applicable, physical resources should include equipment modified for people with special needs.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	

Relevant legislation, *codes*, *regulations and standards* may include:	• Australian Communications Industry Forum (ACIF) standards and codes
	 • appropriate licences:
	   • crane
	   • EWP
	   • forklift
	   • winch
	 • AS Communications Cabling Manual (CCM)

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RANGE STATEMENT	
	Volume 1 • AS/NZS 3000:2007 • AS/NZS 3080:2003 • AS/NZS 3084:2003 • AS/NZS 3085.1:2004 • AS/NZS IEC 61935.1:2006 • AS/NZS IEC 61935.2:2006 • AS/NZS ISO/IEC 14763.3:2007 • AS/NZS ISO/IEC 15018:2005 • AS/NZS ISO/IEC 24702:2007 • cabling security codes and regulations • Environmental Protection Acts • ISO Draft 11801 (International) • OHS • regulated or industry codes of practice and include appropriate ACMA standards • relevant Institute of Electrical and Electronics Engineers (IEEE) standards • road and traffic control legislation and codes • technical standards AS/ACIF S008:2006 and AS/ACIF S009:2006.
Appropriate personnel may be:	• consultant • project engineer • site supervisor.

Safety hazards may refer to:	• access points that may contain:
	  • hazardous light (non-visible laser)
	  • radio frequency (RF) emission
	• contact with remote power feed
	• electrical supply and areas of earth potential rise (EPR) that require mandatory separation from communications cable
	• hazardous conduit as according to AS 1345: 1995 conduit colours associated with a hazardous service
	• unsafe support structures:
	  • condemned poles
	  • visible signs of decay or stress
	• unsafe weather:
	  • heavy rains
	  • high winds

RANGE STATEMENT	
	• severe heat or cold • thunderstorms.
Cable may include:	• coaxial • data cabling • distribution cable • lead-in cable • multipair copper • optical fibre • radio feeder.

Equipment may include:	• cable TV (CATV) unit
	• internet protocol TV (IPTV) unit
	• network equipment:
	   • data switch
	   • gateway
	   • router
	   • server
	• private automatic branch exchange (PABX)
	• pay TV unit
	• RFID unit
	• security panel
	• wireless access point.

Other services may include:	• availability and suitability of existing cabling trays and fixing systems • fire sprinkler systems • gas and water mains • high voltage (HV) power.

Plant, *tools and safety equipment* may include:	• plant:
	   • elevated platform vehicle
	   • ladders
	   • scissor lifts
	   • wire raising tool (insulated)
	• safety equipment:
	   • flashing lights
	   • gas and other hazard detection equipment
	   • personal protective clothing:
	      • earmuffs
	      • fall arrest systems
	      • gloves

RANGE STATEMENT	
	- head protection - kneepads - masks - protective suits - safety boots - safety glasses - safety barriers - trench guards - warning signs and tapes - test equipment: - cable tester - continuity tester - LAN Cat tester - network analyser - passive optical network (PON) meter - protocol analyser - tools: - auger - fixing brackets - spanner.
Cut over tasks may include:	- cable jumpering of distribution frames - installing new cable and equipment - job preparation for cut over activity - loading of new software - saving and backing up existing system configurations - splicing new optical fibre.
Cut over details may include:	- back up support from vendor or supplier - contingency plan - date, time and duration - nature and type of work involved - request for customer representation.
OHS and environmental requirements may relate to:	- decommissioning and isolating worksite and lines prior to commencement - identifying other services, including power and gas - personal protective clothing: - earmuffs - gloves:

RANGE STATEMENT	
	- leather - plastic - rubber - head protection - kneepads - masks - protective suits - safety boots - safety glasses - safety harness - safety line - safe working practices, such as the safe use and handling of: - asbestos - chemicals - materials - tools and equipment - work platforms - safety equipment: - flashing lights - gas and other hazard detection equipment - safety barriers - trench guards - warning signs and tapes - witches hats - special access requirements - suitable light and ventilation - environmental considerations: - clean-up protection - stormwater protection - waste management.
Test may include:	- ability to make and receive a call - connectivity - end to end performance test - programme checks - qualitative test - software diagnostics - toll and metering functions

RANGE STATEMENT	
	• traffic flow.

Unit Sector(s)

Unit sector	Telecommunications

Co-requisite units

Co-requisite units		

Competency field

Competency field	Cabling