Australian Government

ICTCBL2017B Alter services to existing cable system

Release 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

ICTCBL2017B Alter services to existing cable system

Modification History

Release	Comments
Release 2	This version first released with *ICT10 Integrated Telecommunications Training Package Version 3.0*. Minor changes to range statement to reflect changed terminology. Outcomes deemed equivalent.
Release 1	This version first released with *ICT10 Integrated Telecommunications Training Package Version 1.0*.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to alter services to an existing voice or data cable system within customer premises.

Assessment by a TITAB-registered assessor is recommended.

The six unit competency set ICTCBL2005B, ICTCBL2006B, ICTCBL2008B, ICTCBL2012B, ICTCBL2017B and ICTCMP2022B, that meets the Australian Communications and Media Authority's (ACMA) requirements for Cabling Provider Registration (CPR), is generally used as part of a more specialised customer cabling qualification. This set is usually regarded as more suitable for new entrants where limited industry experience has been obtained and forms the major part of specialised qualifications, such as ICT20313 Certificate II in Telecommunications Cabling. When these six units are undertaken as a set within state and territory funding approved programs, the two benchmark Cabling Provider Rules units (ICTCBL2136B and ICTCBL2137B) are not required.

All customer cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an ACMA-accredited registrar.

Application of the Unit

Technical staff who alter services to existing cable systems apply the skills and knowledge in this unit.

This unit applies to indoor and outdoor installation within a customer premises. It may be applied to domestic, commercial or industrial installations. Communications applications include digital and analog, telephony, data, video, digital broadcasting, computer networks, local area networks (LAN), wide area networks (WAN) and multimedia.

They may make use of formal documentation, such as accurate completion of a telecommunications cabling advice form (TCA1 form), test routines and databases.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements	**Performance Criteria**
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

1. Prepare to alter services to existing cable system	1.1 Survey the site to determine ***system alteration*** requirements to ***existing cable system***
	1.2 Inform appropriate personnel of identified ***hazards*** on work site
	1.3 Organise equipment and materials to meet required industry standards and ensure compatibility with existing system
	1.4 Arrange ***access to site*** according to required procedures
2. Alter cable system	2.1 Follow ***occupational health and safety (OHS) and environmental requirements*** for the given work and according to industry standards
	2.2 Alter system so that it conforms to ***client system specifications*** according to requirements of ***relevant legislation, codes, regulations and standards***
3. Restore and test cable system	3.1 Confirm compatibility of alterations with existing systems
	3.2 Test new work in isolation and when integrated with existing systems
	3.3 Rectify any faults
4. Complete records and clean up site	4.1 Update plans and documents to show revised systems accurately and clearly, or create new plans as appropriate
	4.2 Remove installation waste and debris from work site and dispose of according to environmental requirements to maintain safe work site conditions
	4.3 Reinstate site according to customer and company requirements
	4.4 Complete TCA1 form and sign off with customer to record satisfaction

Required Skills and Knowledge

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

Required skills

- communication skills to liaise with internal and external personnel on technical and operational matters
- literacy skills to interpret technical documentation, such as equipment manuals, specifications and service orders
- numeracy skills to take and analyse measurements
- planning and organising skills to organise and maintain equipment
- problem-solving skills to solve equipment and logistics problems
- task-management skills to work systematically with required attention to detail and adherence to all safety requirements
- technical skills to:
  - perform fault clearance
  - use diagnostic equipment
  - use hand and power tools
  -

Required knowledge

- ACMA Competency Requirements for Telecommunications Cabling Provider Rules 2000
- legislation, codes of practice and other formal agreements that impact on the work activity
- features and operating requirements of test equipment
- information required to operate equipment according to a test specification
- manufacturer requirements for safe operation of equipment
- specific OHS requirements relating to the activity and site conditions
- test methods and performance requirements
- typical issues and challenges that occur on site

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: • estimate requirements and document specifications and cable plan for alteration • alter, restore and test cable system according to industry standards • rectify faults • comply with all related OHS requirements and work practices.
Context of, and specific resources for assessment	Assessments must ensure: • sites on which alterations to existing cable system may be conducted • use of testing equipment currently used in industry • relevant regulatory and equipment documentation that impacts on alteration 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: • review of a hands-on project completed by the candidate • review of an oral and written report with completed documentation, such as TCA1 form • direct observation of the candidate altering services to an existing cable system.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTCBL2005B Install customer cable support systems • ICTCBL2006B Place and secure customer cable • ICTCBL2008B Terminate metallic conductor customer cable

	• ICTCBL2012B Install functional and protective telecommunications earthing system • ICTCMP2022B Organise and monitor cabling to ensure compliance with regulatory and industry standards. Aboriginal people and other people from a non-English 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

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.

System alteration may include:	• additions • new extensions to services • removals • systems or application upgrades.
Existing cable system may include:	• all metallic conductor cable types • Category 5, 6, 6A, 7 or 7A installations • terrestrial or satellite coaxial systems.
Hazards may include:	• building debris • earth potential rise (EPR) • glass fibre • live power lines • manual handling • mud and water • natural gas and other gas build-up • needle stick injury • optical fibre cable that contains hazardous light • radio frequency (RF) equipment emitting radiation • remote power feeding services that operate at above telecommunications network voltage (TNV) • vermin.
Access to site may involve:	• activities of tenants and other facility users • egress points • electronic surveillance • hours of access • noise control • presentation • registered entry requirements • relationships with other customer activities • security requirements • type of client activity.
OHS and environmental requirements may relate to:	• identifying other services, including power and gas • need for decommissioning and isolating work site and lines before beginning work • personal protective clothing:

	• earmuffs
	• gloves:
	  • plastic
	  • rubber
	  • leather
	• head protection
	• kneepads
	• masks
	• protective suits
	• safety boots
	• safety glasses
	• safety harness
	• safety line
	• safe work 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.

Client system specifications may relate to:	• contract documents • cable plans and designs • specification schedules.
Relevant legislation, codes, regulations and standards include:	• Australian Communications Industry Forum (ACIF) standards and codes • ACMA technical standard requirements for cabling: • underground

	• aerial • Category 5 6, 6A, 7 or 7A • unshielded twisted pair (UTP) • AS Communications Cabling Manual (CCM) 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 • Australian building codes and regulations • cabling security codes and regulations • Environment Protection Acts • fire regulations • industry standards • manufacturer specifications • noise abatement regulations • OHS Acts and relevant codes and standards • technical standards AS/ACIF S008:2006 and AS/ACIF S009:2006 • use of ACMA-approved cabling products.

Unit Sector(s)

Telecommunications - Cabling