



**Public Consultation on the Draft Guideline for ICT Cabling Practices in PNG**

The deadline for responses is 4:30pm on the 13<sup>th</sup> of December 2013

**Purpose:** To seek the views of interested parties on NICTA's proposal for the ICT Cabling Guideline

## 1. Executive Summary

- i The National Information and Communications Technology Act 2009 (the Act) provides for NICTA to conduct public consultation before making, revoking or varying any rules or guidelines. NICTA Staff has revised the Guideline for ICT cabling practices instrument and is now conducting public consultation pursuant to section 229 of the NICT Act as been revised to facilitate the development of new technologies and the introduction of new services and the consequential increase of ICT cabling activities in PNG. The Guideline is also aimed at encouraging increased compliance with the Licensing requirements and Cabling Standards as well as to foster an improved level of safety for consumers, cabling practitioners and the ICT networks.
- iii NICTA is required by the Act, to ensure that the ICT Industry contributes to the greatest extent possible to the long term economic and social development of Papua New Guinea by means of providing a regulatory framework that is based on sound economic principles and is technology neutral to reflect the potential for convergence.
- iv The Guideline provides the general guiding principles for regulating ICT cabling services in terms of supplying; installing; maintenance; and maintaining of cables and their accessories, either internally or externally. This includes licensing requirements as well as technical operation and service provisions of Cabling Providers.

## 2. Introduction and Background

- i. NICTA has responsibility under the Act, for the regulation of ICT Cabling practices in PNG. To full this responsibility, NICTA:
  - develops and manages the overall regulatory instruments for cabling practices;
  - ensures that the ICT industry is aware of and comply with the regulatory requirements;
  - promotes consumer and industry awareness of cabling regulatory arrangements; and
  - ensures that the ICT industry players have a level playing field that encourages fairness and transparency for all competitors.
- ii. In this consultation document, the Guideline for Cabling Practices sets out NICTA's proposal to provide general guiding principles for the technical regulation of Cabling Providers and their activities so that:
  - a high standard of ICT Cabling work is provided whether, coaxial, fibre optical, copper or any forms of internal and external ICT Cabling;
  - a safe and acceptable quality of operational cabling system is maintained for the user and consumer as well as the equipment and networks to which the cabling system is connected;, and
  - External and internal cabling installations and requirements thereof are consistent with relevant provisions of the current and appropriate regulatory guidelines and technical cabling standards.
- iii. The Guideline includes the regulatory requirements of both the internal and external telecommunications cabling services for customer cabling and other

important aspects that are of vital importance to the smooth and orderly development of the ICT cabling services in PNG.

- iv The amendments in this regulatory instrument address the ICT Cabling services in terms of licensing, installation, maintenance and maintaining of new and existing cabling network infrastructure with their accessories so that a high level of cabling standards can be achieved for the emerging customer cabling environment, especially in light of customer premises cabling associated with the NBN rollout.

### 3 Consultation

#### Issues for consideration

- i NICTA invites comments on any aspect of the Guideline or related issues and may wish to consider the following points:
  - *ICT Cabling Licensing Conditions;*
  - *Categories of ICT Cabling Licences;*
  - *Eligibility Criteria for the three (3) proposed categories of ICT Licences;*
  - *Renewal of Cabling Licences;*
  - *The proposed Cabling Licences fees;*
  - *Conditions for Network Boundaries;*
  - *Inspection and approval of cabling work;*
  - *Issuing of permit to connect cable to a Network;*
  - *International recognized Cabling Standards; and*
  - *Any other general comments.*

### 4 Instructions for submitting a response

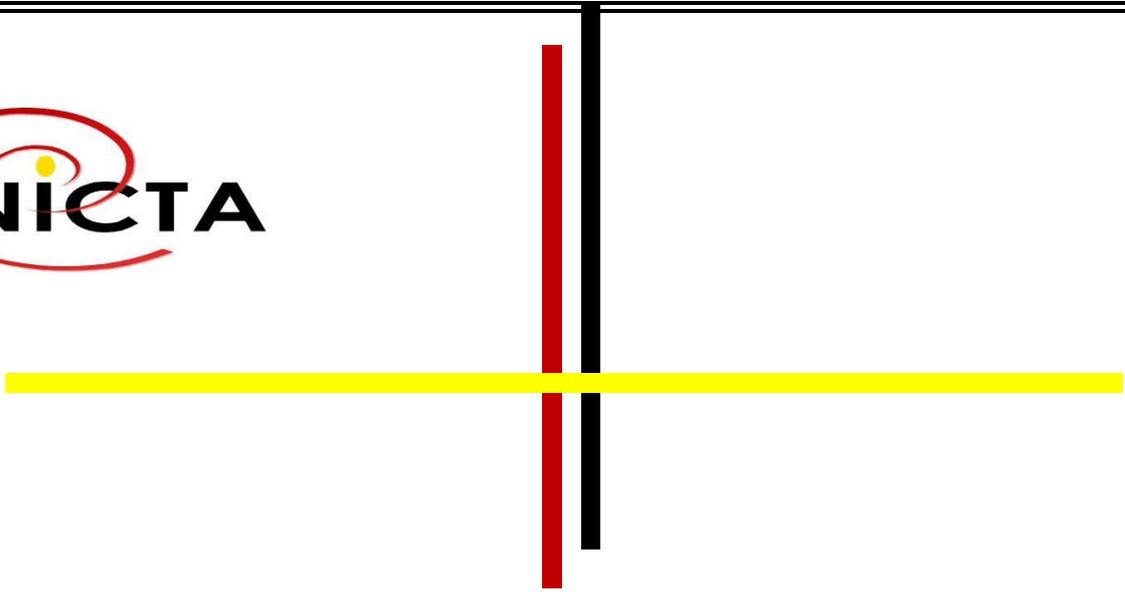
#### Submissions

- i Comments should be submitted by 4:30pm on the 13th of December 2013  
Responses should be addressed to:  
The Director Engineering and Resource Planning  
Engineering and Resource Planning Department  
NICTA  
P.O. Box 8227, Boroko, NCD
- ii. Alternatively, responses may also be emailed to [vdoncevski@nicta.gov.pg](mailto:vdoncevski@nicta.gov.pg) or [frupokei@nicta.gov.pg](mailto:frupokei@nicta.gov.pg)
- iii. Responses should include:
  - the name of the company/institution/association;
  - the name of the principal contact person; and full contact details (physical address, telephone number, fax number and email address);and
  - in the case of responses from individual consumers, name and contact details.
- v. For the purpose of transparency, NICTA will make all submissions received available for public scrutiny, subject to the confidentiality of the information received. NICTA will evaluate requests for confidentiality in line with relevant legal provisions and

NICTA's published guidance on the treatment of confidential and non-confidential information.

- vi. Respondents are required to clearly mark any information included in their submission which is considered confidential. Where such confidential information is included respondents are required to provide both a confidential and non-confidential version of their submission. If a submission is marked confidential in its entirety, reasons for this should be provided. NICTA may publish or refrain from publishing any document or submission at its sole discretion.
- vii. Once NICTA has received and considered the responses to this consultative document, NICTA will issue a final version of the Guideline, together with a report on the consultation.
- viii. Upon receipt of the comments from stakeholders NICTA will consider such comments in the preparation of the final version of the Regulatory Guideline.

**ANNEX A**



**DRAFT GUIDELINE  
FOR  
ICT CABLING PRACTICES**



**Document Ref. 1152.1**

## Table of Contents

<b>1 INTRODUCTION .....</b>	<b>1</b>
<b>1.1 SCOPE .....</b>	<b>2</b>
<b>1.2 OBJECTIVE .....</b>	<b>2</b>
<b>2 ICT CABLING LICENSING CONDITIONS .....</b>	<b>3</b>
<b>2.1 GENERAL CONDITIONS .....</b>	<b>3</b>
<b>2.2 PROHIBITION OF UNAUTHORIZED CABLING WORK.....</b>	<b>4</b>
<b>2.3 LICENSING OF CABLING PROVIDERS.....</b>	<b>4</b>
<i>2.4 Eligibility Criteria And Application.....</i>	<i>4</i>
<b>2.5 RENEWAL OF CABLING LICENCE .....</b>	<b>5</b>
<b>2.6 FURTHER INFORMATION .....</b>	<b>6</b>
<b>2.7 NOTIFICATION OF APPLICATION REFUSAL.....</b>	<b>6</b>
<b>2.8 CONDITIONS OF LICENSES.....</b>	<b>6</b>
<b>2.9 OFFENCE OF CONTRAVENING LICENCE CONDITIONS .....</b>	<b>6</b>
<b>2.10 REVOCATION OF CABLING LICENCES .....</b>	<b>7</b>
<b>2.11 CABLING FEES .....</b>	<b>7</b>
<b>2.12 REGISTRATION OF ICT CABLING LICENCES .....</b>	<b>8</b>
<b>3 NETWORK BOUNDARY.....</b>	<b>9</b>
3.1 General Conditions.....	9
3.2 Exceptional Conditions .....	9
<b>3.3 APPROVALS .....</b>	<b>9</b>
3.4 Inspection .....	10
<b>4 EQUIPMENT CERTIFICATION, REGISTRATION AND TYPE APPROVAL .....</b>	<b>11</b>
4.1 General .....	11
4.2 Interference And Hazardous Cabling Systems Or Equipment.....	11
<b>5 CABLING SYSTEMS.....</b>	<b>12</b>
5.1 Upgrading Of Existing Cabling Systems .....	12
5.2 Quality Assurance/Standard Compliance.....	12
5.3 Connection To The Provider Network .....	12
<b>6 REGULATORY COMPLIANCE AND STANDARDS .....</b>	<b>13</b>
6.1 Regulatory Instruments .....	13
6.2 International Cabling Standards .....	13
6.3 Bribery.....	13
<b>7 DOCUMENT ADMINISTRATION.....</b>	<b>14</b>
7.1 Date Of Effect Of The Guideline .....	14
7.2 Minor Amendments To The Guideline .....	14
7.3 Document Publication And/Or Distribution.....	14
7.4 Complaints And Enquiries .....	14
<b>8 SCHEDULES.....</b>	<b>15</b>
Schedule 1 - Definitions .....	16
Schedule 2 – Reference Documents .....	17
Schedule 3 - Fees.....	18
Schedule 4 – Cabling Flow Chart .....	21
Schedule 5 – List Of Test Houses .....	22

## 1 Introduction

Information and Communications Technology (ICT) services and applications have now become a necessity for everyday life, just like water, and electricity. ICT creates a platform where people can interact, share and download information, or conduct their everyday business remotely without the need for physical presentation. ICT services and applications have become the backbone for businesses, schools and other institutions which rely entirely on communications devices and infrastructure to communicate, exchange information and conduct business transactions.

About 80% of these ICT services and applications are delivered through a wired network; where we have internal LANs in offices and buildings, external local and backbone copper and optical fibre loops linking the residential homes to the local exchanges or main backbone links connecting buildings to buildings or buildings to main PSTN exchanges.

With the recent increase in business activities, the growing popularity of internet, and the deployment of ICT services in schools, and the public demand for multimedia services has seen a greater need for reliable communication infrastructures. It is therefore vital that Cabling Providers perform cabling work that is of the highest level that can sustain and maintain its capacity, increased network lifespan and compliance to applicable standards.

### ICT Cabling Overview

In recent years, there has been a decline in the standard of ICT cabling in Papua New Guinea as observed by NICTA, and from numerous complaints received from the general public. The main causes in the decline in the level of cabling standards is due to inexperience and unqualified persons carrying out cabling work, coupled with no clear procedures and technical standards in place and the importation and use of low quality cabling products and related accessories.

### NICTA's Mandatory Obligation

In accordance with Section 218 of the Act 2009, NICTA has the mandatory obligation to make rules and guidelines that shall be used as a basis on which it can perform its technical regulatory functions and or by which users and or service providers shall comply as appropriate.

To address this current Cabling situation, NICTA has therefore developed this Instrument to provide the guiding principles for regulating ICT Cabling services in terms of supplying, installing, maintenance and maintaining new and existing cabling network infrastructure with its associate accessories so that a high level of cabling standards can be achieved.

## 1.1 Scope

1.1.1 The guidelines in this Instrument apply to:

- a) Network Operators;
- b) External and Internal Cabling Providers of ICT cabling networks and services;
- c) Suppliers of Cabling Products and associated accessories; and
- d) Cabling Providers and Network Provider Employees where required or necessary.

1.1.2 The provisions of this Instrument apply to all ICT Cabling systems or networks whether or not the ICT Cabling system/network is:

- a. in service or out of service;
- b. being constructed and has never been invoked or operated in some form; or
- c. being constructed on or near other utility infrastructure.

1.1.3 Unless otherwise expressly stated, this Instrument supersedes all previous policies and practices on external and internal cabling activities and practices.

1.1.4 Where applicable, cross-reference to relevant documents is made to give more specific guidance. These are relevant to this Instrument but do not necessarily represent all the technical standards that may need to be consulted in meeting the requirements of these guidelines. The publication dates for these reference documents however, should be checked before use to ensure that they are still the most appropriate issue, and that all associated amendments are considered.

## 1.2 Objectives

1.2.1 The main objective of this Instrument is to provide the general guiding principles for the technical regulation of Cabling Providers and their activities so that:

- a. a high standard of ICT Cabling work is provided whether coaxial, optical fiber, copper or any other forms of internal and external ICT Cabling;
- b. a safe and acceptable quality of operational cabling is maintained for the users and consumers as well as the equipment and networks to which the cabling system is connected to; and
- c. external and internal cabling installations and requirements thereof are consistent with relevant provisions of the current and appropriate regulatory guidelines and technical cabling standards.

## 2 ICT Cabling Licensing Conditions

### 2.1 General Conditions

- 2.1.1 A number of persons will be licensed and registered with NICTA to supply, install and maintain cabling systems to all segments of the ICT network in PNG. That includes copper, coaxial, fibre, alarm or any form of internal or external ICT cabling in customer premises and commercial buildings.
- 2.1.2 Only persons that are licensed and registered with NICTA in accordance with the conditions outlined in this Instrument and the Act shall be permitted to supply, install or maintain ICT Cabling in Papua New Guinea.
- 2.1.3 Cabling licensees will be subjected to relevant NICTA regulatory instruments.
- 2.1.4 Certified and registered Cabling Provider(s) maybe engaged by building and/or engineering firms for consultancy service to design and oversee a major cabling project.
- 2.1.5 Unless otherwise stated, the terminology used in this Instrument carry the meaning defined in the attached Schedule 1 (Definitions) of this Instrument.

### 2.2 Prohibition of Unauthorised Cabling Work

- 2.2.1 A person must not perform a particular type of cabling work unless:
  - a. the person is the holder of a NICTA ICT Cabling Licence that authorises the performance of that type of cabling work; or
  - b. the person performs the work under the supervision of the holder of a ICT Cabling Licence that authorises the performance of that type of cabling work.
- 2.2.2 A person(s) other than a cabling license holder, who intentionally or recklessly contravenes subsection 2.2.1, will be subjected to Section 204 (*Offences Relating to Unlicensed Cabling Work*) of the Act.

## 2.3 Licensing of Cabling Providers

### 2.3.1 ICT Cabling Licences

2.3.1.2 NICTA shall issue ICT Cabling Licence to persons for the supply, installation and maintenance of ICT Cabling in accordance with Section 201 (*Issue of Cabling Licences*) of the Act under one of the following categories of licences:

(1) **Restricted ICT Cabling Licence** - This will be issued to persons to perform cabling work where the network boundary is a simple socket or a simple network termination device. Such settings are often found in domestic homes and small businesses, but not in large commercial buildings. However, the person may carry out work in multi-storey and campus-style premises given that the cabling is performed behind a compliant device.

**b) Open ICT Cabling Licence** - This is issued to persons to perform all types of ICT Cabling work from simple residential homes to complex structured cabling in buildings. However, in order to qualify, one must possess the necessary qualifications and experiences in cabling work.

**c.) Lift Cabling Licence:** This license shall be issued to individuals to carry out ICT Cabling in lifts on high rise multi-storey buildings. A person applying for a Lift licence must prove to NICTA that he or she has the relevant experience and qualifications before he/she can be considered for the licence.

## 2.4 Eligibility Criteria and Application

2.4.1 A licence holder or interested person applying or wishing to upgrade his/her licence for a particular form of cabling licence, shall possess the necessary qualification and experience requirements as outlined below.

### a) Restricted Cabling Licence

- i. Possess industry recognised cabling certification(s)
- ii. Over six (6) months on-the-job experience under supervision of a Cabling Licence holder
- iii. Must have been involved in a minimum of 4 major cabling projects

### b) Open Cabling Licence

- i. Must possess industry recognised cabling certification(s) for voice, data, and video, fibre or alarm systems.
- ii. Must have a minimum of one (1) year experience under the direct supervision of a licensed Cabler.
- iii. Must involve in a minimum of six (6) major cabling projects

### c) Lift Cabling Licence

- i. Must possess relevant certifications
- ii. Must have a minimum of one (1) year experience in carrying out cabling installations in lifts.

## **2.4.2 Interested person applying for a ICT Cabling licence must provide the following:**

- a) a CAB 100 application form completed with applicant details
- b) a Copy of birth certificate or passport
- c) ICT Cabling certifications from a NICTA recognised institution(s)
- d) On the job-training and/or work experience references in accordance with the clause 2.4 (a,b,c)

## **2.4.3 Foreigners or expatriates applying for a cabling licence must provide the following:**

- (1) A CAB100 application form completed with details of the applicants
- (2) A copy of the passport
- (3) A copy of the work permit
- (4) A copy of holders license issued by the regulator at his/her country of origin
- (5) Copies of relevant cabling certifications

2.4.4 An application shall be accompanied by a fixed fee as determined by NICTA (*see Schedule 3*)

2.4.5 Applicants will sit for an interview in order for NICTA to assess whether the applicant has sound knowledge of the cabling appropriate to the licence applied for. The NICTA interview panel will set time of interview for assessment of the applicant's knowledge of the ICT Cabling.

2.4.6 A Cabling Assessment Committee shall further deliberate on the application to ascertain the eligibility of the applicant

The Committee shall comprise of the following:

1. Principle Licensing Officer
2. Principle ICT Inspector
3. Principle ICT Engineer

2.4.7 Issuance of cabling licences shall be done by the Licensing Division followed by the signing of the licence by the Director of the Licensing and Enforcement Department or a duly appointed officer of NICTA.

## **2.5 Renewal of Cabling Licence**

2.5.1 Renewal of a ICT Cabling licence shall be one (1) month prior to the expiry date of the cabling licence as stated on the licence.

2.5.2 Non –renewal of the licence one (1) month after the expiry date shall result in the cancellation of the licence.

2.5.3 Any request for renewal after the cancellation shall be taken as a new application for cabling licence, hence, all process and procedures have to be followed.

# Guideline For ICT Cabling Practices in PNG

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- 2.5.4 Any attempt by the applicant to bribe or interfere with the NICTA assessment staff shall be deemed as an offence under the relevant appropriate Laws and Policies which may result in criminal proceedings against the applicant.
- 2.5.5 At the time of renewal, the applicant must provide to NICTA a record of activities engaged in during the previous authorisation period. This record(s) must be compiled on or attached to the compliance folder for record purposes.
- 2.5.6 Further information is outlined in the Terms and Conditions of a cabling licence.

## **2.6 Further Information**

- 2.6.1 NICTA reserves the right to request additional information from the applicant as and when required.
- 2.6.2 NICTA may refuse to consider the application unless the applicant provides all the necessary information as required.

## **2.7 Notification of Application Refusal**

- 2.7.1 NICTA has the right to refuse an application that does not comply with or satisfy the eligibility criteria set out in this Instrument and the Act.
- 2.7.2 Unsuccessful cabling applicants will be notified by NICTA through a written notice within 30 working days.

## **2.8 Conditions of Licences**

- 2.8.1 ICT Cabling Licence holders shall be registered in “The Register” as specified in Section 43 of the Act.
- 2.8.2 ICT Cabling Licence holders shall be required to observe all relevant NICTA regulatory Instruments current at the time, related to ICT Cabling in PNG.
- 2.8.3 NICTA may impose, vary, and/or revoke certain terms and conditions of the licence as specified in Sections 201(*Issue of Cabling Licences*), 202(*Variation of Cabling Licences*) and 203(*Issue and Variation of Cabling Licences*) of the Act, including but not limited to the following:
  - a) that the holder of the licence shall comply with the provisions of the Act; and
  - b) that the holder of the licence shall comply with any direction, determination or order that the Act provides for NICTA to give or make.
- 2.8.4 In addition to the above, the licensee shall also pay applicable prescribed fees where necessary as required by NICTA.
- 2.8.5 Other terms and conditions shall be attached to the ICT Cabling Licence granted as and when NICTA deems necessary or otherwise.
- 2.8.6 As a condition of the licence, the licensee shall for the purpose of audits, create a compliance folder for NICTA to scrutinise at the time it is required.

## **2.9 Offence of Contravening Licence Conditions**

- 2.9.1 NICTA may issue a formal warning if the holder of an ICT Cabling Licence contravenes a condition of his/her licence.

# Guideline For ICT Cabling Practices in PNG

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- 2.9.2 The holder of an ICT Cabling Licence must only perform the type of cabling works as specified in his/her licence conditions.
- 2.9.3 The holder of an ICT Cabling Licence must take all reasonable steps to ensure that cabling work of that type performed under his or her supervision does not contravene the conditions of the licence.
- 2.9.4 A person who intentionally or recklessly contravenes subsections 2.9.2 and 2.9.3 will be subjected to Section 204 (*Offences Relating to Unlicensed Cabling Work*) of the Act.

## 2.10 Revocation of ICT Cabling Licences

- 2.10.1 Any form of network Cabling Licences granted to eligible applicants under Section 201 (*Issue of Cabling Licences*) of the Act may be revoked or suspended by NICTA in writing where:
- a) the holder of the licence so requests;
  - b) in NICTA's judgement, the holder of the licence is about to cease or has ceased to meet the eligibility criteria;
  - c) the holder of the licence carries out a particular type of ICT Cabling work that is not satisfactory to the requirements of NICTA's regulatory instruments and/or other recognised International standards;
  - d) the holder of the licence fails to comply with the provisions of this Instrument and the Act and;
  - e) the holder of the cabling licence is physically, mentally or medically seen by NICTA as unfit to perform any form of cabling work.
- 2.10.2 Should the holder of an ICT Cabling Licence fail to comply with any terms and conditions attached to the licence granted, then NICTA may, in accordance with Section 207 of the ACT (*Cancellation of Cabling Licences*) or revoke or suspend the licence.

## 2.11 Cabling Fees

- 2.11.1 All applicable fees, as per Schedule 3 must be paid to NICTA in the appropriate manner. These fees include:
- (1) **ICT Cabling Licence Fee:** This cabling Licence fee is paid to NICTA by eligible persons or applicants in order to be accredited as registered/licensed Cabling Providers. The applicable fees vary depending on the type of licence the applicant is applying for. (**See Schedule 3**)
  - (2) **Application Processing Fee:** This is a non-fundable processing fee payable when submitting a cabling licence application to NICTA for processing.
  - (3) **Inspection Fee:** This is the inspection fee that must be paid by Cabling Providers or Customers before NICTA Inspectors can carry out inspections on the cabling work performed to ensure it complies with Cabling Standards and Guidelines.
  - (4) Any other associated fees including penalties as deemed applicable.
- 2.11.2 The Cabling Fees shall be reviewed by NICTA as and when necessary.
- 2.11.3 A copy of the Cabling Fees Schedule can be obtained on request from the office of Licensing and Enforcement or it can be downloaded from the NICTA website.

### **2.12 Registration of ICT Cabling Licences**

- 2.12.1 Pursuant to Section 43 of the ACT (*Public Register*), NICTA shall maintain a Register in which it includes:
- a. all ICT cabling licences in force;
  - b. all rejected, suspended and/or cancelled ICT cabling licences; and
  - c. all conditions of such licences.
- 2.12.2 The Register shall be maintained in a manner and form deemed appropriate by NICTA whether it be by electronic or other means.
- 2.12.3 A person may access the NICTA website [www.nicta.gov.pg](http://www.nicta.gov.pg):
- a. visit “The Register”; and
  - b. make a copy of, or take extracts from, The Register.

## 3 Network Boundary

### 3.1 General Conditions

- 3.1.1 All internal or external cabling installations or maintenance carried out before and after the Network Boundary including connection to the Network Provider shall be subject to NICTA's regulatory requirements.
- 3.1.2 A Network Provider owns and provides the network lead-in cable(s) to the Network Boundary.
- 3.1.3 A Customer who owns any internal or external cabling systems or network beyond the Network Boundary shall be responsible for any particular type of internal or external cabling work within its customer's premises.

### 3.2 Exceptional Conditions

The following three (3) clauses shall apply to miscellaneous Network Boundary situations arising from varying property infrastructure design considerations.

#### 3.2.1 Single Residential Buildings:

- a) The demarcation point shall be the first Network Provider cable termination point in the building.
- b) The Network Provider cable may terminate at a terminal block or at the first telephone socket.
- c) The customer shall take responsibility beyond the point where the Network Provider cable terminates, whether it is at the terminal block or the first equipment socket.

#### 3.2.2 Compounds, Campus, Flats and Duplexes:

The demarcation point shall be defined as follows: -

- (1) Where no provision has been made for a Main Distribution Frame (MDF), the Network Provider shall recommend the provision of an external pit or pits within the property boundary. In such a situation, the demarcation point shall be at the first pit inside the property boundary. A Network Provider's responsibility shall end at this point.
- (2) Where provision for a MDF is available, sub clause 3.2.3 (below) shall apply.

#### 3.2.3 Building wherein an MDF is provided:

- (1) The demarcation point shall be where a Network Provider cable terminates on the MDF.
- (2) The customer shall be responsible for accommodating the Network Provider cable between the Customer Premises boundary and the MDF as specified in the relevant Technical Cabling Standards.
- (3) The Network Provider will provide the necessary modules, or equivalent, for termination of the network cable pairs.

### 3.3 Approvals

- 3.3.1 All internal and external cabling plans or designs detailing the required engineering/building practices and cabling works including name and licence number of the Cabler must be submitted to NICTA for approval before any cabling work commences.
- 3.3.2 Except under urgent circumstances, sub-section 3.3.1 shall be waived in and according to a Management Decision to meet the urgent request forwarded by the Cabling Provider.
- 3.3.3 No registered Cabling Provider is to commence cabling installation or maintenance work until all cabling plans or designs are approved.

## Guideline For ICT Cabling Practices in PNG

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3.3.4 NICTA reserves the right to reject cabling plans or designs that do not fully satisfy the applicable standard requirements and specifications.

3.3.5 ICT Cabling installations and maintenance without prior approved plans or designs shall not be authorised by NICTA for connection to the Network Provider.

### **3.4 Inspection**

3.4.1 All installations and maintenance of any particular type of internal or external ICT Cabling work shall be subjected to inspection by NICTA for regulatory compliance.

3.4.2 Under normal circumstances a site/plant inspection may take place to ascertain whether the information submitted for approval is correct in all aspects. NICTA will have the prerogative to decide when to conduct such inspections before start of the project or after completion of the project.

3.4.3 Any cost (travel, accommodation, etc) incurred for the purposes of inspections shall be borne by the Cabling Provider(s) or Network owner(s).

## 4 Equipment Certification, Registration and Type Approval

### 4.1 General

- 4.1.1 All Cabling Products offered for supply, installation and maintenance in Papua New Guinea, must be certified by accredited test houses recognised by NICTA.
- 4.1.2 Proof of certification by an overseas Certifying Authority recognised by NICTA shall be proof of acceptance for connection of that Cabling Product to a Network facility.
- 4.1.3 All Cabling Product certifications shall be registered with NICTA.
- 4.1.4 NICTA shall charge a type approval fee for registration of certification, at rates approved by the NICTA as and when necessary.
- 4.1.5 NICTA will not approve Cabling Products that are not certified by a NICTA recognised accredited test house.

### 4.2 Interference and Hazardous Cabling Systems or Equipment

- 4.2.1 In the event that any equipment or cabling system configuration causes unacceptable interference and is a threat to the network facility and the safety of persons working or using network services, NICTA shall direct the customer or owner to rectify the problem at the customer's/owner's expense.
- 4.2.2 Should the problem not be rectified, NICTA may direct the disconnection of the Network Provider from the affected equipment or cabling system in accordance with Section 211 (*Disconnection Etc., Of Customer Equipment Or Customer Cabling*) of the Act.

## 5 CABLING SYSTEMS

### 5.1 Upgrading of Existing Cabling Systems

- 5.1.1 Where the technical quality of cabling and hardware of an installation and maintenance is deemed to be a threat to safety of life or equipment and/or the integrity of the Network Provider, that installation or maintenance shall be upgraded or redone to rectify any defective hardware or cabling.
- 5.1.2 The standard of upgrading of any particular type of internal or external cabling work shall be done in accordance to the NICTA regulatory compliance and standards.
- 5.1.3 The cost of any upgrading of any particular type of internal or external cabling work shall be accordingly borne by the relevant owner(s).
- 5.1.4 NICTA will not arbitrate between the Cabling Provider(s) and Customer(s) of the internal or external cabling systems and equipment regarding the payment of charges/fees for any cabling system upgrade.

### 5.2 Quality Assurance/Standards Compliance

- 5.2.1 Any particular type of internal or external cabling installations or maintenance shall require a Quality Assurance Certificate to be issued to the customer to guarantee that the installation or maintenance fully complies with the NICTA regulatory Standards and/or regulatory guidelines on technical quality, interference and safety of life and equipment.
- 5.2.2 A copy of the Quality Assurance Certificate shall be forwarded to NICTA.
- 5.2.3 Only licensed Cabling Providers shall issue Quality Assurance Certificates. All Quality Assurance Certificates shall require the licensed Cabling Provider's letterhead and signed by the appropriate manager or senior officer.
- 5.2.4 After the issuing of the Quality Assurance Certificate it will be the responsibility of the owner of the building/premises or network to ensure the standard of cabling is maintained throughout the life of the building/premises or network.

### 5.3 Connection to the Provider Network

- 5.3.1 NICTA shall issue an Acceptance Permit to the registered Cabling Provider before Network services can be connected to any particular type of internal or external cabling upgrades, new installations or maintenance work.
- 5.3.2 Any particular type of internal or external cabling installations, maintenance and upgrade work that does not hold an Acceptance Certificate will not be connected to the Network facility.
- 5.3.3 The registered Cabling Provider is responsible for obtaining an Acceptance Permit before Network services will be connected.
- 5.3.4 Only NICTA can authorise the connection across the demarcation point, extending the public telecommunications network services into the customer cabling network.
- 5.3.5 Cabling Providers that fails to comply with subsections 5.3.4 are subjected to the conditions of Section 212 of the Act.

## 6 Regulatory Compliance and Standards

### 6.1 Regulatory Instruments

- 6.1.1 Pursuant to Part XI of the Act, NICTA maintains the authority to issue, adopt, modify and/or authorise the use of regulatory instruments on ICT services and equipment, written by NICTA or other international standards organisations.
- 6.1.2 Regulatory instruments shall be issued by NICTA to facilitate network connectivity, safe working practices and safety of life and equipment, and other general requirements as seen to be appropriate by NICTA.
- 6.1.3 All Cabling Providers shall abide by those regulatory instruments to ensure that the technical quality of ICT services and equipment that connect either directly or indirectly to the Carrier Network are maintained.

### 6.2 International Cabling Standards

- 6.2.1 NICTA recognises the ACMA AS/CA S009:2013: Installation requirements for customer cabling (Wiring rules) as the technical standard in which all Cabling Licence holders shall abide by.
- 6.2.2 All cabling work must comply with AS/CA S009:2013 and the other NICTA recognised cabling Standards as outline in ***Schedule 2- reference documents***.
- 6.2.3 Where there is disagreement between NICTA recognised international standards to those issued by the manufacturer, or others, NICTA regulatory instruments will take precedence.

### 6.3 Bribery

- 6.3.1 Any attempt by the applicant to bribe or interfere with any NICTA staff in regard to the cabling licence either new or renewal shall be deemed as an offence under the relevant appropriate Laws and Policies which may result in criminal proceedings against the applicant.
- 6.3.2 Any NICTA staff that accept or receive bribe from the applicant will be dealt with in accordance to NICTA Code of Ethics.

## 7 DOCUMENT ADMINISTRATION

### 7.1 Date of Effect of the Guideline

7.1.1 This Instrument shall be in force and effective from the date endorsed by the NICTA Board and is subject to the appropriate provisions of the Act.

### 7.2 Minor Amendments to the Guideline

7.2.1 The Chief Executive Officer of NICTA shall administer this Instrument and make amendments or modifications to this Instrument as may appear to be necessary to prevent anomalies. Any such amendments or modifications made by the CEO shall be deemed always to have had the same force and effect as if the Board has made them. The Board is to be advised through the CEO of any significant changes to this Guideline.

7.2.2 NICTA shall in due cause inform the industry on any such amendments to this Instrument through the relevant media sources.

### 7.3 Document Publication and/or Distribution

7.3.1 This Guideline shall be published on the NICTA website [www.nicta.gov.pg](http://www.nicta.gov.pg) for public information.

### 7.4 Complaints and Inquires

7.4.1 Complaints or enquiries maybe lodged in writing to the:

**Director Licensing and Enforcement,**

PO BOX 8227,

BOROKO, NCD.

Phone: 325 8633,

Facsimile: 300 4829

## 8 SCHEDULES

### SCHEDULE 1

### Definitions

#### DEFINITIONS

**Act** means the National Information and Communications Technology Act 2009.

**Acceptance Permit** means a written document which is issued by NICTA to a Cabling Provider giving him/her the permission to connect a cabling network to a licensed Network Provider's network or facility.

**Carrier Network** means telecommunications network consisting of cabling and facilities of a Telecommunications Network which is owned and operated by a licensed operator.

**Cabling Provider** means a holder of an ICT Cabling Licence under the Act, registered with NICTA to supply, install and maintain Network or Customer cabling systems in Papua New Guinea.

**Cabling Product** means all forms of communications cables and their accessories, which are used for the supply, installation, and maintenance of an ICT network.

**Cabling Work** means:

- (a) the installation of ICT cabling for connection to a ICT network or to a facility; or
- (b) the connection of ICT cabling to a ICT network or to a facility; or
- (c) the maintenance of ICT cabling connected to a ICT network or to a facility.

**Commission** means Papua New Guinea Independent Consumer and Competition Commission.

**Compliance folder** means is a form of small filing system or physical folder which a Cabling Provider must create purposely for storage of any regulatory file which include copies of Cabling License, Connection Permits and list of cabling works carried out and which must be made readily available on NICTA's request.

**Customer** means a person, company, organisation or groups thereof that have rendered a service by a registered/licensed Cabling Provider.

**External Communication Network** means an aerial (above the ground) and/or underground Communication Network installed exterior to and beyond a building entry point.

**Final Distribution Point (FDP)** means those connection points where the floor distribution cables terminate and from which the facility cables are distributed.

**Hazardous Service** means a service that may cause permanent mechanical or electrical damage to ICT equipment, systems and network or cause injury to persons.

**ICT Cabling Licence** means a licence issued under **Section 201** of the Act to perform ICT Cabling work.

**Industry Standards** means a standard determined under Division XI.7 of the Act.

**Internal cabling** refers to both indoor and outdoor cabling within a customer's premises.

**Intermediate Distribution Frame (IDF)** means that connection point further from the Main Distribution Frame (MDF) in the building or property where cables to the FDP and/or facility cables are terminated.

**Interference** means the process of impairing the fidelity or discernment of communications.

**Main Distribution Frame (MDF)** means that connection point where the Operator's Network Cables and the Premises cabling are terminated on a single or composite frame.

**Network Boundary** means the demarcation point where Operator's Network ownership ends and customer network ownership begins.

**Network Provider** means the ICT network Provider or a mobile carrier.

**NICTA** means the National Information and Communications Technology Authority.

# Guideline For ICT Cabling Practices in PNG

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**Premises** mean any house, building or structure including the land associated with it.

**Premises Cabling** means communications infrastructure comprising cabling equipment and facilities which is connected to the network boundary, and used or intended to be used, for direct or indirect connection to the public telecommunications network.

**PSTN** means Public Switched Telephone Network. That part of the public telecommunications network which enables any customer to call and communicate with any other customer either automatically or with operator assistance. The PSTN has a nominal transmission bandwidth of 3 kHz and employs signalling system type SS3 to SS7.

**Quality Assurance Certificate** means a form of written notice which must be issued by the Cabling Provider to the Network owner/customer ensuring him/her that the cabling work carried out is of satisfactory quality and is compliant to the applicable standards.

**Registration** means enrolment of Cabling Providers to “The Register” maintained by NICTA to be recognised as registered Cabling Providers to perform any particular type of ICT Cabling work.

**Registration Fee** means the prescribe fee in Kina for enrolling on “The Register”.

**Regulatory Instrument** means approved NICTA rules, guidelines, industry standards and Technical standards.

**Supervision** means direct supervision by a cabling licence holder to an unlicensed person carrying out cabling work, which must be maintain throughout the project duration.

**SS7** means Signalling System Number 7, a signalling protocol that provides the ability to transfer information within networks or different networks, most commonly used in public switched networks.

**SS3** means Signalling System Number 3, a signalling protocol, which is the earlier version to SS7.

**Technical Standards** means approved NICTA documents that outline technical specifications, practices, procedures, requirements, diagrams and circuits to be used in the cabling industry.

**Technical Quality** means characteristics and attributes that are essential to attain a certain degree of safety and satisfactory operation of equipment in service.

**Technical Manuals** means approved specifications by accredited test houses governing the implementation and performance of a communications equipment.

**Test House** means a laboratory recognised by NICTA which conducts conformance assessment procedures of cabling products and accessories against recognised technical standards and specifications.

**The Register** means the official record or list of licensed Cabling Providers as well as revoked, cancelled or rejected Cabling Providers.

## SCHEDULE 2 Reference Documents

### REFERENCE DOCUMENTS

Where applicable, cross-references to relevant Documents are made to give more specific guidance. These are relevant to this Guideline but do not necessarily represent all the conditions and requirements that may need to be consulted in meeting the requirements of this Instrument. The publication dates for these Reference Documents however, should be checked before use to ensure that they are still the most appropriate issue, and that all associated amendments are considered.

This Instrument should be read in conjunction with the following *Acts, Regulations, Policies, Guidelines, Technical Standards* and/or other *relevant documents*:

#### **Acts**

≈ ***National Information and Communications Technology Act 2009***

#### **Regulations**

≈ ***NICT Radio Spectrum Regulation 2010***

≈ ***NICT Operator Licensing Regulation 2010***

### TECHNICAL GUIDELINE

= **AS/CA S009:2013**: Installation requirements for customer cabling (Wiring rules)

### STANDARDS

#### **AS/NZ**

= **AS/NZS ISO/IEC 14763.3:2007** Implementation and operation of customer premises cabling—Part 3: Testing of optical fibre cabling

= **AS/NZS ISO/IEC 15018:2005** Information technology—Generic cabling for homes

= **AS/NZS ISO/IEC 24702:2007** Telecommunications installations—Generic cabling—Industrial premises

= **AS/NZS 3080:2003** Telecommunications installations—Generic cabling for commercial premises (ISO/IEC 11801:2002, MOD)

= **AS/NZS 3084:2003** Telecommunications installations—Telecommunications pathways and spaces for commercial buildings (Incorporating Amendment 1:2007)

= **AS/NZS 3085.1:2004** Telecommunications installations—Administration of communications cabling systems—Basic requirements

= **AS/NZS IEC 61935.1:2006** Testing of balanced communication cabling in accordance with ISO/IEC 11801—installed cabling

= **AS/NZS IEC 61935.2:2006** Testing of balanced communication cabling in accordance with ISO/IEC 11801—Patch cords and work area cords

= **AS/ACIF S008:2006** Requirements for customer cabling products

**SCHEDULE 3      FEES**

**CABLING AND CCE FEES – NICTA**

**1. CCE Inspection Fees -**

<u>NO. PORTS</u>	<u>FEES</u>
<u>1 TO 500</u>	<u>K350</u>
<u>OVER 500 PORTS</u>	<u>KK1000.00</u>

**2. CCE and Terminal Equipment Type Approval Fees**

<u>ITEMS</u>	<u>FEES</u>
<u>CCE</u>	<u>K750.00</u>
<u>TERMINAL          EQUIPMENT</u> <u>(HAND SETS)</u>	<u>K100.00</u>

**CABLING FEES**

**3. Cabling Inspection Fees**

<u>PER SITE</u>	<u>FEES</u>
<u>PER SITE</u>	<u>K650.00</u>
<u>ADDITIONAL HOUR</u>	<u>K200 PER HOUR</u>
<u>RE-INSPECTION FEE</u>	<u>K650.00</u>

**Application Processing Fee**

<u>ITEM</u>	<u>FEE</u>
<u>PROCESSING FEE</u>	<u>K75.00</u>

**5. Cabling License**

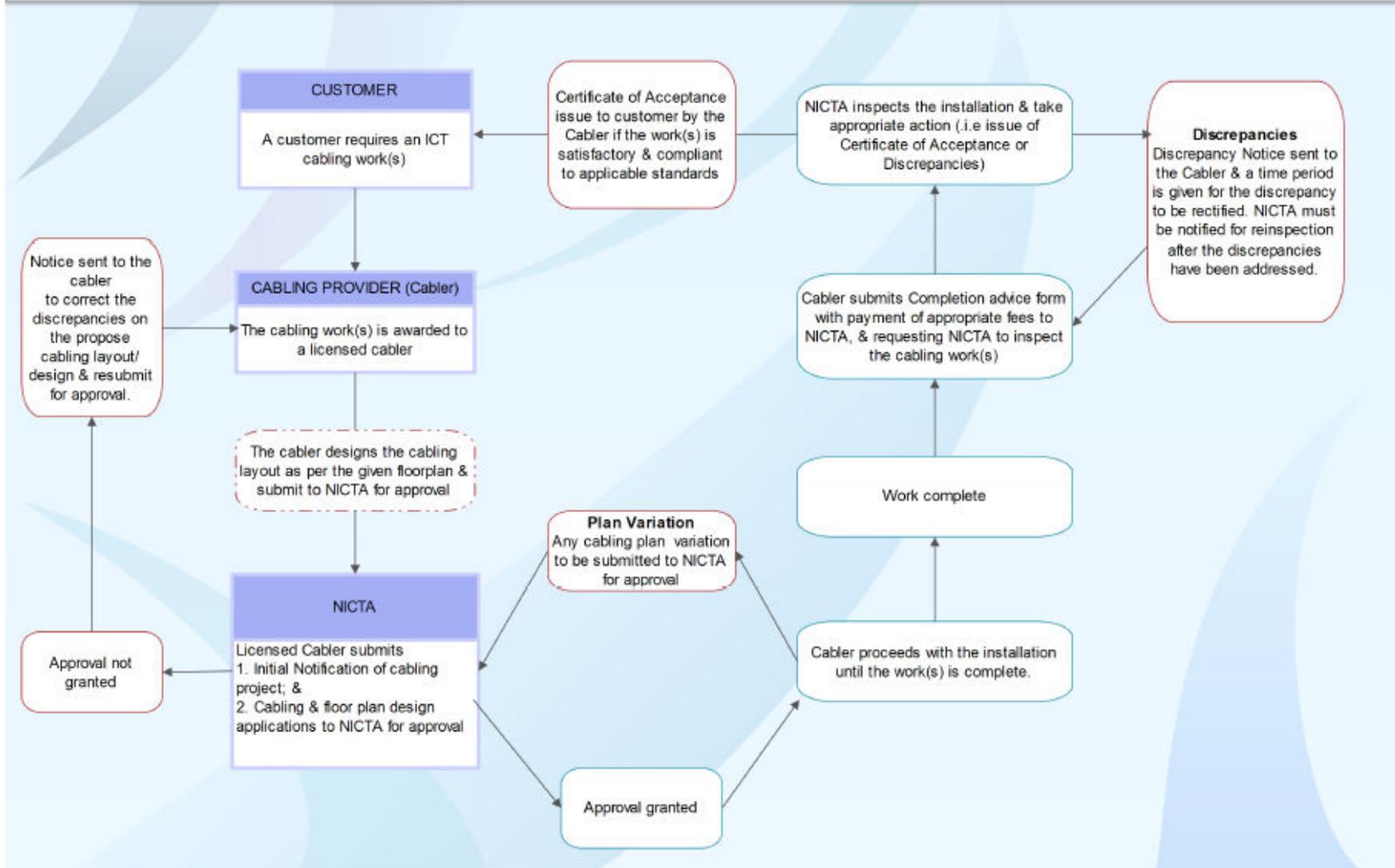
<u>ITEM</u>	<u>FEE</u>
<u>RESTRICTED CABLING LICENSE</u>	<u>K900.00</u>
<u>OPEN CABLING LICENSE</u>	<u>K1500.00</u>
<u>LIFT CABLING LICENSE</u>	<u>K500.00</u>
<u>APPLICATION FEE</u>	<u>K75.00</u>

**6. Administrative (logistical) Cost for Physical Inspections**

<u>ITEM</u>	<u>FEE</u>
<u>WHERE NICTA IS PRESENT</u>	<u>ONLY RESPECTIVE FEES ABOVE WILL APPLY</u>
<u>WHERE NICTA IS NOT PRESENT</u>	<u>COST OF 1X INSPECTOR WILL BE MET BY CLIENT OR LICENSEE + RESPECTIVE FEES.</u>
<u>ADDITIONAL INSPECTOR IF REQUIRED (OPTIONAL)</u>	<u>COST OF SECOND INSPECTOR WILL BE MET BY NICTA</u>

# Guideline For ICT Cabling Practices in PNG

## ICT CABLING FLOW CHART (Draft)



## Guideline For ICT Cabling Practices in PNG

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### LIST OF RECORGNISED TESTING AUTHORITIES (RTA)

Accreditation Number	Testing Authority	Current Scope
<b>AUSTRALIA</b>		
NATA 3148	Comtest Laboratories Pty Ltd Unit 1, 570 City Road South Melbourne, Vic 3205 Mr P Arms Tel +61 3 9645 5933 Fax +61 3 9645 5944 Email: <a href="mailto:parms@comtest.com.au">parms@comtest.com.au</a>	AS/NZS 4117, AS/NZS 60950.1, AS/ACIF S002, AS/CA S002, AS/ACIF S003, AS/CA S003.1, AS/CA S003.2, AS/CA S003.3, AS/ACIF S004, AS/ACIF S006, AS/ACIF S008 (excluding cables and pits), AS/CA S008 (excluding cables and pits), TS 014, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S041.1, AS/ACIF S041.2, AS/ACIF S041.3, AS/ACIF S043.1, AS/ACIF S043.2 and AS/ACIF S043.3
NATA 5292	EMC Technologies 3/87 Station Road Seven Hills, NSW 2147 Mr L Dickenson Tel +61 2 9624 2777 Fax +61 2 9838 4050 Email <a href="mailto:les@emctech.com.au">les@emctech.com.au</a>	AS/NZS 60950.1† †with exclusions as per the scope of accreditation
NATA 1700	ITACS Pty Ltd 4-6 Second Street Bowden, SA 5007 Mr P Akther Tel +61 3 9450 1400 Fax +61 3 9450 1499 Email <a href="mailto:akther@au.tuv.com">akther@au.tuv.com</a>	AS/ACIF S008

## Guideline For ICT Cabling Practices in PNG

Accreditation Number	Testing Authority	Current Scope
<p>A2LA 2765.02</p>	<p>Austest Laboratories 2/9 Packard Avenue Castle Hill, NSW 2154 Mr M Garwood Tel +61 2 9680 9990 Fax +61 2 8850 3113 Email austest@austest.com.au</p>	<p>AS/NZS 60950.1, AS/ACIF S002, AS/CA S002 AS/ACIF S003, AS/CA S003.1, AS/CA S003.2, AS/CA S003.3, AS/ACIF S004, AS/ACIF S006, AS/ACIF S008 (excluding underground conduit, sure suppression devices, optical fibre and coaxial cable, pits) AS/CA S008 (excluding underground conduit, sure suppression devices, optical fibre and coaxial cable, pits), AS/ACIF S031, AS/ACIF S038, AS/ACIF S041.1, AS/ACIF S041.2, AS/ACIF S041.3 AS/ACIF S043.1, AS/ACIF S043.2, AS/ACIF S043.3</p>
<p>A2LA 2765.01</p>	<p>Austest Laboratories Melbourne 102A Albert Street Brunswick East, Vic 3057 Mr M Garwood Tel +61 3 9387 7799 Fax +61 3 9387 7512 Email austest@austest.com.au</p>	<p>AS/NZS 60950.1†, AS/ACIF S002, AS/CA S002, AS/ACIF S003, AS/CA S003.1, AS/CA S003.2, AS/CA S003.3, AS/ACIF S004, AS/ACIF S008 (excluding underground conduit, sure suppression devices, optical fibre and coaxial cable, pits) AS/CA S008 (excluding underground conduit, sure suppression devices, optical fibre and coaxial cable, pits) AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S041.1, AS/ACIF S041.2, AS/ACIF S041.3 AS/ACIF S043.1, AS/ACIF S043.2, AS/ACIF S043.3</p>

## Guideline For ICT Cabling Practices in PNG

Accreditation Number	Testing Authority	Current Scope
<b>CANADA</b>		
SCC 12	CSA International Conformity Assessment 178 Rexdale Boulevard Etobicoke Ontario M9W 1R3 Mr Benjamin Baker Tel +1 416 747 4039 Email Benjimin.Barker@csagroup.org	AS/NZS 4117 and AS/NZS 60950.1
A2LA 2082-01	DSC Testing Laboratory 3301 Langstaff Road Concord Ontario L4K4L2 Mr C Bolintineanu Tel +1 905 760 3000 ext 2568 Fax +1 905 760 3020 Email cbolintineanu@dsc.com	AS/NZS 60950.1 (excluding flammability and ultra-violet conditioning) and AS/ACIF S002† †with exclusions as per the scope of accreditation
SCC 75	Nemko Canada Inc. 303 River Road Ottawa Ontario K1V 1H2 Mr S Beck Tel +1 613 737 9680 Fax +1 613 737 9691 Email stuart.beck@nemko.com	AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S0016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S043.1, AS/ACIF S043.2 and AS/ACIF S043.3
SCC 605	Nortel Networks Limited Audio Quality Test Laboratory 250 Sidney Street Belleville, Ontario K8P 3Z3 Mr Z Farah Tel +1 613 961 2314 Fax +1 613 967 5417 Email zfarah@nortel.com	AS/ACIF S004

## Guideline For ICT Cabling Practices in PNG

Accreditation Number	Testing Authority	Current Scope
<b>PEOPLE'S REPUBLIC OF CHINA</b>		
NVLAP 200707-0	Bay Area Compliance Laboratories, Corp. (Shenzhen) 6/f. Third Phase of Wanli Industrial Bld, Shihua Road Futian Free Trade Zone Shenzhen, Guangdong Mr John Y Chan Tel +86-755-33320018 Fax +86-755-33320008 Email baclsz.regulatory@baclcorp.com	AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S008, AS/ACIF S016, and AS/ACIF S043.1
A2LA 2951.01	BUREAU VERITAS SHENZHEN CO., LTD. DONGGUAN BRANCH Chenwu Industrial Zone Houjie Town, Dongguan, Guangdong, China Mr Alec Hu Tel +86 769 85935656 Email alec.hu@cn.bureauveritas.com	AS/NZS 60950.1
A2LA 2174.01	Huawei Reliability Laboratories Bantian, Longgang District Shenzhen, 518129 Mr Tang Shuanli Tel +86 755 89653401 Fax +86 755 89653384 Email sltang@huawei.com	AS/NZS 60950.1
CNAS L4287	Jiangsu TUV Product Service Co. Ltd. Shenzhen Branch 6/F, H Hall, Century Craftwork Culture Square, No. 4001, Fuqiang Road, Futian District, Shenzhen, Guangdong, 518048, China Mr. Harry Zhou Tel +86 755 3332 3281 Fax +86 755 8828 5299 Email harry.zhou@tuv-sud.cn	AS/NZS 60950.1

## Guideline For ICT Cabling Practices in PNG

Accreditation Number	Testing Authority	Current Scope
ACCLASS AT-1532	Ke Mei Ou Laboratory Co., Ltd. E506, 5th Floor, No. 39 Keji Middle 2nd Rd. Science and Technology Park Nanshan District Shenzhen Guangdong, 518057 Mr Apollo Liu Tel +86 755 83642690 Fax +86 755 83297077 Email apollo_liu@kmlab.com	AS/ACIF S002, AS/CA S002 AS/ACIF S003, AS/CA S003.1, AS/CA S003.2, AS/CA S003.3 AS/ACIF S004, AS/ACIF S016, AS/ACIF S038, AS/ACIF S041.1, AS/ACIF S041.2, AS/ACIF S041.3, AS/ACIF S043.1, AS/ACIF S043.2
TAF 2640 CNAS L3163	Neutron Engineering Inc. No. 3, Jinshagang 1st Road ShiXia, Dalang Town DongGuan, China 523792 Mr Vic Chiu Tel +86 769 83183000 ext: 618 Email vic@btl.org.cn	AS/NZS 60950.1 AS/CA S002, AS/ACIF S004, AS/ACIF S016, AS/ACIF S038, AS/ACIF S041.1, AS/ACIF S041.2, AS/ACIF S043.1, AS/ACIF S043.2
CNAS L3193	Shenzhen Accurate Technology Co. Ltd. 1/F Building A Changyuan New Material Port Science & Industry Park Nanshan District, Shenzhen Guangdong, China Mr Jerry Wang Tel +86 755 26503968 Fax +86 755 26503396 Email wangwei@atc-lab.com	AS/NZS 60950.1
CNAS L3572	Shenzhen Morlab Communications Technology Co., Ltd. Shahe Road, Xili, Nanshan District Shenzhen, Guangdong Province 518055 Mr Shu Luan Tel +86 755 86113898 Fax +86 755 86130218 Email shuluan@morlab.com.cn	AS/NZS 60950.1
Accreditation Number	Testing Authority	Current Scope
CNAS L0442	Telecommunications Metrology Center of The Ministry of Industry and Information Technology No.52, Huayuan North Road Haidan District, Beijing Mr Meng Aili Tel +86 010 62301383 Fax +86 010 62304104	AS/NZS 60950.1

## Guideline For ICT Cabling Practices in PNG

	Email <a href="mailto:mengaili@catr.cn">mengaili@catr.cn</a>	
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Accreditation Number	Testing Authority	Current Scope
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### DENMARK

DANAK 352	UL International Demko A/S Borupvang 5A 2750 Ballerup Ms Marie Bruun de Neergaard Tel +45 44 85 6377 Fax +45 44 85 6500 Email <a href="mailto:marie.bruundeneergaard@dk.ul.com">marie.bruundeneergaard@dk.ul.com</a>	AS/NZS 60950.1
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Accreditation Number	Testing Authority	Current Scope
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### GERMANY

DAkKS D-PL-12076- 01-01	CETECOM ICT Services GmbH Untertürkheimer Straße 6-10 66117 Saarbrücken Mr Michael Klos Tel +49 681 598 8722 Fax +49 681 598 8775 Email <a href="mailto:Michael.Klos@ict.cetecom.de">Michael.Klos@ict.cetecom.de</a>	AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, TS 014, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S043.1, AS/ACIF S043.2 and AS/ACIF S043.3
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Accreditation Number	Testing Authority	Current Scope
DATech DAT-P- 268/08-00	Eurofins Product Service GmbH Storkower Straße 38c 15526 Reichenwalde Mr Robert Kschiwan-Kaspar Tel +49 33631-888 201 Fax +49 33631-888 660 Email <a href="mailto:RKK@eurofins.de">RKK@eurofins.de</a>	AS/ACIF S002 and AS/ACIF S004
DATech DAT-PL- 002/91-03	SGS Germany GmbH SGS CQE (formerly Siemens AG) Hofmannstraße 50 81359 München Mr C Waldenburg Tel +49 89 787 475 - 420	AS/NZS 60950.1

## Guideline For ICT Cabling Practices in PNG

	Fax +49 89 722 – 26538 Email Christian.Waldenburg@sgs.com	
DATEch DAT-P- 009/91-2	TÜV Rheinland Product Safety GmbH - TÜV Rheinland Group Am Grauen Stein 51105 Köln Mr K Jauernik Tel +49 221 806 3428 Fax +49 221 806 1605 Email klaus.jauernik@de.tuv.com	AS/ACIF S031 and AS/ACIF S038

### HONG KONG, CHINA

Accreditation Number	Testing Authority	Current Scope
DATEch TTI-P-G 165/98-C0	TÜV Rheinland Hong Kong Ltd Unit 8, 25/F, Skyline Tower 39 Wang Kwong Road Kowloon Bay, Kowloon, Hong Kong Mr T Berns Tel +852 2192-1000 Fax +852 2192-1008 Email thomas.berns@hk.chn.tuv.com	AS/ACIF S002 (including amendment 1) and AS/ACIF S004

Accreditation Number	Testing Authority	Current Scope
HOKLAS 005	Intertek Testing Services Hong Kong Ltd 2/F., Garment Centre 576 Castle Peak Road, Kowloon, Hong Kong Ms Law Sau Mui, Christina Tel +852 2173 8888 Fax +852 2370 2837 Email consumergoods.hongkong@ intertek.com	AS/NZS 60950.1†, AS/ACIF S002† and AS/ACIF S004† †with exclusions as per the scope of accreditation

## Guideline For ICT Cabling Practices in PNG

### ISRAEL

Accreditation Number	Testing Authority	Current Scope
A2LA 0839.01	Hermon Laboratories Hatachana Street Binyamina 30550 Mr G Shleimovich Tel +972 4 626 8488 Fax +972 4 626 8469 Email george@hermonlabs.com	AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S016, AS/ACIF S041 and AS/ACIF S043.2
A2LA 1152.01	ITL Product Testing Ltd 1 Batsheva Street Lod 71100 Mr S Loznen Tel +972 8 915 3100 Fax +972 8 915 3101 Email steli@itl.co.il	AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016 and AS/ACIF S038
ACLASS Accreditation Services AT-1359	Standard Institution of Israel Chaim Levanon 42 Tel Aviv 69977 Mr Eli Vaknin Tel +972 3 646 7800 Fax +972 3 646 7779 Email eliv@sii.org.il	AS/NZS 60950.1
A2LA 1633.01	Qualitech Experts Ltd 30 Hasivim Street Petach-Tikva 49133 Mr Y Zucker Tel +972 3 926 8443 Fax +972 3 926 6550 Email yossi.zucker@ecitele.com	AS/NZS 60950.1 and AS/ACIF S002
Accreditation Number	Testing Authority	Current Scope

### JAPAN

NVLAP 100290-0	Intertek Japan K.K., Kashima Site 3-2 Sunayama Kamisu-Shi, Ibaraki-ken 314-0255 Mr T Yamanaka Tel +81 479 40 1097 Fax +81 497 46 1788 Email takeshi.yamanaka@intertek.co m	AS/ACIF S002 and AS/ACIF S004
NATA 10684	UL Apex Co Ltd 4383-326 Asama-cho Ise-shi, Mie-ken, 516-0021 Mr K Miura	AS/NZS 60950.1

## Guideline For ICT Cabling Practices in PNG

	<p>Tel +81 596 24 8008          Fax +81 596 24 8002          Email          Kazuhiro.Miura@jp.ul.com</p>	
<p>NATA          14357          DATech          DAT-P-          069/97-02</p>	<p>TÜV Rheinland Japan Ltd          German Technology          Assessment Center          4-25-2 Kita-Yamata, Tsuzuki-ku,          Yokohama 224-0021          Mr J Ologbosere          Tel +81 45 914 3888          Fax +81 45 914 3377          Email ologbosejpn.tuv.com</p>	<p>AS/ NZS 60950.12, AS/ACIF          S002 (including          amendment 1) 2 and AS/ACIF          S0042          2Accredited by DATech</p>

### REPUBLIC OF KOREA

<p>DATech          DAT-P-          068/97-02</p>	<p>TÜV Rheinland Korea Ltd          Test Center          4F., E&amp;C Venture Dream Tower          6          197-28, Guro-dong, Guro-gu          Seoul, 152-719          Dr R Frankenberger          Tel +82 (0)2 3016 6900          Fax +82 (0)2 3016 6901          Email info10@kor.tuv.com</p>	<p>AS/NZS 60950.1, AS/ACIF S002          (including          amendment 1) and AS/ACIF          S004</p>
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Accreditation Number	Testing Authority	Current Scope
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### NEW ZEALAND

<p>IANZ          752</p>	<p>TeleLab Ltd          870 Mt Eden Road          Three Kings, Auckland          Mr Iain Whittet          Tel +64 9 625 8200          Fax +64 9 625 8200          Email telelab@xtra.co.nz</p>	<p>AS/NZS 60950.1, AS/ACIF          S002† and          AS/ACIF S004†          †with exclusions as per the          scope of          accreditation</p>
<p>IANZ          69</p>	<p>UL International New Zealand          Limited          54 Tarndale Grove          Albany, Auckland 1331          Mr K Wilson          Tel +64 9 415 3355          Fax +64 9 415 3356          Email ken.wilson@ul.com</p>	<p>AS/NZS 60950.1</p>

## Guideline For ICT Cabling Practices in PNG

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### NORWAY

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NA TEST 031	Nemko Comlab Gaasevikveien 8 Postboks 96, N-2027 Kjeller Mr Geir Antonsen Tel +47 64 84 5715 Fax +47 64 84 5705 Email geir.antonsen@nemko.com	AS/ACIF S002, AS/ACIF S004, AS/ACIF S031 and AS/ACIF S038

Accreditation Number	Testing Authority	Current Scope
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### SINGAPORE

SACSINGLAS LA-2007- 0385-E	TÜV SÜD PSB Pte Ltd Electrical & Electronics No.1 Science Park Drive SINGAPORE 118221 Mr D Yeo Tel +65 6885 1476 Fax +65 774 1459 Email daniel.yeo@tuv-sudpsb. sg	AS/NZS 60950.1 and AS/ACIF S002
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### SPAIN

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## Guideline For ICT Cabling Practices in PNG

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Accreditation Number	Testing Authority	Current Scope
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### CHINESE TAIPEI

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TAF 2021	Bureau Veritas Consumer Products Services (Hong Kong) Limited, Taoyuan Branch Lin Kou Laboratories No. 47, 14th Ling, Chia Pau Tsuen, Linkou Hsiang, Taipei Mr Ellis Wu Tel +886 3 318 3232 ext. 1624 Fax +886 3 327 0892 Email ellis@adt.com.tw	AS/NZS 60950.1, AS/ACIF S002, AS/CA S003.1, AS/CA S003.3 AS/ACIF S004, AS/ACIF S041, AS/ACIF S043.1 and AS/ACIF S043.2
TAF 0371	Electronics Testing Center EMC/Safety/Reliability Laboratory No. 8, Lane 29, Wenming Road Guishan Shiang, Taoyuan County 33383 Mr John Peng Tel +886 3 3280026 ext. 360 Fax +886 3 3276198 Email john@etc.org.tw	AS/NZS 60950.1
TAF 0674	Electronics Testing Center Communications Laboratory No. 8, Lane 29, Wenming Road Guishan Shiang, Taoyuan County 33383 Meiling Wu	AS/ACIF S002, AS/ACIF S004, AS/ACIF S041, AS/ACIF S043.1 and AS/ACIF S043.2

## Guideline For ICT Cabling Practices in PNG

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<b>Accreditation Number</b>	<b>Testing Authority</b>	<b>Current Scope</b>
TAF 0597 (formerly 0596)	Intertek Testing Services Taiwan Ltd. No. 11, Lane 275, Ko-Nan 1 Street Chia-Tung Li, Shiang-Shan District Hsinchu City Mr Alpha Liu Tel +886 3 519 1411 ext. 316 Fax +886 3 519 1410 Email alpha.liu@intertek.com	AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S041, AS/ACIF S043.1 and AS/ACIF S043.2
TAF 0910	Intertek Testing Services Taiwan Ltd, Safety Laboratory 5F, No. 423, Ruiguang Road Neihu District, Taipei City 114 Mr Gary Yunn Tel +886 2 6602-2888 ext. 705 Fax +886 2 6602-2415 Email Gary.Yunn@intertek.com	AS/NZS 60950.1
TAF 1288	Max Light Technology Co., Ltd. No. 74-4, Shi-Ba Chong Xi, Shi Ding Township, Taipei Hsien 223 Mr Liang-Shan CHEN Tel +886 2 2663-3486 Fax +886 2 2663-3582 Email cls@mltlab.com.tw	AS/ACIF S041.1, AS/ACIF S041.2, AS/ACIF S041.3, AS/ACIF S043.1, AS/ACIF S043.2
TAF 1395	Nemko Taiwan Safety Lab. 5F, No. 409, Sec. 2, Tiding Blvd. Neihu District, Taipei City 114 Mr Roger Liou Tel +886 2 8797 8790 ext. 111 Fax +886 2 9797 8791 Email roger.liou@nemko.com	AS/NZS 60950.1

## Guideline For ICT Cabling Practices in PNG

Accreditation Number	Testing Authority	Current Scope
TAF 0659	Neutron Engineering Inc. B1., No. 37, Lane 365, Yang-guang St. Nei-hu District, Taipei City 114 Mr Alan Huang Tel +886 2 26573299 Email alan.huang@btl.com.tw	AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S016, AS/ACIF S038, AS/ACIF S041, AS/ACIF S043.1 and AS/ACIF S043.2
TAF 1440	Product Safety Consultant Incorporation 4F-8, No. 4, Lane 609, Sect. 5 Chung Hsin Road San Chung City, Taipei Hsein Mr Venson Huang Tel +886 2 2999 6855 Fax +886 2 2999 6849 Email ben@psclabom.au	AS/NZS 60950.1
TAF 1151	Sporton International Inc. Junghe Safety Lab. 14F-2, No.186, Jianyi Rd. Zhonghe District New Taipei City 235 Taiwan Mr Jason Chuang (莊文聖) Tel +886 2 8227-2020 Email Jason@sporton.com.tw	AS/NZS 60950.1
TAF 2117	TECO Image Systems Co.,Ltd PTT Laboratory 2F.,No.1568-1, Chung Shan Road, Sec.1 Kuang-In, Taoyuan Hsein.328 Mr David Hsu Tel +886 3 473 3112 ext 3524 Fax +886 3 473 3613 Email david_hsu@tecoimage.com.tw	AS/ACIF S002
TAF 0759	TÜV Rheinland Taiwan Ltd. No. 9 Lane 36 Minsheng Rd Sec. 3, Daya District Taichung City 428 Mr Michael Kroeger Tel +886 4 2301 9898 ext. 033 Fax +886 4 2301 9696 Email mk@twn.tuv.com	AS/NZS 60950.1
Accreditation Number	Testing Authority	Current Scope
TAF 0944	Underwriters Laboratories Taiwan Co., Ltd. – Testing Laboratory 1st to 6th Fl, 260, Da-Yeh Road,	AS/NZS 60950.1

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	Peitru, Taipei City 112 Mr Kila.Yang Tel +886 2 2896 6790 - 6241 Email Kila.Yang@tw.ul.com,	
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### UNITED KINGDOM

UKAS 0026	TRaC Global Ltd (formerly KTL) Unit E, South Orbital Trading Park Hull HU9 1NJ Mr J Harros Tel +44 1482 801801 Fax +44 1482 801806 Email test@tracglobal.com	TS 014, AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S041†, AS/ACIFS043.1, AS/ACIF S043.2† and AS/ACIF S043.3 †with exclusions as per the scope of accreditation
UKAS 0029	Intertek ETL SEMKO division IntertekHouse, Cleeve Road Leatherhead Surrey KT22 7SB Mr R Kellock Tel +44 1372 370900 Fax +44 1372 370999 Email rob.kellock@intertek.com,	AS/NZS 60950.1† †with exclusions as per the scope of accreditation
UKAS 0225	Nemko Ltd 15 Chelsea Fields Estate Western Road London SW19 2QA Mr S Sherwood Tel +44 20 8646 8383 Fax +44 20 8646 8099 Email stuart.sherwood@nemko.co.uk	AS/NZS 60950.1† †with exclusions as per the scope of accreditation
<b>Accreditation Number</b>	<b>Testing Authority</b>	<b>Current Scope</b>
UKAS 1856	Steve Kerner Ltd Bardeen House Hillbottom Road High Wycombe Buckinghamshire HP12 4HU Mr S D Kerner Tel +44 1494 537637 Fax +44 1494 510581 Email testlab@stevekerner. com	AS/ACIF S002† †with exclusions as per the scope of accreditation
UKAS 0141	TÜV SÜD Product Service Ltd Octagon House	AS/NZS 60950.1† †with exclusions as per the

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### UNITED STATES

NVLAP 200612-0	Advanced Compliance Solutions, Inc. 5015 B.U. Bowman Drive Buford GA.30518 Mr R Abernathy Tel +1 770 831 8048 Fax +1 770 831 8598 Email rabernathy@acstestlab.com	AS/NZS 60950.1
AS/NZS 60950.1 A2LA 2035-01	Avaya Regulatory Compliance Laboratory 1300 West 120th Avenue Westminster CO 80234-2726 Mr S Anderson Tel +1 303 538 2363 Fax +1 303538 2363 Email handyman@avaya.com	AS/ACIF S002, AS/ACIF S003, AS/ACIF S004 and AS/ACIF S016

Accreditation Number	Testing Authority	Current Scope
A2LA 1212-01	BABT and TÜV Product Service Divisions of TÜV America Inc. 4855 Patrick Henry Drive Building #6 Santa Clara CA 95054 Mr C Minx Tel +1 408 919 3770 Fax +1 408 919 0585 Email cminx-jr@tuvam.com	AS/ACIF S006, AS/ACIF S043 (ADSL) and AS/ACIF S043 (SHDSL)
NVLAP 200167-0	Bay Area Compliance Laboratory, Corp. (BACL) 1274 Anvilwood Avenue Sunnyvale CA 94089 Mr John Y Chan Tel +1 408 732 9162 Fax +1 408 732 9164	AS/ACIF S002 (including amendment no. 1), AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S008, AS/ACIF S016, AS/ACIFS043.1 and AS/ACIF S043.3

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A2LA 1178.01	Cisco Systems Inc 170 West Tasman Drive San Jose, CA 95134-1706 Mr W Schaefer Tel +1 408 853 8550 Fax +1 408 526 4184 Email wsemc@cisco.com	AS/NZS 60950.1†, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, TS 014, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S041, AS/ACIF S043.1, AS/ACIF S043.2 and AS/ACIF S043.3 †with exclusions as per the scope of accreditation

Accreditation Number	Testing Authority	Current Scope
A2LA 1960.01	Cisco Systems Inc 1414 Massachusetts Avenue Boxborough, MA 01719 Mr M Anderson Tel +1 978 936 0875 Fax +1 978 936 0896 Email manderson@cisco.com	AS/NZS 60950.1† †with exclusions as per the scope of accreditation
NVLAP 100272-0	Communication Certification Laboratory 1940 West Alexander Street Salt Lake City, UT 84119-2039 Mr T Jackson Tel +1 801 972 6146 ext. 1228 Fax +1 801 972 8432 Email tcj@cclab.com	AS/NZS 60950.1, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006 and AS/ACIF S008
NVLAP 200527-0	Compatible Electronics Inc 19121 El Toro Road Silverado/Lake Forest , CA 92676 Mr J Klinger	AS/NZS 60950.1

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NVLAP 200528-0	Compatible Electronics Inc 114 Olinda Drive Brea, CA 92823 Mr J Klinger Tel +1 714 579 0500 Fax +1 714 579 1850 Email jeff@celectronics.com	AS/NZS 60950.1
A2LA 1673.01	Compliance Worldwide, Inc. 357 Main Street Sandown, NH 03873 Mr Robert J McCall Tel+ 1 603 887 3903 Fax+ 1 603 887 6445 Email Larry@ComplianceWorldwide.com	AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S043.1, AS/ACIF S043.2 and AS/ACIF S043.3

Accreditation Number	Testing Authority	Current Scope
NVLAP 200147-0	Electro Magnetic Test, Inc. 1547 Plymouth Street Mountain View, CA 94043 Mr J Gandhi Tel +1 650 965 4000 Fax +1 650 965 3000 Email jgandhi@emtlabs.com	AS/ACIF S031, AS/ACIF S038, AS/ACIF S041-1, AS/ACIF S043.1, AS/ACIF S043.2 and AS/ACIF S043.3
A2LA 2014.26	National Technical Systems 38995 Cherry Street Newark, CA 94560 Ms Laura Bader Tel +1 510 578 3500 Fax +1 510 578 3510 Email laura.bader@nts.com	AS/NZS 60950.1 AS/ACIF S002, AS/CA S002, AS/ACIF S003, AS/CA S003.1, AS/CA S003.2, AS/CA S003.3 AS/ACIF S016 AS/ACIF S041.1 AS/ACIF S041.2, AS/ACIF S043.1, AS/ACIF S043.2
NVLAP 200436-0	Global Testing 4183 Riverview Drive Riverside, CA 92509 Mr Kumar Chaklashiya Tel +1 951 781 4540 Fax +1 951 781 4544 Email kumar@globaltesting.com	AS/NZS 4117, AS/ACIF S002 (including amendment no. 1), AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S008, TS 014 and AS/ACIF S016

## Guideline For ICT Cabling Practices in PNG

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A2LA 1455.01	Intertek Testing Services NA Inc 1950 Evergreen Boulevard Suite 100 Duluth, GA 30096 Mr G Flom Tel +1 678 775 2434 Fax +1 678 775 2401 Email Gary.Flom@Intertek.com	AS/NZS 60950.1
<b>Accreditation Number</b>	<b>Testing Authority</b>	<b>Current Scope</b>
A2LA 2085.01	Intertek Testing Services NA Inc 27611 La Paz Road Suite C Laguna Niguel, CA 92677 Mr J Quigley Tel +1 949 448 4100 Fax +1 949 448 4111 Email John.Quigley@Intertek.com	AS/NZS 60950.1
A2LA 1755.01	Intertek Testing Services NA Inc 1365 Adams Court Menlo Park, CA 94025 Mr J Quigley Tel +1 650 463 2900 Fax +1 650 463 2910 Email John.Quigley@Intertek.com	AS/NZS 60950.1
A2LA 1427.01	Intertek Testing Services NA Inc 7250 Hudson Blvd, Suite 100 Oakdale, MN 55128 Mr Y Litvinov Tel +1 651 730 1188 Fax +1 650 463 2910 Email Yuriy.Litvinov@Intertek.com	AS/NZS 60950.1
A2LA 2310.01	Intertek Testing Services NA Inc 1809 10th Street, Suite 400 Plano, TX 75074 Mr. P Coghill Tel: +1 330-405-3552 Email:paul.coghill@intertek.com	AS/NZS 60950.1
NVLAP 100275-0	Lucent Technologies Inc Global Product Compliance	AS/NZS 60950.1, AS/ACIF S002 (including

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Accreditation Number	Testing Authority	Current Scope
NVLAP 100273-0	MET Laboratories Inc 914 W. Patapsco Avenue Baltimore, MD 21230-3432 Mr R Frier Tel +1 410 354 3300 Fax +1 410 354 3313 Email rfrier@metlabs.com	AS/ACIF S002 (including amendment 1), AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S008, TS 014 and AS/ACIF S016
NVLAP 100426-0	Nemko, USA Inc. 802 North Kealy Lewisville, TX 75057-3136 Mr T Tidwell Tel +1 972 436 9600 ext 287 Fax +1 972 436 2667 Email tom.tidwell@nemko.com	AS/NZS 4117, AS/ACIF S002, AS/ACIF S003, AS/ACIF S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031 and AS/ACIF S038
NVLAP 200061-0	Rhein Tech Laboratories, Inc. 360 Herndon Parkway, Suite #1400 Herndon, VA 20170-4824 Ms G Yushina Tel +1 703 689 0368 Fax +1 703 689 2056 Email gyushina@rheintech.com	AS/NZS 60950.1
A2LA 2742.01	Siemic Laboratories 775 Montague Expressway Milpitas, CA 95035 Mr L Bai Tel +1 408 526 1188 Fax +1 408 526 1088 Email leslie.bai@siemic.com	AS/NZS 60950.1†, AS/ACIF S002, AS/CA S002, AS/ACIF S003, AS/CA S003.1, AS/CA S003.2, AS/CA S003.3, AS/ACIF S004, AS/CA S004, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031, AS/ACIF S038, AS/ACIF S041.1, AS/ACIF S041.2, AS/ACIF S041.3, AS/ACIF S043.2 and AS/ACIF S043.3 †with exclusions as per the scope of accreditation

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Accreditation Number	Testing Authority	Current Scope
NVLAP 200111-0	TÜV Rheinland of North America, Inc. 12 Commerce Road Newtown, CT 06470-1607 Mr T M Dwyer Tel +1 203 426 0888 ext 104 Fax +1 203 426 4009 Email tdwyer@us.tuv.com	AS/NZS 4117
A2LA 1972.01	TÜV Rheinland of North America, Inc. 762 Park Avenue Youngsville, NC 27596 Mr A Servais Tel +1 919 554 3668 Fax +1 919 554 3542 Email jservais@us.tuv.com	TS 014, AS/ACIF S002, AS/ACIF S006, AS/ACIF S016, AS/ACIF S031 and AS/ACIF S038
A2LA 2955.1	TUV SUD America, Inc. 10 Technology Drive, Peabody, MA 01960 Mr William Stinson Tel +1 978 573 2517 Fax +1 978 573 2517 Email Wstinson@tuvam.com	AS/NZS 60950.1
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NVLAP 100271-0	TUV SUD America, Inc. 1775 Old Highway 8 NW, Suite 104, New Brighton, MN 55112-1891 Mr Stephen Lee Tel +1 978 573 2530 Fax +1 978 977 0182 Email slee@tuvam.com	AS/NZS 60950.1

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NVLAP 100414-0	Underwriters Laboratories, Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 Mr R A Titus Tel +1 847 664 3281 Fax +1 847 509 6321 Email rick.a.titus@us.ul.com	AS/ACIF S008
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