PAPUA NEW GUINEA QoS REGULATORY FRAMEWORK


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NICTA
PNG
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PNG Country Profile

- **Land Mass** - 462,840 sq km
- **Population** - 8 million (Appro)—87% live in rural villages and remote areas.
- **Geography** - Rugged terrain with high mountain ranges and very steep and deep valleys and over 600 associated islands.
PNG ICT Industry
Telecommunications in PNG

- The PNG telecommunications network comprises of microwave radio, satellite (domestic & international) and optical fibre transmission systems (intra-city and international).
PNG ICT Statistic

Licensees

- Individual Gateway Licence: 40
- Individual Content Licence: 45
- Individual Application License: 70
- Class License (non commercial): 71
- Individual Network Licence: 86

Available in urban areas only

- 2G – 90%
- 3G – 51%
- 4G – 20%

- 3G & 4G — 17%
- ADSL/Fiber - 0.4%

Mobile subscription (per 100 inhabitants): 60%

Fixed subscription (per 100 inhabitants): 1.2%
ICT Development

Universal Access Service
- Extend network to unserved areas
- Upgrade mobile 2G to 3G

National Transmission Network
- Fibre optic broadband network - Connecting Mainland centres
- Kumul Domestic Cable - Domestic submarine cable
- Coral sea cable - Linking Sydney to Port Moresby (PNG) -- To deliver minimum of 20Tps to PNG
NATIONAL INFORMATION AND COMMUNICATIONS TECHNOLOGY AUTHORITY

ICT Challenges

Unique geographical
Wide dispersed populations, Rugged terrain with high mountain ranges and very steep and deep valleys and over 600 associated islands.

ICT connectivity challenges
- Access to site
- Land issues
- Vandalism

Digital literacy and high cost of internet access
Low literacy rates in the Pacific, hence minimal digital literacy levels

High vulnerability to natural disasters and climate change

Small market sizes discourage private sector investment
High cost of laying and maintaining subsea cables

Prioritizing funding for the ICT sector
Institutional strengthening

High business and operational costs

Lack of robust ICT Policy

Lack of electricity
Diesel & Solar alternate

Providing adequate telecommunication network coverage and quality of service in PNG remains a challenge for service providers.
PNG ICT REGULATOR
To assist the growth of ICT in PNG which is needed for Effective and efficient communication, the Government has set a Policy to reform the ICT Sector.

Prior to 2007, Monopolistic ICT sector with Telikom having exclusive rights. Very low penetration, high priced services and the dual regulatory regime was costly and timely.

A pro-competitive approach, with a forward looking policy to be implemented by a converged sector specific Regulator was the way to go…

2007: Liberalisation of Mobile sector (2 new mobile licenses)
2009: NICT Policy Phase 2 Reforms 2009 and NICT Act 2009

Set in place legislation for Full liberalisation and formation of NICT Authority
BACKGROUND

- ICT Sector Reform

Dual regulatory regime

ICCC
Multi-sectoral (economic and social regulatory functions)

PANGTEL
PANGTEL – sector specific (spectrum and technical regulatory functions) and Broadcasting licensing and Technical Regulation

Converged Regulator

NICTA
Converged sector-specific regulator

- NICTA will be responsible for all *ex ante* regulation of the ICT industry in Papua New Guinea;

Succession Date
(29 October 2010)
NATIONAL ICT AUTHORITY - NICTA

ABOUT NICTA

- NICTA formally established in 2010 by the National ICT Act 2009
- NICTA is both Economic & Technical regulator for the ICT Sector.
- NICTA has responsibilities to promote the objectives of the National ICT Act 2009, which include ensuring that people and businesses in Papua New Guinea enjoy at the earliest practicable time and lowest sustainable price, the benefits of modern telecommunications/ICT services.
QoS Regulatory Framework
**Qos Regulatory Frameworks**

**Current QoS Regulatory Framework**

Current QoS regulation is carried over from previous regime or Telecommunication Act.

**LAW**

**NICT ACT, 2009**

- To ensure that ICT industry contributes to the greatest extent possible to the long term economic and social development of Papua New Guinea

**Regulations**

**-NICT Operator Licensing Regulation, 2010**

- Specify General Licence Conditions

**-Consumer Protection Rule, 2014**

- Provide rule for better protection of the interest of the consumers

**-Data Collection Rule, 2016**

- For Licensees to provide to NICTA data specified in the rule.
QoS Regulatory Frameworks

Continued...

Standard and Special Conditions of Individual Licences Rule, 2011
- Contains QoS condition on licensees.
- Specify QoS parameters

Minimum level of Network Performance

Network Fault Repair
QoS Parameters

Minimum level of Network Performance

- a call drop-out rate of no more than 2%;
- a rate of call failure due to network congestion of no more than 2%;
- a network availability rate of 99.99% in specified main centres and mid-sized centres, and 98.00% in specified administrative district centres and localities;
QoS Regulatory Frameworks

QoS Parameters

Network Fault Repair

- Repair 95% of network faults occurring in:
  - main centres within 6 hours;
  - mid-sized centres within 24 hours;
  - administrative districts within 2 working days;
  - Small population centres within 3 working days.
NICTA has not been monitoring the licensees performance with respect to the QoS parameters outlined in the regulation.
Proposed QoS Regulation

CONSULTATION PAPER

Draft rules on telecommunications quality of service performance monitoring

Issued on xx 2019
Objectives

1. To enable NICTA to help consumers understand any QoS differences that may exist between different service providers so that consumers may take such information into account when choosing a service provider.

2. To provide NICTA with objective points of reference for assessing and comparing the QoS provided by service providers.

3. To give NICTA objective insight into the QoS of telecommunications services in PNG.
Proposed QoS Regulation

**TELECOMMUNICATIONS QUALITY OF SERVICE RULE, 2019**

New regulation with a view to establish a set of parameters that;

- Relate to Mobile telephony and fixed and Mobile broadband internet access
- Relate to the aspects of those services that have the biggest impact on customers
- Are well-defined and can be measured cost-effectively
- Will help inform NICTA's understanding of the state of telecommunications markets and the level of performance;
- May in time help customers to make better informed choices

*Individual licences – Operator licence issued by NICTA pursuant to section 56 of the NICT Act, 2009*
Proposed QoS Regulation

QoS Parameters

Proposed quality criteria for key telecommunications services

<table>
<thead>
<tr>
<th>Mobile telephony</th>
<th>Broadband internet access</th>
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<tbody>
<tr>
<td>• Availability</td>
<td>• Availability</td>
</tr>
<tr>
<td>• Call set-up time</td>
<td>• Speed</td>
</tr>
<tr>
<td>• Speech quality</td>
<td>• Latency</td>
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<tr>
<td>• Reliability</td>
<td>• Reliability</td>
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Proposed QoS Regulation

QoS Measurement

- Measurement by licensees themselves, which then submit statistical reports to NICTA.
- Measurement by NICTA to proof report submit by licensees.
- Measurement by third party companies that specialise in such technical services and who are contracted by the regulator for dedicated test campaigns.
Licensees required to:
- Measure each of QoS parameters,
- Carry out measurement in accordance with ITU-T standards specified in the regulation,
- Provide NICTA with the measurement result within 30 days of the end of each measurement period.
NICTA will consult with licensees on the proposed QoS regulation to consider;

- The proposed QoS parameters,
- The cost and complexity of the proposed measurement arrangement,
- Plans for publication of the monitoring results/measurements
THANK YOU..

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