First session of the Asia-Pacific Information Superhighway (AP-IS) Working Group on

'Strengthening efficient Internet traffic management through a subregional Internet Exchange Point (IXP) in Pacific Island Countries'

University of the South Pacific, Laucala Campus, 3-5 December 2019

CONCLUSIONS AND RECOMMENDATIONS

1. The first session of the AP-IS Working Group on 'Strengthening efficient Internet traffic management through a subregional Internet Exchange Point (IXP) in Pacific Island Countries', was organized by the ICT and Disaster Risk Reduction Division in collaboration with the Internet Society, the Asia-Pacific Network Information Centre, the University of the South Pacific, and the Pacific Islands Telecommunications Association, from 3 to 5 December 2019 in Suva, Fiji.

2. The AP-IS Working Group was attended by ICT government officials from Kiribati, Lao People's Democratic Republic, Maldives, Malaysia, Mongolia, Papua New Guinea, Samoa, Solomon Islands, Thailand, Tonga, Tuvalu, and Vanuatu. Resource persons and other non-government entities participated in the session. The list of participants and the programme of the Working Group session are attached to this document (Annex 1 & 2).

3. The ESCAP secretariat presented the findings and recommendations of a study on estimating the effects of IXPs on fixed-broadband speed and latency. In addition, the Internet Society presented the findings and recommendations of a study on the feasibility of establishing an IXP in Pacific island countries.

4. The two studies offered the following findings and recommendations:

    a) Recognized that IXPs improve Internet traffic and network management by enhancing Internet speed and lowering latency;

    b) Recommended strong policy and regulatory support from governments, including regional and subregional cooperation, and putting in place appropriate incentives, for IXPs development;

    c) Noted that a Pacific IXP is technically feasible;

    d) Identified that a Pacific IXP may be:

        i. Established in Fiji, Samoa and New Zealand with an average latency between members (around 27 (ms) with weighted average latency between

members (around 16 (ms)) or any other viable options;

ii.   National IXPs should be established to keep internal traffic internal;

iii.   North Pacific island countries may consider joining IXPs in Guam; and

iv.   Papua New Guinea to connect through Guam and Sydney, while Solomon Islands is subject to a new fiber-optic cable to Vanuatu.

e) Recommended that the ESCAP secretariat set up an intergovernmental Working Group to discuss and agree on the operational principles and modalities of the Pacific IXP (i.e. estimate cable capacity required between nodes; determine capacity costs between nodes; flat membership charges; and detailed design among others).

5. The members of the AP-IS Working Group thanked ESCAP and ISOC for the studies conducted and supported the findings and recommendations of the two studies.

6. The representative of the Solomon Islands recommended that the Working Group should look into the economics and business models of establishing Pacific IXPs.

7. The representative of Kiribati requested the ESCAP secretariat and partners to further review the widening digital divide and the region's progress on achieving ICT-related SDG targets.

8. The representative of Samoa offered to co-host the next AP-IS Working Group on Pacific IXP.

End.

Annex 1: Programme

Time	Tuesday 3 December 2019: Asia-Pacific Information Superhighway Working Group Meeting on IXP for the Pacific
08:30-09:00	*Registration*
09:00-09:30	**Session 1** • **Opening remarks**: Mr. Iosefa Maiava, Head, ESCAP Pacific Office • **Welcoming Remarks**: Mr. Fred Christopher, Manager, Pacific Islands Telecommunication Association (PITA) • **Welcoming Remarks**: Mr. Kisione Finau, Director, Information and Technology, University of the South Pacific (USP) • **Self-introduction by all participants**
09:30-10:00	*Coffee/Tea Break* **GROUP PHOTO**
10:00-11:00	**Session 2: AP-IS implementation in Pacific Island Countries** • Update on the implementation of the Asia-Pacific Information Superhighway (AP-IS): Mr. Siope Vakataki 'Ofa, IDD, ESCAP • IXPs and Fixed-broadband speed & latency: Mr. Siope Vakataki 'Ofa, IDD, ESCAP *(Discussion)*
11:00-12:00	**Session 3: Internet Traffic & Network Management in Pacific Island Countries** • IXPs in the Pacific, Dr. Paul Brooks, ISOC *(Discussions)*
12:00-13:00	*Lunch Break*
13:00-14:00	**Session 3: Internet Traffic & Network Management in Pacific Island Countries (continued)** • IXPs in the Pacific, Dr. Paul Brooks, ISOC *(Discussions)*
14:00-14:30	*Coffee/Tea Break*
14:30-16:00	**Session 4: Country Updates** • Country updates on IXP policy opportunities and challenges, by ESCAP Member States *(Discussions)*
16:00-16:30	**Session 5: Way forward** • Summary by ESCAP (draft conclusions and recommendations)
Time	**Wednesday 4 December 2019: Subregional Training Workshop on IXP**
09:00-10:30	**Session 1:** Facilitator: Mr. Che-Hoo Cheng, APNIC
10:30-11:00	*Coffee/Tea Break*
11:00-12:00	**Session 2:** Facilitator: Mr. Che-Hoo Cheng, APNIC
12:00-13:00	*Lunch Break*
13:00-14:30	**Session 3:** Facilitator: Mr. Che-Hoo Cheng, APNIC
14:30-15:00	*Coffee/Tea Break*
15:00-16:00	**Session 4:** Facilitator: Mr. Che-Hoo Cheng, APNIC
Time	**Thursday 5 December 2019: Subregional Training Workshop on IXP**
09:00-10:30	**Session 6:** Facilitator: Dr. Paul Brooks, ISOC
10:30-11:00	*Coffee/Tea Break*

11:00-12:00	**Session 7:** Facilitator: Dr. Paul Brooks, ISOC
12:00-13:00	*Lunch Break*
13:00-14:30	**Session 8:** Facilitator: Dr. Paul Brooks, ISOC
14:30-15:00	*Coffee/Tea Break*
15:00-16:00	**Session 9:** Facilitator: Dr. Paul Brooks, ISOC
16:00-16:30	**Session 10: Way forward** Summary by APNIC/ISOC/USP/PITA/ESCAP

Annex 2: Participant's List

FOR PARTICIPANTS ONLY

UNITED NATIONS
ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Strengthening efficient Internet traffic management through a subregional Internet Exchange Point (IXP) in Pacific Island Countries
3-5 December 2019
Suva, Fiji

DRAFT - LIST OF PARTICIPANTS

MEMBER

Kiribati

Mr. Kanaan Ngutu, ICT Department, Ministry of Information, Communication, Transport & Tourism Development, Tarawa.

Lao PDR

Mr. Phuthasone Homlatsamy, E-Government Center, Ministry of Post and Telecommunication, Vientiane.

Maldives

Mr. Riyaz Mansoor, Deputy Minister of National Planning and Infrastructure, Ministry of National Planning and Infrastructure, Bodu Thakurufaanu Magu, Male'.

Malaysia

Mr. Asrul Nizam Bin Asat, Principle Assistant Director, ICT Consultant to Malaysia

Government, Malaysia Modernization and Management Planing Unit (MAMPU), Prime Minister Department, Kuala Lumpur.

Mongolia

Mrs. Uranchimeg Andrai, Deputy MyDirector, Communications and Postal Policy Planning Department Communications and Information Technology Authority, Ulaanbaatar.

Papua New Guinea

Mr. David Bonjui, Tariff Analyst, National Informational Communicational Technology Authority, Port Moresby.

Samoa

Mr. Taiesea Peniamina Petaia, Principal ICT Officer, Ministry of Communications and Information Technology, Government of Samoa, Apia.

Solomon Islands

Mr. Wilson Leguvaka, Director Regulatory Resources, Telecommunications Commission Solomon Islands, Honiara.

Thailand

Mr. Yutthana Rodseesain, Acting Vice President-International, Submarine Cable and Internet Gateway Business Department, TOT Public Company Limited, Bangkok.

Mr. Kamphol Boongsri, Manager, Internet Gateway Operation Division, Data Center Department, CAT Telecom Public Company Limited, Bangkok.

Mr. Boonlit Adipat, Senior Computer Technical Officer, Office of Permanent Secretary, Ministry of Digital Economy and Society, Bangkok.

Tonga

Mr. Anitelu Toimoana, Director of Information and Technology, Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications, Nuku'alofa.

Tuvalu

Mr. Opetaia Simati, Director of ICT, Ministry of Communication & Transport, Funafuti.

Vanuatu

Mr. Jethro W. Tambeana, Government Broadband Network Manager at the Office of the Government Chief Information Officer (OGCIO), Port Vila.

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OTHER INTERNATIONAL ORGANIZATIONS

University of the South Pacific

Mr. Kisione Finau, Director, Information & Technology Services, Suva, Fiji.

Pacific Islands Telecommunications Association

Mr. Fred Christopher, Manager, Suva, Fiji.

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EXPERTS

Internet Society

Mr. Paul Brooks, Founder, Layer 10 Advisory Telecommunications Strategy & Design, Australia, Sydney, Australia.

APNIC Pty Ltd

Mr. Che Hoo Cheng, Infrastructure & Development Director, Brisbane, Australia.

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ESCAP SECRETARIAT

Mr. Iosefa Maiava	Head, ESCAP Pacific Office, Suva
Mr. Siope Vakataki 'Ofa	Economic Affairs Officer, ICT and Development Section, ICT and Disaster Risk Reduction Division, Bangkok