A COORDINATED APPROACH ON THE INTERNATIONAL TELECOMMUNICATIONS SCENE BETWEEN GOVERNMENTS FROM THE PACIFIC AND A NON-GOVERNMENTAL ORGANISATION – THE PACIFIC ISLANDS TELECOMMUNICATIONS ASSOCIATION (PITA)

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The objective of this paper is to share information on a cooperation model that has been operating since 2007 involving regulators from the Pacific islands countries and the Pacific Islands Telecommunications Association (PITA).

La Pacific Islands Telecommunications Association (PITA) a depuis sa création en 1987, progressivement mis en place les fondements d'une coopération internationale entre les différents petits Etats et territoires du Pacifique Sud et les acteurs publics ou privés impliqués dans les activités qui touchent les différentes facettes du monde des télécommunications. Cet article dresse le tableau de ce qui a été d'ores et déjà accompli par la PITA et quels sont ses futurs principaux champs d'actions.

I INTRODUCTION: WHO IS PITA?

PITA is a non-profit organisation formed in 1987 to represent the interests of the Pacific islands in the field of communications and ICT.[1] It is based in Suva Fiji. It has currently 119 members from

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1 PITA's current board is: President: Mr Maui Sanford (International Relations Manager - OPT French Polynesia). Vice President: Mr Ivan Fong (Manager Corporate Planning - Telecom Fiji Ltd), Executive Member: Ms Blanche Salii (Manager Regulatory - Palau National Communication Corporation), Manager: Mr Fred Christopher. More information can be accessed on the PITA website www.pita.org.fj.

22 Pacific island countries, states and territories, and includes operators, carriers, equipment and solution providers, and regulators.[2]

PITA has established cooperation agreements with ITU, APT, CTO, APNIC, ICANN, PTC, APSCC, SOPAC, SPC and works closely with the Forum Secretariat of the Pacific Islands Forum and governments from the Pacific, including Australia and NZ.

II PITA PRIORITIES

As endorsed at the PITA 13th Annual General meeting in Nadi Fiji on 27 April 2009, priorities for 2009 / 2010 identified for workshops and training are:

1. Fraud and Security: IP network security and cyber security
2. Revenue Assurance
3. Policy and Regulation: Interconnection/Universal Fund set up and management / Cost modelling / Importance of Universal Services, Lifeline and Harmonizing market / Interconnect model suitable for Pacific islands
4. Corporate Vision, Planning and Strategy: Change management / Addressing transitions and privatisation
5. Human Resources Management and Development: HRM Strategy and key position churn and succession strategy
6. Sales and Marketing: Selling and marketing skills / New technologies / Customer care in new environment
7. Economics: Cost modelling/Price and Tariff setting/Interconnection / Economics and commercial issues of Broadband/Billing
8. Broadband Practical Engineering: Implementing Broadband/Practical engineering/Addressing satellite congestion/Delivery over KU/Delivery over power lines/Delivery over fibre optic cable
9. Roaming: Cellular roaming / Prepaid roaming
10. NGN and Technology: 3G/4G vs. WiMAX, HSPA / Developing IP skills / Phasing out of 2G issues / Broadcasting, Content development / Expanding TDM Migration to IP
11. Legal Issues: tender process, contract essentials, liabilities, dispute resolution
12. Broadband to Rural Areas and Outer Islands

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2 Refer to schedule 1 - These countries are members of the International Telecommunications Union (ITU – www.itu.int) or Asia Pacific Telecommunity (APT – www.apt.int).

III PITA'S EARLY INVOLVEMENT IN WORKING CLOSELY WITH GOVERNMENTS

From a very early stage PITA has been organising conferences, workshops and training session in partnership with governmental and non-governmental international organisations in charge of various ICT sectors.

PITA members recognised very early and consistently the crucial need for involving all players in the ICT sector – governments, the operators and industry players – to address key issues.

Since 2006 all PITA meetings dealing with regulatory issues involving regulators have been open to operators and industry players

The first formal role of PITA and the regulators was formalised with the 'ICT Task Force'[3] which was formed in order to implement the Wellington Declaration of 30 March 2006.[4] PITA contributed as a member of the ICT Task Force which was coordinated by the Pacific Islands Forum Secretariat.[5]

IV PRACTICAL ACHIEVEMENTS FROM COLLABORATIVE WORK

The close cooperative relationship established between regulators and operators in the Pacific through PITA over many years, has allowed the formation of a unique platform for coordination when the need arises to deal with the issues impacting on the Pacific region and to address concerns and raise proposals at major international meetings.

This situation has been experienced on several occasions and particularly to address two issues that were considered a threat to ICT development in the Pacific region:

A Submission at WRC07 World Radio Conference 2007

In January 2007 during the PITA Annual General Meeting, organised in conjunction with the Pacific Telecommunications Council, the attention of the Pacific islands community was drawn to a potential threat to the fixed satellite services on which the Pacific islands region heavily relies for its communications.

Several bands were being considered for use for the terrestrial component of IMT (which includes WiMAX services). This move would have impacted on the frequency bands of 3.4 - 4.2 GHz and 4.5 - 4.8 GHz (C Bands), whose primary use includes downlinks for the Fixed Satellite Service (FSS).

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3 Alfred Soakai acted as chair of the ICT Task Force – he is currently Acting Secretary for Communications & Information, Department of Communications & Information, Government of the Kingdom of Tonga.

4 Useful link: http://www.forumsec.org.fj/UserFiles/File/Wellington_Declaration.pdf.

5 Useful link: http://www.forumsec.org.fj/pages.cfm/economic-growth/ict/.

In the context of the WRC07, it was agreed that a coordinated approach had to be taken to move this issue forward.

Telecom Cook Islands submitted a paper (Schedule 2) to the 5th Meeting of the APT Conference Preparatory Group for WRC-2007 (APG2007-5) held from 16 to 21 July 2007 in Busan, South Korea. This paper was entitled 'IMT-2000 AND SYSTEMS BEYOND IMT-2000'.

Regulators took the opportunity of PITA workshops to meet and share ideas with operators. The 'PITA platform' was used to facilitate coordination prior to submission of this paper.

All regulators from the Pacific islands had a common approach on the issue and therefore voted in favour of the paper during WRC

As a result, the paper was submitted to WRC07 and contributed to applying some limitation on the initial plans to open the C band fixed satellite services to terrestrial services.

B WTSA08 World Telecommunications Standardization Assembly - Johannesburg

Since early 2005 the Pacific has been the target of fraudsters using a portion or the full numbering plan range of a country. This was called within PITA, 'number hijacking'. Hijacked calls are Short Stopped ie not terminated in the Pacific island country.

Perpetrators do it for financial gain and have no concern for the impact on the country or regional economies

Some countries block call to the Pacific to ensure protection of consumers, but blocking of calls means that:

- People cannot ring Pacific island countries. This affects the economy of Pacific island countries affecting all areas including mainstay tourism and trade;
- It gives the Pacific islands a bad reputation when it is not their fault ;
- It directly affects the revenue of the operator due to inbound traffic reduction.

This situation has been taken very seriously by PITA since late 2005 when the Irish regulator decided to block all calls to several Pacific islands on the instruction of the national regulator ComReg because of internet dialler scams after receiving complaints from more than 300 victims. Numbers can be unblocked only at the request of subscribers. Other countries followed Ireland:

- It is an aggressive approach; contrary to the ITU ruling (E156) on blocking of country codes and stops all traffic to the affected country;
- Fails to address the true cause of this globally organised criminal activity and to stop the perpetrators.

The number hijacking occurred heavily in 2006 / 2007 and PITA initiated several actions to

work more closely with regulators and operators from the developing world. In 2006, PITA formed the PITA Fraud Forum to focus on ways to prevent or solve the different forms of fraud.

Experience has shown that it is almost impossible to get information on such traffic:

- Gateway carriers quote confidential agreements which prevent disclosure of the traffic routing making it extremely difficult to trace who the offending carrier is so action can be taken ;
- Regulators are very reluctant to force carriers to reveal how they are routing the calls, so the perpetrators can be identified.

Considering these constraints PITA has, along with the Pacific island regulators decided to activate the WTSA process. PITA participated in two preparatory meetings in Kobe and Hanoi[6] along with delegates representing the Pacific island governments.

The same process as WRC07 was followed and a submission was made - coordination was the key element to get the Pacific acting as a block in these Asia Pacific international meetings.

As a result, resolution 61 on "Misappropriation of international telecommunication numbering resources" was adopted at the Johannesburg meeting in October 2008.[7]

In its key elements this resolution 'resolves to invite member states':

1. To consider providing a mechanism to allow their national regulator to request carriers to release routing information in cases of fraud, within the constraints of national laws and regulatory frameworks;
2. To encourage administrations and national regulators to collaborate and share information on fraudulent activities related to misuse of international numbering resources and to consider sharing information about these activities;
3. To encourage all administrations and international telecommunication operators to enhance the effectiveness of ITU's role and to give effect to its Recommendations, particularly those of ITU-T Study Group 2, in order to promote a new and more effective basis for dealing with fraudulent activities due to number misappropriation, which would help limit the negative effects of these fraudulent activities and the blocking of international calls to developing countries;

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6 See agenda and papers of Asia-pacific preparatory meetings http://www.aptsec.org/Links/WTSA/.

7 See the WTSA resolution 61: http://www.itu.int/publ/T-RES/en.

4. To encourage administrations and international telecommunication operators to implement ITU-T Recommendations in order to mitigate the adverse effects of fraudulent number misappropriation and blocking of calls to certain developing countries,

Today, this resolution makes it much easier to implement actions in order to prevent or solve the 'Misappropriation of international telecommunication numbering resources'.

V PITA PROJECTS

So far eight major projects have been identified:

1. Satellite bandwidth aggregation
2. Public private partnerships
3. Internet direct to outer islands
4. Purchasing of mobile handsets aggregation
5. NRTRDE implementation (near real time roaming data exchange)
6. Strengthening of regulatory capacity
7. Strategy and multiplayer setup
8. IP conference and showcase (PTC, ICANN, APNIC, etc).

VI RECENT DEVELOPMENTS – CONCLUSION

PITA is committed to working even closer with regulators / policy-makers through a series of initiatives such as:

- In 2009, setting up the Pacific Centre of Excellence between ITU and PITA;
- co-hosting the APT / PITA Telecommunications ICT Policy and Regulation Meeting for Pacific (Nadi, Fiji, 19 April to 1 May 2009);
- co-hosting of the 'ITU-PITA Network Cost Modelling workshop' (Auckland 20 – 24 July 2009);
- contribution to the concept of a regulatory resource centre.

To conclude, there are many areas which have a high demand for collaborative and cooperative work – one of them is crucial to set up the scene for the future of services: convergence.

Regulators and policy-makers, operators, and solution providers will continue to gain efficiency from sharing more and more. PITA will advocate cooperation at its maximum in order to get Pacific islanders the full benefit of ICTs and therefore to feel closer to each other.

SCHEDULE 1

MEMBERSHIP by COUNTRY - PITA / APT / ITU

	Country	Regulator	APT Members	ITU Members	Notes
1	American Samoa	Yes (Dual)			
2	Australia	No	Member	Member	**PITA**
3	Cook Islands	Yes (Dual)	Associate		21 Countries represented
4	Fiji	Yes	Member	Member	12 Regulators
5	French Polynesia	Yes (Dual)			
6	FSM	No	Member	Member	
7	Kiribati	No		Member	
8	Marshall Islands	No		Member	
9	Nauru	Yes	Member	Member	
10	New Caledonia	Yes			**APT**
11	New Zealand	No	Member	Member	9 Countries represented
12	Niue	Yes (Dual)	Associate		2 Associate members
13	Norfolk Island				
14	Palau	Yes	Member		
15	PNG	Yes	Member	Member	
16	Samoa	Yes	Member	Member	**ITU**
17	Solomon Islands	No			12 Counties represented
18	Tokelau	Yes (Dual)			
19	Tonga	Yes	Member	Member	
20	Tuvalu	Yes (Dual)		Member	
21	Vanuatu	No		Member	

SCHEDULE 2

ASIA-PACIFIC TELECOMMUNITY

The 5th Meeting of the APT Conference Preparatory Group for WRC-2007 (APG2007-5)

Document No: APG2007-5/INP-06

16 – 21 July 2007, Busan, Rep. of Korea

16 July 2007

AGENDA ITEM 1.4: IMT-2000 AND SYSTEMS BEYOND IMT-2000

By Telecom Cook Islands, Cook Islands

BACKGROUND

Several bands are being considered for use for the terrestrial component of IMT (which includes WiMAX services). This paper is focused on the bands 3.4 - 4.2 GHz and 4.5 - 4.8 GHz (C Bands), whose primary use includes downlinks for the Fixed Satellite Service (FSS).

The FSS delivers a variety of services in C Band including International and Domestic (National) telecommunications for many small countries especially the small Pacific Island countries. C Band is also used widely for government and industry, video program relay for broadcasting and direct-to home (DTH) television broadcasting reception. The C band is used exclusively by many small Pacific Island countries because of many technical factors that include a greater rain fade margin and availability of satellite coverage. Currently the Cook Islands have 12 Satellite Earth Stations (some of which are in very remote island locations) all using C Band carrying the entire Cook Islands International, National and Internet services.

The C Band beams cannot be replaced by Ku Band for cost, technical and logistical reasons.

Although this paper focuses on the Cook Islands, the same situation applies to many Pacific Islands countries such as Federated States of Micronesia, Niue, Kiribati, Palau, Tokelau, Tuvalu and French Polynesia. In all these countries, C Band satellite Services are used exclusively as the only means of communication for all International, National and Internet services.

DISCUSSION

Resolution 228 requires sharing and compatibility studies with services already having allocations in potential spectrum for the future development of IMT, taking into account the needs of other services.

The 3.4 - 4.2 GHz band is allocated to the FSS as a primary service and the Cook Islands use it heavily. The 4.5 - 4.8 GHz band is a downlink FSS frequency band in the FSS Plan contained in Appendix 30B of the ITU Radio Regulations, having worldwide treaty status.

Studies in the ITU-R Working Party 8F (WP8F) in relation to these bands provide data, attached as Annex A, for co-channel and adjacent channel interference from IMT to a typical FSS earth station.

These studies show that the minimum required separation distances between IMT transmitting stations and FSS earth receiving stations range from tens to hundreds of km for co-channel sharing and are measured in km for use of adjacent bands. This means that in these bands, IMT cannot share in the same geographical area with FSS. Rarotonga, the largest island in the Cook Islands, has a length of just 10 Km at the longest part. Other islands have a length of less than 1 Km.

Given that FSS receive stations are ubiquitously deployed in most regions of the world and in many cases, on small islands, sharing of the 3400 – 4200 MHz band with IMT in the same geographic area is not feasible, because no minimum separation can be guaranteed.

The frequency band 3.4 - 4.2 GHz is important for the FSS because atmospheric absorption is lower in this band, thus providing reliability and coverage, particularly in severe rain-fade conditions. Communications is essential in Hurricane situations and the Ku Band cannot provide this reliability. Many developing countries including those in the Pacific rely heavily on satellite links in this band to provide vital domestic and international connectivity and will continue to do so. Worldwide, approximately 160 satellites now in orbit use these frequencies.

If developed countries cease to permit use of C Band FSS beams, which normally provide services on a multi-administration wide-coverage basis, those beams will become uneconomic for service to developing countries and other tropical countries – the 'Swiss cheese effect'. Satellite operators will cease to deploy and operate them. For these reasons, this frequency band should not be identified for IMT.

Also, the Cook Islands is far too small a market to influence the frequency spectrum used by manufactures of WiMAX equipment. If this band is licenced for use by WiMAX, then this equipment would interfere with existing Satellite Earth Stations.

Though less important, the band 4.5 - 4.8 GHz band is currently used or planned for use in many developing countries for infrastructure telecommunication networks, for the same technical reasons as those for 3.4 - 4.2 GHz. Therefore, this frequency band should not be identified for IMT.

SUMMARY

The operation of IMT and FSS in the 3.4 – 4.2 GHz and 4.5 – 4.8 GHz bands are mutually exclusive in the same geographic area. IMT would cause unacceptable levels of interference to existing FSS receive stations and preclude further deployment of FSS earth stations in those areas. This would render C Band beams uneconomic in developed countries and therefore in all countries.

In the medium to long term, C Band services would cease. Pacific Island countries, which are heavily reliant on C Band FSS, would lose their services completely.

PROPOSAL

That the following frequency bands:

- 3.4 - 4.2 GHz
- 4.5 - 4.8 GHz

be removed from the list of candidate bands for identification for IMT under Agenda Item 1.4 of WRC-07, on the basis that:

- Large distance separations are required between a single IMT transmitter and an FSS receive station,
- FSS receive stations are deployed on all populated small islands in the Cook Islands and the introduction of terrestrial equipment using these bands will cause interference with essential communication networks,
- The bands are already extensively shared by the FSS with other services on a coordinated basis, particularly the FS (point-to-point terrestrial links),
- The FSS provides many administrations with essential telecommunications infrastructure, which cannot be effectively replaced by other telecommunications services.
- Prohibition of FSS services in some administrations will make multi-administration beams uneconomic, to the particular detriment of developing and other tropical countries as well as to potential users in thinly populated areas of other countries. (end)