

REPORT OF THE CONFERENCE @



PARLIAMENT HOUSE - TARAUA, KIRIBATI



*Written By :*

*Scan B Mitiepo  
Systems Analyst / Web Master  
Information Systems Office  
Administrative & Service Department  
**Government of Niue***

## Rural Technologies: Connecting & Advancing Remote Communities through ICT

PacINET 2005 - Parliament Building, Tarawa, Kiribati 22-27 August 2005

---

### INTRODUCTION

The theme of the conference is, '*Connecting & Advancing Remote Communities through ICT*'. The venue was held at the parliamentary complex, Tarawa, Kiribati on 22<sup>nd</sup> – 27<sup>th</sup> August 2005. Representatives and participants all over of the Polynesia, Micronesia and Melanesia, pacific island countries attended to this proactive conference. This meeting covers all the Internet aspects but it has focused on rural Internet.

The main key development participants were specially invited by PICISOC is as follows; this provides the conference a very high profile, which indicated to the United Nations Organization that PICISOC is a well productive and constructive organization for the pacific island countries.

- Dr Vinton G Cerf, [http://en.wikipedia.org/wiki/Vint\\_Cerf](http://en.wikipedia.org/wiki/Vint_Cerf) Internet Pioneer, ISOC founding (Internet Society) President and ICANN (Internet Corporation for Assigned Names and Numbers). Dr Vinton Cerf, one of the world's leading technologists, made a first trip to the Pacific region, was a special guest at the PacINET (Pacific Internet Networking) 2005 conference in Kiribati. Cerf was instrumental in the development of the Internet and Internet-related data packet and security technologies, including co-designing the TCP/IP protocol. He is chairman of the Internet Corporation for Assigned Names and Numbers (ICANN), the organisation that manages all domain names. To celebrate the award of 2004 A.M. Turing Award to Vinton G. Cerf and Robert E. Kahn, considered the "Nobel Prize of Computing", for pioneering work on the design and implementation of the Internet's basic communications protocols
- Dr Jimmy Rodgers, <http://www.spc.int/> Senior Deputy Director Gene – South Pacific Commission.
- The founder of PICISOC, Mr Sam Taufao from SPC, Noumea presented varieties of the importance of the theme.

PacINET 2005 is the Fourth Annual Technical Conference and AGM of PICISOC. The First Pacinet conference was held in October of 2002 in Nadi Fiji, followed by Tonga in 2003, Vanuatu in 2004. At the conclusion of the conference, there were two bidders for the 2006 and it was credited to Samoa, to be held around the same period of time.

### ATTENDEE PARTICIPANTS

There are two participants represented Niue to this PICISOC annual conference. I represented for the Government ICT and Emani Lui for the Internet Service Provider (ISP) for IUSN. Emani conducted an excellent presentation about Niue's wireless internet infrastructure. Emani's presentation was the only one amongst all had DVD which captured the wireless setup and the coverage of Niue. The presentation was rated highly from the key participants and wanting Niue to bid and to host the next PICISOC conference.

## **INFORMATION BACKGROUND**

The PACINET is the annual PICISOC (Pacific Islands Chapter, Internet Society) Conference for practitioners, developers, researchers and those interested in ICT from all sectors to exchange information on the system design, enabling technologies, and anecdotal experiences related to the use of ICT in the Pacific Islands.

The conference is composed of several types of contributions including Paper Presentations, demonstrations, Tutorials and Workshops, Panel Discussions and Invited Talks by the keynotes speakers.

The Pacific Islands Chapter of the Internet Society (PICISOC: [www.picisoc.org](http://www.picisoc.org)) is affiliated to the Internet Society (ISOC). It covers 22 Pacific Islands Countries with a membership of more than 300 individuals in the region. PICISOC organizes a yearly meeting called PacINET.

The Pacific Islands Chapter of the Internet Society serves the Society's purposes by serving the interests of the global Internet community through its presence in the Pacific Islands. It focuses on local issues and developments, and as an impartial advisor to governments and the public on matters of significant interest to Pacific Island people.

## **FUND PROVISIONS**

Mr Don Hollander, the chief head commissioner for PIP (pacific Internet partners) and associated to UNESCO NZ, Wellington, NZ, provided the full funds as follows;

- Accommodation
- Per Diem
- Workshop Fees
- Transit Allowances

The Internet User Society of Niue (IUSN) provided full return air fare. The Department of Administration is unable to provide air fare funds due that this is the conference workshop. Funds only offer to training purposes.

## **PROGRAMME OF THE CONFERENCE**

*See Appendix I for the program*

The following passages are the summaries of the individual presenters I encountered that are important to note. However, I found most presentations were essential and vital to Niue's current and proposed IT infrastructure. In some presentations, they are advanced and up to date, which I may not consider for Niue's IT platform, as the government is experiencing and facing difficulties to source finance for varieties of IT projects

### **USPNet – Connecting Students in Rural and Remote Islands of the Pacific Keith Moala, University of the South Pacific**

Presentation by Manager, USPNet highlights the importance of USPNet VSAT satellite network for the University of the South Pacific. The report includes a brief background on VSAT technology in the Pacific including comments on PEACESAT, DAMANET, VTSAT and USPNet. A brief history of USPNet development, since USP established in 1968 to support the university's distance education (University Extension) services. Uniqueness of USP has created the need for a 'private telecommunication' infrastructure. Attempts were made with HF Radio, leased satellite links via Telecom operators and the challenges faced leads to the plan for USPNet Upgrade Project 2000. This \$10million Project co-funded by Governments of Japan, Australia, New Zealand and the 12 USP member countries saw the introduction of a private VSAT satellite network for USP. It was launched in March 2000 and became the milestone of Distance Education development in the Pacific. The rest of the presentation highlights the past five years of experience in the operation and maintenance of this unique Pacific VSAT network. Challenges include inefficient use of satellite bandwidth, inability to support IP traffic, inflexibility of the network and limited user interface – initiated the "USPNet Enhancement Project 2005" - the most recent development of USPNet and the benefits ahead.

### **Map Server Implementation: Progress Update Franck Martin, SOPAC/EU Project**

Map servers are being installed in 14 Pacific Island countries. This presentation shows the progress on these installations and an assessment on how communities have received this new web based technology. How problems got solved and what are the challenges ahead. It also draws a picture of Internet availability for local content in many Pacific Island Countries

### **Secure Wireless Without the Pain: Radius, WPA, TKIP and Active Directory AI Blake, Canberra Girls Grammar School**

ICT departments in most organizations are coming under increasing pressure to deploy wireless solutions that address user demands for flexible access to corporate resources. Whilst there are methodologies available to secure wireless networks, out-of-the-box installation of many products expose systems to significant security risks. These risks have received is proportionate publicity from the popular media, propagating the image of teenagers with laptops driving around the suburbs to steal network secrets. The net result is that many corporate ICT teams are uneasy about deploying wireless with current technologies. This paper uses the case study of a medium to large wireless network installation that was achieved without compromising security and provides guidance as to how integrated policies and procedures can be used to manage wireless connectivity without any additional administrative overhead as well as attempting to make sense of the acronym soup that has become an inevitable part of any discussion of wireless networks.

### **Content Control and Management in Education: Content keeper Update AI Blake, Canberra Girls Grammar School**

Whilst the Internet represents a significant learning resource for education at all levels, parents, teachers and society as a whole have legitimate concerns regarding the exposure of minors to inappropriate material. This paper focuses on the rationale for content filtering within schools and similar organisations, and discusses some of the recent developments in this technology and how organisations can achieve a balance between an 'open Internet' and addressing the cultural and legal issues that require restriction of undesirable and illegal activities.

### **Travel Reservations and the Internet Taberannang Moaniba, Pacific Travel Agency**

The introduction of the internet to Kiribati brings a lot of changes to the Kiribati people. Not just in the way we communicate and finding information but also in the way travel bookings are being processed both by the suppliers of travel service and the customers. With its low cost it opened doors for new startup travel agencies allowing competition which then allows customers to have more choices. With the availability of online booking people at the comfort of their homes can do their booking by themselves. The choices for customers can even go further through the introduction of Wireless Internet in the not too distant future. The presentation will focus on Travel Reservation System. It will consider the benefits internet is offering to Kiribati in relation to travel and issues that are affecting the delivery of travel related services

### **Voice-over-IP (VoIP) Rajnesh D. Singh, PATARA**

An overview of VoIP, the benefits it can provide, and what governments and regulatory bodies are doing around the world to promote or hinder its development.

### **ICT Developing Culture and Communication Ian Thomson, 2020 Communications Trust New Zealand**

Many rural, remote and Island communities have been considerably weakened by the “Brain Drain” into the “Big Smoke”. This has left a depleted community to carry on the traditions and cultural heritage so important to local communities, especially indigenous ones. Many of the leavers want to maintain links with their roots, but find it hard because phone calls are too expensive and writing letters is too hard and too slow.

Telecenter and ICTs as a way to attract these leavers back into the community “virtually” so that they can Keep in touch with family and friends, Keep up with important issues and traditions, Have their say and be involved, Add their new skills from afar to the community, Strengthen language, culture and heritage in both countries. Telecenter can also be used to improve health and education in small rural communities.

Ian’s case study, based on working with a very remote Maori community in New Zealand, will demonstrate how this can be achieved by Deploying cheap broadband access, connecting schools and communities, raising skills in using ICTs, Developing local content in local language, Improving health and education

### **International Open Source Network – FOSS (Free and Open Source Software) Shahid Akhtar, UNDP-APDIP**

While FOSS has become more accepted, there is a lack of understanding on its benefits, policy implications and resources available to Governments to implement FOSS solutions. FOSS software refers to applications and operating systems with open source codes for other parties to review, comment, refine, and extend. Very often this model includes a bug reporting process and is often quoted as a good model for producing resilient software. This open concept allows easy customization of the software to users' needs. FOSS represents an opportunity for developing countries to adopt affordable software and solutions toward bridging the digital divide. Cost-savings will allow funds to be used on other priorities and development objectives. The International Open Source Network (IOSN) is a Center of Excellence for FOSS in the Asia-Pacific Region. It shapes its activities around FOSS technologies and applications. Via a small secretariat, the IOSN is tasked specifically to facilitate and network FOSS advocates and human resources in the region.

### **Connecting Island Communities. The Emerging Telecenter Movement in the Pacific Stuart Mathison, The Foundation for Development Cooperation**

The development of Pacific Island Countries and Territories (PICTs) has long been hampered by dispersed populations, small sizes and vast ocean distances. These circumstances impose large costs on service provision in education, economic development, social welfare, health, travel and communication and have limited the ability of communities and their peoples to engage fully in economic activities and democratic processes. Improvements in telecommunications services and information technology now provide increasing opportunities for PICTs to overcome these circumstances by reducing barriers of distance, improving service delivery across countries and the Pacific community, reducing costs, improving the knowledge, skills and general development of their people, and working more effectively together. Community-based Multi-media Telecenter is helping to connect island communities with each other, with their Diaspora communities and with the wider world. He presented some important outcomes that describes the emerging Pacific Telecenter Community, and discusses some of the development implications and outcomes that are being achieved.

### **CONCLUSIONS**

The conference emphasized some key principles to help develop ICT in the region, and primary amongst these was collaboration. By building partnerships and alliances with each other and the respective organizations, and exchanging ideas and knowledge, it can perhaps go some way to bridging the "digital divide" and build a better ICT world for all our people in the south pacific region.

The PacINET 2005 conference concluded with the AGM meeting of the Pacific Island chapter of the Internet Society. A bid was presented by New Caledonia and Samoa to host PacINET 2006 whereby members had to vote to determine the next host of PacINET. Fiji was also going to put in a bid but withdrew in the last minute. Samoa was declared the host of PacINET 2006 with a vote of 30 to 11. New Caledonia offered its candidature as a backup venue, which can be supported by SPC, Noumea as the ideal venue.

As part of the Region's Pacific Plan, leaders requested a strategy for the development of ICTs in the Pacific.

### **RECOMMENDATIONS**

The following are recommended for the government to consider;

- For the Government to make standard negotiations to IUSN to bid for the next host at Niue for this PACINET conference, providing that we have the required facilities and free WiFi access. Henceforth, this is one method of promoting Niue's IT infrastructure
- To give authorization to ISO to registered to other IT regional organizations, such as CROPS, etc, to work correspondently as a IT counterparts
- The Government of Niue to register and seek information for Map Server. SOPAC is the main contact
- To purchase Content Keeper device for the wireless access in each department set up. Information in greater details can provided from the undersigned name

- The Government to look seriously in software applications for licensing. However, FOSS, Free Open Source Software are available world wide coverage as promoted by UNDP representatives, and is been widely used and introduced to other Government regions
- The Government to consider inviting high a representative from any IT organization in the South pacific to asses our IT infrastructure
- The Government to set a side a set amount of budget to promote the usage of Telecenter. Telecenter are vital and essential to all village communities to communicate amongst each village and out side of Niue. However, the *Taoga Niue*, can be the main usage of the centers to exchange and communicate varieties of information nationally and globally
- To have a set budget to meet the cost when the sponsor or organizer of the conference or workshop are unable to provide full funds to attend such meaning conferences
- For the Government or the Minister of IT/ICT to make a set of memorandum of understanding, make peace and to work cooperatively, constructively and productively to IUSN and be a better partnership and relationship in the future
- The Government of Niue to have a update set of a National ICT strategies. Providing this National ICT documents, the Government needs to submit to the required IT regional organization so they can able to assist the government by providing IT resources.
- To continuously provide support for the participant, Mr Scan B Mitiepo to attend to this conference, PICISOC annually. However, the government should seek or reserve some funds to accommodate difficulties of finding funds.

## **ACKNOWLEDGEMENTS**

I would like to acknowledge the following respected sources for providing financial supports;

- Director of Administrative granted approval to attend to this conference.
- IUSN – Richard St Clair for providing funds to accommodate return airfare, Niue – Auckland – Nadi - Kiribati
- IUSN – Emani Lui for providing free accommodation at the five star hotel in Nadi, Fiji,
- UNESCO NZ – Don Hollander for providing full supports and seeking extra funds to UNDP to accommodate per diem and accommodation for Kiribati

## **Appendix I - Programme**

## **DAY ONE: Monday August 22nd, 2005**

00:10 09:30 - 09:40 Opening Message PacINET 2005  
Rajnesh Singh, Chair, PICISOC  
00:10 09:40 - 09:50 Welcome Message  
Titeem Auatabu, Chair, PacINET Kiribati Organising Committee  
00:45 09:40 - 10:25 Traditional Kiribati Welcome  
PacINET Kiribati Organising Committee  
00:20 10:25 - 10:45 Self-introduction by Delegates  
00:30 10:45 - 11:15 Morning Break, Delegates Mingle  
00:45 11:15 - 12:00 Pacific Plan – Digital Strategy John Budden, Forum Secretariat  
01:00 12:00 - 13:00 Lunch  
00:45 13:00 - 13:45 Coconut Wireless in Tuvalu Pese Maatia, Department of ICT, Government of Tuvalu  
00:45 13:45 - 14:30 USPNet – Connecting Students in Rural and Remote Islands of the Pacific  
Keith Moala, University of the South Pacific  
00:15 14:30 - 14:45 Afternoon Break  
01:00 14:45 - 15:45 Map Server? Implementation: Progress Update Franck Martin, SOPAC/EU Project  
00:30 15:45 - 16:15 What is the Role of ICT? Enota Ingintau, Telecom Kiribati Ltd

**---END OF DAY ONE---**

16:15 - 18:15 Kiribati ICT Policy Workshop Open to all

## **DAY TWO: Tuesday August 23rd, 2005**

00:45 09:30 - 10:15 Space Borne High-Resolution? Image Data for Pacific Island Countries, Formats and Availability Dr. Wolf Forstreuter, SOPAC  
01:00 10:15 - 11:15 Secure Wireless Without the Pain: Radius, WPA, TKIP and Active Directory  
Al Blake, Canberra Girls Grammar School  
00:20 11:15 - 11:35 Morning Break  
00:30 11:35 - 12:05 Internet User's Society Niue: Technology Overview Emani Lui, Internet Users Society Niue DVD presentation on the technology used in Niue for Internet services  
00:45 12:05 - 12:50 History of Internet/Information Technology in Kiribati Pinto Katia, Telecom Services Kiribati Ltd  
00:10 12:50 - 13:00 Open Mic  
Open Mic – opportunity for anyone to speak on any matter  
01:00 13:00 - 14:00 Lunch  
01:00 14:00 - 15:00 The Solomon Islands Distance Learning Centres Project (DLCP) - A Solomon Islands SchoolNet? David Leeming & David Ma'ai, Distance Learning Centres Project (DLCP)/ People First Network (PFnet)  
00:40 15:00 - 15:40 Kiribati and the Internet Mote Kabiriera, Development Bank of Kiribati  
00:20 15:40 - 16:00 Afternoon Break

**---END OF DAY TWO---**

16:00 - 18:00 CROP ICT Working Group Meeting Part I

**DAY THREE: Wednesday August 24th, 2005**

07:00 09:30 - 16:30 Parallel Session: GIS Workshop, Room TBA

**Main Session:**

01:00 09:30 - 10:30 Content Control and Management in Education: Content Keeper Update  
Al Blake, Canberra Girls Grammar School

00:30 10:30 - 11:00 Travel Reservations and the Internet Taberannang Moaniba, Pacific Travel Agency

00:20 11:00 - 11:20 Morning Break

01:00 11:20 - 12:20 Nearly Net? Networking for Pacific Island Countries Jonny Martin, Citylink Ltd

00:10 12:20 - 12:30 Open Mic – opportunity for anyone to speak on any matter

01:00 12:30 - 13:30 Lunch

01:30 13:30 - 15:00 Open Regional Dialogue on Internet Governance (ORDIG) Shahid Akhtar, UNDP-APDIP

00:20 15:00 - 15:20 Afternoon Break

01:30 15:20 - 16:50 Utilities Roundup - a PacINET regular Sam Taufao, SPC

**---END OF DAY THREE---**

02:00 16:50 - 18:50 Kiribati ICT Policy Workshop (con't) Open to all

**DAY FOUR:**

00:30 09:30 - 10:00 Voice-over-IP (VoIP) Rajnesh D. Singh, PATARA

00:20 10:00 - 10:20 Cultural Extension to your Diaspora - Using the Internet to leverage traditional Media Don Hollander, I2

00:20 10:20 - 10:40 Pacific Internet Partners - Understanding that Technology does NOT work without Technologists! Don Hollander, Pacific Internet Partners

00:20 10:40 - 11:00 Morning Break

01:30 11:00 - 12:30 Leadership in Global Health Technology (LIGHT) and the Asia Pacific Dr. Harry McConnell?, Institute for Sustainable Health Education and Development Live via Video-over-IP from Brisbane, Australia

01:00 12:30 - 13:30 Lunch

01:00 13:30 - 14:30 ICTs Developing Culture and Communication Ian Thomson, 2020 Communications Trust New Zealand

00:45 14:30 - 15:15 International Open Source Network – FOSS (Free and Open Source Software) Shahid Akhtar, UNDP-APDIP

00:15 15:15 - 15:30 Afternoon Break

02:00 15:30 - 17:30 PICISOC Update: Recommended Software and Hardware for Pacific Islands

**---END OF DAY FOUR---**

17:30 - 19:30 CROP ICT Working Group Meeting Part II

**DAY FIVE: Friday August 26th, 2005**

03:00 09:00 - 12:00 PICISOC AGM

**Agenda**

- .Open Meeting, President
- .Introduction of Board
- .Minutes of Last meeting, Secretary
- .Membership Report, President
- .Changes to Mailing List (PIGNET, PICISOC) and ISOC Membership Policy
- .Hosting Policy and Requirements for PacINET
- .Presentation of Bids for hosting PacINET 2006
- .Selection/Award of Host for PacINET 2006
- .Proposals for Chapter funding from ISOC
- .Chapter Activities
- .CROP ICT Report
- .Other Business
- .Next Meeting
- .Close Meeting

02:00 12:00 - 14:00 Lunch

01:00 14:00 - 15:00 Keynote Address: Dr. Vinton G. Cerf, Internet Pioneer and Founding President of ISOC

00:30 15:00 - 15:30 Afternoon Break

01:30 15:30 - 17:00 FORUM: Natural Disasters and how can ICT help?

Chaired by: Rajnesh Singh, PICISOC

Panellists:

Dr. Vinton G. Cerf, Internet Pioneer

Dr. Jimmie Rodgers, SPC

Dr. Harry McConnell?, Institute for Sustainable Health Education and Development

Dr. Wolf Forstreuter, SOPAC

Atu Kaloumaira, Disaster Mitigation Adviser, SOPAC

02:00 17:00 - 19:00 Cocktail in honour of Vinton G. Cerf

**DAY SIX: Saturday August 27th, 2005**

01:00 09:30 - 10:30 Project Management on Source forge

Franck Martin, SOPAC

00:30 10:30 - 11:00 Morning Break

01:00 11:00 - 12:00 Recommendations for a single standard in GIS software for Pacific Island Countries Dr. Wolf Forstreuter, SOPAC

00:45 12:00 - 12:45 Knowledge, Awareness and Usage of Free/Open Source Software in Pacific Island Countries Dr. Marko Schutz, University of the South Pacific  
00:15 12:45 - 13:00 Open Mic  
Open Mic – opportunity for anyone to speak on any matter  
01:00 13:00 - 14:00 Lunch  
00:30 14:00 - 14:30 A Brief Overview of ISOC and the evolution of PICISOC Sam Taufao, Founder of PICISOC  
01:00 14:30 - 15:30 De-mystifying ICANN Theresa Swineheart, ICANN  
00:20 15:30 - 15:50 Afternoon Break  
01:00 15:50 - 16:50 Connecting Island Communities. The Emerging Telecentre Movement in the Pacific Stuart Mathison, The Foundation for Development Cooperation  
04:00 19:00 - 23:00 Island Night – Dinner and Closing Remarks for PacINET 2005 : Otintaai Hotel

**Sunday August 28th, 2005**

TBC - Picnic at Biketawa, North Tarawa