

## Cook Islands e-waste day — a great success



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The first e-waste day in the Pacific region was held in Cook Islands in December 2010. It was a huge success — organisers had to bring in five extra containers to load the e-waste that was brought. They originally thought two containers would be enough for the population of Rarotonga. However, people just kept coming with e-waste and at the final count, 238 vehicles had turned up at the Te Atukura grounds.

According to the statistics collected on the day, 5154 pieces of e-waste were collected. The Prime Minister of

Cook Islands visited the drop off site for e-waste and called the initiative a resounding success.

Every piece of e-waste was audited and then sorted before being packed with the help of 50 volunteers. Before the containers were closed, they were fumigated to prevent Rarotongan insects or fauna being stowed away to New Zealand.

The e-day was organised by a local committee comprising staff from the Cook Islands National Environment

Services, the Office of the Prime Minister's ICT Unit and some private companies. The Secretariat of the Pacific Regional Environment Programme (SPREP), e-Day Trust New Zealand and the Secretariat of the Pacific Community (SPC) provided technical expertise and some financial support.

SPREP, e-Day Trust and SPC will continue to collaborate with other interested Pacific Island countries and territories to launch a similar initiative.

## From PICTO

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Welcome to the first issue of *e-talanoa* for 2011.

As our readers may recall, SPC has been actively engaged with members and partners to develop an implementation plan to action the priorities and strategies of the Framework for Action on ICT for Development in the Pacific (FAIDP). To progress this further, SPC convened a meeting of the Special ICT Advisory Group (SIAG) on 16–17 February at the Economic Development Division (EDD) Conference Room, Lotus Building, Suva, Fiji.

SIAG provides a mechanism for consulting representatives of member countries to ensure regional initiatives and the ICT implementation plan are locally relevant and in line with national development priorities. SIAG members include official representatives from Papua New Guinea (PNG), Fiji, Tonga, Federated States of Micronesia (FSM), and the Cook Islands.

The meeting discussed the agenda of the upcoming joint energy, ICT and transport ministerial with a special focus on the ICT ministers' meeting agenda. The group also discussed and provided feedback on the progress report on the Tonga Declaration and the draft implementation plan of FAIDP — the Pacific Regional ICT Strategic Action Plan (PRISAP).

PRISAP has been developed in response to a directive from Pacific ICT ministers for SPC to work with the University of the South Pacific, member countries and development partners to develop a three-year rolling strategic action plan to implement the

ICT framework.

The draft PRISAP will be tabled for endorsement at the joint ministerial meeting for energy, ICT, and transport on 4–8 April 2011 in Noumea, New Caledonia. The draft PRISAP has also been circulated to member countries and development partners for comments and feedback.

The consultative process leading to the development of PRISAP and the associated meetings were supported by funding from SPC and the European Union through the EU ACP ICT Access for the Poor Project.

The 'many partners, one team' approach has been integral in the development of this implementation plan. Similarly, all partners will need to work as one team to successfully implement this framework.

A meeting of the Pacific ICT Regulatory Resource Centre (PIRRC) Working Group and the Pacific Islands Emergency Response (PacCERT) Board was held prior to the SIAG meeting on 16 February 2011 at the University of the South Pacific's Japan-Pacific ICT Centre. The PacCERT and PIRRC meetings deliberated on operational issues such as hosting arrangements, financing, staffing, and governance.

The next issue of *e-talanoa* will be a special edition focusing on the outcomes of the joint ministerial meeting.



## Upcoming events

**Pacific Cybercrime Legislation Workshop**  
27–29 April, 2011, Nuku'alofa, Tonga



SPC  
Secretariat  
of the Pacific  
Community



The growing threat of cybercrime and the attacks experienced by societies around the world underlines the need for countries to put in place a comprehensive set of measures to protect their citizens. These measures include criminal law and criminal justice action.

**Regional ICT Statistics Training**  
25–29 April 2011, Suva, Fiji



SPC  
Secretariat  
of the Pacific  
Community

The "Training Course on Measuring Information and Communication Technology (ICT) Access and Use by Households and Individuals", is organised by the International Telecommunication Union (ITU) and the Secretariat of the Pacific Community (SPC).

**WSIS Forum 2011**  
16–20 May 2011, Honolulu Hawaii



The World Summit on the Information Society (WSIS) is a unique two-phase United Nations (UN) summit that was initiated in order to create an evolving multi-stakeholder platform aimed at addressing the issues raised by information and communication technologies (ICTs) through a structured and inclusive approach at the national, regional and international levels.

**Developing e-government & e-business strategies for the Pacific region, May 2011, Samoa**



To better respond to the new challenges and opportunities in the digital age, many public sector organisations are embracing the concept of e-government. With new technologies and the explosive growth of the Internet, governments can provide public services and information in a much more consistent, streamlined and personalised way.

**e-Talanoa**

The name of the newsletter '*e-talanoa*' came from merging the word '*talanoa*', which largely means talking / communicating / sharing in most Pacific languages, with '*e*' denoting electronic. *E-talanoa* encapsulates the convergence of the traditional and the modern means of communication and sharing of ideas and news.

## ComSec and SPC co-operate to use ICT to improve government services

*The current economic crisis and the growing demand for good governance and more transparency has created an urgent need for governments to become more effective and efficient in the delivery of services in the face of budget cuts.*

In recognition of this need, Pacific information and communication technology (ICT) ministers in their June 2010 meeting in Tonga endorsed the use of ICT to ensure delivery of more effective, efficient, secure and transparent government services in the Pacific Island countries and territories.

There are several transformation models in use today but Business Process Re-engineering (BPR) has been successfully implemented in many Commonwealth countries such as Singapore, Trinidad and Tobago and Malta.

Re-engineering is a prerequisite for automation in the delivery of government services. Business processes must be redesigned with a view to removing inefficiencies, bottlenecks and arcane procedures.

In view of this, the Governance and Institutional

Development Division of the Commonwealth Secretariat, in collaboration with the Secretariat of the Pacific Community (SPC), organised a regional workshop on re-engineering from 31 January – 5 February, 2011 in Sydney, Australia.

Titled ‘Business Process Re-engineering: Leveraging Information and Communications Technology for Public Sector’, the six-day workshop opened on 31 January.

The workshop, conducted by Mr Ooh Koon Tian, an e-government specialist, targeted senior officers and executives from Pacific Commonwealth countries to help them translate public sector reform policies into concrete action plans with a re-engineering component.

Nineteen participants from ten countries attended the workshop.





## PICISOC supporting Pacific Island engagement with ICANN

*The Pacific Islands Chapter of the Internet Society (PICISOC) is working to strengthen the Pacific region's relationship with the Internet Corporation for Assigned Names and Numbers (ICANN), a not-for-profit corporation dedicated to coordinating the global Internet naming system and keeping the Internet secure, stable and interoperable.*

PICISOC represents the concerns and interests of the Internet Society serving the global internet community in the Pacific. It is a volunteer non-profit organisation that focuses on local issues and developments of significance to internet and ICT users in the 22 island states of the Pacific.

In December 2010, two members of the PICISOC Board, co-Vice-Chair Maureen Hilyard and Treasurer Siaosi Sovaleni, attended an ICANN meeting held in Cartagena, Columbia as ICANN fellows. The Board members learned a lot from the opportunity to engage in the ICANN process. The reports from the meeting also impressed upon PICISOC the importance of Pacific Islands nations having a clear voice in these important discussions that are shaping the future of the Internet.

The Pacific is represented on the ICANN Asia Pacific Regional At-large organisation (APRALO), although this has been limited to a single member, Will Tibben, who is co-Vice-Chair on the PICISOC Board and represents the interests of PICISOC. Ex-Chair of PICISOC Rajnesh Singh also represents on APRALO, although for the wider interests of the Internet Society more generally.

As in many organisations, the Pacific Island nations are grouped together with larger but disassociated countries and continents; in the current ICANN structure these include Asia as well as the Middle East. PICISOC is concerned this grouping has been made with little consideration for the most significant barrier to internet development in the Pacific – their diverse individual circumstances and their isolated situations within large expanses of ocean.

After the Cartagena ICANN meeting, a submission was made by the Board to the ICANN Regional Areas Working

Group that the 22 separate Pacific nations represented by PICISOC lacked strong individual representation accorded to other countries, within the large international structure of the ICANN organisation.

The submission made on behalf of PICISOC recommended that ICANN consider the creation of a region (or special interest group) that represents the needs and concerns of small island developing states, both within the Pacific and perhaps other similar small island states currently assigned to other regions. The submission is currently under consideration by regional ALAC communities.

PICISOC plans to create a subcommittee of country representatives to broaden regional input from around the Pacific, which would feed into this potential new ICANN region or special interest group.

Another application was made to ICANN on behalf of the countries of Cook Islands, Niue and the Tokelau Islands. These countries do not appear on the World Bank list of developing countries on which ICANN's membership list is based. It was recommended to the Regional Areas Working Party that these Pacific countries be added to the ICANN's list of membership countries.

Additionally, a successful application has been made by Pacific NGO, The Cook Islands Internet Action Group to register as a member of ICANN's At Large Community.

Thanks to support from ICANN, the Cook Islands Government and PICISOC, there is now another Pacific Island Computer users group that can contribute directly to the discussions and decision-making of the ICANN organisation.

### PICISOC Board Members 2010 - 2011



**Andrew Molivurae**  
Hon. Chairman



**Maureen Hilyard**  
Hon. Co Vice Chair



**William Tibben**  
Hon. Co Vice Chair



**Ellen Strickland**  
Hon. Secretary



**Siaosi Sovaleni**  
Hon. Treasurer



**David Leeming**  
Hon. Board Member (Membership Lists)



**Andrew Berquist**  
Hon. Board Member (Webmaster)

## ITC Services strengthens ICT partnership with Pacific Island countries

*IT operations are a vital part of any organization's operations. Therefore, if a system becomes unavailable, the organizations operations may be impaired or completely stopped. It is necessary to have a reliable infrastructure for IT operations, in order to minimize the chances of disruption to services*

The Data Bank — as referred to by one of our senior technical officials — is aimed to achieve tier 3 Data Centre level. It's equipped with the latest technology and equipment which includes redundant and backup power supply, communication connections, environmental controls, (air conditioning & fire suppression) and security devices. Information security is vital, and for this reason entry into the facility is restricted to authorized personnel only, card access for the outskirts of the building, and biometric palm readers for entry into the core of the facility. This is to ensure a secure environment to minimise the chances of a security breach.

ITC Services is the government department identified as the “heart” of the Fiji Government, which houses all government information. The department is responsible for developing, supporting and implementing ICT across all government departments. They are also the implementers of various projects like the e-government project and now the completion of the Fijian Government Data Centre.

The department in the past month has had visitors to the Data Centre from stakeholders and government departments, including SPC together with officials from Tonga, Samoa, and the Cook Islands. The delegation accompanied by Secretariat

of the Pacific Community staff had a chance to tour the ITC Services office, located on Victoria Parade and the new Fijian Government Data Centre at Berkley Crescent.

Through SPC, the department hopes to work with Pacific Island countries in working together to enhance the relationship in terms of providing ICT support, in ensuring information security in their different Island countries.

With the opening of the Fijian Government Data Centre in just less than a month away, the teams at ITC Services are working overtime to tie up loose ends and fix some teething problems currently being experienced. The Data Centre, upon commissioning, will see government information and data hosted on an internationally standardised environment to ensure:

- 99.982% up-time availability;
- Standardised security features; and
- And state-of-the-art redundancy plans.

*\* Article & pictures submitted by ITC, Fiji.*



*ITC Services staff, members from Pacific Island countries and SPC staff at the Fiji Government Data Centre*

## USP — at the forefront in the ICT field

*The role of information and communication technology (ICT) is seen as an integral part of education and development.*

In the past, the use of ICT in education was limited to classrooms as a way to teach computer literacy. Today, it takes on a broader role of delivering learning at lower costs and with higher quality than generally made available by traditional methods of teaching.

ICT applications provide many options and choices to students. These choices extend from when students can choose to learn, to where they learn.

The University of the South Pacific (USP), which is the premier institution of higher learning for the Pacific region, is well aware of these benefits and is committed to providing students with exposure to cutting edge ICT education and state-of-the-art ICT facilities.

USP connects its students in remote campuses across the Pacific region to some of the region's most advanced online educational technology.

Through a combination of Fiji's largest education internet link (via Australian Academic & Research Network - AARNet), state of the art network and server systems and USP's unique regional IP VSAT satellite system (USPNet), USP provides global connectivity for all its regional campuses facilitating a truly immersive research and educational environment for its students.

To make internet accessible to all students, USP offers a quota system, which allows students to access the internet for free. If the quota is exceeded and students still need to use the internet for academic and research purposes, students can request to have their quotas increased.

At the USP Laucala Campus, 90% of the student areas (hotspots) are covered by the USP wireless network, this includes student residential areas, allowing students to access the internet to study or do research almost anywhere. Our larger campuses in Vanuatu and Samoa also enjoy wireless connectivity.

The Information Technology Services (IT Services) at USP offers a range of computing and IT-related services aimed at supporting academic, administrative and research activities within the University community, including: email and personal online services; file storage shares; news groups; printing services; internet services; wireless internet services; computer labs; basic training on general PC use and access to online material; and free training in Microsoft Office



USP students in computer labs at the campus

applications.

Many USP students arrive on campus having had little experience working with computers. However, USP provides the learning environment conducive to students to expand his/her potential and to acquire the necessary skills and experience to become a well-educated, well rounded citizen of his/her country.

The offer of a generic course on information literacy, which all students must take as part of their programme expands the skills and expertise of students in ICT and information.

Student computer labs are made available for teaching and researching. Some labs are open 24 hours. These labs are equipped with the latest technology and applications students require for their studies.

USP enables students to use ICTs to solve problems more efficiently. USP students and graduates know that ICT holds the key to regional integration, development and to the full involvement of small island nations in the global knowledge society.

The School of Computing, Information and Mathematical Sciences at USP offers Computing Science and Information Systems programmes from undergraduate to doctorate level. Some of the wide range of courses that students can choose from includes data communication, computer networks and security, internet computing, data mining and project management.

*\* Article & picture supplied by the University of the South Pacific*



## Distance learning a reality with TFL's VTSAT technology

*'Bridging the digital divide' was taken to another level as Telecom Fiji Limited (TFL) achieved a milestone with the successful implementation of the Distance Learning Project through its VTSAT technology platform.*

In the past, the likelihood of a student in the interior of Viti Levu receiving the same quality education as that of a student in Suva was very unlikely. But thanks to TFL's VTSAT technology, this is now a thing of the past.

Introduced in 2004, TFL's VTSAT technology serves the telecommunications and ICT needs of Fiji's outer lying islands, remote resorts and rural communities. With approximately 70% of Fiji's population living in rural communities, distance education makes logical sense, especially in today's fast paced technological era.

Today, 16 primary and secondary schools nationwide benefit from the program. From the fully equipped teaching studio in Nasinu, the live transmission is received by students from as far as Vatoa in the Lau group. Furthermore, students are able to interact with their Suva-based teachers and with students from other participating schools. The technology further allows multiple schools to log into a teaching session simultaneously.



TFL is the back-bone behind this government development initiative and through the Distance Learning Project, TFL remains committed in supporting the development of Youth, promotion of ICT and education initiatives.

'The project has been a long term ambition for TFL and we are proud that it has come to fruition. More importantly, we are equally proud that this interactive learning tool has significantly benefited the students,' said TFL's Chief Executive Officer, Rohan Mail. 'The technology is versatile with the ability to further develop the current distance learning program and future initiatives such as e-commerce, community health care and corporate networking



applications throughout Fiji," adds Mail.

With over 230 remote villages using the VTSAT technology, TFL has been able to provide basic telephony and internet services to Fiji's rural and remote communities. The network also provides services to 49 businesses and resorts in remote and outer islands. The provision of these services has been a catalyst for economic growth in these remote locations.

TFL's Satellite Earth Station at Yaqara has a 11m Ku Band antenna that utilises technologies such as self-tracking capability, rain fade compensation and redundant system failover configurations that ensures high service uptime and availability. This added capability has resulted in the deployment of TFL's satellite technology for airline surveillance and monitoring in Fiji.



*Article & pictures submitted by Telecom Fiji Limited, Fiji*



## SPC ICT Virtualisation Project

By Phill Hardstaff

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Up until this point, because of funding constraints, the ICT infrastructure at SPC was maintained on what one could call a “break and fix” way of working, that is there was no long term strategy in place for hardware upgrades and all of the ICT structure had been based on discrete physical servers.

With AusAID funding came a chance to put in place cutting edge technology with a five-year plan for upgrades and maintenance. It was decided at the outset for many reasons that this would be based on a combination of VMWare, multi processor 6 core servers and iSCSI storage and that there would be a move from physical servers to virtual servers. The process of identifying local suppliers, specifying equipment then going through selection and testing processes in Noumea and Suva was a long one. It was decided at the outset to use local suppliers in both countries to maximise access to local support resources.

SPC received money from Australia

around August 2010 and by December 2010 we had gear installed at both sites running production servers. IBM was chosen in Noumea and Dell in Suva for storage and servers and Cisco for switches at both sites. We have now started converting physical servers to virtual servers and have been able to turn off around ten physical servers in Noumea and around five in Suva. It is anticipated that this will reduce electricity consumption by around 50% — have already achieved a reduction of about 15%.

The virtualised environment also provides much greater flexibility for the ICT section. Production quality servers can be deployed within minutes, and test and development environments can be provisioned quickly enabling production process to remain independent from research tasks.

The next step will be the development of a DR policy and implementing it. The move to a virtual infrastructure will simplify this process somewhat



as virtual servers are hardware independent and enables you to move servers around easily. For example, if we take a complete backup of all the Noumea servers, it would be possible to take that backup to Suva and “turn on” servers as needed.

For more information contact the SPC ICT Section Manager Phill Hardstaff at [phillh@spc.int](mailto:phillh@spc.int).



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