

PAST PROJECTS & ACTIVITIES

Summary of Selected Projects and Activities

PEACESAT pursues its mission to improve telecommunications in the Pacific Island regions through research and projects which are funded by government agencies, private foundations, and partners. Our project work is based on research and considerable experiences. The work of one project frequently informs and builds on the work of others to form clusters of interrelated projects. The following describes some of the projects and activities of the PEACESAT Program and Telecommunications and Information Policy Group, Social Science Research Institute, University of Hawaii.

PROJECT

- 2000 - Pacific Basin Telehealth Workshop
- 1999-2003 - PEACESAT PRELStar Partnership
- 2002-2003 - PEACESAT Operations Maintenance and Improvement (OMIP)
- 2001-2003 - National Library of Medicine
- 1998-1999 - National Telecommunications and Information Administration
- 1998-1999 - Grant from the Sasakawa Peace Foundation for Distance Learning Education and Training Program with focus on Telecommunications
- 1988-1997 - PEACESAT Re-Establishment Cooperative Agreement
- 1993-1997 - Distance Education Learning Technologies and Applications
- 1996-1997 - Electronic Post Office for Health Agencies in the Pacific Islands Region
- 1997-1998 - Experimental Collaboration in Technical Support
- 1994-1995 - Pacific Telecommunications Infrastructure Study
- 1995-1996 - Emergency Management Network
- 1993-1994 - Remote Data Access for Land Grant College Institutions
- 1991-1995 - International PARTNERS Project
- 1987-1988 - PEACESAT Communications in Pacific through Single-Side Band Radio

Pacific Basin Telehealth Workshop

DESCRIPTION: In December 2000, PEACESAT coordinated a conference on telehealth and telemedicine for health care professionals in the American Affiliated Pacific Island jurisdictions. The conference, which was held at the East-West Center on the University of Hawaii campus, was a special weeklong session that provided an orientation to telehealth and telemedicine and gave instructions on how to construct a telemedicine plan for each of the jurisdictions. The presenters included the University of California at Davis School of Medicine, the Health Resources and Services Administration, PEACESAT, the Telecommunications and Information Policy Group, Hawaii Health Systems Corporation, Shriners Hospital for Children, and others.

FUNDING ORGANIZATION: Health Resources and Services Administration, State of Hawaii Department of Planning and Economic Development, and Hawaii Health Systems Corporation

PRINCIPAL INVESTIGATOR: Norman H. Okamura

PRELStar Partnership

DESCRIPTION: PREL is one of 11 Regional Educational Laboratories funded by the U.S. Department of Education. As part of the PREL-PEACESAT Partnership, PREL has provided funds FY 2002-2003 and 2001-2002 for technical assistance, program planning and utilization and upgrade of the telecommunication networks and services of PEACESAT with the intent to develop telecommunications and information technology policies, plans, technology systems, management and regulation consulting. In FY 99-00 PREL has provided funds to PEACESAT to assist in the implementation and support of distance learning network for K-12 education. PREL has also engaged PEACESAT as a partner to implement a video teleconferencing network capability for the American Samoa Department of Education. In addition to the direct funds provided to PEACESAT, PREL expended over \$125,000 for additional digital satellite modems, video teleconferencing systems, and other miscellaneous equipment for

the digital services network.

FUNDING ORGANIZATION: Pacific Resources for Education and Learning (PREL)/U.S. Department of Education

PRINCIPAL INVESTIGATOR: Norman H. Okamura, Christina Higa

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PEACESAT Operations Maintenance and Improvement (OMIP)

DESCRIPTION: The Department of the Interior funded an Operations Maintenance and Improvement training program for PEACESAT operators and technicians. The program included several types of training. The first involved regional meetings in which instructors met face-to-face with the operators for hands-on technical training. In the second form of training, the operators met weekly over video conference for technical status checks, and during the third the PEACESAT Satellite Communications Technician made a site visit to each area for individual training. The goal of this program was to build the support required to increase overall network performance, user satisfaction and participation.

FUNDING ORGANIZATION: U.S. Department of Interior

PRINCIPAL INVESTIGATOR: Abe Malae, American Samoa Power Authority

National Library of Medicine (2001-2003)

DESCRIPTION: The National Library of Medicine funded equipment to establish an Internet link for authorized health care personnel in the Republic of the Marshall Islands (RMI), transfer medical literature provided by the NLM, and allow interaction via email with other health care professionals around the world.

FUNDING ORGANIZATIONS: The National Library of Medicine

PRINCIPAL INVESTIGATOR: Norman H. Okamura

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PEACESAT Grant (1998-1999)

DESCRIPTION: Program support for the Pan-Pacific Education and Communication Experiments by Satellite (PEACESAT) Program.

FUNDING ORGANIZATIONS: The National Telecommunications and Information Administration (U.S. Department of Commerce)

PRINCIPAL INVESTIGATORS: Norman H. Okamura and Christina Higa.

Telecommunications, Distance Learning, Telemedicine in the Pacific (1998-2001)

DESCRIPTION: Policymakers, program managers, and technical staffs need to be aware of the policy, program, technical systems and management issues with the use of telecommunications and information technology within their locales. The purposes of this grant is to initiate education and training programs in the Pacific.

FUNDING ORGANIZATIONS: The Saskawa Peace Foundation Pacific Islands Network Fund (SPIN-F).

PRINCIPAL INVESTIGATORS: Norman H. Okamura and Christina Higa.

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PEACESAT RE-ESTABLISHMENT COOPERATIVE AGREEMENT (1989-1997)

DESCRIPTION: Educational, government, regional, and other non-profit public service organizations in the Pacific Islands regions need to share information and resources to facilitate national and regional development. The PEACESAT Cooperative Agreement between the National Telecommunications and Information Administration (NTIA) of the U.S. Department of Commerce and the University of Hawaii provides funding for the PEACESAT Program to promote the transfer of appropriate technology. The missions of the PEACESAT Program and Cooperative Agreement are: (a) to facilitate the use of appropriate telecommunications and information

technology for development and public service, (b) to conduct telecommunication application experiments, and (c) to provide public service telecommunications through a dedicated satellite with a global beam over the Pacific region.

PEACESAT has been an important element of public service telecommunications focused in the program areas of distance education and learning, emergency management, health and medical emergencies, telehealth, economic development, technology transfer, and research.

FUNDING ORGANIZATIONS: National Telecommunications and Information Administration (U.S. Department of Commerce) and the University of Hawaii.

PRINCIPAL INVESTIGATORS: Donald M. Topping and Lori Mukaida (1988-1994); Donald M. Topping, Lori Mukaida, and Norman Okamura (1994-1996); Lori Mukaida and Norman Okamura (1996-1997).

DISTANCE EDUCATION LEARNING TECHNOLOGIES AND APPLICATIONS (1993-1997)

DESCRIPTION: Educational and government institutions in Hawaii and throughout the United States have made significant public investments to develop telecommunication and information networks to facilitate public service objectives. One problem that exists is that many of the networks are developed as single-purpose networks with little sharing of infrastructure, resources, and programs. The DELTA-Hawaii network is a project that interconnects existing education (Hawaii Interactive Television System (HITS), SkyBridge), economic development (Hawaii Telecommunications and Information Resource Center/HTIRC), and the international public service PEACESAT networks. When completed, the network will enable sharing of resources and extend services throughout Hawaii and the Pacific Islands Region. The project interconnects networks that were originally funded in part through federal funds.

FUNDING ORGANIZATIONS: Public Telecommunications Facilities Program/National Telecommunications and Information Administration; State of Hawaii Department of Budget and Finance; High Technology Development Corporation; and the University of Hawaii (Maui Community College, UH-Hilo, UH-ITS, and Social Science Research Institute).

PROJECT ORGANIZATION: The Principal Investigators of the project are Norman Okamura and Lori Mukaida. Ms. Christina Higa is the Program Manager and currently serves as the Acting Director.

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ELECTRONIC POST OFFICE FOR HEALTH AGENCIES IN THE PACIFIC ISLANDS REGION (FY 1996-1997)

DESCRIPTION: A problem for the health organizations in the Pacific Islands region is access to information and the ability to transfer electronic mail and files. The purpose of this project is to lessen the problems created by the lack of access to information and ability to communicate electronically by designing a cost-effective means for electronic communications. This project lessens the barriers of lack of information access, electronic mail, and transferring of data files through the planning, design, and implementation of an "Electronic Post Office" for health and other government and educational institutions and providing links to the Internet and other data services through PEACESAT.

The concept of an "Electronic Post Office" is articulated in a paper entitled "Internet Services via PEACESAT." (See Library, Papers & Documents under Resources).

FUNDING ORGANIZATIONS: The funding agency for this project is the U.S. Public Health Service. The project is a collaboration between the Pacific Islands Health Officers Association and the Office of Telecommunication and Information Studies and Applications of the Social Science Research Institute.

PROJECT ORGANIZATION: The Principal Investigators of the project are Ms. Roylinne Wada (Assistant Professor, School of Public Health) and Dr. Norman Okamura. Mr. Thomas Okamura (PEACESAT) and Mr. Glenn Nochi (PIHOA) are the project managers.

REMOTE ACCESS TO PEACESAT INFORMATION SERVICES FOR LAND GRANT INSTITUTIONS (FY 1993-1994)

DESCRIPTION: Land Grant institutions in the Pacific required access to information and data capabilities. Many of the existing PEACESAT sites did not support data and information access. This project developed a technique that

enable users to remotely access the PEACESAT data network through the public switched telephone system and did not require a PEACESAT operator at the site. The remote access did not solve the problem of multiple concurrent access which has since been developed by PEACESAT.

FUNDING ORGANIZATIONS: Agriculture Development in the American Pacific (ADAP), U.S. Department of Agriculture.

PROJECT ORGANIZATION: The Principal Investigator of the project is Lori Mukaida. Mr. Thomas Okamura served as the project manager for the development.

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EMERGENCY MANAGEMENT NETWORK (FY 1994-1998)

DESCRIPTION: The Pacific Islands region has experienced many natural disasters and hazards during the past decade. Hurricanes, typhoons, earthquakes and tsunamis have been prevalent in the region. Access to information and the ability to communicate have hampered efforts to plan, mitigate, and respond to disasters. The purpose of this project is to assess the requirements, design and test modifications to the PEACESAT earth stations, and provide an emergency management communications capability and training for the Pacific Island territories and freely associated states of American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia (Chuuk, Kosrae, Pohnpei and Yap), the Republic of the Marshall Islands, and the Republic of Palau.

FUNDING ORGANIZATIONS: The funding agency for this project is the Pacific Basin Development Council. The PBDC received funding from the U.S. Federal Emergency Management Agency and the U.S. Department of Interior for the project.

PROJECT ORGANIZATION: The project is a collaboration among the Pacific Caucus of Emergency Managers, the Pacific Basin Development Council, PEACESAT, and the Office of Telecommunication and Information Research and Applications of the Social Science Research Institute. The Principal Investigators of the project are Dr. Norman Okamura and Ms. Lori Mukaida. Ms. Christina Higa is the Project Manager.

PACIFIC TELECOMMUNICATIONS INFRASTRUCTURE STUDY (FY 1993-1994)

DESCRIPTION: The relationship between the telecommunications and information infrastructure of a country or region and development is well understood today. The purpose of this project is to undertake a survey of the telecommunications and information infrastructure in the Pacific Islands regions. The study revealed that the state of development of telecommunications and information infrastructure and activities is mixed. Regional tariff data, services, # of telephone lines, and other useful information was gathered during this study.

The results are found in a A Primer on the Telecommunications and Information Infrastructure in the Pacific Islands Region prepared in 1995 and a paper prepared by Norman Okamura and Edmond Durand (Director of Telecommunications Division, Forum Secretariat, Fiji) delivered to the Pacific Telecommunications Conference in 1996.

FUNDING ORGANIZATIONS: The study was partially funded by the Hawaii Information Network Corporation or HAWAII INC.

PROJECT ORGANIZATION: The Principal Investigator of the grant is Dr. Norman Okamura.

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COLLABORATIVE RELATIONSHIPS IN MANAGING INFORMATION SERVICES AND ACCESS (FY 1997)

Collaborative relationships among public service organizations are needed to provide the necessary mixture of personnel and technology for public service telecommunications. This is especially true due to the high costs of telecommunications within the region, the lack of technical personnel, and the strong need for information. The purpose of this project is to trial both technologies and collaborative organizational management to implement an electronic mail and voice telecommunications capability involving the Federated States of Micronesia, U.S. National Weather Service in Pohnpei and Guam, and the University of Hawaii. Specifically, this project seeks to establish and test a policy of resource sharing among several emergency management, health, and weather service organizations. The objective of this project is to facilitate a cooperative relationship, develop a Memorandum of Understanding, and design/implement appropriate technology that would permit the NWS in Pohnpei to share the electronic mail transmission facilities for the Emergency Management Office in Pohnpei. The

E-mail system will be provided by the PIHOA/PEACESAT Electronic Post Office Project funded by the U.S. Public Health Service. This should serve as a useful model of collaboration and partnering among organizations in the Pacific Islands Region.

FUNDING ORGANIZATIONS: This project was partially funded by the National Weather Service. The participating organizations include: the Federated States of Micronesia National Emergency Management Office (NEMO), Pohnpei State Emergency Management Office (Pohnpei SEMO), U.S. National Weather Service, Pacific Islands Health Officers Association (PIHOA), U.S. Public Health Service, and PEACESAT. The Principal Investigator of the grant is Dr. Norman Okamura.

REMOTE ACCESS AND TRAINING ON INTERNET FOR PUBLIC HEALTH OFFICERS IN THE U.S. FLAG AND FREELY ASSOCIATED STATES (1995/1996)

The use of telecommunications and information technology by health personnel in the Pacific Islands region is emerging at best. This should not be surprising since telemedicine and telehealth are still emerging fields in developed countries. The use of technology in the Pacific Islands region suffers from the same problems of budgetary resources, lack of trained personnel, and so on. Further, the use of telecommunications and information technology must compete with the value of other direct health care services.

At the same time, the exchange of and access to information is an important aspect of continuing professional development, consultation, and education. The purpose of this project was to provide training to public health personnel in the use of electronic mail, file transfer, and WWW services through the Internet - services that are provided by PEACESAT in parts of the Pacific Islands region.

PRINCIPAL INVESTIGATOR: Dr. Roylinne Wada, Assistant Professor, School of Public Health, University of Hawaii in collaboration with the Office of Telecommunications and Information Research and Applications/PEACESAT, Social Science Research Institute, UH.

PROJECT ORGANIZATION: The training project is a collaboration between the Pacific Islands Health Officers Association and PEACESAT. Mr. Thomas Okamura (PEACESAT) and Mr. Glenn Nochi of the Pacific Island Health Officers Association were project managers.

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PAN-PACIFIC AREA RESEARCH, TRAINING NETWORK (PARTNERS NETWORK) (FY 1991-1995)

DESCRIPTION: PEACESAT participated in the PARTNERS Network in the Pacific Islands and Asia Pacific Region. PARTNERS used the ETS-V (Experimental Test Satellite) to conduct video teleconferences at 64 Kbps. The participants involved in the project include: the National Institute of Multimedia Education (NIME) of the Ministry of Education; the University of Electro-Communications in Chiba; Tohoku University in Sendai; the University of Technology at Lae (Papua New Guinea), the King Mongkut Institute of Technology in Thailand; the Bandung Institute of Technology in Indonesia; the University of the South Pacific in Fiji; and, the University of Hawaii. Satellite workshops, student exchanges, and country overviews of telecommunications and distance learning were some of the topics that were presented over the network. The Ministry of Posts and Telecommunications installed a satellite antenna to enable PEACESAT to be connected to the network. The Communications Research Laboratory of the Japan MPT performed the switching through its Kashima Station.

PRINCIPAL INVESTIGATORS: Ms. Lori Mukaida and Dr. Donald M. Topping

FUNDING ORGANIZATION: Communications Research Laboratory, Japan

SINGLE SIDE BAND RADIO SYSTEM (1988/1989)

DESCRIPTION: During the period when the Advanced Telecommunication Satellite 1 (ATS-1) left its orbit, communication among the Pacific Islands Region suffered. To maintain communications with the Pacific Islands, the PEACESAT Program of the Social Science Research Institute requested funding from the University of Hawaii Special Equipment Fund and Project Development funds for a Single Side Radio System. The project was approved and PEACESAT continued to provide services and cooperated with other Pacific Island states.

The HF/SSB remains in use both to reach remote users and also for other communication experiments such as the link between the Hokulea and the Space Shuttle.

PRINCIPAL INVESTIGATORS: Dr. Donald M. Topping and Ms. Lori Mukaida

FUNDING ORGANIZATIONS: UH Special Equipment Fund, UH Project Development Fund

PROJECT ORGANIZATION: Ms. Lori Mukaida managed the project and system.

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