

**Third Annual GIS Conference
Empowering a Community of Users: Building a Strong Geospatial
Connected Network Throughout the Caribbean
St. Thomas, U.S. Virgin Islands November 14-16, 2007**

Wednesday, Nov. 14, 2007				
SESSION	TIME	Presenter	Agency	Title
1st Day I	10:25 AM	Eric Linzey	NOAA	USVI Leveling Project and its implications to the Geospatial Foundation for the Territory
1st Day II	11:10 AM	Alexis Doward	DPNR	Update on the VI Flood Hazard Maps
1st Day III	11:30 AM	Theresa Anduze-Parris, PhD.	OLG	Update on the VI Geospatial Council
12:00 PM - 1:15 PM Break for Lunch				
1st Day IV	12:15 PM	Dr Ulric Trotz, Chief Science Advisor for the Caribbean Community (CARICOM) Climate Change Centre		
1st Day V	1:35 PM	Pedro Nieves	UVI-ECC/CDC	Empowering A Community of Users: The Elkhorn Coral Geo-database
1st Day VI	2:05 PM	Rob Hoffman	ESRI	Functionality: GIS Technology
2:45 PM - 3:00 PM Afternoon Break				
1st Day VII	2:50 PM	Alan Springett	FEMA	Data sharing and free quality data through the National Spatial Data Infrastructure (NSDI)
1st Day VIII	3:35 PM	Lupe Alonzo	DonRiver, Inc.	USVI Street Atlas
1st Day IX	4:00 PM	William Bates (Bill)	Tele Atlas®	The Puerto Rico GIS Data Acquisition Project
1st Day X	4:25 PM	Mel D. Vanterpool	Homeland Security	Homeland Security and GIS
1st Day XI	4:50 PM	Lou Driber	USGS	Supporting Geospatial Data Sharing and Program Coordination in Florida
	6:30 PM	WELCOME RECEPTION		

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Thursday, Nov. 15, 2007		8:00-8:25 AM Breakfast		
2nd Day XII	9:00:00 AM	William Burgess	NSGIC	Building Spatial Data Infrastructures
2nd Day XIII	9:40:00 AM	Rupert Pelle	WAPA	
2nd Day XIV	10:00 AM - 10:15 AM	Morning Break		
	10:15 AM - 12:00 PM	NOAA WORK SHOP I Richard H. Foote		ACOE WORK SHOP I Dan Vogler
		Online Positioning User Service		Imagery Workshop
	12:00 PM - 1:00 PM	Steve Parris, Director for the Virgin Islands Territorial Emergency Management Agency		
2nd Day XV	1:00 PM-3:00 PM	NOAA WORK SHOP II William Henning		ACOE WORK SHOP I Dan Vogler
Friday, Nov. 16, 2007		NGS Support for Real Time Networks		Imagery Workshop
	3:10 PM - 3:50 PM	Sylvio Mannel, PhD.	UVI-ECC/CDC	GIS in Media, Internet, History, Healthcare and Environmental Science
		8:00-8:25 AM Breakfast		
3rd Day XVI	9:00 PM - 11:30 PM	STRATEGIC PLANNING		
		TECHNICAL TOUR		
	6:30-10:30	CLOSING BANQUET		

USVI Leveling Project and its implications to the Geospatial Foundation for the Territory

William E. Linzey

ABSTRACT

This session describes the recently completed phase of NOAA's National Geodetic Survey's Framework Geodetic Project for the Territory of the United States Virgin Islands. This session will cover the historical, current, and future impacts of the project to the Territories Geospatial and Geodetic Infrastructure. In addition, this session will describe future plans for NOAA's National Geodetic Survey framework campaign for the Virgin Islands and its impact and opportunities for the region.

BIOGRAPHY

With over 14 year of experience, Mr. Linzey has been in the field of Geography as a Comprehensive Planner, GIS Coordinator, and Project Manager and worked in Land Surveying. He also has experience as a Geographer, expertise with the utilization of computerized technologies, and with Geographic Information Sciences, all of which support the decision making process as well as policy analysis and creation. In addition, Mr. Linzey has experience with Remote Sensing technologies, aerial photography and aerial photo interpretation. His experience also includes standards development for geospatial data and working with national and international standards organizations.

Mr. Linzey is currently working as a Cartographer with the Department of Commerce, National Oceanic and Atmospheric Administration, NOAA. He is involved with the development of standards which form the baseline for GIS data development under the standards approval process of the Federal Geographic Data Committee, FGDC. Previous work experience spans from the Physical and Policy Planning to working in the field of Land Surveying / Cadastre in United States and the Caribbean.

Empowering A Community of Users: The Elkhorn Coral Geo-database

Pedro Nieves

ABSTRACT

Acropora palmata, commonly called Elkhorn coral, grows faster than many of the other Caribbean coral and significantly contributes to the overall ecology of shallow reefs. This coral life cycle also includes both sexual and asexual reproduction which enables it to populate reef crest and shallow reef areas where the surface wave-energy influences their morphology and distribution. *A. palmata* has been under a lot of stress that caused their numbers to drastically drop from their previous abundant distribution.

Historically there were large cluster of Elkhorn coral around St. Thomas and St. Croix. Current survey results reveal that these locations have declined to patches concentrated on the north of St. Croix, on off-shore cays south of St. Thomas and on the west end of St. Thomas. This work is complementing the Elkhorn coral database that started in 2001 by several agencies to facilitate the recovery or restoration of this species.

The Nature Conservancy and University of the Virgin Islands are surveying Elkhorn corals for size class distribution and disease frequency through the use of GPS surface-mark protocol, PDA data capturing, photography and GIS mapping analysis around St. Thomas and St. Croix. Swimmers worked in teams on as many sites as possible. The team captured waypoints (latitude and longitude) for each individual colony. Few of the characteristics recorded include location, condition, sizes and colony type. Photographs were archived to link waypoints to their colony and mapping. The results are cross referenced to other GIS layers.

BIOGRAPHY

Pedro Nieves a native of St. Thomas, U.S.V.I. holds a B.S. in Marine Biology from the University of the Virgin Islands (2004). He started working with Geographic Information Systems (GIS) when it was introduced in a 2002 pilot study "Introducing GIS into the Classroom". As a result of his outstanding GIS class project, he was selected to participate in the UVI-Conservation Data Center (CDC) internship program. Pedro was assigned to intern with The Nature Conservancy (TNC) where he started the geo-database of *Acropora palmata*.

He continues building his GIS skills with the UVI-ECC/CDC where he serve as Assistant to the Data Manager. Other experiences that prepared him for a position with UVI-ECC/CDC include an internship with the Department of Fish and Wildlife and working with Coral World, Inc. as an aquarist.

He contributed maps to the publication of "State of the Coral Reef of the U.S.V.I." and "Island Peak to Coral Reef" field guide.

Functionality: GIS Technology

Rob Hofmann

ABSTRACT

Come learn about the wide range of functionality available with ESRI's latest GIS technology. From serving data and maps, to end user applications for the web and mobile devices you will see how you can leverage your data and applications with ArcGIS desktop, Server and mobile applications. We will cover how you can serve maps on the web, an update on new functionality in ArcGIS desktop and a review of GPS integrated with your GIS. We will also briefly review the software functionally matrix and review licenses that you may be unclear about after some of the latest releases. In addition, you will see examples of how several agencies in Florida and the Southeast have built ArcGIS-Server systems for emergency management.

BIOGRAPHY

Rob Hofmann has a BS degree in Aeronautical Studies and an MA in Urban Planning from the University of Florida. He has been with ESRI for almost nine years as an ESRI Account Manager. Prior to ESRI, Rob was the GIS manager for Florida Power & Light Company. Rob works to help Government agencies acquire and deploy the right GIS software and solutions to best meet their requirements, plans and budgets. Rob has had extensive experience in large enterprise GIS planning and implementations as well as recent field experience in Hurricane response and restoration activities.

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“Empowering a Community of Users” USVI Caribbean GIS Conference
Alan Springett

ABSTRACT

This presentation will discuss the importance of data sharing and identify Federal sources of quality data that is freely available through the National Spatial Data Infrastructure (NSDI). Examples of NSDI data include the Geospatial One-Stop, the National Atlas, and Census spatial and demographic data. The data requirements of FEMA’s Flood Map Modernization Program will be defined. Finally, FEMA’s HAZUS disaster impact analysis software will be presented as an important tool for preparing for and mitigating the effects of various disasters, as well as a source for default geospatial data. Emphasis will be on data applications for Puerto Rico and the USVI, as well as for other members of the Caribbean community.

BIOGRAPHY

Alan Springett is a Civil Engineer working for FEMA Region II. Alan has in excess of thirty years of experience in geotechnical engineering. Alan has been involved with computers and programming for forty years. Over the past twelve years, Alan has worked, first as a Disaster Assistance Employee and later as a full time employee for FEMA. A large portion of his work with FEMA has been as a GIS liaison between Mitigation and IT/GIS.

Best Practices: The Puerto Rico GIS Data Acquisition Project

William 'Bill' Bates

ABSTRACT

Commercial landbase data is changing for the better, due to innovative processes, practices, sources, new technologies, and the convergence of technologies. The Puerto Rico project is a specific case in point. The project benefited by continued improvement of internal process efficiencies, best practices in GIS, and through the use of new mobile mapping technologies. This session will discuss project specifics, how these changes influence the commercial data products of today and how government and commercial enterprises will benefit from this and similar projects tomorrow.

BIOGRAPHY

Bill Bates has a diverse background in strategic business development, industry research, and business partnership in the GIS, AEC, technology and manufacturing sectors for 23 years. His experience includes management, executive management, business ownership, and consulting assignments within growing companies and start-up organizations including Tele Atlas, Stone & Webster Engineering, Spatial Technologies, Softdesk, and Cimlogic.

Bill received a Bachelor Degree from The Pennsylvania State University and completed advanced-level courses from Cleveland State University. Bill has also been an advisor to the Vice Trade Consul of the Hungarian Chamber of Commerce involving the assessment of new technologies for North America. Bill currently serves as Co Chairman of the Corporate Leadership Council (CLC) of NSGIC: an organization working for efficient & effective government through the adoption of GIS related technologies. Previously, Bill served on committee with AIAG, a North American organization addressing IT, engineering, and supply chain issues associated with the automotive industry, and is former Corporate Liaison of the Prescient Technology Customer Advisory Board.

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Homeland Security and GIS

Mel D. Vanterpool

BIOGRAPHY

Mel D. Vanterpool is the Virgin Islands First Homeland Security Director/State Administrative Agent. He was appointed April 2005. Prior to his appointment he was the Chief Instructor for the Homeland Security Defense Academy, Virginia Beach, Virginia

Mel is a 9th Generation Virgin Islander with an extensive military background in Counter-Insurgency, Anti-Terrorism and Guerilla Warfare. He is a former instructor and Special Operations Specialist with the US Army Special Forces "Green Berets"

Director Vanterpool is a certified Maritime Security/Assessor and Planner and certified in Radiation Detection Systems.

Mel D. Vanterpool

Director/SAA

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Supporting Geospatial Data Sharing and Program Coordination in Florida

Louis Driber

ABSTRACT

Florida has long been a leader in the development, implementation, and use of geospatial technologies. In the absence of a formal statewide coordinating council, Florida has primarily achieved GIS coordination and supported data sharing through ad-hoc methods involving GIS managers, regional user groups, and academia. This presentation will examine the current state of Florida's Public Data Access law which mandates geospatial data produced by state and local agencies be placed in the public domain. Also addressed will be Florida's recent efforts to improve GIS data discovery and sharing through regional clearinghouse implementation efforts as well as development of a strategic plan designed to support a more formalized approach to an effective Statewide Spatial Data Infrastructure.

BIOGRAPHY

Louis Driber serves as the USGS Geospatial Liaison to Florida, US Virgin Islands, and Puerto Rico. Lou has been with the USGS for 21 years, 19 of which were spent working at the National Geospatial Technical Operations Center located in Rolla, Missouri. Lou has extensive experience in topographic map production, ortho-image and elevation model product generation, application of GIS technology, web map systems implementation, and professional services contracting. Serving in the capacity of Geospatial Liaison, Lou has developed numerous collaborative partnerships with state and regional geospatial data producers for collection of high-resolution orthoimagery (including 2007 coverage over US-VI and PR), LiDAR, and hydrographic data. In addition, Lou has developed successful partnerships with academia in support of geospatial data clearinghouse implementation efforts, standards development, and metadata training. Lou is currently working closely with the Florida Division of Emergency Management in the development of a Florida Statewide Geospatial Strategic Plan. Lou has a Bachelor's of Science in Geography from the Pennsylvania State University.

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Building Spatial Data Infrastructures

William 'Bill' Burgess

ABSTRACT

Suitable spatial data infrastructures enable efficient and effective government, but building them can be a daunting task. We often try to build all of the component pieces at the same time only to become mired in conflicting issues and competition for scarce resources. This presentation will discuss the benefits of spatial data infrastructures and examine the component pieces. It will also discuss the positive role that strategic and business plan development can play in creating your spatial data infrastructure and the tools that NSGIC provides to assist these efforts. Working together in a consensus-driven effort will yield positive results, avoid duplication of effort and maximize available resources.

BIOGRAPHY

Bill Burgess worked for Maryland's Department of Natural Resources from 1975 through 2003 where he directed nearly every aspect of the state's water resources management, permitting and enforcement programs. These programs each required the application of remote sensing, geospatial technologies and IT support. He has been an active member of the National States Geographic Information Council (NSGIC) since 1993. He served two terms on the Board of Directors and now serves as their Washington Liaison. In this role, his responsibilities include working with Federal agencies, engaging other national geospatial organizations, and project management for most of NSGIC's grants and contracts including work on the Fifty States Initiative and Ramona GIS Inventory System.

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Benefits and Effectiveness of GIS to WAPA

Rupert N. Pelle

ABSTRACT

Over the past 10 years, WAPA has embarked on an aggressive plan to build an integrated Geographic Information System (GIS). The aim of the system design is to improve the utility's day-to-day operations. Customer service is a major part of Authority's operation. This includes timely response to requests, processing work orders, producing detailed route maps, maintaining work histories and inventory of water and power utility facilities (asset).

The Authority has developed a demonstration project to determine the applicability and feasibility of implementing GIS. A community that best reflect the overall system was selected for this demonstration project. This presentation will cover some of the findings from this demonstration project. A major issue to be discussed is the problem of integrating data using the current naming convention for estates and roadways. Recommendations on developing addresses, and implementing a street naming and numbering system will be presented. This building block will help to create a solid link between WAPA's future GIS system and that of other participating agencies.

BIOGRAPHY

Rupert Pelle serves as the Water Distribution Superintendent at the Virgin Islands Water & Power Authority, St. Croix, USVI. Rupert Pelle a Licensed Civil Engineer first expressed his interest in GIS Mapping after working as a college intern with the Leon County Geographic Information System in Tallahassee, Florida. Upon Graduation from Florida Agricultural and Mechanical University in 1996 Rupert returned to the Virgin Islands and began service with the Government of the Virgin Islands for the past 11 years and looks forward for years to come where he can work as a GIS Planner/Technician for the VI Government. Mr. Pelle also serves as the Chairman for the St. Croix Historic Preservation Committee and loves developing community oriented design projects in his spare time.

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Online Positioning User Service

Richard H. Foote

ABSTRACT

OPUS (Online Positioning User Service) is a free Web-based utility enabling its users to submit GPS data to NOAA's National Geodetic Survey (NGS) where it will be automatically processed to obtain precise coordinates for the location associated with this data. This session will cover the basic principles of OPUS and GPS surveying. Emphasis will be given to obtaining accurate coordinates using modern tools such as the Internet. The way GPS data files can be processed over the Internet will be explained, in particular the description of new resources available to the GPS user such as OPUS and the Continuous Operating Reference Stations (CORS). CORS is a network of GPS sites operated by a variety of organizations making GPS data readily available from nearby, and sometimes not-so-nearby GPS reference stations. This relatively recent development led to the creation of the OPUS project by NGS, which turned out to be one of the most successful projects recently undertaken by NGS, and the by-product of high visibility and recognition. You will learn: How OPUS works; the ingredients for a successful OPUS solution; whether the OPUS solution should be used under all circumstances; and the dos and don'ts when using OPUS. Finally, you will become familiar with OPUS, how to submit observations, the required parameters (antenna height, etc.) and how to interpret an OPUS solution in a correct fashion.

BIOGRAPHY

Richard H. Foote has been a Geodesist with the National Geodetic Survey since 1982. He has been involved with processing GPS networks since 1982, the CORS project since 1995, and OPUS since 2001. He gives training classes in the NGS program PAGES, the NGS data reduction programs, ADJUST, the NGS Least Squares Adjustment program, and presents OPUS and CORS workshops. He is a graduate of the University of Maryland.

NGS Support for Real Time Networks

William Henning

ABSTRACT

Many modern technologies are converging to drive the explosion of real time networks (RTN) in the USA and its territories. Cell phone and CDMA data service, easy internet access, mature networking and GNSS software and firmware, robust later generation RTK hardware, and the spread of GIS applications, are all integral parts. Today's GIS managers, surveyors, engineers,, construction leaders and other geospatial professionals are in the right place and at the right time to both capitalize on using these networks as well as to be part of many business models that let them share in subscription profits. Either way, the cost/benefit ratio is rosy. NOAA's **National Geodetic Survey (NGS)** has an important role to play in this new positioning solution, both in providing support for these networks as well as protecting the public interest. This presentation will detail the NGS plans to encourage RTN to successfully link to our National Spatial Reference System (NSRS), how the NGS will broadcast raw data, what can be implemented to archive RTN data and what is being done to develop dynamic guidelines for classical RTK and RTN positioning. Additionally, potential RTN problems will be discussed as the NGS wades into the rising tide of real time positioning.

BIOGRAPHY

William Henning is a Registered Professional Land Surveyor with over 40 years of active experience in all phases of surveying technology. He has helped plan, implement and manage height modernization geodetic networks for county-wide projects and has been involved with real time positioning for over 14 years – using several different GNSS manufacturers' equipment. Mr. Henning is a Past President of the American Association for Geodetic Surveying (AAGS) and is a current member of the RTCM SC-104, involved with differential positioning. He is currently employed by NOAA's National Geodetic Survey, where he is helping to develop guidelines and support methodology for real time positioning.

COE Imagery Workshop

Dan Vogler

ABSTRACT

Large image collections are often a daunting task for GIS agencies and the contractors who support them. This workshop will help the collector to define the largest hurdle – the Scope of Work. After the scope of work, common contracting elements such as delivery scheduling, mile-stoning and selection criteria are discussed. In order to accept delivery of these the large image (> 500 MB) data sets, many software solutions can be employed. One can do image transformations, build virtual raster datasets, build external overviews (pyramids) and translate image formats with many free software packages. Image QA as well as accuracy standards will be defined and discussed. Once the data is complete, we will explore the facilitation of data through websites, how to set an ftp server and the use of portable hard drives for agency requests.

BIOGRAPHY

Dan Vogler has worked as a contractor for the United States Corps of Engineers - Jacksonville District since 1998, beginning as a GIS Analyst in the Information Management Office. He has a M.S. in Geology and has worked as a resource geologist in KY, WV & WY. For five of the last eight years, he supported regional hydrologic model simulation with generation of automated performance measures, inundation mapping, development of land use, topographic and other inputs. He has been involved in GIS support for hurricane response in Florida and Texas. He currently works for CNI, Inc., serving as the Sr. Lead GIS Analyst for The Jacksonville District.

Applications of GIS - in Media, Internet, Healthcare Historical and Environmental Science

Dr. Sylvio Mannel, UVI-ECC/CDC Coordinator

ABSTRACT

This presentation highlights opportunities provided through UVI's Conservation Data Center (CDC). It gives an encompassing overview of a variety of exciting GIS research and outreach applications, including interactive internet mapping. Examples come from diverse areas of daily life, and science.

BIOGRAPHY

Dr. Sylvio Mannel is the Program Coordinator and senior administrator for UVI's Conservation Data Center (CDC). He now facilitates CDC's capability to be a self-sustaining organization with focus on geospatial technology.

Dr. Mannel has in the past facilitated geospatial education and GIS/Remote Sensing programs throughout South Dakota and nationwide. As a board member of NativeView he had decisive impact on bringing Native American geospatial needs and achievements to national attention.

He is experienced in the planning, research and educational aspects of spatial analysis and visualization, GIS, Remote Sensing and Environmental Science. Dr. Mannel secured and administered funding through grants by NASA, NSF and US Department of Agriculture.

He published several papers in peer-reviewed journals, for example, a paper on how to set up a successful GIS program. Another publication was through the International Journal of Remote Sensing.

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Strategic Planning: Expanding Coordination
Facilitator William Burgess, NSGIC Washington Liaison

The current effort of the U.S. Virgin Islands central government to implement performance base budgeting (PBB) provides a significant opportunity for developing a territorial spatial data infrastructure (SDI). Departments and Agencies are required by the PBB to submit Performance Goals and Performance Indicators for the purpose of monitoring and evaluating the progress of resources being utilized to achieve the overall goals of the Government.

The coordination in standardizing the compilation of data is critical to visualizing patterns and linkages in the performance among various departments and agencies. To make policies effective, the socioeconomic environment must be combined with data on the local biological environment.

The spatial analysis of data offers the opportunity to evaluate the performance of departments and agencies collectively.

STRATEGIC PLANNING OBJECTIVES:

- Promote the understanding of SDI in the context of Performance Budgeting Policy evaluation and applicability to improving service
- Define the priorities and the process for building the Virgin Islands Spatial Data Infrastructure