

PANELIST BIOGRAPHIES

Professor José Achaché

In 2001, the ESA Council appointed José Achache, of French nationality, to the post of Director of Earth Observation, for a four-year term.

José Achache, 48, obtained his doctorate in geophysics at the Pierre et Marie Curie University in 1979 and his doctorate in physical sciences at the René Descartes University. He started his career in 1978 at the Institut de Physique du Globe de Paris as a Research assistant, then "Chargé de Recherche" and in 1989 was appointed Professor, Director of the Department of Space Studies and director of the Graduate School of Earth Sciences. In 1996 he joined the Bureau de recherches géologiques et minières as deputy director of the Research Division and the following year became its director. In 1999, he was named advisor to the President of the French Space Agency (CNES) and in 2000, was appointed by him deputy director general for science.

Dr. Scott Barrett

Scott Barrett is Professor and Director of International Policy at the Johns Hopkins University School of Advanced International Studies. While on sabbatical, from January 2006, he will be Distinguished Visiting Fellow at the Yale Center for the Study of Globalization at Yale University. He is the author of *Environment and Statecraft: The Strategy of Environmental Treaty-Making* (Oxford University Press), which will be coming out in paperback (with a new afterword on climate change) in January. His presentation will draw from a forthcoming article, "The Problem of Averting Global Catastrophe," which will appear in the *Chicago Journal of International Law* in early 2006. He is also currently senior lead adviser to the International Task Force on Global Public Goods. He received his PhD in economics from the London School of Economics.

Mr. Robert H. Brumley

Robert H. Brumley joined TerreStar Networks, Inc. as President & CEO on August 15, 2005. Mr. Brumley was formerly with Pegasus Global, an international firm, specializing in telecommunications/technology, infrastructure development and aerospace/defense, where he was a Founder as well as President & CEO. Mr. Brumley's extensive telecommunications, security and transactional background, both domestic and abroad, offers TerreStar a strong blend of skills to position the company on the path to full financing and implementation. He will spearhead TerreStar's efforts to build and operate the company's next-generation business that will combine the best of satellite and terrestrial networks.

Mr. Brumley's extensive experience and background includes key roles as an entrepreneur in startup ventures in international trade, finance, satellite and terrestrial communications as well as senior executive positions with global communications firms such as Deutsche Telekom and Bell Atlantic International where he was responsible for Bell Atlantic's international telecommunications transactions worldwide, including its participation in Constellation Communications, Inc., a low earth orbit satellite venture.

Mr. Brumley served as a Presidential appointee of the Reagan Administration, as General Counsel of the U.S. Department of Commerce, where he was chief legal officer of the

Department and senior policy advisor to the Secretary. He also served on senior-level working groups of the National Security, Domestic and Economic Policy Councils and chaired the Reagan Administration policy group that privatized commercial space transportation removing NASA from the burden of launching commercial satellite payloads on the Space Shuttle [STS].

Mr. Brumley is a retired Lieutenant Colonel in the United States Marine Corps Reserves. He completed his Marine Corps career after serving as Commanding Officer of Marine Air Control Squadron-24, Fourth Marine Aircraft Wing in 1989. He is married and has two sons.

Dr. Andrew Clark

Dr. Andrew Clark is president and founder of HARRIS Corporation (**NYSE:HRS**) Maritime Communication Services (MCS). HARRIS Corporation is a global communications and IT leader providing products, software and services for government, commercial broadcast and telecom markets. MCS, the subsidiary headed by Dr. Clark, provides broadband communication equipment and services to remote regions of the world lacking any infrastructure. This includes transoceanic ships, buoys, platforms (manned and unmanned – subsea and surface) as well as remote terrestrial sites in regions that have been ravaged by natural or manmade disasters. MCS clientele ranges from peace keeping troops, World Health Organization, United Nations High Commissioner for Refugees and African Development Bank to luxury ocean liners and offshore oil and gas exploration vessels. Dr. Clark is currently on loan to the U.S. National Office for Integrated and Sustained Ocean Observations (*Ocean.US*) serving as Industry Liaison to assist the US Government in the development of the Global Earth Observation System of Systems (GEOSS). His maritime career spans more than thirty years, beginning in the Gulf of Mexico's offshore oil and gas industry. He was appointed by the U.S. Secretary of the Navy to serve on the nation's Ocean Research Advisory Panel (ORAP, a Federal Advisory Committee), and is a past president and Fellow of the Marine Technology Society (MTS). He is a licensed Professional Engineer (P.E.) and holds a Ph.D. in Ocean Engineering from the University of Hawaii. Dr. Clark is on the Ocean Engineering faculty of Florida Atlantic University and Florida Tech, is a trustee on the Boards of both the Florida Institute of Technology and the Link Foundation, and is a Senior Member of the IEEE Oceanic Engineering Society. Dr. Clark was the 2003 recipient of the Lockheed-Martin Ocean Technology Award, holds both US and International Patents and has authored more than forty technical publications.

Dr. Steve Fernandez

Dr. Fernandez received his Doctor of Philosophy in Analytical Chemistry in 1984 from the University of Idaho, his Master of Science in Chemical Engineering/Air Pollution Science in 1977 from Washington State University, and his Bachelor of Science, Chemical Physics in 1975 from Centre College of Kentucky. Dr. Fernandez is the current Group Leader Los Alamos National Laboratory's Energy and Infrastructure Analysis Group consisting of about 53 staff members and students. Dr. Fernandez joined Los Alamos in February, 2002. Before joining Los Alamos, Dr. Fernandez worked for 25 years at the Idaho National Laboratory where he directed the Laboratory's Critical Infrastructure Protection Programs.

Dr. Gerald E. Galloway, Jr.

Gerry Galloway is Glenn L. Martin Institute Professor of Engineering and an Affiliate Professor in the School of Public Policy, at the University of Maryland. He is also a Visiting scholar at the US Army Institute for Water Resources and a consultant to the Michael Baker Corporation..

Previously, he served as Vice President, ES3 Sector, Geospatial Strategies, for the Titan Corporation. A civil engineer, public administrator and geographer, he also has served as a

water resources consultant to a variety of national and international government and business organizations. He was a Presidential appointee to the Mississippi River Commission and the American Heritage Rivers Advisory Committee and served as Secretary of the US-Canada International Joint Commission. In 1994, he led a White House study of the causes of the 1993 Mississippi River Flood. During a 38-year career in the military he served in various command and staff assignments in the US and overseas, retiring in 1995 as a brigadier general. He was General Chairman of the National Water Resources Policy Dialogue, held in 2002 and 2005, and is a member of the National Academy of Engineering.

Mr. Steve Jordan

U.S. Chamber of Commerce Center for Corporate Citizenship

Stephen Jordan is vice president and executive director of the Center for Corporate Citizenship (CCC), a nonprofit 501(c)(3) affiliate of the U.S. Chamber of Commerce, and has served in this capacity since the CCC's founding in May 2000.

In his current position, Mr. Jordan works with a broad spectrum of companies and American chambers of commerce in the United States and overseas and has produced numerous conferences, policy papers, and other projects and programs related to the fields of corporate citizenship, business-society relations, ethics, education, disaster assistance, military quality of life, critical infrastructure protection, homeland security, and public-private partnerships. Some of the most notable coalitions he has played a role in launching include the Partnership for Critical Infrastructure Security, the National Cyber Safety Alliance, Business Strengthening America, and the CCC's Business Education Network.

He regularly consults with corporate donor advisory boards and he is a director on two non-profit boards: Communities in Schools – DC and the Southern Business Leadership Council.

Previously, Mr. Jordan served as executive director of the Association of American Chambers of Commerce in Latin America from 1997 to 2000. In the private sector, he has worked in the publishing industry and has a background in strategy, marketing and business development. He began his professional career as a Senate Foreign Relations Committee legislative assistant for Inter-American affairs. He holds an MBA from Georgetown University and an MA in Political and Social Thought from the University of Virginia with accompanying academic honors from both institutions.

Dr. Debra Knopman

Debra S. Knopman is vice president and director of RAND Infrastructure, Safety, and Environment, one of RAND's major research units that includes: homeland security, critical infrastructure protection, public safety, occupational safety, criminal justice, energy, environment, economic development, transportation, space, and information technology. Her own expertise is in hydrology, environmental and natural resources policy, systems analysis, and public administration. She has led projects on the design of a national research fund in Qatar, barriers to transferring Army lands containing unexploded ordnance, and innovative management strategies in public and private organizations. From 1997 to 2003, she served as a member of the Nuclear Waste Technical Review Board, which has oversight of the Yucca Mountain scientific and engineering program, and chaired the Board's Site Characterization Panel. From 1995 to 2000, she served as director of the Center for Innovation and the Environment at the Progressive Policy Institute in Washington, DC. She served as Deputy Assistant Secretary for Water and Science at the Department of Interior from 1993-1995. Prior to 1993, she worked for the U.S. Geological Survey and the U.S. Senate Environment and Public Works Committee. She has a B.A. in chemistry from Wellesley College, a Master of Science degree in civil engineering from

the Massachusetts Institute of Technology, and a Ph.D. from the Department of Geography and Environmental Engineering at Johns Hopkins University. She was the 2001 recipient of The Johns Hopkins University Alumni Association's Woodrow Wilson Award for Distinguished Government Service.

Dr. Howard Kunreuther

Howard Kunreuther is the Cecilia Yen Koo Professor of Decision Sciences and Public Policy at the Wharton School, University of Pennsylvania as well as serving as Co-Director of the Wharton Risk Management and Decision Processes Center. He has a long-standing interest in ways that society can better manage low probability-high consequence events as it relates to technological and natural hazards and has published extensively on the topic. He is a Fellow of the American Association for the Advancement of Science (AAAS) and Distinguished Fellow of the Society for Risk Analysis, receiving the Society's Distinguished Achievement Award in 2001. Kunreuther has written or co-edited a number of books and papers including **Catastrophe Modeling: A New Approach to Managing Risk** (with Patricia Grossi) and **Wharton on Making Decisions** (with Stephen Hoch). He is a recipient of the Elizur Wright Award for the publication that makes the most significant contribution to the literature of insurance

Dr. Shirley Laska

Dr. Laska is Director of the Center for Hazards Assessment, Response and Technology (CHART) and Professor of Sociology at the University of New Orleans. Prior to serving as the University's Vice Chancellor for Research from 1993-2001 she founded the Environmental Social Science Research Institute, a precursor to CHART. Dr. Laska is an environmental and natural hazards sociologist with a focus on encouraging the application of social science to societal challenges engendered by these phenomena. For this effort in 2000 she received the Outstanding Contribution to Environment and Technology Award given by the American Sociological Association. For over 20 years she has been engaged in policy and applied research funded by the federal agencies such as EPA, MMS, FEMA, NOAA, Sea Grant and HUD as well as state and local agencies. Her work has drawn attention to the need for more sub-regional analysis of hurricane evacuation behavior; more consideration to flood-proofing structures for less than 100-year floods to compliment more stringent protection; more attention to considering local area drainage solutions to repetitive flood loss rather than demolition of individual repeatedly flooded structures; inclusion of the human/social impacts of coastal restoration rather than only the ecological; and also improving hazard mitigation outcomes by including community members and stakeholders as full participants in efforts to reduce the human risk to hazards.

Dr. Laska received a BS degree in Communication at Boston University, MA, 1966; a Ph.D. in Sociology at Tulane University, LA, 1973; and was a post-doctoral fellow at the International Center for Medical Research, Tulane University, School of Medicine, 1972-74. She has been the author, co-author or editor of several books and book chapters, and has published numerous articles in the peer-reviewed literature

Vice Admiral Conrad C. Lautenbacher, Jr.

A native of Philadelphia, Pa., retired Navy Vice Admiral Conrad C. Lautenbacher, Ph.D., is serving as the undersecretary of commerce for oceans and atmosphere. He was appointed Dec. 19, 2001. Along with this title comes the added distinction of serving as the eighth administrator of the National Oceanic and Atmospheric Administration. He holds an M.S. and Ph.D. from Harvard University in applied mathematics.

Lautenbacher oversees the day-to-day functions of NOAA, as well as laying out its strategic and operational future. The agency manages an annual budget of \$4 billion. The agency includes, and is comprised of, the National Environmental Satellite, Data and Information Services; National Marine Fisheries Service; National Ocean Service; National Weather Service; Oceanic and Atmospheric Research; Marine and Aviation Operations; and the NOAA Corps, the nation's seventh uniformed service. He directed an extensive review and reorganization of the NOAA corporate structure to meet the environmental challenges of the 21st century.

As the NOAA administrator, Lautenbacher spearheaded the first-ever Earth Observation Summit, which hosted ministerial-level representation from several dozen of the world's nations in Washington July 2003. Through subsequent international summits and working groups, he worked to encourage world scientific and policy leaders to work toward a common goal of building a sustained Global Earth Observation System of Systems (GEOSS) that would collect and disseminate data, information and models to stakeholders and decision makers for the benefit of all nations individually and the world community collectively. The effort culminated in an agreement for a 10-year implementation plan for GEOSS reached by the 55 member countries of the Group on Earth Observations at the Third Observation Summit held in Brussels February 2005.

He also has headed numerous delegations at international governmental summits and conferences around the world, including the U.S. delegation to 2002 Asia-Pacific Economic Cooperation Ocean Ministerial Meeting in Korea, and 2002 and 2003 meetings of the World Meteorological Organization and Intergovernmental Oceanographic Commission in Switzerland and France, as well as leading the Commerce delegation to the 2002 World Summit on Sustainable Development in South Africa.

Before joining NOAA, Lautenbacher formed his own management consultant business, and worked principally for Technology, Strategies & Alliances Inc. He was president and CEO of the Consortium for Oceanographic Research and Education (CORE). This not-for-profit organization has a membership of 76 institutions of higher learning and a mission to increase basic knowledge and public support across the spectrum of ocean sciences.

Lautenbacher is a graduate of the U.S. Naval Academy (Class of 1964), and has won accolades for his performance in a broad range of operational, command and staff positions both ashore and afloat. He retired after 40 years of service in the Navy. His military career was marked by skilled fiscal management and significant improvements in operations through performance-based evaluations of processes.

During his time in the Navy, he was selected as a Federal Executive Fellow and served at the Brookings Institution. He served as a guest lecturer on numerous occasions at the Naval War College, the Army War College, the Air War College, The Fletcher School of Diplomacy, and the components of the National Defense University.

His Navy experience includes tours as Commanding Officer of USS HEWITT (DD-966), Commander Naval Station Norfolk; Commander of Cruiser-Destroyer Group Five with additional duties as Commander U.S. Naval Forces Central Command Riyadh during Operations Desert Shield and Desert Storm, where he was in charge of Navy planning and participation in the air campaign. As Commander U.S. Third Fleet, he introduced joint training to the Pacific with the initiation of the first West Coast Joint Task Force Training Exercises (JTFEXs).

A leader in the introduction of cutting-edge information technology, he pioneered the use of information technology to mount large-scale operations using sea-based command and control. As Assistant for Strategy with the Chief of Naval Operations Executive Panel, and Program Planning Branch Head in the Navy Program Planning Directorate, he continued to hone his

analytic skills resulting in designation as a specialist both in Operations Analysis and Financial Management. During his final tour of duty, he served as Deputy Chief of Naval Operations (Resources, Warfare Requirements and Assessments) in charge of Navy programs and budget.

Dr. Patrick Leahy

On June 20, 2005, Dr. P. Patrick Leahy became the Acting Director of the U.S. Geological Survey (USGS), U.S. Department of the Interior.

Dr. Leahy previously served as the Associate Director for Geology of the USGS where he was responsible for Federal basic earth science programs, which included worldwide earthquake hazards monitoring and research, geologic mapping of land and seafloor resources, volcano and landslide hazards, and assessments of energy and mineral resources. He was also responsible for all international activities conducted by the USGS.

He has been with the USGS since 1974 and has served in other various technical and managerial positions, including Chief of the National Water-Quality Assessment Program. He has authored or co-authored more than 50 publications on a wide array of earth science topics. Dr. Leahy was born in Troy, New York, in 1947. He holds undergraduate and graduate degrees in geology (1968) and geophysics (1970) from Boston College. He received his doctorate in geology (1979) from Rensselaer Polytechnic Institute where he specialized in regional ground-water studies and hydraulics.

Among his many professional affiliations, Dr. Leahy is a Fellow in the Geological Society of America and is a member of the American Geophysical Union, the American Institute of Hydrology (former president), Sigma XI, American Association for the Advancement of Science, the 50th Anniversary Committee of the American Geological Institute, and the Geological Society of Washington.

Dr. Leahy is the Vice-President for North America of the Circum-Pacific Council for Energy and Mineral Resources. He also serves as an advisory member of the Journal of the International Consortium on Landslides. Dr. Leahy is a past President of the U.S. National Chapter of the International Association of Hydrogeologists. In addition, he was selected by the National Academy of Science to head the U.S. delegation to the 30th International Geological Congress in Beijing, China, in August 1996 and as a U.S. delegate to the 31st International Geological Congress in Rio de Janeiro, Brazil, in 2000. He also serves as the Chair of the Federal Advisory Committee for the National Cooperative Geologic Mapping Program. He was a member of the U.S. National Committee on Scientific Hydrology. Dr. Leahy is a representative on the Atmospheric and Hydrospheric Science Committee of the American Association for the Advancement of Science. He also has served on the Editorial Board of Water Resources Update of the Universities Council on Water Resources. He is also a member and the past chairman of the U.S. National Committee for Geological Science for the National Academy of Sciences.

Dr. Leahy was the recipient of the 1996 Boston College Alumni Association Award of Excellence in Science. He was also the 1995 Alumni Association Fellow in Science for Rensselaer Polytechnic Institute. Dr. Leahy is also the recipient of the U.S. Department of the Interior Meritorious Service Award and in 2003 was recognized as a Meritorious Senior Executive by President Bush.

Mr. Elliot Mittler

Elliott Mittler is a management consultant, advisor, and educator specializing in systems management, management of technology and new ventures, corporate organizational development strategy, leadership, risk analysis, and natural hazards and public policy. He is a nationally recognized expert in public policy related to natural disasters.

He has consulted in strategic management, project management, and management of research and development. In addition, he has worked independently and as a consultant for the Tavistock Institute of Human Relations, London, and Kenneth Leventhal & Co., Los Angeles. Clients included the Boeing Corporation, Exxon, Guinness, Hughes Aircraft Company, Los Angeles Department of Airports, Los Angeles County Probation Department and the Japanese Interior Ministry. His work included program and strategic assessments, the establishment of change programs, training courses, and surveys of business opportunities.

Elliott has been a faculty member at the University of Southern California Marshall School of Business, University of Southern California Institute of Safety and Systems Management, University of California at Los Angeles Anderson Graduate School of Management, University of California at Irvine Graduate School of Management, and the University of Wisconsin, Green Bay. He taught corporate strategy, operations strategy, management of research and development, project management, new venture management, and organizational development.

Elliott has been awarded five National Science Foundation grants, numerous contracts including two from the Federal Emergency Management Agency, wrote three monographs and over two dozen articles on the public policy assessment and the public policy adoption process relating to natural hazards, the environment, and natural resources. The book, *An Assessment of Floodplain Management in Georgia's Flint River Basin*, evaluated the FEMA disaster recovery process and the National Flood Insurance Program and is considered the most thorough assessment of floodplain management conducted in the United States and one of the only independent assessments of a significant federal program. A recent review concluded that it would become the standard in the field.

Elliott has developed a model of political agenda setting allowing clients to integrate public policy and strategic planning for competitive advantage, consulted with The National Committee on Property Insurance to establish a lobbying position on federal earthquake insurance legislation, and advised the state of California Department of Insurance on the feasibility of establishing a state earthquake insurance program for small businesses.

Mr. Frank Nutter

Frank Nutter has been president of the Reinsurance Association of America (RAA) since May of 1991. He held the same position with the RAA from 1981-1984. Prior to becoming president of the RAA in 1981, Mr. Nutter served as the Association's general counsel from 1978-1981.

In the interim, he was president of the Alliance of American Insurers and the Property Loss Research Bureau.

Mr. Nutter currently serves on the Board of Trustees of the Bermuda Biological Station for Research; the Board of the International Hurricane Center; the Advisory Board of the Center for Health and the Global Environment, an adjunct to the Harvard University Medical School; and the Advisory Board to the National Center for Atmospheric Research.

Mr. Nutter has chaired the Natural Disaster Coalition, an effort to develop a program to respond

to catastrophic earthquakes, hurricanes, and volcanic eruptions in the United States. He served as a trustee to the National Commission Against Drunk Driving, and has served as a member of the Board of Directors of the Advocates for Highway and Auto Safety, the Insurance Institute for Highway Safety and the Worker's Compensation Research Institute, and the Board of Overseers of the Institute for Civil Justice, a subsidiary of the Rand Corporation. Mr. Nutter was also a member of the Department of Commerce's Industry Sector Advisory Committee on Services for Trade Policy Matters. Mr. Nutter has been active on reinsurance advisory committees and task forces of the American Bar Association and of the National Association of Insurance Commissioners. He served on the faculty of the American Institute's first advanced education program and served on the Brookings Council, an affiliate of the Brookings Institution in Washington, D.C.

Mr. Nutter has a Juris Doctorate from the Georgetown University Law Center and a bachelor's degree in economics from the University of Cincinnati. Mr. Nutter is a Vietnam veteran and is listed in Who's Who in America.

Ms. Pam Pogue

Pam Pogue has been involved in multi-disaster natural hazard mitigation, coastal zone management and watershed management programs, policies and issues since 1987. She is currently working at the Rhode Island Emergency Management Agency as the State National Flood Insurance Program (NFIP) Manager and the State Program Manager for Hurricanes and Earthquakes. Her work has primarily been in developing state, county and local hazard mitigation strategies and hazard risk and vulnerability assessments, organizing and facilitating statewide and regional workshops on the NFIP and coastal construction issues for building officials, insurance, real estate agents and lenders.

In June 2005, Pam was elected Chair of the Association of State Floodplain Managers. The Association of State Floodplain Managers is an organization of professionals involved in floodplain management, flood hazard mitigation, the National Flood Insurance Program, and flood preparedness, warning and recovery. ASFPM has become a respected voice in floodplain management practice and policy in the United States because it represents the flood hazard specialists of local, state and federal government, the research community, the insurance industry, and the fields of engineering, hydrologic forecasting, emergency response, water resources, and others.

Her experience in working with the private sector in hazard mitigation issues includes establishing public and private partnerships to address hazard mitigation issues between various Rhode Island cities and towns with utility companies, insurance adjustment agencies, the Red Cross, Bryant College Small Business Development Center for Excellence and the National Service Organization, *VISTA*. Ms. Pogue was extensively involved with the Rhode Island Disaster Recovery Information Exchange (RIDRIX), the sole purpose of this organization was to assist businesses in issues associated with disaster recovery, hazard mitigation and business continuity planning. Additionally, during the summer of 2003, Ms. Pogue developed and delivered a Business Continuity Planning and Hazard Mitigation Course in Hawaii with Hawaii Civil Defense and the Hawaii Coastal Zone Management Program to Pacific Island resorts, major corporations and island businesses.

The National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center provided funding for Ms. Pogue to travel to Maui, Hawaii during the summer of 2000 to work with County officials to develop a comprehensive multi-hazard mitigation plan and an extensive training program for county staff, stakeholders, constituents and the private sector's tourism industry. The culmination of her various efforts was the implementation of the Maui County Mayor's and Maui County Council's Executive Order establishing 14 points of criteria in order for Maui Hawaii to be designated as a "Disaster Resistant" showcase community. The Maui County multi-hazard

mitigation plan has been used as a model by the other four Hawaiian counties and Pacific states and territories.

Prior to her work in hazard mitigation and watershed management, Ms. Pogue completed a national assessment on the effectiveness of the Coastal Zone Management Act in providing coastal public access to the shore for the National Oceanic & Atmospheric Administration. She has also worked with Rhode Island's 29 coastal communities in developing and implementing harbor management plans, providing training for municipal officials on watershed management and in 1992, she completed the first statewide public access guide for Rhode Island.

Mr. William J. Poutsiaka

Bill Poutsiaka has extensive experience in financial services and risk management through executive leadership positions and Board memberships, including the following:

- Chairman and CEO, PanAgora Asset Management, a quantitative investment advisor.
- CEO & President, Arkwright Mutual Insurance Company (Factory Mutual), a global leader in property loss prevention and commercial insurance.
- Vice President, Liberty Mutual Insurance Company, a leader in worker risk management and commercial property insurance.
- Board Member, Harvard Risk Management Foundation, a specialist in risk management and insurance in the health care field.
- Board Member Dana Farber Cancer Institute, a major cancer research and treatment center.

Bill has also served on various other public and non-profit Boards, and trade organizations in the financial services industry. He has worked on initiatives with the National Oceanic and Atmospheric Administration, including their emergency warning system. Bill received his Bachelor of Arts degree from Muhlenberg College and an M.B.A. from Boston College. He is an avid fisherman and cyclist.

Mr. Brent Woodworth

Mr. Woodworth is the manager of IBM's worldwide Crisis Response Team and has been with IBM for 26 years. He has worked closely with business leaders, elected officials and heads of state throughout the world in the development of improved risk identification, disaster management and global humanitarian relief services. Brent is responsible for the development and implementation of IBM's Crisis Response Team services in 60 countries and has responded to over 70 major global disasters. Mr. Woodworth represents IBM's corporate risk & insurance interests in providing disaster preparedness, mitigation, response and recovery services to all of IBM's manufacturing, marketing, and administrative sites worldwide. Brent and his team are also responsible for the delivery of IBM's Humanitarian Relief Services during times of global crisis.

IBM Crisis Response Team services are delivered to subscribed commercial and public sector customers anytime and anywhere a disaster occurs. Brent's team has proven their skills in multiple disaster situations including: the Oklahoma City bombing, floods, earthquakes, tornadoes, hurricanes, fires, volcanic eruptions, ice storms, civil unrest, hazardous material incidents, and the NY WTC disaster.

Brent is certified in disaster recovery planning, crisis management, disaster communication, and emergency medical services. He is a regularly featured speaker on radio and television broadcasts along with corporate meetings and industry conferences. Brent has written several articles on disaster management and has been a guest lecturer on the subject of disaster preparedness and recovery at colleges and universities including Caltech and Harvard Law

School. The Miami Herald, Computer World, Wall Street Journal, New York Times, BBC, ABC, and CNN are among the news media groups that have interviewed Brent on the subject of disaster preparedness and response. Brent was appointed to the U.S. Congressional subcommittee for the development of the national pre-disaster mitigation plan, and was named to the board of the U.S. Multihazard Mitigation Council in Washington DC. Brent has also represented the interests of U.S. corporations at the New Zealand, Australia, and United States government emergency management agency summit.

Biographies Not Provided

Dean Pappas