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Civil Applications Committee

2008

Activity Report

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Prepared By

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Civil Applications Committee Annual Report - 2008

Background

Overview

The Civil Applications Committee (CAC) is an interagency committee that coordinates and oversees the Federal civil use of classified collections. The CAC was officially chartered in 1975 by the Office of the President to provide Federal civil agencies access to National Systems data in support of mission responsibilities. The CAC is operated and staffed by the U.S. Geological Survey on behalf of the Department of the Interior (DOI). In recent years, CAC activities have expanded beyond traditional mapping applications to a broad range of environmental, climate, natural disaster, and remote sensing applications central to Federal agency missions. Examples include monitoring volcanoes; [REDACTED]; coordinating emergency response to and determining impacts of natural disasters, such as hurricanes, earthquakes, and floods; monitoring ecosystems; and mapping wetlands.

Membership

In addition to the DOI, the CAC is made up of voting representatives from the Departments of Agriculture (USDA), Commerce (DOC), Health and Human Services (HHS), Homeland Security (DHS), and Transportation (DOT), as well as the Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), National Aeronautics and Space Administration (NASA), National Science Foundation (NSF), U.S. Coast Guard (USCG), and U.S. Army Corps of Engineers (USACE). Additional non-voting associate members of the CAC include representatives from the Departments of Energy (DOE) and State (DOS), Office of the Director of National Intelligence (ODNI), Defense Intelligence Agency (DIA), National Geospatial-Intelligence Agency (NGA), and National Reconnaissance Office (NRO).

Responsibilities and Functions

Primary CAC responsibilities are:

- Providing oversight for all civil National Technical Means (NTM) source collection and management;
- Ensuring that NTM data collected to satisfy CAC Member Agency mission requirements are not used in any way that threatens civil rights, civil liberties, or personal privacy;
- Promoting and overseeing the use of imagery and imagery derived products (IDPs);
- Overseeing the Global Fiducials Program;
- Facilitating the relationships between the Civil Community, the Department of Defense (DOD), and the Intelligence Community (IC);
- Presenting Civil Community requirements to the IC and DOD;
- Supporting national disaster response;
- Representing and advocating civil requirements and interests in various DOD and IC forums;
- Ensuring as the Civil Community voice in defining future space architectures;
- Providing an inter-community forum for technology and information exchange; and
- Coordinating Civil Community training.

Functionally the CAC is composed of a technical and coordinating committee. Each Member Agency and Associate Member Agency provides a representative and an alternate to this committee. The committee is chaired by the Director of the USGS. A CAC Secretariat, led by an Executive Director, provides day-to-day oversight of CAC activities. The CAC meets monthly.

Oversight is provided to the CAC by an Executive Steering Group (ESG), chaired by the Deputy Secretary of the Interior. Typically, the ESG meets annually. As necessary, the CAC sponsors working groups to address specific issues. The Global Fiducials Working Group (GFWG) is a standing interagency working group that provides guidance to the operations of the Global Fiducials Program. This program systematically monitors changes in critical areas of the Earth's surface. On an ad-hoc basis, an Emergency Response Working Group (ERWG), an Imagery Derived Products Working Group (IDPWG), a Requirements Working Group (RWG), a Security Working Group (SWG), and a Thermal Event Sensing Working Group (TESWG) are convened. In 2008, the TESWG was actively investigating thermal event monitoring capabilities.

The CAC provides a forum through which Federal Civil Agencies coordinate data requirements, develop tasking strategies, certify proper use of data, and track and plan for the progress and evolution of National Systems. The CAC coordinates the use of imagery exploitation and application resources and supports remote sensing research and development activities at special facilities, such as the USGS Advanced Systems Center (ASC), located in Reston, Virginia. At these facilities, appropriate capabilities and exploitation tools are available for CAC members to use for end-to-end data processing and developing custom products either individually or in conjunction with the USGS National Civil Applications Program (NCAP). Through the CAC, arrangements can also be made for technical support from DOD and IC entities.

Data Acquisition and Management

Prior to being submitted, CAC Secretariat reviews of Member Agency data requests are performed to ensure that the intended use in no way threatens civil rights, civil liberties, or personal privacy. The CAC review and approval process ensures: 1) that requests are only from member agencies and within the scope of member agency statutory missions; 2) that NTM assets are being requested as a source of last resort; 3) that tasking is not intended to support law or regulatory enforcement issues; 4) that "U.S. persons" are not being targeted; and 5) that in no way will the requested use of NTM assets be used for "intelligence purposes." When this analysis is completed, requests are presented to NCAP staff to begin the acquisition process.

In concert with the CAC Secretariat, NCAP staff at the ASC assists CAC Member Agencies in the tasking, collection, processing, exploitation, and dissemination of National Systems data in support of a wide variety of scientific investigations and mapping projects with unique requirements. The CAC Secretariat and NCAP personnel work together with CAC Member Agency customers to analyze these requirements, plan and coordinate support for submitting data requests, and acquire approval from appropriate authorities. Archive searches are also performed to locate existing data sources to meet project needs in addition to initiating new data collections. Upon receipt of new or archived data, ASC staff members perform a quality

assessment to ensure that the data received satisfy the customer's requirements. Only then are data delivered to the customer and properly archived.

NCAP employs a collection manager at the ASC who also serves as a Departmental Requirements Officer for the Civil Community. The presence of the CAC Secretariat and NCAP staff at meetings in which imagery acquisitions are adjudicated provides opportunities to further explain and defend CAC agency collection needs. Regular participation in the Domestic Requirements Working Group is particularly important because most CAC requirements fall within the U.S. and its territories. Coordination with other members of the imagery community results in higher success rates for competing and obtaining imagery on a non-interference basis with other Agency's requirements.

The Global Fiducials Program and the Global Fiducials Library

For nearly a decade, the CAC's Global Fiducials Working Group (GFWG) has overseen an activity designed to improve our understanding of our planet. Images of Earth collected by satellites and aircraft provide valuable insights into the dynamics of Earth's surface processes and provide windows to observe changes in oceans, land-cover, and ecosystems. The collection and analysis of images with defined image characteristics and specified repeat intervals, located over systematically defined sites, enhances our ability to understand environmental processes and can be used to determine long-term trends and impacts, and to define environmentally critical areas. In essence, this is the philosophy behind and the purpose of the Global Fiducials Program.

NCAP staff are building an archive of Global Fiducials Program satellite imagery to support current CAC Member Agency missions and to support future science and policy needs and requirements. NCAP staff provide tasking, acquisition of data, archiving, and dissemination services in support of the program. The Global Fiducials Library (GFL), managed by NCAP staff, is the archive of imagery collected by the Global Fiducials Program. There, GFL imagery and associated imagery derived products (IDPs) are used to support current agency programs while also being stored for future use by the scientific community.

2008 CAC Highlights

CAC Executive Steering Group

No CAC Executive Steering Group (ESG) meeting was held in 2008

CAC Participation in External Forums

During 2008, the CAC participated in the following external forums to represent civil community interests and advocate for civil community requirements:

- CAC visit to New Mexico State University (NMSU)
- CAC visit to National Counter Terrorism Center (NCIC)
- CAC visit to National Security Agency (NSA)
- NSG Senior Management Council (NSMC)

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

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CAC Monthly Meeting Recap:

Jan	Landsat Satellite Image Map of Antarctica (LIMA)	Jerry Mullins & Doug Binnie
	National Civil Applications Program (NCAP) Land Remote Sensing Support for Global Climate Change Studies	Jeff Sloan
	Data Fusion Technique Development to Support Federal Civil Community Activities	Jeff Sloan
	National Land Cover Database (NLCD) Mapping Tool	Greg Koeln
	The Role of Remote Sensing and GIS in the Remediation of Chemical Weapons Contamination	Terry Slonecker
Feb	DARPA UAS Initiatives	Steve Welby
	DOD Unmanned Aerial Systems	Jim Greenley
	U.S. Army UAS Program: Challenges and Opportunities	Steve Moore and Rex Forney
	USNORTHCOM UAS CONOPS	J. Jay Updegraff
	UAS Applications and Certification	Steve Hottman
	UAS Science Applications	Sara Summers
Mar	Shadow Harvest	Hank Fowler
	Consolidated ONIR Architecture Modernization Plan	Mike Roth
	Endangered Walrus Populations in Alaska	Doug Burn
	Information Vulnerabilities	Gabe Maznick
Apr	Unclassified Rapid Response Operations Center (URROC)	Nikki Frankino
	Ice, Cloud and Land Elevation Satellite (ICESat)	Jeanne Sauber
	Orbital Mechanics	Biff Genda
	Impacts of Limited Capabilities on the Civil Community	Andy Bratton
May	Special off-site meeting held at National Security Agency (NSA) – Fort George G. Meade, Maryland	
	Special off-site meeting held at Las Cruces, NM	
	White Sands Facility Tour	
May	El Paso Intelligence Center (EPIC) tour – Biggs Army Airfield, TX	
Jun	U.S. Customs Border Protection/Port of Entry tour – El Paso, TX	
	New Mexico State University UAS/UAV Offsite	
Jul	No Meeting	

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Aug	WORASATS: Web-Enabled Applications Development for Rapid Response Operation Center (RROC)	David Gorman, Michael Simmons, Carrie Hazleton
	Early Experience with the Unmanned Aircraft Systems Flight Test Center	Phil Copeland
	New Mexico State University (NMSU) Intelligence-Related Activities	Dan Seltzer
Sep	Volcanoes Hazard Assessment	Bill Burton
	Mt Stellar Landslide	Bruce Molnia
Oct	U-2 and Optical Bar Camera (OBC) Overview	Edward Rykowski
	Future of U-2 and Replacement	Tony Pinson and David Giddens
	IMINT Roadmap	Michael Gauthier
	Pathway to Civil Community Acquisition of Commercial Satellite Imagery	Tom Cecere and David Maydwell
Nov	Special off-site meeting held at Liberty Crossing National Counterterrorism Center (NCTC)	Greg Conradi
	NCTC Operations Center	Laurie Hoisington and John Sinisko
	The New Executive Order 12333	Regina Genton
	The Intelligence Community's Strategic Partnerships and the ODNI	Amy Reed
	Discussion: The CAC as an Intelligence Customer	Kurt Scherer, Liz Dunning, Rob Abbott
Dec	Cyber Security	Chris Pehrson
	Commercial Imagery	John Richardson
	Digital Elevation Model (DEM) Generation from Classified and Unclassified Satellite Sources	Pete Chirico

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Partial List of Data Requested by CAC Members in Response to Specific Mapping and non-Disaster Science Events:

Date	Name & Location	Event
Jan	Material searches completed over Kachemak Bay, AK; MCG collection over Agrihan Island (Marianas) was completed in support of a USGS-NOAA Mariana Islands mapping effort.	Mapping
Feb	Source materials for NOAA coastal map and charting activity: Duke Island, AK; Harvard/Yale Glaciers, AK; Muir/Rendu Inlet, AK; Taylor Bay, AK	Mapping
July	Source materials for Chugach National Forest, AK	[REDACTED]
Aug	Source materials for NOAA coastal map and charting activity: Behm Canal, AK; Controller Bay, AK; Kodiak Island, AK; Tingilet Point, AK; Mississippi Delta, LA	Mapping
Oct	Source materials for NOAA coastal map and charting activity: Behm Canal 2, AK; Icy Bay, AK; Pavlov Bay, AK	Mapping
	Source materials for Grand County, CO	[REDACTED]
Nov	Pine Island Glacier Aircraft Landing Site – Antarctica	Data was used to help search for crevasses near proposed rescue aircraft landing site
Dec	Source materials for NOAA coastal map and charting activity: Controller Bay, AK; Duke Island, AK; Kodiak Island, AK; Pavlov Bay, AK; Rendu & Harvard Glaciers, AK	Mapping

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Data Was Requested by CAC Members to Monitor the Following Volcanoes:

Volcano Name & Location	Outcome
Anatahan, Commonwealth of Northern Mariana Islands	Erupted
Aniakchak, Alaska	Did Not Erupt
Atka (Kliuchef), Alaska	Did Not Erupt
Atka (Korovin), Alaska	Did Not Erupt
Augustine, Alaska	Did Not Erupt
[REDACTED]	Did Not Erupt
[REDACTED]	Erupted
Carlisle, Alaska	Did Not Erupt
[REDACTED]	Erupted
Chiginagak, Alaska	Did Not Erupt
Cleveland, Alaska	Erupted
[REDACTED]	Erupted
[REDACTED]	Did Not Erupt
[REDACTED]	Erupted
[REDACTED]	Did Not Erupt
[REDACTED]	Erupted
Kaguyak, Alaska	Did Not Erupt
[REDACTED]	Erupted
Kasatochi, Alaska	Did Not Erupt
[REDACTED]	Erupted
Kilauea, Hawaii	Erupted
[REDACTED]	Erupted
[REDACTED]	Erupted
Mauna Loa, Hawaii	Did Not Erupt
[REDACTED]	Did Not Erupt
[REDACTED]	Erupted
[REDACTED]	Did Not Erupt
Mount Spurr, Alaska	Did Not Erupt
Mount St. Helens, Washington	Erupted
[REDACTED]	Erupted
[REDACTED]	Erupted

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[REDACTED]	Erupted
Okmok, Alaska	Erupted
[REDACTED]	Erupted
Pagan, Commonwealth of Northern Mariana Islands	Did Not Erupt
[REDACTED]	Did Not Erupt
Pavlof, Alaska	Erupted
[REDACTED]	Did Not Erupt
Popocatepetl, Mexico	Erupted
[REDACTED]	Erupted
Redoubt, Alaska	Erupted
[REDACTED]	Erupted
Shishaldin, Alaska	Did Not Erupt
[REDACTED]	Erupted
[REDACTED]	Did Not Erupt
Trident, Alaska	Did Not Erupt
[REDACTED]	Erupted
[REDACTED]	Did Not Erupt
Veniaminof, Alaska	Erupted
Vsevidof-Recheschnoi, Alaska	Did Not Erupt

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Partial List of Data Requested for Ongoing CAC Member Agency Projects:

CAC Member	Request Type	Project Description	Approval Date
DOC National Oceanic and Atmospheric Administration	Renewal	Hurricane effects on Gulf Coast fishing industry	February 2008
DOC National Oceanic and Atmospheric Administration	Renewal	Global Fiducials – 11 monitoring sites	February 2008
DOC National Oceanic and Atmospheric Administration	Renewal	Coastal and harbor mapping	February 2008
DOC National Oceanic and Atmospheric Administration	Renewal	Louisiana Wetlands restoration monitoring	February 2008
DOI Bureau of Land Management	Renewal	[REDACTED]	February 2008
DOI Fish and Wildlife Service	New	Alaska Marine Mammal (Walrus) monitoring – Seasonal off-shore and coastal 'haul-out' study	July 2008
DOI National Park Service	Renewal	Global Fiducials – 58 monitoring sites	February 2008
DOI U.S. Geological Survey	Renewal	Use of data for testing	February 2008
DOI U.S. Geological Survey	Renewal	Volcano monitoring	February 2008
DOI U.S. Geological Survey	Renewal	Landslide Studies – Post landslide analysis	February 2008
DOI U.S. Geological Survey	Renewal	Global Fiducials – 33 monitoring sites	February 2008

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DOI U.S. Geological Survey	Renewal	Natural disaster assessment and monitoring	February 2008
DOI U.S. Geological Survey	Renewal	Vegetative Mapping - NPS vegetation mapping and monitoring program at Great Sand Dunes National Park	February 2008
DOI U.S. Geological Survey	Renewal	Chesapeake Bay riparian boundary mapping	February 2008
DOI U.S. Geological Survey	Renewal	Louisiana coastal shoreline mapping	February 2008
DOI U.S. Geological Survey	Renewal	Glacial Monitoring – 37 domestic glaciers	February 2008
DOI U.S. Geological Survey	Renewal	Louisiana Brown Marsh – Impact of marsh dieback on coastal wetlands	February 2008
DOI U.S. Geological Survey	Renewal	Tornadoes	February 2008
DOI U.S. Geological Survey	Renewal	Existing PPUMS	February 2008
DOI U.S. Geological Survey	Renewal	Flood inundation mapping and analysis	February 2008
DOI U.S. Geological Survey	Renewal	Earthquake monitoring	February 2008
Environmental Protection Agency	Renewal	Global Fiducials – 31 monitoring sites	February 2008
Environmental Protection Agency	Renewal	Hazardous materials fire and spill response	February 2008
National Science Foundation	Renewal	Global Fiducials – 23 monitoring sites	February 2008
National Science Foundation	Renewal	Long-term monitoring of sea ice characteristics	February 2008
National Science Foundation	Renewal	Antarctic studies	February 2008
USDA Forest Service	Renewal	Natural disaster impacts on forests	February 2008

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USDA Forest Service	Renewal	Forest inventory and analysis program	February 2008
USACE Army Corps of Engineers	Renewal	Global Fiducials – 4 monitoring sites	January 2008
USACE Army Corps of Engineers	Renewal	Natural disaster damage assessment	January 2008

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