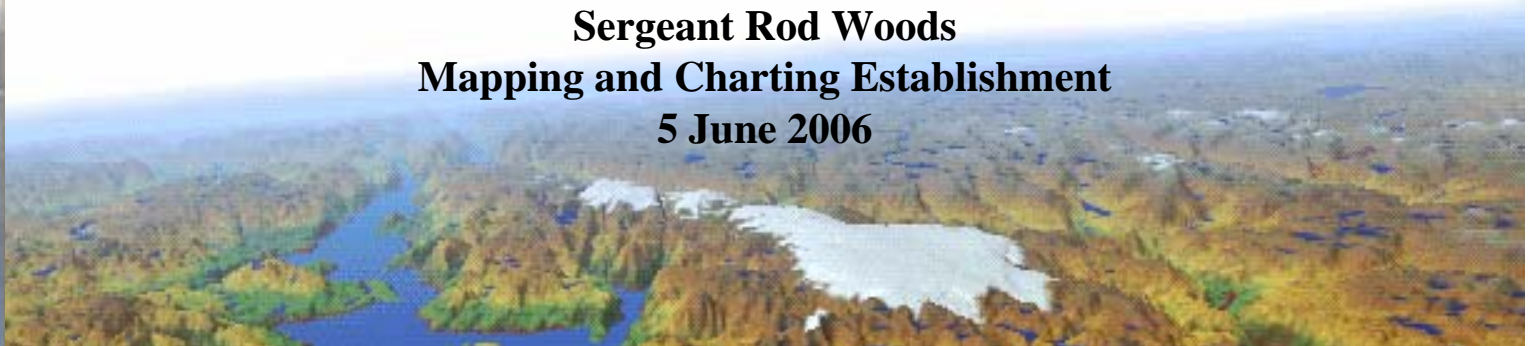




Canada Command and Geospatial & Critical Infrastructure Data

**Working Together
Federal/Provincial/Municipal/Industry
for Emergency Response**

**Sergeant Rod Woods
Mapping and Charting Establishment
5 June 2006**



Outline

- **Canada Command**
- **Domestic Operations Spectrum**
- **Ongoing Programmes and Partnerships**
- **Common Operating Picture**
- **Mapping and Charting Establishment / Data Mining**
- **Goals and Issues**



Canada Command

Relevant Responsive Effective





Canada Command

Relevant Responsive Effective

➤ Announced 28 June 2005



- ✓ Initial joint planning staff of approximately 60 to develop the final operating concept and master implementation plan
- ✓ A view of commanding Canadian Forces routine and contingency operations in Canada as early as Spring 06

MISSION STATEMENT

“ Canada Command will **conduct operations to deter, prevent, preempt, and defeat threats and aggression** aimed at Canada within the area of responsibility.

When required, Canada Command will provide military assistance to civil authorities *including consequence management*, **in order to protect and defend Canada**. Canada Command will be the operational link with US NORTHCOM ”



Policy Direction

“In improving their ability to respond to domestic requirements, the Forces will view Canada as a single operational area. **In place of the current command structure, which is focused primarily on managing training and administration, the Canadian Forces will establish a single integrated structure that will be able to bring the best available military resources from across Canada to bear on a contingency, wherever it occurs, nationwide. The new structure will be linked to a smaller number of integrated regional headquarters.”**



Canada Command
Relevant Responsive Effective

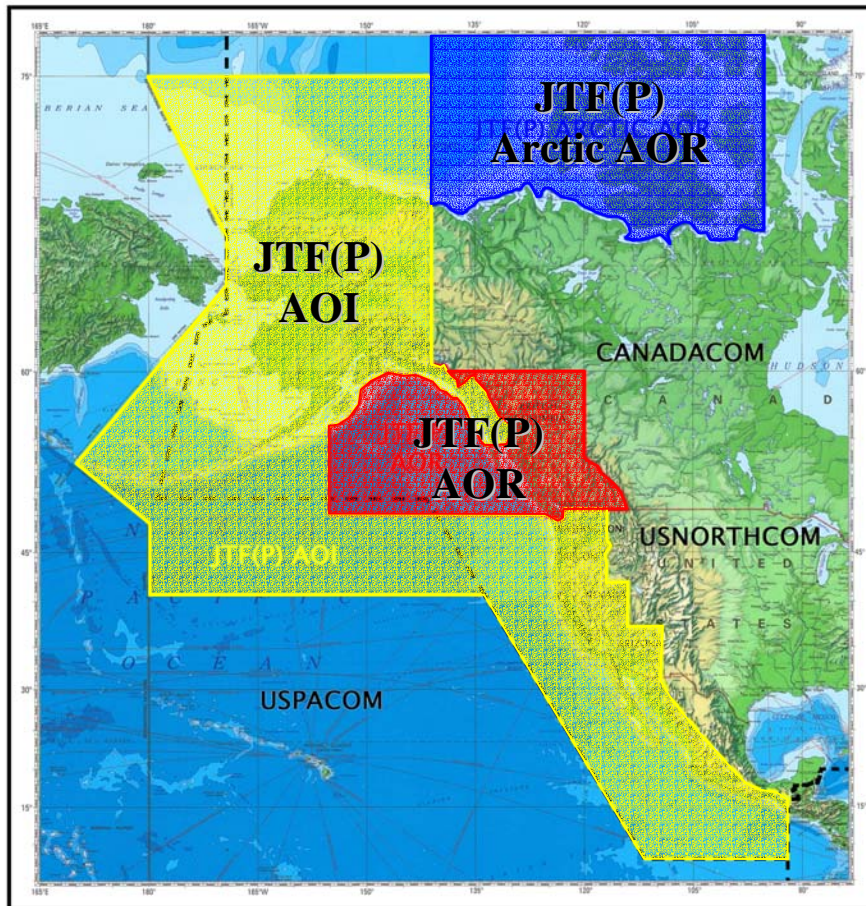
Regional Joint Task Force (JTF)



- 6 Asymmetric Regions
- Areas divided by geo-political considerations.
- Separation of Strategic and Operational Responsibilities
 - ❖ Operational Commander executes mission;
 - ❖ Strategic Command assign missions
- Bases under each region with different level of assets.
- Focus on Operations and Responsiveness



Joint Task Force (Pacific)



Joint Task Force (Pacific) is responsible to the Commander, Canada Command for the defence of Canada and **for the conduct of all military assistance to civil authorities**, within the defined JTF(P) Area of Responsibility (AOR), and, when directed, for the defence of North America.



OPREAD – SA Goals

- **National Situation Awareness**
 - ❖ **Current readiness status of all CF units / formations.**
 - ❖ **National military picture and readiness, Intelligence picture, Search-and-Rescue, etc.**
 - ❖ **National/International events (i.e. Vancouver 2010, G8 Summit) and event makers such as weather or geo-physical related.**
 - ❖ **interface 24/7 with the six regions, and federal Other Government Departments (OGD) including the RCMP NOC and the GOC Ops Centre.**



OPREAD – SA Goals

- **National Situation Awareness**
 - ❖ **control (or host) the national Logistic Control and the Movement Control centres, currently embedded in NDHQ.**
 - ❖ **Web/GCCS geo-based listing of critical infrastructure such as all national transportation routes and hubs status (i.e. Airports, Seaports, etc).**
 - ❖ **All non-military resources that can be employed during emergencies.**



OPREAD – SA Goals

- **Continental Situational Awareness**
 - ❖ **24/7 chat line and info/picture exchange with NORAD-US NORTHCOM**
 - ❖ **US military formation & bases and capability**
 - ❖ **Web/GCCS geo-based listing of US military facilities and units in bordering states**
 - ❖ **US areas of concerns - from potential terrorist activities to major events**
- **International Awareness**
 - ❖ **Awareness of international picture/info which could migrate to Canada Command areas of responsibility**

CF Domestic Operations Spectrum

Ensuring Homeland Security

Safeguard Sovereignty

Defend Canada

Surveillance and Control



ALEA (Special Events)



ACP



Response to Terrorism



Execute OPLANS



Northern Sovereignty Patrols



(International Law Dispute)

Protect Canadian Resources

Pollution Monitoring Fisheries Patrols

Securing our Borders to Illegal Activities
(Drug Interdiction)(Illegal Immigration)



MISSION LEGEND

- DND led
- DND in support

Protect Canadians

Search and Rescue



Disaster Relief



Protect Cities



A Decade of Domestic Operations

YEAR	OPERATION	EVENT	LOCATION
1992	Op TEMPEST	Hurricane Andrew	US South Coast
1995	Op OCEAN VIGILANCE	Turbot War	Grand Banks, NF
	Op WALLABY		Gustavesen Lake, BC
1996	Op SAGUENAY	Flood	Saguenay, QC
1997	Op ASSISTANCE	Flood	Red River, MB
	Op MANDIBLE	APEC Summit	Vancouver, BC
1998	Op RECUPERATION	Ice Storm	ON, QC
	Op MATTOCK, MOLLUSC, MANDRILL	Forest Fires	BC, AB
	Op PERSISTANCE	Swissair Flt 111	Peggy's Cove, NS
1999	Op PREAMBLE	Snow Storm	Toronto, ON
	Op SEMAPHORE	Immigrant Smuggling	West Coast

...

A Decade of Domestic Operations

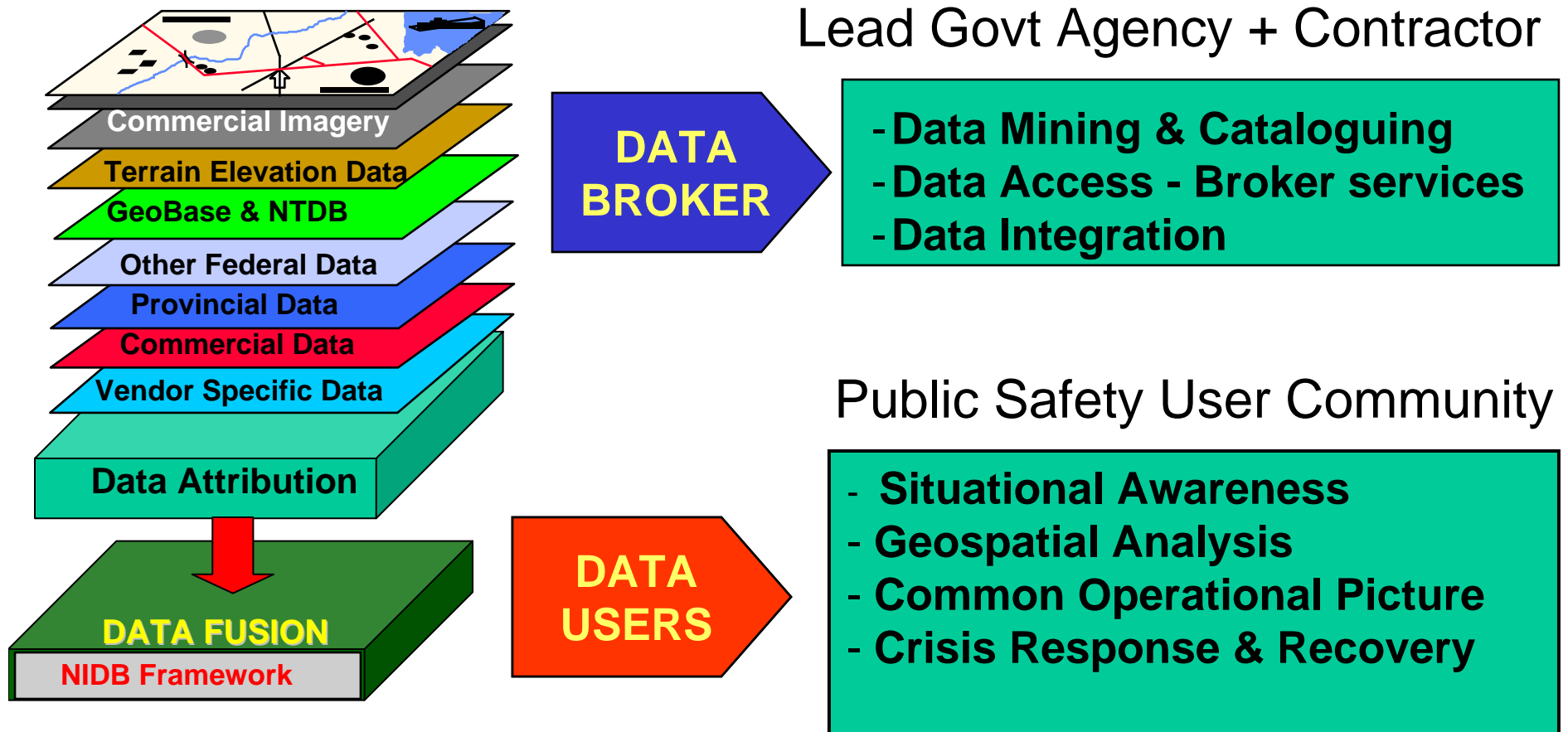
YEAR	OPERATION	EVENT	LOCATION
2000	Op ABACUS	Y2K	Canada
	Op PIXLE	OAS Gen Assemble	ON
		Tornado	Pine Lake, AB
	Op MEGAPHONE	GTS Katie Affair	East Coast
2001	Op PODIUM	World Athletics	Edmonton, AB
	Op QUADRILLE	Summit of Americas	Quebec City, QC
	Op SUPPORT	9/11 Stranded Air Travelers	North America
2002		Forest Fires	AB
	Op GRIZZLY	G8 Summit	Kananaskis, AB
2003	Op ORACLE	SARS Outbreak	Toronto, ON
	Op PEREGRINE	Forest Fires	Central BC
	Op OASIS	Power Black Out	ON, QC, NE US
	Op SPLINTER	Hurricane Juan	NS
2004		US President Visit	Ottawa, ON; Halifax, NS
2005	Op UNISON	Hurricane Katrina	US South Coast
	Op CANOPY	Contaminated drinking water	Kashechewan, ON

Ongoing Programmes and Partnerships

- **National Infrastructure Database (NIDB)**
- **Cross Border Infrastructure Plan (CBIP)**
- **Canadian Council of Geomatics (CCOG)**

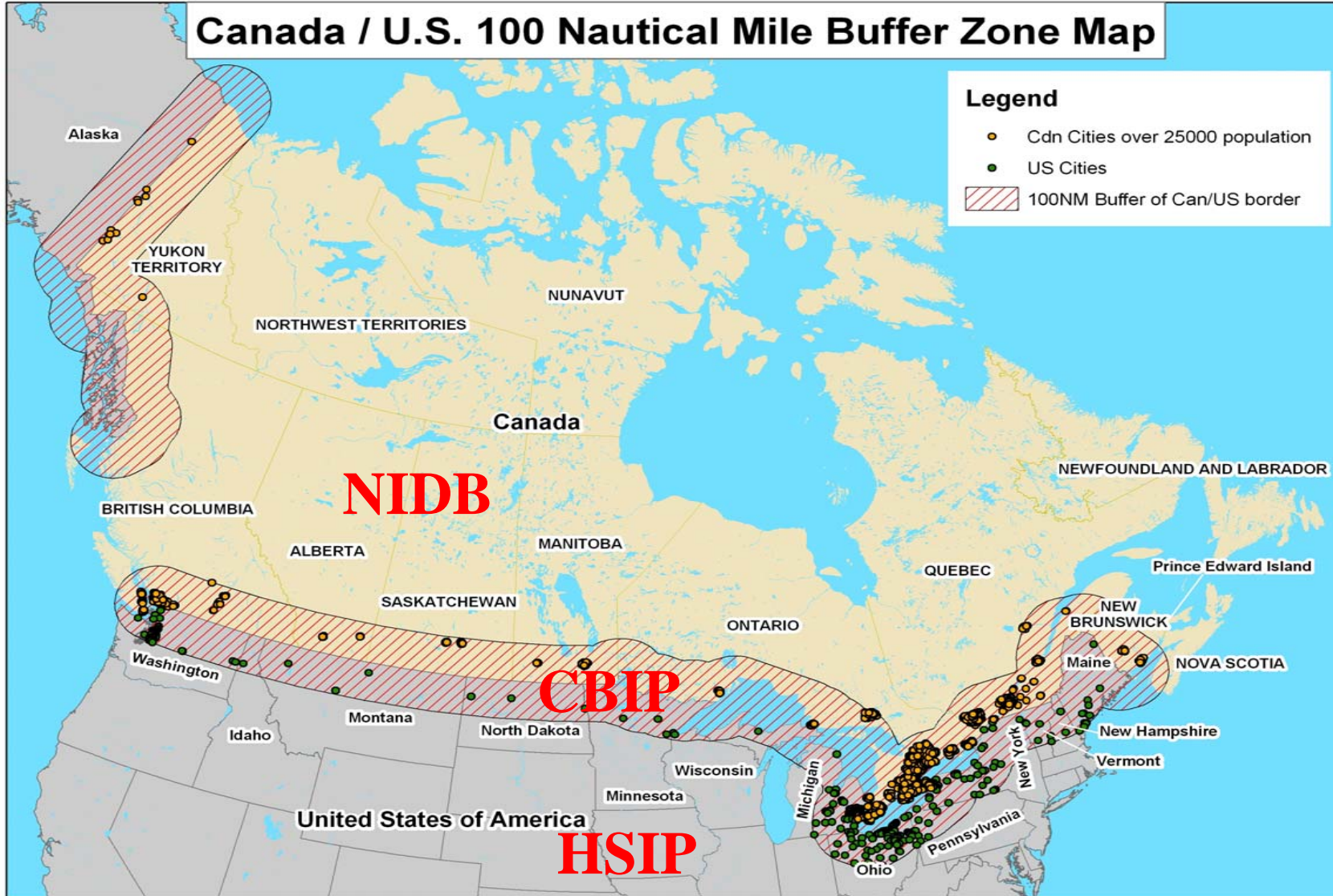
National Infrastructure Database (NIDB)

*A single and integrated NIDB for
Official Government Use Only*





Cross Border Infrastructure Plan (CBIP)



Critical Infrastructure Sectors



HSIP

- Emergency Services
- Food, Water
- Agriculture
- Public Health
- Government Services
- Defense Industrial Base
- Information/Telecomm
- Energy
- Transportation
- Banking and Finance
- Chemical/HazMat
- Postal and Shipping
- Manufacturing



**NIDB
CPIB**

- Emergency Services
- Utilities (Hydro, Gas, Oil, etc)
- Information & Communications
- Banking, Finance, & Insurance
- Water Supply
- Energy
- Law Enforcement
- Public Health
- Important Industries
- High Value/Symbolic Targets

Foundation Data

- Imagery
- Land Cover
- Structures
- Hydrograph
- Transportation
- Boundaries
- Geographic Names



NTDB



NIDB/CBIP Common Framework Data

- Some data owned by Federal & Provincial Agencies
- Maintained closest to the source
- Accessible at no cost to other Government Depts
- Not necessarily maintained regularly
- No redistribution clause
- Data Integration thru GeoConnections (TBA)
- Coord thru IACG GCC for Public Safety
- Distribution thru a Geo Portal for Public Safety





CCOG 2004 Resolution F04-10

Geospatial Data Access for Public Safety and Emergency Response

Whereas **CCOG** acknowledges the potential **security threat to Canada** following the tragic events of Sept 11, 2001, and the requirement to support national anti-terrorism activities;

Whereas **CCOG** acknowledges the **safety threat** to Canadians caused by **natural or human-caused hazards**, and the requirement to support national emergency response and disaster management activities;



CCOG 2004 Resolution F04-10

Geospatial Data Access for Public Safety and Emergency Response

Whereas CCOG recognizes the need for a heightened awareness and **increased collaboration** between federal, provincial/territorial stakeholders and the need to build on the GeoBase framework data **to develop a unified National Infrastructure Data Base (NIDB)** for the security and safety of all Canadians to support response as well as **mitigation and planning**;

Whereas CCOG acknowledges that their federal, provincial and territorial members possess **numerous Geospatial databases** that would be **valuable** in assisting in the development of an NIDB and to support emergency planning and other operational defence and security activities;



CCOG 2004 Resolution F04-10

Geospatial Data Access for Public Safety and Emergency Response

Be it resolved that CCOG acknowledges the continued support for the concept that Council members **freely provide** necessary Geospatial data sets as may be requested by National Defence and Public Safety and Emergency Preparedness Canada (**PSEPC**) or other emergency coordination agencies;

Be it further resolved that **upon request** the data be **provided freely** for **national** and **continental** defence and other security or emergency coordination agencies for response purposes as well as mitigation and planning purposes, and that the data users **will not be permitted to re-distribute the products to third parties** without the consent of the data custodian to ensure that **data sharing** will not compromise Council members' existing data distribution and cost recovery activities.



CCOG 2004 Resolution F04-10

Geospatial Data Access for Public Safety and Emergency Response

Be it also resolved that the Inter-Agency Committee on Geomatics (IACG) co-chairs will forward a **letter to federal and provincial/territorial agencies (either Council members or agencies identified by Council) requesting the free provision and access to Geospatial data for critical infrastructure protection and emergency response, planning and mitigation.**

Common Operating Picture (COP)



NGA PALANTERRA



BLACK CORAL

GIS ENABLED COP

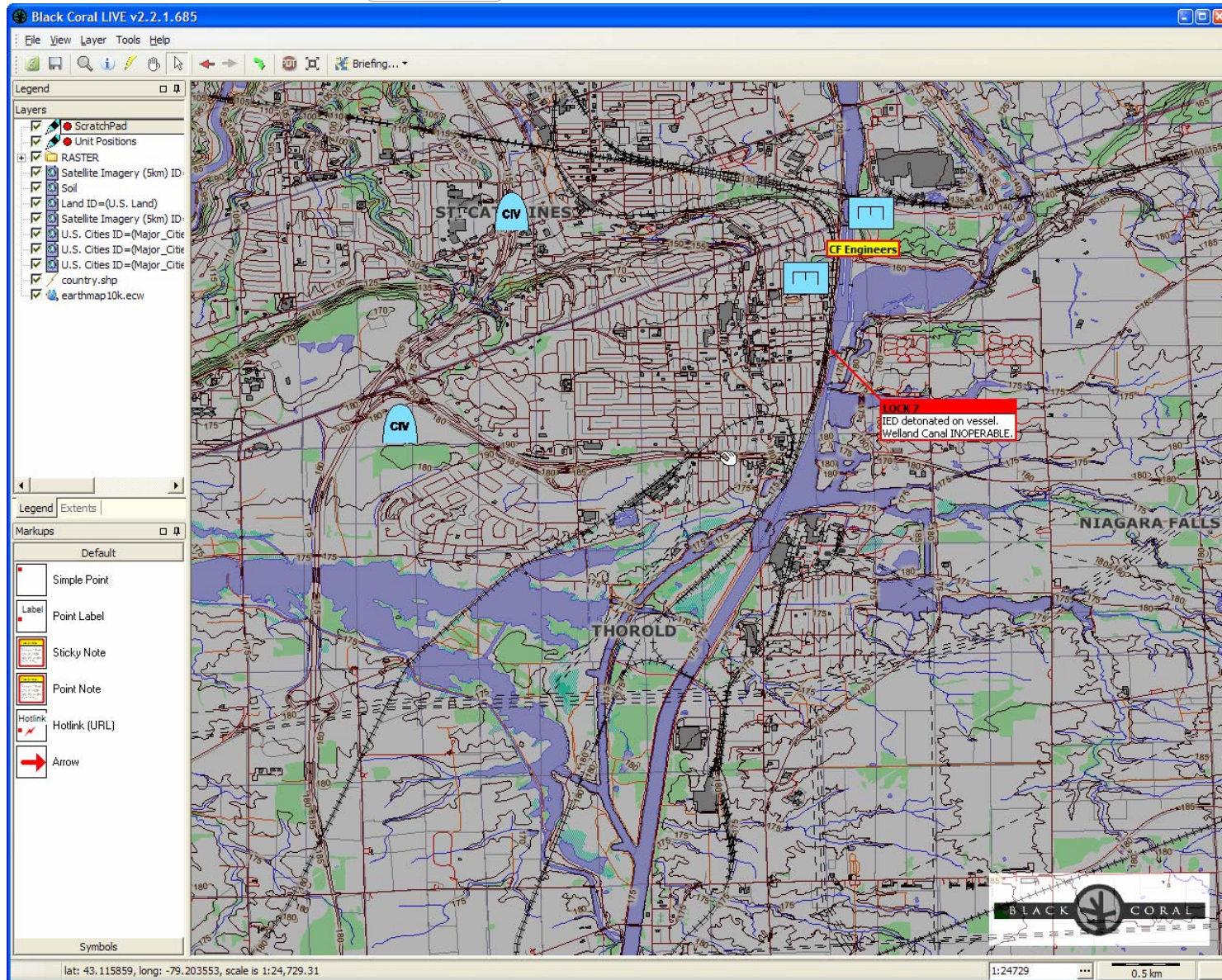
COMMON OPERATING PICTURE (COP)



NGA PALANTERRA

The screenshot displays the NGA PALANTERRA software interface. At the top, it shows the National Geospatial-Intelligence Agency logo and the text "PALANTERRA". Below this, there are navigation tabs for "Search", "Utilities", "Selection", "Annotation", "Measure", "Output", and "Help". The main map area shows a geographical view of the Northeast United States, including New Hampshire, Massachusetts, Rhode Island, and Connecticut. The map is overlaid with various data layers, including flight paths (e.g., UAL917, NWA717, EGF475, EGF805, DAL117, VIR15, N426SP, AAL173, AAL105, AAL828, DAL199, N51250, USA2032, USA2128, AAL173, AAL105, USA11), airports (e.g., BOS, WOR, PVD), and other infrastructure. A "TABLE OF CONTENTS" panel on the left lists various data layers such as "NSSE Events", "Superbowl XXXIX", "Weather Information", "NOTAMs", and "C2PC Tracks". The interface also includes a "Theme List" and a "Refresh Map" button. A banner at the bottom of the map area reads: **User Friendly Intuitive Interface...Server Side Processing...Consolidated Display**

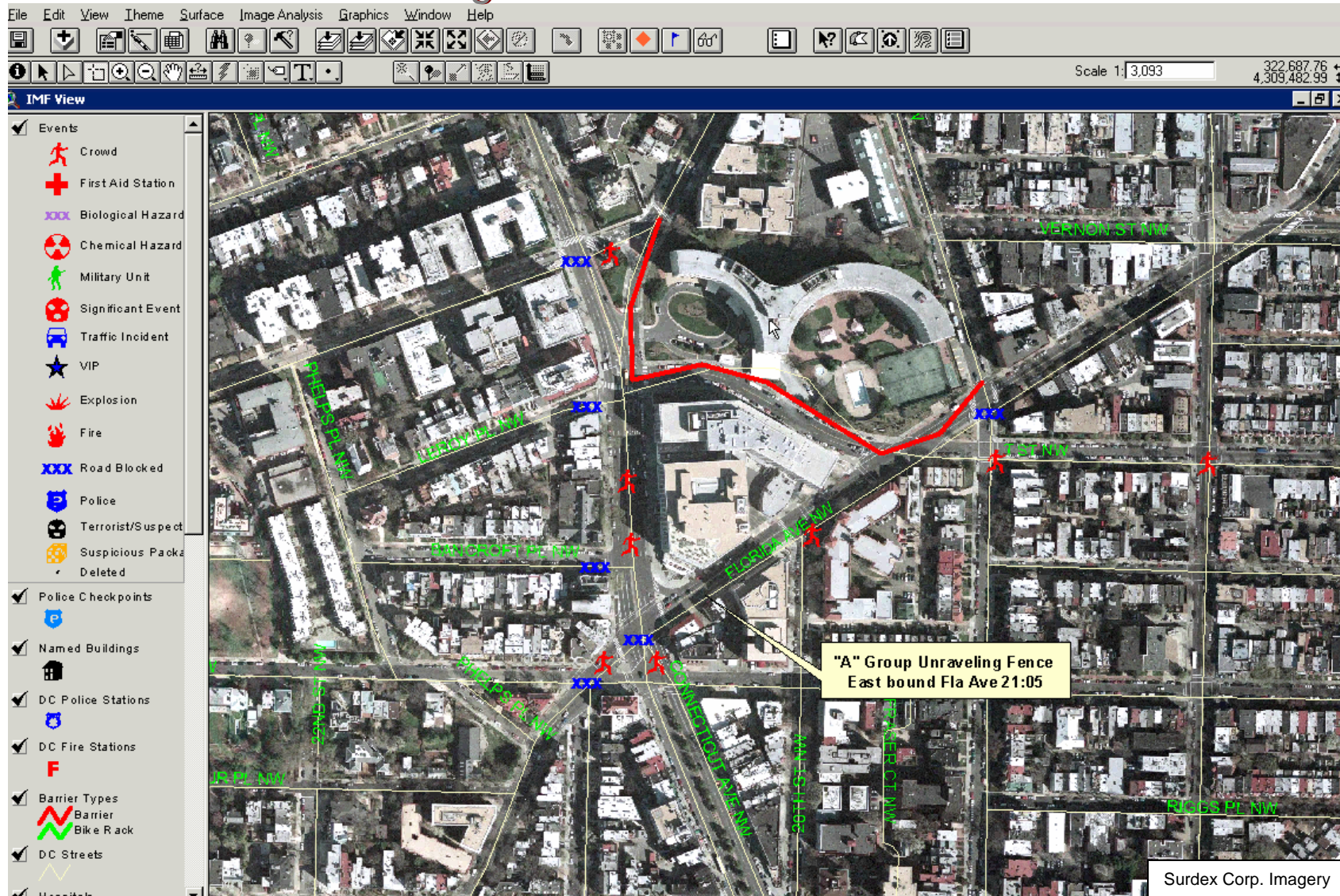
COMMON OPERATING PICTURE (COP)



COMMON OPERATING PICTURE (COP)

First Generation GIS Enabled COP Capability

- Adding an event based on address



Mapping and Charting Establishment

- **Main provider of geospatial products in CF**
- **Provide commanders with timely, accurate and relevant geospatial information in order for their mission command decisions.**



Data Mining

- ✓ Vancouver / Victoria and Environs (May 2005)
 - ❖ Vancouver 2010 focus
- x Toronto and Environs (Sep 2005)
- x Hamilton / Windsor and Environs (Nov 2005)
- x Montreal and Environs (Jan 2006)
- x Quebec City and Environs (Mar 2006)

Goals

- **Establish contacts with local municipal and industry GIS data holders/developers.**
 - **Set up data sharing agreements (similar to the CCOG for the provinces) to provide geospatial data and metadata in response to domestic situations.**
 - **Focus on Vancouver 2010 and emergency response.**

Data Issues

- **Availability**
- **Accuracy**
- **Metadata**
- **Currency of Data / Frequency of Updates**
- **Transmission**
- **Contact in short fuse situations**

Contact Information



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