PICTOMETRY
REAL-TIME AIRBORNE
MANAGEMENT
SYSTEM

Charles Mondello
Deputy CTO
Pictometry International Inc.
Uses of Imagery in Emergency Response

- E911
- Homeland Security
- Incident Management Team
- Law Enforcement Support Team
- Fire Response
- School Safety
- Commercial Support
- Preplanning
- Emergency Operations
- Post Disaster Recovery
- Hazards Planning
- Emergency Operations Center
- Property Assessments
“with this technology we are able to locate sick or injured people who are unable to give us their location when they are in need of help,” said Rochester Emergency Communications Department Director.

“In all, more than 3,000 square miles of imagery from flood-affected areas has been captured, including 104 square miles of imagery within 24 hours of capture, the imagery was processed and delivered along with several seats of software which enables users to compare existing (“before”) imagery with post (“after”) disaster imagery. We know what the 500-year flood is, but the bigger question is what properties have been lost as a result of it?” Johnson County Assessor.

“The objective for NG9-1-1 is to answer ‘what is needed for the future of 9-1-1?’ We now have the answer. What’s needed is the ability to respond to ‘any device, anywhere, any time,’” said National Emergency Number Association (NENA) Development Director.
Benefits of multiple views to Emergency Respondents
Orthogonal View Versus Oblique View

The Transamerica Building, San Francisco, CA
Emergency Response uses of Oblique Raster Content
Fire Response
3 Story Building

Average Scale: 1 cm = 43.4 meters
Or 7 Stories?
Significant Elevation Change

It is critical not to assume all content is defined by a single view raster Data set.
Side by Side Damage Displays
Concentric Circle Overlay
Grid Overlay
Structural Integrity

Follow on Collapse Risk to Emergency Respondents

Pictometry Proprietary
Preparing for Disaster

Coastal Storm and Hurricane Surge Planning

From FutureView 2008
Ed Conover
Atlantic County NJ
Emergency Preparedness
Preparing for Disaster

Critical Infrastructure Pre-planning

From FutureView 2008
Ed Conover
Atlantic County NJ
Emergency Preparedness
What's Needed Next..

- The solution for obtaining near-real time images for emergency response
  - Deployment of airplanes quickly
  - Transmission and receipt of large amounts of data
  - Data delivery within 15 seconds from capture
  - Ability to track planes in the air
  - Distribute the data to where it’s needed
  - Processing On Site
Real-time Airborne Management System (RAMS)

Pictometry received a Small Business Innovative Research (SBIR) to develop RAMS

United States Department of the Interior
OFFICE OF THE SECRETARY
National Business Center
Acquisition and Property Management Division, Southwest Branch
P.O. Box 12924
Fort Huachuca, Arizona 85670-2924

June 14, 2007

Pictometry Intl.
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Rochester, NY 14623-4260

Dear Mr. Mondello:

Your Small Business Innovation Research (SBIR) Phase II proposal 0614021, “Real Time Airborne data Management System (RAMS)" submitted in response to the Department of Homeland Security (DHS), Homeland Security Advanced Research Projects Agency (HSARPA), Small Business Innovation Research (SBIR) program, Program Solicitation FY06.1, has been evaluated for possible inclusion in the DHS SBIR Program.

We are pleased to inform you that your proposal has been selected for possible award, subject to your company meeting DHS SBIR contract provisions as required by United States Code and the Federal Acquisition Regulations. This is not an authorization to incur cost. A contracting officer will contact you in the near future with additional guidance concerning negotiation of a contract for performance of the proposed effort.

To prepare for the contracting and audit process for contract award, we suggest that you download the following material and guidance, "Information for Contractors," so you may begin preparing for the award negotiation and audit process, http://www.dcaa.mil/dcaap7641.99.pdf

We look forward to your continued success in working with the DHS SBIR program. If you have additional questions or concerns, please don’t hesitate to contact me at 520-533-0387, Lisa A Mattocks@dhs.gov, or Elissa Sobolewski, DHS SBIR Program Manager at 202-254-6768, elissa.sobolewski@dhs.gov, or your DHS SBIR Program Manager.

Sincerely,

Lisa Mattocks
Contract Specialist
System Diagram

- **Internet**
- **Sat Comm**
  - 10-50 kb/s (global)
- **802.16**
  - 10-40 Mb/s
  - 10-40 Mb/s (32 km)
- **Broadband wireless**
  - 0.5 - 2 Mb/s
- **Mobile Command Van**
- **Airborne Capture**
Real Time Response

Real-time download from PentaView
Real Time in flight Aircraft tracking and Flight Planning and Upload
Real-Time Image Download and Registration
GSSE CAPTURE 10/11

Data online seconds after capture in full mapping form
RAMS Directed Capture
Live Directed Content of Target
High Resolution Live Content

Google Earth

Fly to e.g., 37° 25.818' N, 122° 05.36' W

Places

Layers

Earth Gallery

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Live Situational Awareness
Live Situational Awareness

CM live iPhone View of live RAMS data
Arc Deployment
Online Location Search

Search: Address
12310 Sunrise Valley Drive Reston VA 2019
Cardinal Views
Online Measurements

Height Tool Information: 87.61 feet
Summary

- The uses of oblique image content are extensive
- On site respondents need a natural perspective
- It is imperative to have historic and current content for change analysis and context
- The cycle time between collection and implementation needs to be seconds temporally
- Data must be usable anywhere on the globe regardless of where the event and decision makers are located
- All of the above are in use and in continuous improvement today