

## Geospatial Preparedness from the Non-Governmental Organization Perspective

DHS Geospatial Strategies and Opportunities Conference  
May 15, 2006

# Mission Statement

- The mission of ASPRS is to advance knowledge and improve understanding of mapping sciences and to promote the responsible applications of photogrammetry, remote sensing, geographic information systems (GIS), and supporting technologies.

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# Membership

- Founded in 1934, ASPRS has 5500 members in a multitude of scientific and engineering disciplines
  - 4750 US, 750 international
  - 750 student members (700 US, 50 international)
- Academic 20%
- Government 40%
- Private Industry 40%

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# Organization

- Board of Directors (volunteers)
  - 4 nationally elected officers
  - 5 nationally elected technical division directors
  - 17 regionally elected national directors
  - Sustaining Member Council Chair
- 19 Standing Committees (volunteers)
  - Chairs appointed by President from pool of volunteers
- Staff (paid)
  - Executive Director and 12 staff at ASPRS HQ in Bethesda

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# Primary Activities

- 2 national ASPRS conferences per year
- Regional conferences and workshops
- Monthly peer-reviewed journal, PE&RS
- Extensive technical publications
- Professional certification
- Scholarships
- Numerous division and committee activities

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# Post-Hurricane Season Lessons Learned Workshops

- January 19, 2006 in Washington, DC
  - Presentations from imagery response “working group” members as well as state/local responder community
  - Presentations and summary published at [http://www.asprs.org/news/disaster\\_ws/](http://www.asprs.org/news/disaster_ws/)
- May 2, 2006 in Reno, NV
  - Presentations from additional federal agencies and private sector data providers
  - Presentations will published on ASPRS website
  - Report and recommendations will be published in PR&RS

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# Summary of Recommendations

- Geospatial data and analysis roles should be specifically called out in the National Response Plan, in greater detail than currently provided, giving acknowledgment to the interdisciplinary, multi-purpose use of these datasets.
- Preparedness should include mock drills and training in the acquisition, packaging, extraction and use of large image and terrain datasets

# Summary of Recommendations

- Specific mission requirements currently drive image acquisition mission specifications. There should be a coordinated set of requirements (one-size-fits-many) recognizing the broad usage of imagery for many response and recovery applications
  - coverage area
  - resolution (GSD)
  - delivery schedule
  - spatial accuracy
  - image quality (radiometry)

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# Summary of Recommendations

- Satellite imagery is useful for local, repeat coverage but cannot provide seamless coverage over large areas at high resolution
- Airborne imagery is still essential to support many response and recovery mapping tasks
- Issues of disclosure and release must be resolved in the case of NTM. Image source needs to accompany derivative products.

# Summary of Recommendations

- Tasking and funding must include several levels or generations of image products
  - Level 1 (within hours)
    - Direct georeferencing only
    - Planar rectification
    - no radiometric enhancement or color balancing
  - Level 2 (hours to days)
    - Block adjustment to improve spatial accuracy
    - Orthorectification to best available DEM
    - Automated radiometric correction
  - Level 3 (days to weeks)
    - Archive quality product of record
    - QA/QC inspection
  - METADATA! METADATA! METADATA!

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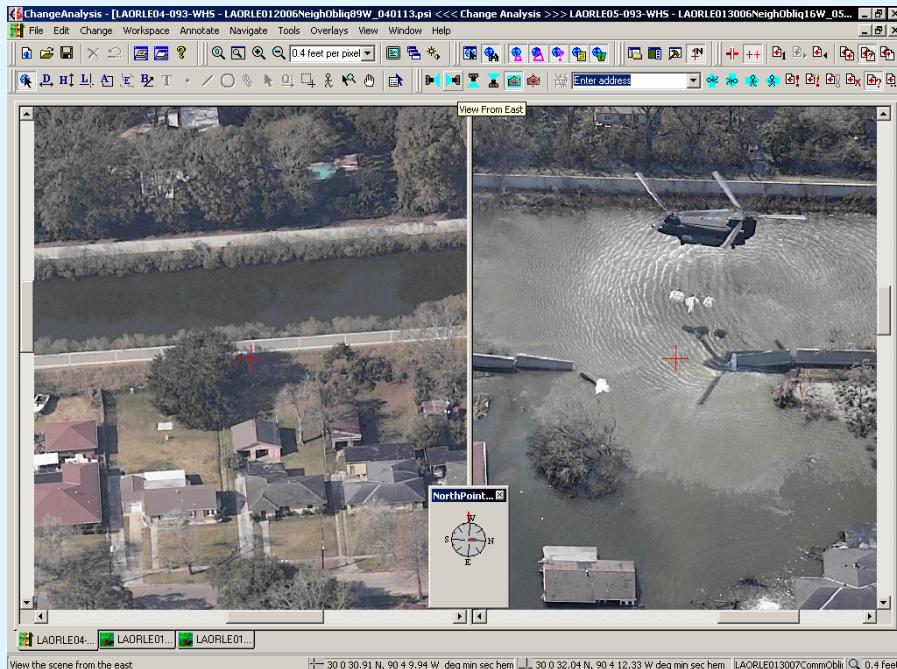
# Summary of Recommendations

- Our ability to distribute large image datasets falls far short of our capacity to produce them
  - Web mapping services
  - Image cataloging and compression
  - Hard copy still a requirement



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# Thank You!



*Image courtesy of Pictometry*



*Image courtesy of UISACE and 3001, Inc.*

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