

** Remote Sensing News for and About the Private Sector **

The Quarterly Newsletter of the IEEE-GRSS Private Sector Liaison Group

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** 1. WHERE THE PRIVATE SECTOR IS, AND WHERE IT ISN'T

Though the private sector is increasingly visible across the landscape of remote sensing, it still has considerable untapped potential. In areas such as US aerial imagery and GIS software, the private sector dominates. But in many others, from weather remote sensing to global land observations, the private sector takes a back seat to government. Release of the new US National Space Policy (see below) spotlights the

role of the private sector. Our community should use the opportunity to raise critical questions. Is the private sector being used effectively by government? Is the private sector itself sufficiently aggressive in pursuing available opportunities and adequately innovative in creating new ones? And if not, what can we do about it?

The roles of government and the private sector in remote sensing are in many ways complementary; government's strength is public safety and welfare, while the private sector's is efficiency. Yet we trip over each other far too often. Recent debate about constraints in commercial remote sensing licenses (such as prohibiting the DigitalGlobes and GeoEyes from distributing imagery for 24 hours after acquisition) illustrates how well-intentioned national policy can inhibit an industry if other nations have less stringent restrictions. Aerial remote sensing and weather services are two areas where private sector groups work continuously with government counterparts to ensure that government is not itself doing what can be accomplished more effectively in the private sector. Yet public-private partnerships, from the NGA NextView contracts for US commercial remote sensing satellites to Germany's TerraSAR and the multi-nation Disaster Monitoring Constellation initiated by Surrey Satellite, have proven successful in many cases. The rapidly emerging internet geospatial demand created by Google Earth and Microsoft Virtual Earth is already shifting the balance of remote sensing resources toward the private sector. If we are to ensure the continued health of our community, we must promote the private sector's capabilities while respecting the evolving balance of public, private, and academic roles.

** 2. CONNECTING THE PUBLIC, ACADEMIC, AND PRIVATE SECTORS

A section of the Private Sector website (at a new location - see above!) will soon list important websites categorized as academic, public, and private sector. If you work primarily in only one of these sectors, go to the website and check out what the other parts of the remote sensing world are doing.

** 3. NEW US NATIONAL SPACE POLICY

The President authorized a new ten-page National Space Policy effective 31 August this year, replacing the existing 1996 Clinton-era policy.

The changes have been closely scrutinized by those who follow space policy. Most prominent are the change in tone - from multilateralism to unilateralism - and an increased emphasis on space for national security purposes. Commercial space has its own section with provisions promoting "a dynamic, domestic commercial space sector". Within civil space, NOAA is chartered with continued responsibility for both NPOESS and GOES along with ensuring that "civil space acquisition processes and capabilities are not duplicated". USGS "shall collect, archive, process, and distribute land surface data" and NASA "shall conduct a program of research to advance scientific understanding of Earth". Even GEOSS gets a nod - "The US will . . . take a leadership

role in international fora to establish a long-term plan for coordination of an integrated global Earth observation system."

** 4. IGARSS 2007 IN BARCELONA

IGARSS 2007 is being held July 23-27 in Barcelona, Spain (<http://www.igarss07.org>). The theme this year is "Sensing and Understanding our Planet". For those who have attended previously, you know that IGARSS is the premier remote sensing conference for bringing together government, academia, and industry. Historic attendance has been running about 1500. A variety of tutorial sessions are planned with interest to the private sector. For questions about exhibiting, please contact Lisa Ostendorf directly (ieeegrss@adelphia.net, +1.540.658.1676). Future symposia include Boston (2008), Capetown (2009), and Hawaii (2010). See you there.

** 5. NRC DECADAL SURVEY OF EARTH SCIENCE AND APPLICATIONS

The National Research Council (NRC) two-year decadal survey of earth science and applications titled "Earth Science and Applications from Space: A Community Assessment and Strategy for the Future" will be released by the end of the year. The report establishes, for the first time, a formal community strategy for the nation's public sector spaceborne Earth observations. Included will be a vision for the progress to be made over the decade and a prioritized set of missions.

The study is sponsored jointly by NASA, NOAA, and USGS - NASA has stated publicly that they will build their mission program around the study's recommendations. Information is available at

http://qp.nas.edu/QuickPlace/decadalsurvey/Main.nsf/h_Toc/4df38292d748069d0525670800167212/?OpenDocument .

** 6. REVIEWING A SUCCESSFUL GOVT-INDUSTRY PARTNERSHIP

The EO-1 mission (<http://eo1.gsfc.nasa.gov/>, launched 2000) was initiated under the Earth Observing element of the NASA New Millennium Program. The mission objective was to validate advanced land imaging instruments and related technologies. It has proven to be a successful example of a government-industry partnership, yet many people are not aware of the program's accomplishments. One highly successful demonstration was the Advanced Land Imager (ALI), a potential technology precursor for an improved Landsat instrument jointly developed by NASA Goddard and MIT Lincoln Laboratory (with critical components from SSG Precision Optonics and Raytheon). An ALI-based instrument would achieve significantly superior signal-to-noise ratio while requiring only about one fifth the power, be reduced in mass by a factor of close to four, and have the strong potential for being less costly as compared to the current Landsat sensor. Another success was the Hyperion push-broom hyperspectral imaging spectrometer, a joint effort between NASA Goddard and Northrop Grumman. Hyperion performance has met or exceeded predictions including continued operation well beyond the planned one-

year lifetime. Other partnerships involved flight testing of new spacecraft and sensor components, including a radiation-tolerant, stacked memory array developed jointly by NASA Langley and 3D Plus USA, and a pulsed plasma thruster (PPT) developed with Aerojet. For those seeking to understand how government can better work with the private sector, EO-1 provides an important data point.

** 7. OTHER BUSINESS OPPORTUNITIES

A quick reminder of items mentioned in previous newsletters:

- The monthly "GRS Newsletter" publishes corporate profiles (<http://www.grss-ieee.org/menu.taf?menu=Publications&detail=Newsletter>).
- The GRSS technical committees accept volunteers (<http://www.grss-ieee.org>).
- Short contributions of news or other items for this newsletter will be accepted.

** 8. COMPANY NEWS

(This space is available to briefly advertise company news or events at no cost. Please submit 1-4 sentence requests to the editor with lead time appropriate for a quarterly periodical.)

YANKEE ENVIRONMENTAL SYSTEMS - Yankee's "Weather Web" system (also called the Minuteman system) consists of multiple geographically-dispersed radio-linked wind sensors that telemeter wind data around any localized area once a minute. It can be used to assist localized weather forecasting or to monitor and predict the evolution of chemical dispersion events. Using dedicated RF channels so as to not be reliant on wireless or wired telephone networks, the weather web can continuously feed real time meteorological data into a sophisticated "transport and diffusion" plume dispersion forecast model. Wind data is used as initial condition data for the model runs and is aggregated from all nearby stations and then published back to field users using internet networking. The short term numerical weather prediction model output is then displayed on a PC. For more information visit <http://www.yesinc.com> and look for surface systems, WEB-8700: <http://www.yesinc.com/products/sys.html> or email info@yesinc.com.

GENESYS - Genesys (<http://www.igenesys.com>) has been selected as the sole vendor for the aerial photography of 137 cities in India, the first time a civilian company has been awarded such a contract. With service offerings in LiDAR processing and a comprehensive GIS and Photogrammetry department, Genesys is the natural choice as a mapping partner. Genesys is a ISO 9001:2000 Global Geospatial Mapping firm

which provides data creation, processing, conversion, migration and integration.

** 9. EVENTS AND EVENT CALENDARS

- 6-10 Nov MAPPS/ASPRS Measuring the Earth, San Antonio, TX,
<http://www.asprs.org/fall2006/index.htm>
- 13-16 Nov GEOINT Symposium, Orlando, FL, <http://www.geoint2006.com/>
- 13-17 Nov SPIE Asia-Pacific Remote Sensing, Goa, India,
<http://spie.org/conferences/programs/06/ae/>
- 11-15 Dec American Geophysical Union, San Francisco, CA,
<http://www.agu.org/meetings/fm06/>
- 18-22 Dec Conf on Microwaves, Ant, Prop, and Rem Sens, Jodhpur,
India
- 9-11 Jan ESRI Federal User Conference, DC, <http://www.esri.com/feduc>
- 14-18 Jan American Meteorological Society, San Antonio, TX,
<http://www.ametsoc.org/meet/annual/>
- 20-25 Jan SPIE Photonics West, San Jose, CA, <http://spie.org/Conferences/calls/07/pw/>
- 21-25 Jan MAPPS Winter Conf, Naples, FL, <http://www.mapps.org/>
- 4- 7 Mar Geospatial Info & Tech Assoc (GITA), San Antonio, TX,
<http://www.gita.org/events/annual/30/>
- 9-12 Apr National Space Symposium, Colorado Springs, CO,
<http://www.nationalspacesymposium.org/>
- 9-13 Apr SPIE Defense and Security, Orlando, FL,
<http://spie.org/conferences/calls/07/dss/>
- 7-11 May APPRS Annual Conference, Tampa, FL, <http://www.asprs.org/tampa2007/>
- 22-25 May American Geophysical Union, Acapulco, Mexico,
<http://www.agu.org/meetings/ja07/>
- 7- 9 Jun Intl Sympos on Digital Earth, San Francisco, CA,
<http://www.isde5.org>

Institute of Electrical and Electronic Engineers (IEEE)

<http://www.ieee.org>

American Geophysical Union (AGU)

<http://www.agu.org>

American Meteorological Society (AMS) Conferences, Meetings, and Symposia

<http://www.ametsoc.org/>

American Society for Photogrammetry and Remote Sensing (ASPRS)

<http://www.asprs.org/>

International Society for Photogrammetry and Remote Sensing (ISPRS)

<http://www.isprs.org/>

SPIE - The International Society for Optical Engineering

<http://www.spie.org>

MAPPS - Management Association for Private Photogrammetric Surveyors

<http://www.mapps.org>

United Nations Environment Program (UNEP) Conferences and Meetings

<http://www.unep.org/Documents/Default.asp?DocumentID=303>

Earth Observing System (EOS) Science and Global Change Calendars

<http://eospsso.gsfc.nasa.gov/calendars/index.php>

The IEEE Geoscience and Remote Sensing Society (GRSS) Private Sector Liaison Group was formed in 2002 to increase collaboration between the private sector, academia, and government in the remote sensing field. The readership of this newsletter now exceeds 1000 people from companies associated with remote sensing, as well as government agencies, international space agencies, professional organizations, non-government organizations, OMB, and Congressional staff. We in the private sector want to help keep our colleagues informed of the activities and capabilities of the private sector - and the role that GRSS plays in supporting and promoting these activities. Should you need further information about the Private Sector Group, require that contact information for you or your organization be updated, or request to be removed from the list, please contact Bill Gail (bgail@microsoft.com).