

GRSS Private Sector Newsletter, No. 9

**** Remote Sensing News for and About the Private Sector ****
The Quarterly Newsletter of the IEEE Geoscience and Remote Sensing Society (GRSS) Private Sector Liaison Group

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**** 1. BUILDING DEVELOPING WORLD MARKETS – brief editorial**
Remote sensing is fundamental to economic growth in the developing world. China and India, two nations with emerging economies, have long recognized this and have developed their own sophisticated remote sensing capabilities. Smaller nations often utilize the data available from Landsat and other systems operated by the larger nations. Many have taken advantage of the growing commercial remote sensing industry to purchase products as needed. A substantial portion of the world's future economic growth will come from the developing world. Government and non-government organizations can contribute to this growth by leveraging the critical information that is obtained through remote sensing – for natural resources, land management, environmental security, and many other applications. Businesses that invest early in these markets will find themselves well-positioned to benefit from the growth. As market opportunities in the developed world

flatten, investment in the developing world will create the rising tide that extends global economic growth. Remote sensing provides particularly high leverage to support this growth, so it will be in strong demand.

** 2. IGARSS 2008 IN BOSTON

IGARSS 2008 is being held July 6–11 in Boston, MA. The theme this year is “Geoscience and Remote Sensing: The Next Generation”. 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 Ron Isaacs. For other information or requests, contact either of the conference co-chairs, John Kerekes and Eric Miller. Future symposia include Capetown (13–17 July, 2009), Honolulu (2010), Sendai (2011), TBD (2012), and Melbourne (2013). See you there.

** 3. RADAR – the “other” Earth imaging

High-resolution Earth imagery from optical sensors has captured the public’s attention through its routine use in TV news stories and its wide internet availability. But few people are aware of the revolution that has taken place over the last two years in high-resolution radar imaging of the Earth. Radar imagery has several distinct advantages over optical, including being able to image at night and through clouds – huge advantages when rapid response is paramount. Radar satellites have already seen widespread use for applications such as sea ice monitoring and detection of illegal bilge dumping by ships. Growth of the radar satellite industry has been enabled in large part through partnerships that link the public and private sectors. TerraSAR-X, developed through a public-private partnership between The German Aerospace Center (DLR) and Infoterra GmbH, was launched in June 2007 and now provides a variety of X-band Earth imagery products with resolution up to 1 meter. Radarsat-2, a partnership between the Canadian Space Agency and MacDonald Dettwiler, was launched in December 2007 and provides C-band image products with resolution better than 2 meters. The Italian government launched two COSMO-SkyMed civilian/military satellites (from a planned constellation of four) in June and December 2007 – each is capable of X-band imaging with resolution as good as 1 meter. In addition, Germany has since

2006 launched four SAR–Lupe satellites (with one more to go), small low–cost X–band systems capable of imaging at resolutions up to 0.5 meter, and Israel recently launched TecSAR which is capable of imaging at better than 1 meter.

** 4. ACCURATE DATA VS USEFUL DATA – why accuracy is not always best

As scientists and engineers, we often assume that more accurate is always better than less accurate. For the end–users of information, this is not always true. Car navigation devices provide perhaps the best illustration of this issue. They show “notional” maps, in which the width of streets and their separation is less important than assisting with rapid visual recognition of where to go and which way to turn. In this, and in many similar situations, portraying something inaccurately can provide the user better knowledge than portraying it accurately. This phenomenon might be described as “objective inaccuracy”. Within the remote sensing industry there are many examples of objective inaccuracy – from the widespread use of ortho–projection imagery (a non–physical projection from a vantage point at infinity) to the well–known distortions of the Mercator map projection. In the end, all are engineered in an “objective” way to provide useful information rather than to preserve less–useful accuracy.

** 5. REMOTE SENSING CONSUMERS: INDIVIDUALS OR ENTERPRISES? – roles of each

Who benefits from remote sensing? Historically, consumers have seen only the secondary fruits of remote sensing. Governments and businesses have been the primary users, ingesting remote sensing data and producing usable text–based information such as weather forecasts and flood plain assessments. This balance is gradually shifting as technology makes it easier to communicate and share image/map–based information. Most everyone has looked at satellite or aerial images of their home on one of the internet mapping services. Imagery and maps are compelling to everyone – as more can be made available through remote sensing, businesses will find new ways to deliver them directly to people for uses ranging from commerce (such as real estate browsing) to education (visit Victoria Falls without travelling) to crisis response (rapid collection/distribution of tornado or hurricane damage imagery/assessment) to entertainment (see where your favorite movie star lives). This shift will, in the long run, be a fundamental

market driver for how we do remote sensing and as well as the prioritization of remote sensing systems.

** 6. REMOTE SENSING AND SUSTAINABILITY – a growth market
If trends can be discerned by “follow the money”, sustainability is rapidly becoming a major motivator for remote sensing systems and applications. Environmental sustainability is no longer simply about “green” or “eco-friendly” – it is fundamental to the economic viability and national security of every nation, with a total annual global market size approaching \$1 trillion. The energy sector is most visible today, but agriculture, water resources, desertification, climate change, and other issues are of great importance to government agencies – and to many private sector companies. “Clean” technology – technology that enables environmental sustainability – is among the fastest growing sectors within the venture capital industry. While the developing world will be a major beneficiary of this technology (see editorial), the largest near-term business opportunities exist within the developed world itself. The rapid increase in the number of commercial Earth-observing satellites, with more than 100 launches anticipated over the next decade, is a testament to this growth market.

** 7. OTHER BUSINESS OPPORTUNITIES

A quick reminder of items mentioned in previous newsletters: A) the monthly GRS Newsletter publishes corporate profiles, B) the GRSS technical committees accept volunteers, and C) short contributions of news or other items for this newsletter will be accepted.

** 8. COMPANY NEWS – To advertise at no cost, please submit short requests to the editor

CORE CAPITAL – Core Capital, through its Electronics and Semiconductor Group (ESG), has signed an agreement with NAVSYS Corporation to develop new strategic business initiatives around a key set of the company’s innovative technology and intellectual property called TIDGET. TIDGET technology efficiently enables portable data acquisition devices to automatically capture and integrate geographical identification metadata with various forms of primary data. The forthcoming TIDGET-based applications are expected to revolutionize consumer and commercial markets where automated meta-tagging can greatly improve geospatial data logging, reliability and precision. ESG will develop strategic

business initiatives to commercialize the TIDGET technology. NAVSYS provides high-quality technical products and services in GPS hardware design, systems engineering, systems analysis and software design. ESG managing director, Loren Lancaster, has over 25 years executive management operating experience. Contact Loren at 719-598-4680 or email llancaster@corecapital.net.

ISC - ISC (Tallahassee, FL), the developers of the MapDotNet product suite, announced April 18 that they'll be releasing beta versions of their new Windows Presentation Foundation (WPF) and Silverlight 2.0 map controls to a limited number of test sites. "The response to the WPF and Silverlight 2.0 map control demos has been overwhelming. We are getting requests daily for a beta version of the control" says Casey Donovan, VP of Government Solutions for the MapDotNet product. With the WPF and Silverlight 2.0 map controls, .NET developers can build rich smart-client and web applications that integrate Virtual Earth with their GIS spatial data. Using vector rendering and animation features of the two new Microsoft presentation technologies, web-based GIS applications will be able to provide a level of cartographic analysis historically only seen on the desktop. The beta program will start May 1st - please contact Casey Donovan (casey.donovan@mapdotnet.com) or Benton Belcher (benton.belcher@mapdotnet.com) to learn more about joining the MapDotNet beta program.

** 9. EVENTS

- 28-30 Apr Location Intelligence Conf - Santa Clara, CA
- 28- 2 Apr/May ASPRS Annual Conference - Portland, OR
- 12-14 May Where 2.0 - Burlingame, CA
- 27-28 May Earth Ob Solutions for Decision-Making - Berlin, Germany
- 27-30 May American Geophysical Union Joint Assembly - Fort Lauderdale, FL
- 2- 5 Jun GeoTec - Ottawa, Canada
- 2- 5 Jun European Conf on SAR (EUSAR) - Friedrichshafen, Germany
- 2- 5 Jun Intergraph 2008 - Las Vegas, NV
- 15-20 Jun International Microwave Symposium - Atlanta, GA
- 23-27 Jun Intl Laser Radar Conference - Boulder, CO
- 3-11 Jul ISPRS Congress - Beijing, China
- 6-11 Jul IGARSS - Boston, MA
- 13-20 Jul COSPAR - Montreal, Canada

19–23 Jul MAPPS Summer Conference – Sun Valley, ID
21–25 Jul GeoWeb – Vancouver, Canada
4– 8 Aug ESRI User Conference – San Diego, CA
10–14 Aug SPIE Optics & Photonics – San Diego, CA
9–11 Sep AIAA Space 2008 – San Diego, CA
15–18 Sep SPIE Europe Remote Sensing – Cardiff, Wales, UK
30– 2 Sep/Oct INTERGEO – Bremen, Germany
7–10 Oct URISA Annual Conference – New Orleans, LA
10–14 Nov Asian Conf on Remote Sensing – Colombo, Sri Lanka
17–21 Nov SPIE Asia–Pacific Remote Sensing – Noumea, New
Caledonia
15–19 Dec American Geophysical Union Fall Mtg – San Francisco,
CA

** 10. PROFESSIONAL ORGANIZATIONS – see more orgs (public,
private, academia)

Institute of Electrical and Electronic Engineers (IEEE)

Aerospace Industries Association (AIA)

American Geophysical Union (AGU)

American Institute of Aeronautics and Astronautics (AIAA)

American Meteorological Society (AMS)

American Society for Photogrammetry and Remote Sensing (ASPRS)

Geospatial Information and Technology Association (GITA)

International Society for Photogrammetry and Remote Sensing
(ISPRS)

The International Society for Optical Engineering (SPIE)

Management Association for Private Photogrammetric Surveyors
(MAPPS)

Space Foundation

United States Geospatial Intelligence Foundation (USGIF)

Urban and Regional Information Systems Association (URISA)

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 1500 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).