



Intelligence

ASIA

REPORT



11 – 12 JUN 2015

JW MARRIOTT, AEROCITY, NEW DELHI

CONVERGING

- GEOINTELLIGENCE
- ENGINEERING
- INFORMATION TECHNOLOGY

FOR NATIONAL SECURITY





Introduction

National security is a key concern for all nations. The need for more accurate and relevant geospatial data is increasing acutely. Geospatial technology plays an important role in converging IT and engineering for defence & security. With fast evolution of UAVs, LiDAR, and radar technologies, as well as airborne and surface sensors platforms, geospatial technology is developing aggressively and will have applications in internal security & police modernisation, public safety & disaster management, coastal & maritime security etc.

With the theme 'Converging GeoIntelligence, Information Technology and Engineering for National Security', the 9th edition of GeoIntelligence Asia 2015, organised by Geospatial Media & Communications successfully brought attention to the growing importance of geospatial intelligence to cater for national security. Experts from armed forces, police, research organisations, academia and geospatial community assembled to share their views on essential need to have a credible defence capability by converging GIS, information technology and engineering.

Inaugural Session



GIS is an evolving adoptive technology. GeoIntelligence helps us execute plans but only the correct information is required. It is vastly being used in military.

Lt Gen J S Matharu, VSM, Director General of Information System



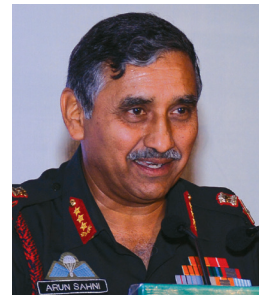
GeoIntelligence is the most accurate and relevant data. It plays an extremely vital part in disaster management.

Lt Gen KT Parnaik, PVSM, UYSM, YSM (Retd), Rolta India Ltd.



We need to identify a GIS enterprise that's tailor made for us and understands what we need. The seamless exchange of information is lacking in India and that the country needs a system robust enough to understand the requirements of the users.

Lt Gen A K Sahni UYSM, SM, VSM, GOC-in-C, South Western Command



Plenary Session 1: Geospatial Enablers for Defence & Security

CHAIRPERSON

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Geospatial technology has reduced cost and improved efficiency.

Lt Gen A K Sahni UYSM, SM, VSM, GOC-in-C, South Western Command



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There has been a tremendous revolution in IT sector in the past 10 years and crowd-sourcing has taken the centre stage. Positioning accuracy is an aphrodisiac. Geospatial workflows are homogenous.

Rajan Aiyer, MD, Trimble



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Digital technologies made the data creation simpler, faster and accurate.

Maj Gen PK Vachher, ADG - Military Survey, MOGSGS



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Dynamic world creates new intelligence challenges. Integration is very important factor because without integration, the entire decision making process is compromised.

Brett Dixon, National Security Lead - Asia Pacific, Esri



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Plenary Session 2 : IT Architecture for GIS

CHAIRPERSON



Spatial data is fast becoming a key factor in major decisions.

Lt Gen NK Kohli, AVSM, VSM, Signal Officer in Chief



GIS is at the heart of every global challenge and opportunity we face, therefore it warrants GEOINT to be at the heart of strategic decision making.

Anand Santhanam, Director Asia Pacific, BAE Systems



Networking of sensors, decision makers and shooters is essential. GIS plays a crucial role in AWACS, drones, radars, etc.

AVM P K Srivastava, AVM (Retd), L&T Ltd



We must leverage consumer and commercial spatial data for defence.

Brent Stafford, Director, APAC Enterprise Sales HERE Nokia



3D modelling of hilly terrains for security operations using airborne LiDAR and ortho-images.

Vinod Kumar, Indian Forest Service, Hisar, Haryana



Plenary Session 3: Cutting-Edge Engineering for Modern Geospatial Systems

CHAIRPERSON

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The trend is towards the multi dimension visulisation of geospatial data specially with the availability of digital terrain model data & light detection.

Lt Gen Sandeep Singh, AVSM*, SM, VSM, DG, Rashtriya Rifles



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Geospatial Intelligence is that it describes, analyses and visually depicts physical features and geographically referenced activities.

GIS has evolved from desktop to distributed GIS. It is evolving from mobile GIS to web GIS and now onto cloud GIS.

Radm S Kulshrestha (Retd)



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The importance of cutting-edge engineering is that it allows use of same map by different users with each ones specific requirements e.g. 1. Aartillery fire controller to plot, predict and correct gun fire. 2. Tank commander to locate an enemy counter fire ambush without cross information clutter.

Brig R K Bhonsle (Retd), Security-Risk.com



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The use of geospatial technology has revolutionised the way in which the armed forces operate. Technological superiority continuous to be a corner stone of national military strategy.

Dr C D Murthy, Sr. Divisional Director, Defense & Security, Rolta India Ltd





12 JUNE 2015





Participants

- ▶ Ashok Dohare, IPS, ADG - MP Police
- ▶ Piyush Trika, Senior Data Specialist, Pitney Bowes
- ▶ Col Richard Sundharam (Retd), General Manager – Defence and Homeland Security, Esri India
- ▶ Maithili Sharan Gupta, IPS Special DGP(Railways), Bhopal (MP)
- ▶ Dr B N Ramesh, IPS, Director/IGP, CRPF Academy
- ▶ Rajeev Krishna, IPS, IG, Border Security Forces
- ▶ Shailesh Shankar, Manager, Sales Engineering, DigitalGlobe

Key Points Discussed:

- Incorporation of the convergence of authenticated technologies and other technologies available at hand is necessary for modernisation of the law enforcement agencies.
- Web-based monitoring (railways), QIRT teams need to be well equipped with laptops, data cards for internet, computerized criminal profile data, passenger details and details of offenses. Railway criminals have not been mapped geospatially which is a drawback.
- There is a need for highest scale digital geospatial information
- GIS is being used actively by Border Security Force. It is being used in presentations, briefings, terrain analysis/operational planning for border management and LWE operations.

Exclusive Forum: Public Safety & Disaster Management



Participants

- ▶ Lt Gen N C Marwah PVSM, AVSM (Retd), Member, National Disaster Management Authority
- ▶ Gp Capt (Dr) AV Lele (Retd), Institute for Defence Studies and Analysis
- ▶ Lt Col G Saravanan
- ▶ Dr M R Bhutiyani Director, Defence Terrain Research Laboratory
- ▶ Wg Cdr S Aparajit SC (Retd)
- ▶ Dr C R Bannur, Sr. Divisional Director, Defense & Security, Rolta India Ltd
- ▶ Sunil Dhar, Scientist F, Digital Terrain Research Laboratory
- ▶ Brig Adrianwalla (Retd), Mahindra & Mahindra
- ▶ Rahul Saxena, Scientist E, India Meteorological Department



Key Points Discussed:

- There is a need for communication equipments and updated maps. GIS, GNSS, remote sensing and mapping are needed to overcome disaster related challenges. Satellite imagery helps understand pre- and post-disaster situations.
- Neogeography that comprises of open source, dynamic mapping tools, mobile data collection etc. is essentially about people asking and creating their own maps.
- There are three key components to crisis mapping: information collection; visualisation and analysis.
- The crowd, that collects the information and cloud that stores the information, are two things that are crucial for crowdsourcing.
- Geointelligence should be used to maximize use of trained manpower.
- 24x7 emergency assistance at site, for employees and spouse whether at work, home or on road in Greater Mumbai region for: medical emergencies; vehicle accidents or incidents; Physical assault or threatening are now available, such as Mahindra In Time Response and Assistance.
- Government change / leadership change is leading to: drying up of funds for AMC's, upgrades & upskilling; loss of enthusiasm in personnel; new ideas for projection of 'work done' as against running the existing systems well.
- Some of the ways to deal with landslides include creation of landslide management maps; creation of landslide hazard zonation maps; development of early warning System for different landslides of India etc.

Technical Session: Sensors & Data Analytics



Participants

- ▶ Lt Gen Rajesh Pant AVSM, VSM (Retd)
- ▶ Shailesh Shankar, Manager, Sales Engineering, DigitalGlobe
- ▶ Dr Rao S Ramayanam, Vice President Sales, Middle East, Africa and South Asia, Urthecast
- ▶ S. Raghavendran, GM Technical (GIS), Pixel Softek Pvt. Ltd.
- ▶ Lt Col Haridas M, Senior Fellow, Centre for Land Warfare Studies
- ▶ Lincoln (Raj) T. Satkunarajah, Chairman, Global Resources Management Consultancy Inc





Key Points Discussed:

- Security related incidents always have a spatial component associated with it.
- Geospatial Predictive Modelling is a process for analysing events through a geographic filter in order to make statements of likelihood for event occurrence in the future.
- The dual-band SAR will be able to image in any weather conditions and penetrate cloud cover. The back of the sensor is mounted on individual, high-precision 3-axis robotic arms for pointing at locations of interest.
- “Geospatial data is power” and a key component that drives any geointelligence solution.
- To fully realize the capability and benefits of geographic information and GIS technology, systems need to be interoperable, even though different agencies are on different GIS platforms and therefore file formats and datamodels.
- Network centric warfare, manoeuvre warfare, counter terror operations, counter-insurgency operations and covert operations all stand to gain from geospatial predictive analytics since it offers options and permutation/ combinations to decision makers to firm on plans and strategies.

Technical Session: Coastal & Maritime Security



Participants

- ▶ VAdm AG Thapliyal, AVSM*, Ex-DG Coast Guard
- ▶ RAdm S Kulshrestha (Retd)
- ▶ Daniel Forsberg, Marketing Director, SAAB India Technologies
- ▶ Cdre M Bhargava (Retd), L&T
- ▶ N. Muruganandam, Dy. Director General, Directorate General of Lighthouses & Lightships

Key Points Discussed:

- Maritime Domain Awareness(MDA) is the effective understanding of anything associated with the global maritime environment that could impact the serenity and safety of a country. MDA's core process is the monitoring of vessels and cargo. Strategic MDA requires a good perspective and capabilities at the highest levels of analysis, intelligence and policy.
- The Navy Way, sheds light on the 'Make in India' initiative, which aims to encourage foreign OEMS manufacture products in India-not clear
- CARABAS system is a system that has been designed to enable superior foliage and camouflage penetration (FOPEN) capabilities, wide area surveillance and automatic target detection. CARABAS can perform target detection under foliage, target detection under camouflage and area mapping under foliage.



Participants

- ▶ Lt Gen Surinder Mehta, AVSM, SM, VSM** (Retd)
- ▶ Dr M K Munshi, Chair, OGC India Forum
- ▶ Brig A S Nagra, Head Business Development, Defence & Security, Intergraph
- ▶ Rajathurai.M, Bentley Systems, India
- ▶ Lt Col Deepak Martin & Maj Sarat Chandra Susarapu, MCEME, Secunderabad
- ▶ Shivendra Singh, HERE Nokia
- ▶ Manjunatha D R, Member(Research Staff), Bharat Electronics Limited

Key Points Discussed:

- The earlier generation of UAVs was primarily used for surveillance. Military UAVs are used for surveillance, direction of artillery fire, gathering Electronic Intelligence(ELINT), lasing target, for fighter aircraft and Post Strike Damage Assessment(PSDA)
- CIA has been using UCAVs over conflict zones in Afghanistan, Libya to target insurgents, munitions dumps and hostile facilities.
- In the civilian space, UAVs, UAS, drones have been used in wide range of application. These are aerial surveillance of pipelines, electric transmission line, highway patrols etc.
- Social media is a geospatial enabler for defense and security.
- During the Kashmir floods social media played crucial role in tracking people, hashtag created to locate missing people.

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- Bentley Systems
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- Border Security Forces
- CAMS
- Centre for Land Warfare Studies
- CRPF
- Defence Scientific Information & Documentation Centre
- Delhi Police
- Director General of Information System
- Directorate General of Lighthouses & Lightships
- Director General Quality Assurance
- DigitalGlobe
- Defence Image Processing and Analysis Centre
- DIS & PS
- DIT
- Defence Research and Development Organisation
- Defence Terrain Research Laboratory
- EFY Group
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- Embassy of the Union of Myanmar
- Embassy of the United States of America
- ENC - Integrated HQ MOD
- Esri India
- Genesys
- Global Resources Management Consultancy
- Harris Communications Systems India
- HERE - Nokia
- Hexagon
- Himachal Pradesh Police
- HP India
- HQ Technical Group - EME
- Haryana Forest
- IEISL
- India Meteorological Department
- IMR
- INCP - HQ IDS MOD
- India Safe
- Indian Air Force
- Indian coast Guard
- Indian Maritime Foundation
- Indian Navy
- Inland Waterways Authority of India
- Institute for Defence Studies and Analysis



PARTICIPATIVE LIST (list of participation)

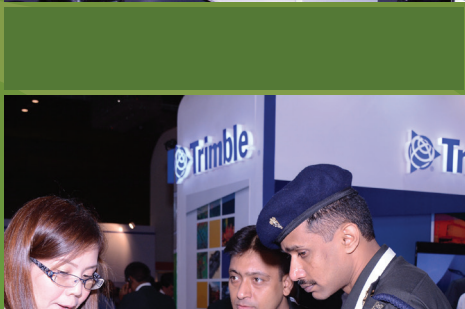
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 - Signals Officer in Chief
 - Signals Staff
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 - South Western Command
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 - UrtheCast
 - USDAO
 - Uttarakhand Police
 - Uttar Pradesh Police
 - Vliz Experts India Pvt Ltd
 - Weaverbird Engg. College
- and many more...**



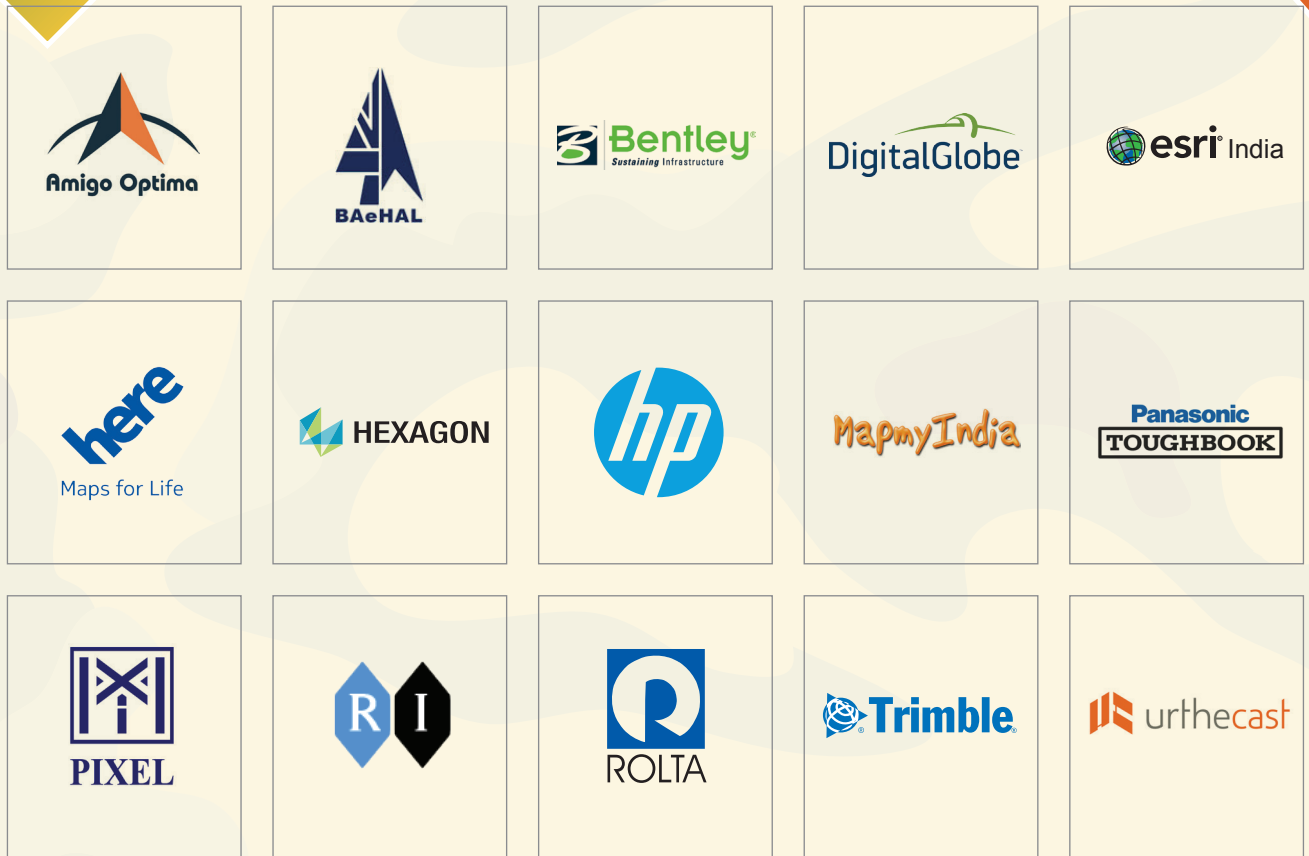
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