

Opening Address

Mukund RAO, President, GSDI

1. GREETINGS

Honorable Prime Minister Your Excellency Ahmed Nazif; Honorable Minister for Water Resources and Irrigation Dr Mahmud Abu-Zeid; Prof Holger Magel, President of the Federation of Surveyors- FIG; Dr Ahmed Fouad El-Sheikh, President of Egyptian Committee for Survey and Mapping; Dr Hisham Nasr, Chairman of ESA and Vice Chair of the Local Organising Committee; Delegates to the FIG and GSDI-8 Conference; Distinguished Invitees; Ladies and Gentlemen.

[In Arabic] **NURAHAB BE AL-GAMIEA. FI MISR AL-BALAD AL-AZIMA AL TERIKHIYYAA. WE MEDINAT AL-KAHIRA AL-GAMIL.** “Greetings to all of you – Egypt is a great and historic nation and Cairo is a beautiful city”.

It is a pleasure for me to be here with all of you and I bring to you the warm regards and greetings from the Global Spatial Data Infrastructure Association.

2. EGYPT AND CAIRO

From “Pharaohs to Geo-informatics” – an excellent and most relevant focal theme for this wonderful Conference in Egypt. Egypt has been the cradle of history and human culture. It was here that papyrus was discovered - revealing a civilization which bears witness to man's resourcefulness and ingenuity. There are many famous contributions from Egypt - Surgery (The first Surgical papyrus); Mathematics and Fractions; Medicines; Surveying; Construction; Languages and Writing; and of course the awe-inspiring images of Cleopatra, Sphinx, young Tutankhamen's mummy – many of which even fascinate all societies even today. Trailing history to see the pyramids and the history of pharaohs will be as interesting as the technical sessions of this Conference.

3. ABOUT GSDI

Let me explain a bit of GSDI Association and its activities. The GSDI movement started in 1996 through the organization of the 1st GSDI Conference in Bonn, Germany. From then on, it has taken 7 years and 6 Conferences for the GSDI Association to be established and incorporate GSDI as a non-profit body in late-2002 –followed by the first election process in 2004.

The mission of the GSDI Association is to provide a forum for the global spatial data community to advance spatial data infrastructure concepts; encourage and enable development of local, national, regional and global spatial data infrastructures and promote the informed and responsible use of geographic information and spatial technologies for the benefit of society. This Mission will be achieved by GSDI through an administrative structure of an apex-Council, an executive Board and 6 Committees and Working Groups.

4. GSDI ACHIEVEMENTS

As an Association, we are pretty young - just about 24 months old. We are now a group of ~30 Full Members and ~30 Individual Members but enjoy the confidence and support of a large number of SDI Professionals across the world – gained through 8 successful Conferences organized all over the world. Over the past year, we have made steady progress.

First and foremost, we have institutionalized the process of international GSDI Sponsored Projects which are funded, through the GSDI Association, by Members and Donors. These projects are important in creating a “critical mass” in many nations/agencies to undertake GIS activities; to spread the message of SDI and showcase and demonstrate how spatial technologies would be of use in different parts of the world – say, in Africa, Asia, South America and the developed world.

The second achievement has been in developing and hosting an innovative and imaginative GSDI Web-site/Portal, which provides a one-stop information about GSDI. The Portal allows users to log onto electronic bulletin boards, e-conversation boards, join different GSDI-Discussion lists and groups, access reports and documents and virtually blog oneself into the SDI community across the world. We almost have more than 2000 people registered to the portal activities.

One other achievement has been in the GSDI interface with other international bodies.

- We have linked with the World Summit on Information Society - GSDI has been accredited for the WSIS meetings. We aim to be able to bring “recognition and respect” to spatial information amongst the broader “Information domain” and its use for society - focusing on the benefits from images, maps and GIS technologies and ensuring that SDI finds its rightful place in the WSIS reports/recommendations.
- We have also interfaces with the international GEO Forum - Group on Earth Observation that is working on bringing to position an international Global Earth Observation System of Systems (GEOSS) – especially in the areas of disaster reduction; environmental monitoring and societal enabling – where SDI can play a dominant role beyond images.

The electronic GSDI Newsletter is yet another major activity. We have also initiated regional SDI Newsletters for Africa, Asia and Pacific and LAC regions. The monthly Newsletters are widely circulated electronically and focus on important events, information, documents on SDI. We have also prepared a draft GSDI Strategy and Action Plan – that has provided us a framework and a set of actions that can be initiated.

In the coming days the Association will focus on increasing its scope of activities. We aim to encourage Members to bring out good publications, reports, technical documents – all of which can bring focus and visibility to SDI and its Applications or Benefits to Society. A very important focus will be on human resources development and capacity-building – training and education in the field of SDIs – where many agencies can play an important role.

5. WHAT ARE THE CHALLENGES AHEAD OF US FOR SDI?

It was just 40-50 years back that some students of computer science and geography began to look at maps (nay, spatial data) through the lens of modernity – a computer. They began modelling maps as tools for visualization and designed new geographical concepts for social change. Now, so much is happening in spatial technology that it is an integrator of many technological elements and is impacting concepts of geography itself.

The world is now open for spatial technologies - computer-enabled smart mapping and database tools that are doing what spreadsheets did long ago for finance and statistics. If you are addressing disaster management; drinking water mapping; landscaping of a layout; studying bird migration patterns; predicting a town's water usage; conserving heritage sites; reapportioning a legislative district or even battling terrorists – then, in all probability, there would be some spatial technology behind all of these.

Imaging technology forms the core of these spatial technologies – what with advances in imaging providing near real-time high resolution images – both in colour and panchromatic. There are going to be almost 15 satellites providing images – a major spatial input to SDI. Similarly, Surveying, Mapping and Cartography, though fundamental to spatial technology, are getting re-defined with the emergence of most-modern and sophisticated photo-grammetry and map-making tools. Precision positioning technology, through satellite based positioning and navigation, are yet another major technology area – they provide the precise coordinates not only for correcting and referencing the spatial datasets with one other but also a stream of coordinates that can become objects in a spatial database. There are other spatial data acquisition technologies include Lidars, Ground Penetrating Radars etc which are emerging as sources of spatial data. Thus, I foresee a variety of spatial data that will have to be handled.

Spatial Databases and Repositories are using the ingenuity of representational algorithms and computing power to store, retrieve and integrate large volumes of varied spatial datasets. Standards are recognized as critical area for SDI – the more you standardize the content, formats, metadata, exchange etc of spatial datasets the more “seamless” and universal is the Spatial Database – thus enabling even a novice user to utilize it and also making it amenable to most advanced access, processing and integration. Web and internet technology is now driving spatial technology and is enabling web-mapping and terra-servers of maps and images of the Earth, organised in a seamless manner, accessible.

Modelling and integration is the heart of spatial technologies. Integrating standardized spatial datasets to combine, super-impose, fuse, visualize and provide new perspectives of spatial information – hitherto not at all possible is now driven and limited only by humankind's imagination.

But with all this technology thrust it is the use of the SDI technologies that will sustain it for a long time. Of course, the potentials of applications of SDI are high and it is essential to apply the technology and build successful case-studies. Nor should we forget that not all knowledge will spew forth from a spatial technology tool. I give one example here. In a drinking water assessment being conducted in a state, using GIS tools, showed the critical need, for instance, to de-silt and reclaim local village tanks – which are the nearest source for water to the villagers. After the study was done and the report was published and distributed, one could

hear the wise villager murmur under his breath - “they needed a satellite image or a GIS to tell that?”

The need of the hour is to master spatial technology but not get over-whelmed by it.

It is the user that must drive SDI and its development. Understanding user needs and providing the right solutions will require a good interface between different communities – SDI technologists and user groups. The potentials of use of SDI and its benefit to society is certainly high. A variety of areas can be mentioned as examples – right from land management, taxation, civic infrastructure, agriculture crop planning, environmental monitoring, Health-GIS, heritage area conservation, water resources and irrigation planning and many, many other areas. Of course, the user groups, ministries, departments etc are well-endowed and have the expertise to take right decisions – provided they have access to a foundation SDI. Developing a foundation SDI that enables the user groups to benefit from all this is extremely important.

In the present context, there is one important area where SDI can impact directly and to a maximum and satisfying extent – to support Disaster Management - where SDI has a vital role to play. Needless to say, all phases of disaster management require good and reliable data and information from a variety of sources – much of it is preferred in form of maps, images and charts. The lack of information, and, if available, the lack of access, brings “frustration” and more misery to the managers and to the people. This, I can say from direct knowledge during the recent Tsunami that hit the South Asian region –there was “glamour” for good maps and GIS data but in many areas there was none. Images from satellites and a good spatial database can provide the much needed assessment and analysis for a disaster – in terms of extent of damage, loss to assets and properties and also help in a systematic recovery of administration in disaster areas. We as a SDI community must work and focus towards this important societal requirement.

People talk of a Digital Divide – but we should not create a new “Spatial Divide”. On the one hand there are nations that are far ahead – talking of MapServers, Registries, Metadata Search, Repositories, Geo-databases and many other advanced concepts – and even implementing them. On the other hand there are nations that just need plain good maps – a “picture” of their area or activity and at the most a GIS application – to address a critical problem of their society. Then there are some nations in between – they have maps, they use GIS but are still to get into the SDI “culture” – they understand its potential but are unable to garner the national support for a NSDI. So, THEN, there is a wide gap amongst the core capability in SDI and this wide gap is in not necessarily related to the wealth of a nation. The latter 2 groups hardly relate to the advanced concepts eschewed by the first group and are way behind the advanced nations. But then many of the Members of these Groups are imaginative and innovative in their traditional knowledge and thinking – give them an opportunity with SDI and they will slowly work a good system around. It is these groups that will sustain and justify the SDI technology and its use – for they have many simple and complex problems to address for their societies AND NEED THE SDI SOLUTIONS MOST. Of course, one can even see a manifest of this extreme variability amongst the various agencies at the lower level even within a nation. This important aspect must be recognized by one and all – while we must create advanced solutions let us not loose sight of what the large part of the world actually requires. Let us make SDI a “collective good” – but then the “good” must not get

Opening Ceremony

4/5

Dr. Mukund Rao, President of GSDI

Opening Address

From Pharaohs to Geoinformatics

FIG Working Week 2005 and GSDI-8

Cairo, Egypt April 16-21, 2005

defined by the HAVEs but must be inclusive of the HAVE NOTs too. I would like to echo this message to all of you - let us not create a “Spatial Divide” but, right from beginning, bridge the divide effectively.

6. GSDI-8 CONFERENCE

And that brings me to GSDI-8 – which aims to focus on society and will address issues that will help bridge the gap. GSDI-8 is different from previous GSDI Conferences in many ways – first, we are joining with FIG – thus providing a broader canvas of technical sessions and networking opportunities to the SDI community. While “From Pharaohs to Geo-informatics” has been selected as the overall theme of the joint conference, GSDI-8 would focus on SDI in an Information Society – thus bringing to fore issues and perspectives of how SDI would play a role in an Information and Knowledge Society. I am sure that the sessions will be very interesting and lively and delegates will get the best of both worlds.

On behalf of GSDI and its many partner-bodies, I would like to express our gratitude and thanks to Honorable Prime Minister Your Excellency Ahmed Nazif – for giving us the encouragement and support by his august presence here. GSDI also thanks Honorable Minister for Water Resources and Irrigation Dr Mahmud Abu-Zeid – who is also here with us. GSDI wishes to thank its colleague – FIG – especially its President - Prof Holger Magel for a wonderful opportunity to work together. How do we express our gratitude and appreciation to 2 important personalities - Dr Ahmed Fouad El-Sheikh, President of Egyptian Committee for Survey and Mapping and Dr Hisham Nasr, Chairman of ESA and Vice Chair of the Local Organising Committee – except to say a big THANK-YOU, YOUR TEAMS HAVE DONE A WONDERFUL JOB. Through you, we have gained the warmth and friendship, so typical of Egyptian people, of a large number of people who have worked hard to make this Conference a success. It is a wonderful experience to be here with all of you and GSDI appreciates all of you.

Hopefully, with this Conference we shall be able to help and enable societies to establish SDI and derive benefits to address their societal and developmental problems. With the focus on SDI here, we hope that ESA will be able to embark on the use of modern tools and techniques and initiate a programme for a SDI for Egypt. I am sure that the Pharaohs are silently attending this Conference and are feeling happy and satisfied that this SDI Conference is in Egypt – expounding modern concepts of what they founded almost thousands of years ago.

Wishing you all a very fruitful and successful Conference and also a pleasant and memorable stay in Cairo.

Thank You!

CONTACT

Mukund Rao, President, GSDI
Email: mukundr@blr.vsnl.net.in

Opening Ceremony
Dr. Mukund Rao, President of GSDI
Opening Address

5/5

From Pharaohs to Geoinformatics
FIG Working Week 2005 and GSDI-8
Cairo, Egypt April 16-21, 2005