

**Points for the address of
Shri. Kapil Sibal, Hon'ble Minister for S&T and ES
at the Map World Forum 2009
on February 10, 2009 at Hyderabad
(time : about 10 minutes)**

1. Shri Hamid Ansariji, Hon'ble Vice President of India, His Excellency Shri Narayan Dutt Tiwariji, Governor of Andhra Pradesh, Dr Narayanan, Shri KK Singh, Dr Jane Goodall, Dr Prahlad, our esteemed guests, ladies and gentlemen, it is truly a privilege for me to address this very august gathering. I recall that two years ago when I had addressed the first Map World Forum, I was sanguine to predict that the Forum would emerge as a vibrant platform for the convergence of diverse stakeholders of the geospatial community and I believe this expectation has come true with the outstanding participation that we have here today.
2. Over the past five years, we in India have come a very long way in geospatial technologies applications although I must admit that we are presently just touching fringes of its enormous potential. But with the unprecedented pace of economic development witnessed in the country till recently, the demand for accurate and up-to-date maps and use of geospatial products has increased exponentially. The global economic slowdown during the later half of 2008 has been disastrous for several sectors of our economy. But I believe that the geospatial industry will not face such a crisis as most geospatial technologies based projects are large in nature and public sector based and thus have pre-allocated budgets. Other mainstream businesses also help leveraging geospatial technologies to cut costs and beat competition in their struggle to survive the meltdown. Also with demand for location-centric services, and applications of geospatial technologies getting enlarged to newer sectors ranging from infrastructure and disaster management to national security and law enforcement applications, I do not see any significant slow down in this sector. Besides, we in India also have good prospects of capturing a significant part of the outsourcing market especially from Europe if we play our cards right.
3. Why do I have this confidence? It arises from the fact that after several years of debate within the government we have been able to muster up significant policy initiatives like the Map Policy, establishment of a National Spatial Data Infrastructure (NSDI) and now the Survey of India Bill and the National Geospatial Data Authority Bill, that are in the offing.
4. Also as you well know, today consumers require more than mere maps. They require customization of various types of information and data. There is thus tremendous scope for 'value addition' to the raw or core geodetic maps churned out hitherto by mainly governmental agencies, be it the Survey of India or the National Remote Sensing Agency. Further, the adoption of 3D Lidar instruments is driving the creation of very accurate and detailed 3D construction, terrain and urban models. Lidar technology is thus an important breakthrough for low-cost mapping, more so as it provides data for various analytical applications in utilities, urban planning and natural resource management where precise 3D data and feature details are essential. The recent incidents in Mumbai have also brought to focus the requirement of high resolution of 3D data of the structures of public buildings which will also be invaluable in dealing with other disasters and certain emergency situations. I believe that private players can create and add value to these newer forms of customization techniques.
5. Today space based and aerial platforms and techniques directly take computer amenable "digital images" instead of the conventional analogue maps. India has an undisputed superiority in IT and in terms of telecom technologies we are current with the world. The pre-eminent position that India has in these two technologies has not been taken advantage of in the geospatial sector so far and the opportunity cost of not having this convergence has been quite high. We now need to build upon this factor to our advantage.

6. The changes in Map Policy that we brought about in 2005 were welcome in themselves and the operationalizing of the NSDI is proceeding ahead albeit, a little slowly. It is undoubtedly a difficult task, as much of the requisite data and meta data are scattered amongst various government departments and agencies. A couple of months ago I launched the 'India Geo-portal' under the NSDI. The Geo-portal I am sure will help numerous users in Government, Industry, Business, and Academia to discover and access the metadata, to begin with, from various National Survey Agencies. I am really delighted to say that different national survey agencies have come together to share information about their data sets from a single window mechanism of the Geo-portal. Our efforts to establish NSDI have also galvanized several State Governments to set up state level Spatial Data Infrastructures as well. The Delhi Government has initiated the Delhi State Spatial Data Infrastructure (DSSDI) for improving access to geospatial data and services for the benefit of a large multitude of sectoral end-users from Land Administration, Police, Transportation, Public Works Department, etc. The opportunities for geospatial applications in the public domain are thus immense and require to be tapped into.
7. But I also feel that we need to do much more to realize the opportunities to snatch an advantage. For this, we need to have an independent 'regulator' for geospatial affairs as we have for telecommunications or insurance or even the stock markets. Due to increased demand for geospatial data and participation by private industry, I feel a need has arisen now to have a Geospatial Data Authority in this country which will provide a level playing field for both government and non-government players. We are actively considering to bring in a National Geospatial Data Authority Bill which will enable the users to facilitate access of requisite data and create the desired facilitative ecosystem for proliferating the applications of geospatial technologies more pervasively.
8. At the same time, I must admit that we have been unable to keep pace in producing the professionals required in numbers and quality for the envisaged growth in the sector. This is basically due to the wide divide between academic teaching and the learning required of professionals in industry including the government sector. Universities need to expand their course offerings to infuse geospatial knowledge in such specializations as architecture, civil engineering, transportation, etc. Also, the present day teaching infrastructure in Universities is inadequate both in coverage and content. We in the Ministry have launched specialized courses at several universities in the field of Geo-information Science & Technology, so that students graduate from these universities with adequate capabilities. It is thus the right time for us, the government and more importantly, the industry to come together to create the requisite manpower at several levels. I now invite you to initiate proposals in this endeavour in a public-private mode with my Ministry.
9. I do recognize that many of the geotechnologies we use today are new and have only been developed in the last two decades or so. Their development has led us toward a pathway that enables higher and higher levels of data integration and greater understanding of both natural and man-made processes, spatially. We do not understand them all and one might even suggest that only recently have we begun to appreciate the scales at which they occur and the durations of their activity. We have learned quite a bit about the planet and its ecosystems, both physical and biological - but we also have much more to learn and understand. The geospatial community can play a vital role in global warming research by helping to make a connection between climate change and individual people across the globe. The best way to accomplish this is by making geospatial data, satellite imagery and derived information more easily accessible and understandable to the general public, so that they can see the impact that climate change has at the local level. This will help create a worldwide network of global citizens who have access to geospatial information and know how to apply it locally to influence positive change.

10. I recently read about the launch of Windows Live Local Service in USA. It provides 45 degree bird's eye view of six major cities captured by low flying planes and then integrated with satellite based and road maps to create 360° panoramas, enabling people to experience in a 3-D format of how it would appear. The usages of such a service are limitless ranging from buying a house to insuring a property or to just taking a vicarious vacation. My dream is to have such a service for six of India's metropolis available in the next three years.
11. Hitherto, geospatial technologies were considered to be highly specialized with their own hardware, software and data structure and more notably a closely guarded 'community'. But things have now changed. What I find most interesting is that current geospatial innovation is being driven more and more by users, especially consumer based mapping. There have been other remarkable developments in data capture technologies and in the range of their applications that have brought about integration and convergence of several technologies. I am confident that with the convergence of technologies and user driven developments, the future holds a great promise for geospatial industry in the country.
12. It has been a signal honour for me to have attended this World Map Forum and share my views with you. The GIS Development deserves special congratulations in its relentless efforts to bring cartography into the centre-stage of planning at every level. I am grateful to His Excellency, the Vice president of India for his gracious presence in this forum and which, I am sure, will underline the importance and significance of this event. While thanking my friends from the media present here, I request them to give prominent coverage for this event. To foster and nurture a flourishing geospatial industry in the country, the press has an important role to play. Ladies and gentlemen, I thank you for a patient listening

Jai Hind.