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I predict an explosion in the volume of multidimensional data, and some very smart people will inevitably bring that together on the Internet to create a virtual multidimensional world online that can be used for a million different uses. That will provide a foundation for many of the futuristic devices we see emerging now, such as Google Glass,

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world.

Geoimaging can be used in efforts that can help end hunger in areas of the world where malnutrition is a perennial problem. The technology can be used in public health initiatives that help control the spread of disease, reduce infant mortality and improve the quality of people's lives. It can be used to monitor and prevent pollution and destructive environmental issues. It can play a major role in crime prevention and increasing public safety.

Right now, we as an industry are just at the beginning of the process of unlocking those applications and helping fulfill the potential of the “science of where,” which leverages geospatial technology and geoimaging data as a foundation for fascinating new ways of understanding the world and improving our lives. The only limit to the impact of geospatial technology is our imagination and our commitment to spreading the word about how powerful this technology is.

Challenges

The internet bandwidth of present days is not wide and fast enough yet in most cases to handle the massive amounts of data that geospatial sensors are generating now. The problem will only intensify in the future as the volume grows and grows. The internet is our “virtual information highway,” and it needs wider and faster lane in order to geospatial-enabled “smart gadgets” to navigate and communicate.

Improving technology adoption

KISS is king (aka Keep It Simple, Stupid). Technology adoption in general improves as it matures and becomes faster, better and more economical... but what really drives adoption among consumers is an easy-to-use interface that allows them to take advantage of the sophisticated technology underneath. Simplicity and usability are the key.

I think the trend will be toward simpler and more intuitive interfaces powered by sophisticated geospatial technology and a huge amount of geoimaging data behind that simple GUI. Eventually that will evolve into interfaces that are driven by voice, eye movement or even thought.

Dealing with Big Data

Big Data is a relative concept that has been with us for decades. It just changes numeric scale over time. Once kilobytes was big. Then came megabytes. Then giga, tera, pita... and let's not forget googol size (not Google). Googol is a large number that equals a 1 followed by 100 zeroes.

What is interesting to me is not so much

the fuss about Big Data but data fusion of all these collected worldwide massive amounts of data that could be used to create ever increasing knowledge that with isolated data sets could not be otherwise obtained, part of data mining. For now the industry is gearing up for a glamorised 1970's IBM-like computer centre with interconnected giant computers having thousands of “dumb” terminals. So what's new?

What will truly drive the use of geospatial technology is Internet-enabled mobile devices that have powerful apps that seem like they are straight out of Star Trek. Now that's exciting. Beam me up, Scottie! ■



Super Wang
CEO, Supergeo

Key transformational trends

For a long time the governmental information was locked up. Since many countries adopted the freedom of information legislation now, citizens around the world have the right to access the documents such as cadastre disclosed by the governments. Open Government would bridge the gap between people and their government, bringing geospatial industries considerable benefits to develop more profitable value-added services and mobile applications with greater openness to meet market demands.

The development of technologies facilitates the rapid collection of data. Therefore, how to effectively manage and analyse growing big data becomes



To succeed, companies would have to innovate faster than their competitors and be better prepared for the future. Supergeo will surely keep developing cost-effective and highly scalable GIS systems to assist governments, organisations, and general users in supporting their geospatial projects.



the key component of competition and innovation. GIS allows us to reveal the complete value of big data, helping users solve various kinds of operational issues.

In the coming future, Cloud Computing remains to play an important role of assisting users in increasing their GIS capabilities from anywhere, anytime. In 2013, we have successfully assisted Taiwan government in establishing Taiwan Geospatial One-Stop portal (TGOS) and NSDI, which allows government sectors, private enterprises, and general users to effortlessly publish maps and geospatial data as a variety

of GIS services and better interact with their data. See the trend of cloud GIS; Supergeo focuses on developing a cloud GIS platform or applications, helping users discover how their organisations can benefit from moving into cloud.

Challenges

It was difficult for scientist to obtain and model more realistic and accurate information about the subsurface of the Earth before. Thanks to the advancement of technology, 3D technology has brought new possibilities and reliability for generating 3D perspectives of world to visualise and analyse subsurface geology and greatly enhance the understanding of the data.

However, to advance GIS from 2D to 3D environment is a huge challenge. To respond to this challenge, Supergeo strives in developing an approach for 3D visualisation, ensuring that innovative technology can be leveraged to support industries, public services etc. over long terms. A new product is under developing to combine GIS analysis and 3D visualisation as a revolutionary solution.

Improving technology adoption

In an endeavor to improve our services and deliver greater use experience of using SuperGIS technologies, we simplify access to GIS data and services, as well as provide users with more flexible data manipulation capabilities.

Nowadays, increasing climate and environment changes have created great impacts on our living environment. It is a pity to see that GIS technologies today could not be well employed by many governments in disaster planning.

In general, GIS can be used in any part of disaster management including prevention, preparedness, response, and recovery, helping the emergency personnel implement precise activities with more informative information to respond efficiently to an emergency and minimise serious damage and financial losses. We are preparing more of the managerial solutions to reduce damage and loss for all users.

Dealing with Big Data

Big Data can be valueless without

properly analysing and managing. Geographic Information System (GIS) delivers a variety of useful tools to help users access, integrate, create, and even share large volumes of analysed data with anyone who need it.

In SuperGIS technologies, we have been researching for more convenient approaches to data generation, management, and sharing. Organisation now can deploy SuperGIS Server technology to help server administrators distribute, process, manage, and view big data and related GIS services efficiently. Moreover, geoprocessing service in SuperGIS Server is also available to effortlessly create user interfaces with analysis functions without writing a line of code and therefore achieve greater time-saving on Web customisation.

In addition to ensuring a high level of data quality and accessibility for big data analytics applications, GIS allows users from different fields such as business analysts and researchers to use big data to drive favorable outcomes with improved decision making.

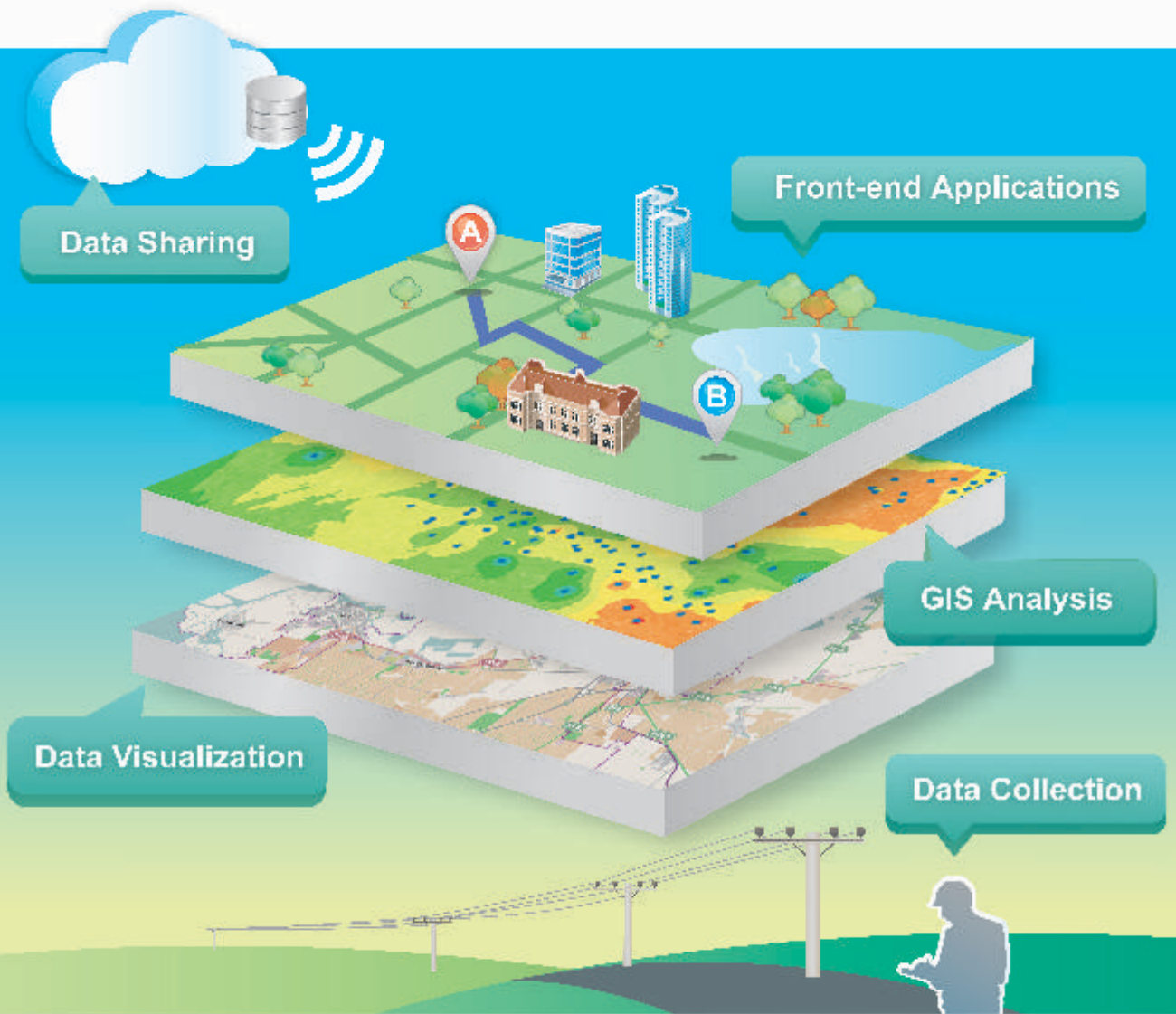
Competition

As emerging market economies have grown, it not only generates potential business opportunities globally but also brings new entrants to the industry. In these developing countries, governments sometimes need application-driven approaches to their specific geospatial applications, which are unable to be offered by the major providers of GIS software.

Due to growing demand for affordable and reliable GIS solutions, it provides young geospatial solution providers like Supergeo with an opportunity to penetrate into new markets and challenge larger incumbents. In this respect, flexible services and reasonable pricing would be the key to retaining our competitive advantages.

To succeed, companies would have to innovate faster than their competitors and be better prepared for the future. Supergeo will surely keep developing cost-effective and highly scalable GIS systems to assist governments, organisations, and general users in supporting their geospatial projects. ■

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