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GeoInformatics provides coverage, analysis and commentary with respect to the international surveying, mapping and GIS industry.

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Looking Ahead

The news on current developments in the financial sector are inescapable in the mass media. The current financial crisis will have serious consequences on the world economy, and that means also for geospatial companies. A recession is on the way. However, this is not to say that everything will be bad after all. Seen from the positive side, a recession will also have a purifying effect and financially unhealthy companies will be forced to reorganize and make sure there is discipline. After a recession, there will be space for change.

For now, geospatial companies need to think about their strategy to cope with the upcoming recession. Those who are able to look ahead and take action now, will win in the long run. In this issue you will find no less than three columns which deal with this issue. First of all, there is a column by ESRI President Jack Dangermond, who writes about the use of GIS for environmental and sustainability issues. Andy Coote's contribution is about the need for the INSPIRE program. INSPIRE is not always well understood by people who are not directly involved with it and I get some very diverging opinions when I discuss the need for the programme with them. So, a column from the INSPIRE camp is more than welcome. Finally, I'd like to introduce our new columnist James Fee, who is a GIS developer, analyst and consultant. His opinions are highly regarded by many people in the industry and we're very happy he will be contributing his views for GeoInformatics from now on.

In this issue, you will find an overview of all the current trends in an extensive analysis on the recently held INTERGEO Conference and Trade Fair in Bremen. Another extensive review from the Racurs conference about digital photogrammetric technologies, written by Gordon Petrie is also not to be missed. In our Neogeography series, Florian Fischer held an interview with TeleAtlas about the company's global content strategy.

Judging from our subscription base for the digital GeoInformatics, we see that our readership is expanding more and more, making GeoInformatics the best resource for GIS, surveying and mapping professionals around the world. We are looking for your ideas and articles, so please look ahead with us and get in touch!

Enjoy your reading!

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LPB on hike

other users. Ideally you should select a channel that is not being used by others because multiple transmissions on the same channel will cause poor reception by all users. One useful tool for determining if the channel is already being used is to simply look at the base radio's Rx LED. If it is blinking somebody is already using this channel. An even better solution is using a radio firmware tool called AutoBase. When selecting this option the radio will methodically scan every programmed channel and automatically select the quietest. The base radio displays this channel to the surveyor who can then select this channel on his rover radio also.

It is well known that radio signals transmitted on the same frequency will interfere with each other. But it is less known that these signals can be generated by a lot of sources other than another RTK transmitter using the same frequency. For example, the GPS receiver, a switching power supply (common in many electronics) or a nearby cell phone can all 'jam' RTK communications. The UHF radio receiver is designed to cope with a lot of these interfering signals, but if they are too strong, the radio will have to filter out the unwanted noise and this will reduce range. If possible, try to keep these sources of radiation away from the receiver.

The 'silent killer' of radio range is a weak battery. Over time, all batteries will fail to take a full charge – typically after 300 recharge cycles or 2-3 years – less in extreme climates. When a radio fails to obtain sufficient voltage from its battery, the first effect is reduced transmission range. It is best to replace the battery after recharging it 300 times or after 2-3 years. The cost of a battery is usually much less than the loss of on-the-job time.

Lastly, it is very important to keep all the connectors clean in order to maximize range. Never let connectors drop on the floor and get damaged or dirty. Use cable bags to wind up excess cable length so that it will stay protected. A small amount of dirt or corrosion on an antenna connector can block RF signals dramatically and substantially limit range. Even the smallest amount of maintenance will go a long way to protecting and maintaining range.

Much can be said about radio technology and its practical use in the field. The above article only touches on the easiest and most obvious elements a surveyor can control in his endeavour to get the most out of his range.

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Column

Keep It Simple

Traditional GIS web mapping is characterized as complex, slow, and mired with over-designed applications. The GIS world is adept at writing GIS applications for GIS professionals but often stumbles when attempting to design applications for non-professional end users. GIS professionals have long taken their desktop applications and attempted to replicate them on the Internet often resulting in complicated solutions that missed their target audiences. There seems to be a tendency in GIS development to throw in tools and functions that are not needed and in turn get in the way of the true functionality of the application. In addition to being a waste of effort and money, over-engineered GIS tools foster the reputation that GIS is expensive and complicated.

Simplicity is on the way. The arrival of Google Maps has brought a visual mapping front end to users without all the cumbersome baggage associated with GIS applications, namely toolbars, SQL queries, and slow performance. Now everyone everywhere is looking at deploying spatial applications that are custom designed to address for the end user.

The key to success is to really understand who the needs and expectations of the end user. Developers and users sometimes draw the conclusion that proprietary tools such as ESRI cause these complicated applications, but it is possible to develop clean, straightforward solutions using these tools. The challenge for developers is to resist the temptation to add features that aren't part of the project scope. Much of the magic that makes Google Maps and Virtual Earth such great visualization tools is their simplicity. Making simplicity a goal of every GIS solution will give end users tools that they want to use and that make everyone on the project happy.

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