

## Adding GIS to the Duties of the Surveyor

The land surveying profession has the expertise to assist the GIS industry manage the risks associated with accuracy and precision of geospatial data. Surveyors have a rich history of understanding the science behind measuring the location of objects on or near the surface of the earth and turning these measurements into legally admissible products and documents recognized by government and the courts. While many GIS products and services may not carry much risk, its value rising.

Young surveying professionals do have educated backgrounds, which include GIS, and are entering careers that see their services benefit GIS products. However, their number is very low. With the median age of surveyors being in the latter fifties, and many already being over the retirement age, we see the majority of the surveying profession in the latter stage of their careers and probably not interested in taking on the extra work associated with the growth of the GIS industry. In many areas there is more than enough traditional surveying services demand keeping surveyors gainfully employed.

While state boards, like BPELS, are concerned with protecting the public against the risk associated with geospatial data and information emanating from GIS, there seem to be few surveyors that have the desire to take on these extra duties; if mandated by board rules. There still needs to be more dialogue between the GIS industry and the surveying profession so each group better understands how cooperation can benefit all parties, including our clients. Though BPELS withdrew the proposed rules to make licensed surveyors responsible for the quality of GIS digital mapping products, the proposed rules did spark the dialogue between surveyors and the GIS industry. Ten years since BPELS proposed their controversial rules, we see the numbers of surveyors are less, while the GIS industry continues to grow. The more we learn and discuss these issues, the better we will be prepared for serving our clients in the future. ▽

## Surveyors often forget that they are also managers of spatial information



TN Wong

The Hong Kong Institute of Surveyors

Surveyors collect spatial information in the field, carry out computation so that this spatial information is geo-referenced to the local spheroid and form a local grid system.

Spatial information which is not geo-referenced can only be regarded as geographical information. We know the types of information and their uses. But, we do not know the accurate position or location of these information, such that other man-made and natural features can be related and conformed to the local grid system used by all users including GIS professional. Unfortunately surveyors very often forgot that they are also managers of spatial information. Generally the surveyors consider that GIS is not within their scope of works or responsibility. This to me is not correct.

GIS Professionals meanwhile are very keen to manage, analyze and visualize spatial information which very often were not geo-referenced. In order to tap the benefits and optimally use spatial information for national and local projects both surveyors and GIS professional must work together in the public interest. There should not

be any double efforts. This will not only save cost, time and resources but also speed up the efficiency in decision making and implementation.

Surveyors and GIS Professionals have no tension or conflict between them. Technology and internet have brought them together. The only problem is that technological development has come too fast and they find it difficult to cope with it. However the situation has now improved very much as considerable efforts are being made and there is good progress towards integrating the two professions into one. But this needs more time. The mindset of both surveyors and GIS Professionals should be to focus on this development. The future is clear and optimistic.

In my view the first thing to do is to introduce GIS syllabi in the surveying course and vice versa until such time that the two professions consider it is the right time to combine them as one course and as one profession. We may give it a name such as "Geomatics". Meanwhile both professions should sit down and work out what should be done and the ways to move forward to integrate the two professions so that Surveyors and GIS Professionals can work together to put spatial information into optimum use. But, some one has to take the lead. I am very happy to learn that our leader in GIS, Jack Dangermond is taking up the task. I have confidence that FIG, GSDI and ISPRS will fully co-operate and collaborate with Jack in this endeavour. I wish him luck and I urge all Surveyors and GIS Professionals to assist in whatever ways we can to help Jack to realize this. ▽

Send your views on Survey GIS debate to the editor at [bal@mycoordinates.org](mailto:bal@mycoordinates.org)