Proposal to Organise During the FIG Working Week 2007 in Hong Kong, a Kick-Off Session to Evaluate the Interest of Creating a New Working Group Named ”Positioning Infrastructures” within the FIG Commission 5 – Positioning and Measurement.

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SCOPE

The proposal is to establish a working group in the FIG Commission 5 to investigate the emergent technologies that are, and likely to be, key components of the future "positioning infrastructures". By that term we include not only the GNSS continuously operating station networks, but also networks formed by other terrestrial positioning/navigation technologies such as LocataLites, pseudolites, RFID readers/tags, WiFi access points, UWB, etc.

The surveying industry has since the advent of GPS referred only to the "navigation" world for their standards (there are numerous examples such as RTCM and NMEA standards, ION and GNSS conferences for new developments, etc.), while today the telecoms industry have ambitious plans to address a larger mass market for LBS type services.

Recently even a worldwide telecom hardware provider has implemented a RTK processing kernel onboard a mobile phone. The surveyors’ community, as represented by the FIG, can no longer ignore the progress in LBS, Assisted-GPS, ... and the new indoor-outdoor positioning technologies. In a well known geomatics magazine the radio frequency identification (RFID) technology was reviewed in the following terms: *Although RFID is a well-developed technology with a wide range of operational applications, introduction into the surveying arena has not yet got beyond the knock-on-the-door stage. Nevertheless, the potential geomatics applications of RFID technology are vast and diverse and include beacon-tracking and alternatives to physical markers. It may even be safe to say that future applications are almost limitless.*

Actually in the FIG (and as far as we know in no other professional associations) there is still not yet a forum where such technologies can be discussed and evaluated to understand their impacts on future surveying products and services.

The upcoming FIG Working Week 2007 “Strategic Integration of Surveying Services” will be the ideal event where the proposal to create a new working group can be debated. Hong Kong itself is an outstanding example of a modern city where the new “positioning infrastructures” concept can be leverage for new applications and opportunities for surveying services.

During the FIG 2007 World Congress in Munich I proposed the task of evaluating those aforementioned technologies, but from the "infrastructure point of view" (... how to build, to design, to maintain ...). This appears to be a logical next step, to complement a control network, or a GNSS receiver network, in large cities where the challenges of using signals from space are the greatest. Hence it is in urban environments that the other PNT (Positioning, Navigation and Timing) technologies will have the greatest advantage vis-à-vis GNSS.

Now what will be the duty of such a new Working Group? Certainly first to evaluate the state of the technology and its implications for our surveying world (and have all research, initiatives and communications gathered and analysed by such a dedicated WG), and secondly to establish contact with the new ICT partners of our profession: the telecommunications and IT companies.

Are you interested to share your own vision and evaluate this proposal during a kick-off session at the FIG Working Week 2007 in Hong Kong? Please join us! Our objective is to validate the proposal of creating a new WG and, if welcomed, develop its objectives for the next 4 years.

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