# Value Added Knowledge Transfer

Together with your partner you are driving through an impressive landscape. It is holiday time. Your partner reads the map: '… here to the right, in the next village straight on…' In the next village, however, the road doesn't go straight on. Where to go? A heavy dispute unfolds. You recognise this scene? It reminds us how difficult is actual interpretation of that abstract two-dimensional representation of the world called a map. Or maybe the map was out-of-date or of low-quality…

## Bright Future

But the future looks bright; there will come an end to confusion. We are in transition between representing the world as a flat surface, in which all objects have been trampled down, to a full spatial realistic description. The magic word overarching this transition is Virtual Reality. Enabled by ICT, realistic and intuitively appealing representations will become our share.

## Interactive Design

And that's not all. Representation is only one aspect of the future. City planners, constructors, architects and many others all have the need to act in the virtual world; to remove buildings, to create roads and to change bridges. Furthermore, proposed changes to the environment need to be discussed with the general public and with decision-makers. The structure of the environment is becoming increasingly complex, especially in densely-populated areas. All these reasons make apparent the need for illustrative interactive design and tools to create easily understandable representation.

## Virtualising the 3D World

The road will be long and winding, and there is much to talk about. Much more than can be covered by just one article. This is why we have initiated a new Series: Virtualising the 3D World. In this and forthcoming issues you will find a number of interesting articles on this subject.
It is not only that appropriate tools are required to act in the virtual world, to visualise and to navigate through it; no, in addition a huge amount of accurate, highly-detailed spatial 3D data is needed. It may be readily envisaged that the availability of high quality spatial data will become one of the main problems to overcome. For us, as a geomatics community, this means that we will be increasingly confronted with spatial data acquisition demands and demands for adding value to automatically sampled data. Read more about the challenge on page 48.

For a long time the geomatics community has focused its attention with respect to quality on the registration of the quality of source data. Quality parameters are stored then as part of the meta-data. The awareness that there are infinitely many ways to select objects from reality and to abstract reality plays an important role in this respect. The particular selection, defined by the Universe of Discourse, will depend on the intended applications. Spatial data registration is carried out for monitoring, planning and decision-making purposes: in short, for geo-management. In order to be of value for many users, a sequence of operations have to be applied to the source data. Consequently, we can no longer limit ourselves simply to the registration part.

## Information Quality

From the viewpoint of the data user, knowledge of the quality of the source data is only important in so far as it provides insight into the quality of the final product. There is a great need among users of GIS systems for tools that are able to compute and to visualise the quality of intermediate and final products. In addition, present GIS systems have no facilities for the interruption of careless users when carrying out non-sense operations. Because there is a clear trend towards a huge expansion in the number of non-specialist users of GIS systems, the need for safety belts is apparent. Prevention of misuse can be assured when the system is able to refuse non-sense operations. Another method works similarly to traffic lights. The user is confronted with signals when he gives improper commands. Greg M. Byrom and Dr Richard T. Pascoe of the University of Otago elaborate upon the developments of tools to avoid misuse.

## Accuracy in Amsterdam

For those geomatics specialists interested in the way users of their data are concerned about data quality issues I have good news. This summer - from 12 to14 July - an interesting symposium is taking place in Amsterdam, just prior to the ISPRS congress. The subject of this Conference is Spatial Accuracy Assessment in Natural Resources and Environmental Sciences. Check this issue's agenda or
http://www.gis.wau.nl/Accuracy2000

## Value-added Knowledge Transfer

Value-added knowledge transfer is a matter of important editorial concern to us. Hence our introduction in this issue of the Series on Virtualising the 3D world. A second newly-appearing phenomenon is the book review. Books which will be of interest to you as a geomatics specialist, will be regularly read and reviewed by other specialists. This month An Introduction to the Theory of Spatial Object Modelling for GIS, written by Prof. Martien Molenaar, is in the spotlight.

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