

## **GIS-o-TOPO-lis: Info-demo-networking**

Conferenties : woensdag 15 oktober 2008 – Tour & Taxis (Brussel)  
Conférences : le mercredi 15 octobre 2008 - Tour & Taxis (Bruxelles)

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**Spreker/Orateur:** Maarten Vergauwen  
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GeoAutomation  
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### **Titel van de presentatie / Titre de la présentation:**

GeoAutomation : efficient and highly accurate surveying, using mobile mapping.

**Taal van de presentatie / Langue de la présentation:** Engels / Anglais

### **Samenvatting van de presentatie / Résumé de la presentation:**

The area of cartographic surveying is undergoing an important revolution. On the one hand, most nations are working towards a fully digital representation. On the other hand, new techniques are necessary and available to provide for the increasing demand for accurate digital surveying information. GeoAutomation is a young mobile mapping company. It uses state-of-the-art computer vision algorithms in an alternative surveying pipeline, which replaces much of the on-site GPS measuring by a combination of automated image processing and post-processing in the office. A set of cameras on-board a van records the scene while driving through it. Structure-and-Motion algorithms compute the pose and calibration of each camera from this image data. These poses are geo-referenced, using measured ground control points. From this moment on, all surveying measurements can be performed on the computer. This leads to a substantial increase in productivity without compromising measurement accuracy.

### **Curriculum Vitae van de spreker / Curriculum Vitae de l'orateur:**

Dr. Maarten Vergauwen got his masters degree and his PHD in Electrical Engineering at the K.U. Leuven (Belgium) where he has worked in the computer vision research group VISICS, lead by professor Van Gool. His main interest lies in "structure and motion": 3D reconstruction from uncalibrated imagery. He is one of the founders of the K.U. Leuven spin-off GeoAutomation which provides mobile mapping solutions for surveying applications. At the moment he combines a post-doctoral research position at VISICS with R&D work at GeoAutomation.