

Proposed Talk at the University of Iowa, April 24, 2008

LOCATIONAL AWARENESS ON THE INTERNET

Franz Leberl

Graz University of Technology, Graz, Austria

Founder and former CEO, Vexcel Corporation¹, Boulder (Colorado) and Graz (Austria)

ABSTRACT

In March 2005, at the occasion of his 50th birthday, Bill Gates went public with his “*Virtual Earth Vision*” for local search in the Internet and stated:

“You’ll be walking around in downtown London and be able to see the shops, the stores, see what the traffic is like. Walk in a shop and navigate the merchandise. Not in the flat, 2D interface that we have on the web today, but in a virtual reality walkthrough.”

This implies an enormous advance in computing power, communications bandwidth, miniaturization of computing, increase of storage capacity and in the ability to model the human habitat (the Earth) in great detail in 3 dimensions, with photographic realism and at very low cost per data unit. Action followed this declaration by Bill Gates, and the transition of a then-10-year old Microsoft business segment called “Map Point” into a new *Virtual Earth Business Unit* was kicked off.

The Microsoft initiative can serve as an example and actually also as a driver for the future of computing and of *computational thinking*. Research in the completely automated creation of 3D models of urban spaces has become greatly inspired and now is a very active field of research. The level of automation in creating 3D city models has benefited from an increase in the redundancy of the source data in the form of highly overlapping imagery either from the air or from the street.

The talk will “*evangelize*” the current capabilities of the Virtual Earth system, point to some pieces of new science in the analysis of imagery of the human habitat, and set the stage for an educated speculation about the future of computing.



Franz Leberl “evangelizing” the Microsoft Virtual Earth web service in South East Asia

¹ Vexcel Corporation was acquired by Microsoft in May 2006 and has been converted into the 3D urban modeling center for the Virtual Earth initiative.