Resume

Richard Milton
Research Assistant, CASA, UCL

I spent 6 years working for the UK Meteorological Office developing weather visualisation systems for various commercial and military customers. This involved software for the transmission, decoding and display of real time data such as satellite, radar, synoptic observations and numerical weather prediction on world maps. Most of the visualisation and display software was developed using Delphi, with Oracle and PL/SQL used for a distributed database deployed at 120 sites around the world. During this time, I was instrumental in securing the contract to supply mobile satellite based display systems to NATO as well as USAFE and the Operational Weather Service.

After the Met Office, I went to work for Criterion Software, who developed the Renderware 3D engine for the games industry. This involved writing art tools and plugins for 3DS Max to allow the export of 3D artwork from 3DS MAX into the Renderware game engine. During my time working at Criterion I gained a lot of practical experience in 3D rendering with DirectX and OpenGL on computers and games consoles. This experience was invaluable when I later moved to University College London to work on a project tracking and visualising data from carbon monoxide sensors in a 3D model of the city. This was an Equator eScience project which was a pilot study into the feasibility of using GPS tracked sensors in a city to measure environmental factors. As a result, the project looked at methods of improving and augmenting the GPS tracking data with additional information.

On the eScience side of the project, I participated in two air pollution studies in London, which provided me with the data to publish a number of articles comparing GPS tracked sensors with fixed sensors, while showing that mobile sensors could provide information that could not be obtained with fixed sensors.

I moved from UCL Computer Science to the Centre for Advanced Spatial Analysis (CASA) in December 2005, where I now work on the GeoVUE project on Geographic Virtual User Environments. This is an eSocial Science project to develop web and GRID based tools for visualising social science data in 2D and 3D. To date, we have released software for thematic mapping using Google Maps, which has currently been downloaded by 2,600 users since it was released in December. We have also recently released another application to allow people to publish large images on the web. I have also worked on placing CASA's Virtual London model into Google Earth using network links to allow the 3.3GB model to be loaded and displayed. In addition to this, various social science and environmental data, including air pollution and weather observations have been developed for Google Maps and Google Earth, potentially making it easier to combine and visualise different datasets. Current work is on visualising real time data sources and on the visualisation of tracked sensor data.