

Urban Modelling

3D Virtual reality models plan future developments



Business Challenge

Advances in computer technology and the desire for ever more realistic virtual landscape representations is resulting in the increasing use of 3D urban models. Their creation is helping stakeholders visualise environments that would have previously been illustrated by static models and images.

Our Solution & Expertise

Traditional methods of modelling large areas of a city can be time consuming – however, University of East Anglia has tackled this problem with some advanced computer algorithms. Unique computer modelling software, developed at the University, rapidly processes significant amounts of data automatically which enables large-scale urban environments to be modelled automatically and cost effectively.

The 3D virtual reality models allow stakeholders to engage with an historical or proposed environment in a way not possible with pictures or photographs. Models of an existing area can be developed using up to-the-minute map and satellite data or an historical environment by using older maps and street layouts.

Models can now be developed in 3D virtual reality enabling users to view movies of the environment and even interact with it by walking around, looking through doors and windows and experiencing the environment with a range of lighting conditions, finishes and landscaping.

The Urban Modelling Group have developed models for use with strategic planning projects, development of sites within sensitive city locations and created 3D models of high-profile public buildings and cities, illustrating their evolution over the centuries.

The models offer stakeholders and visitors a new way to interact with an environment and can form part of an interactive exhibition, capable of being viewed on a variety of devices from mobile phones and PDAs through to plasma and panoramic film screens.

Business Benefits

The Norwich based architects Feilden and Mawson, in conjunction with Art Architecture, needed to illustrate their newly designed Dukes Wharf development for their client – developer Target Follow. The Urban Modelling Group (UMG) based in the School of Computing Sciences, produced computer renderings and fly-throughs of the site, to show how Dukes Wharf would look when redeveloped. The new buildings are modelled and placed within the realistic model of surrounding streets and buildings to give a photorealistic animation and images of the new development in context. The design team have been successful in securing their planning application helped by the fact that the local council and other stakeholders were able to view realistic and comprehensive models and illustrations of the planned development.

Rapidly generated 3D computer models can be used for projects associated with planning and regeneration projects, the heritage industry, education, training and scenario planning.

