

**Friday, 27 June, 2003**

## **British Scientists Win Europe's Top IT Prize for Life-Saving Evacuation Simulation Software**

Scientists from the University of Greenwich have won Europe's most distinguished IT prize for their cutting-edge EXODUS computer software, which simulates evacuations during emergencies to help aircraft, building, and ship designers save lives. The EU Commission-sponsored European IST (Information Society Technologies) Prize is awarded by the European Council of Applied Sciences, Technology and Engineering (Euro-CASE) to entrepreneurial teams that excel in generating novel ideas and converting them into marketable products.

The University of Greenwich team is among twenty prize winners selected from among 420 entries from 28 countries. The winners will exhibit their products at an awards ceremony during the IST 2003 event in Milan, Italy on 2-4 October 2003, where three Grand Prize Winners will be selected, each receiving €200,000 in prize money ([www.ist-prize.org](http://www.ist-prize.org)).

Developed by the University of Greenwich's Fire Safety Engineering Group ([www.fseg.gre.ac.uk](http://www.fseg.gre.ac.uk)), the EXODUS suite of evacuation software uses complex interacting sub-models to predict evacuation behaviour during emergencies such as fires. The software's sophistication means that people are represented as individuals with real human behaviour, such as returning to their desk to collect a handbag or searching for a child. Simulated occupants even react to the heat, smoke and toxic gases generated by a fire. EXODUS simulations allow engineers to assess more potential designs than conventional methods and are free of the potential danger and high cost of conventional human evacuation trials.

“EXODUS enables designers to test the safety of aircraft, building, and ship designs before they are built, helping to prevent mistakes which could cost both lives and huge amounts of money,” says Professor Ed Galea, Director of the Fire Safety Engineering Group. “Our objective is to help design engineers to save lives; we turn their PCs into virtual laboratories in which they can reach the optimal design solution cost effectively and safely. By subjecting our ‘virtual’ people to a living-hell of perpetual emergencies, designers not only develop safer designs, but reduce the need for real people to be exposed to the risk of evacuation trials. We are delighted and honoured to have been selected as one of the prize winners in the face of stiff competition from all over Europe.”

In many countries EXODUS is now the standard evacuation analysis tool, and has been used on projects in 23 countries, ranging from the design of the Millennium Dome, the Airbus-A380 and the Sydney Olympic Stadium. Additional applications of EXODUS include the simulation of people movement in non-evacuation conditions to improve the comfort and efficiency of layouts and operational procedures, as well as public safety.

The high standards of applicants, and the competitive screening procedure for selecting the winners, make this prize Europe's most distinguished for new information technology products. The Grand Prize winners will be selected by independent experts nominated by Euro-CASE.

In 2002 the EXODUS development team was awarded a prestigious Queen's Anniversary Prize for Higher and Further Education. It was also overall winner in the coveted British Computer Society IT Awards for 2001, recognised as the most prestigious acknowledgement of excellence in the British computer industry and again in 2001, the team won the Royal Institution of Naval Architecture/Lloyds Register Safer Ship Award.

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## **NOTES FOR EDITORS**

### **THE FIRE SAFETY ENGINEERING GROUP**

Located in the School of Computing and Mathematical Sciences, The Fire Safety Engineering Group consists of a 30-strong multi-disciplinary team of mathematicians, behavioural psychologists, fire safety engineers and computer scientists. The group was established in 1986 and the modelling philosophy behind EXODUS has been developed and refined through 13 years of research into understanding and simulating evacuation, as well as the rigours of the peer review process in both academic journals and doctoral examination. The group has also produced the SMARTFIRE fire simulation software.

### **PROFESSOR GALEA**

Professor Ed Galea is the founding director of the Fire Safety Engineering Group (FSEG) at the University of Greenwich, where he has worked in fire safety research since 1986. His work in fire safety engineering began after the tragic Manchester Boeing 737 fire, when he was commissioned by the UK Civil Aviation Authority to simulate the spread of fire and smoke in the disaster. Since then his research has expanded to include the modelling of evacuation, people movement, fire/smoke spread, combustion and fire suppression in the built environment, rail, marine and aviation environments. Professor Galea is the author of over 100 academic and professional publications related to fire. He serves on a number of national and international standards and safety committees concerned with fire and evacuation including BSI, ISO, IMO and SFPE. His research and consultancy activities have been supported by a wide range of European and North American organisations.