President’s Medal Presentations

The President’s Medal is awarded for the best practical application of OR submitted to the competition (a wide definition of OR is used). Entries are accepted from both academics and industry-based OR workers and consultants. One of the main qualifications for entry is that the work has been implemented before submission.

Criteria for judging include:

- The level of demonstrable benefit
- The intellectual and novel content of the solution
- The likely longevity of the solution
- The excellence of the OR process

Conference delegates attending the President’s Medal plenary session will have the opportunity to express their views as to their preferred candidate. The judges are required to take into account the views of the audience, but are free to arrive at their own decision. Ballot papers will be distributed at the start of the session.

8/9/2010 : 13:30 : Room Windsor Auditorium

A model future for the UK’s nuclear legacy
Panos Frangos, Simon Hughes, Sellafield Limited

Sellafield Ltd is the company responsible for safely delivering reprocessing, waste management and decommissioning responsibilities on behalf of the Nuclear Decommissioning Authority. Our proud heritage also includes the development of the world’s first commercial nuclear power station, Calder Hall.

The Sellafield OR Group is the Capability Group and Intelligent Customer for the delivery of OR services to Sellafield Ltd. The Sellafield OR Group deliver simulation models and services to an agreed specification defined in the project scope document. Specifications are defined in accordance with the requirements of the strategy development and Front End Loading (FEL) process on an individual project basis. The department follows an interactive project Lifecycle Framework which requires the continuous involvement of the client, the supplier and the Sellafield OR Group.

The Group is undoubtedly at the forefront of modelling and simulation within the nuclear industry, and has a history of delivering ground breaking tools, techniques and innovative solutions to underpin strategic decisions, investment appraisal, explore project timelines, and communicate ideas and concepts to stakeholders and regulators.

8/9/2010 : 14:00 : Room Windsor Auditorium

Accelerating Local Loop Unbundling with OR Techniques
Gilbert Owusu, Mathias Kern, BT Plc

Broadband is at the heart of the Digital Britain initiative. It is a fundamental platform for delivering services such as internet access and TV into the home. It also connects businesses and governments and facilitates social interaction. Local Loop Unbundling (LLU) is the sine qua non of high broadband penetration in the UK. LLU enables communications Providers (CPs) to gain a direct connection into the local access network by installing their equipment in or near BT’s telephone exchanges. LLU involves an activity known as FRAMES jumpering. In April 2004, Ofcom published Phase 1 consultation of its Strategic Review of the Telecommunications industry. BT offers Ofcom a set of undertakings, one of which is to provide an equivalent platform so that BT’s service capabilities and capacity can be equally reserved and consumed by all UK communication providers. Openreach was created to provide this equivalent platform. Openreach has about 20,000 field engineers and the successful planning and scheduling of these resources is key to ensuring that CPs have equal access to Openreach’s 525,937 telephone exchanges.
The OR group within BT developed FOS, a capacity management system that underpins the delivery of broadband and LLU in the UK. FOS has been in use within Openreach since autumn of 2006. In the first year there was cost saving of £5.1m due to avoiding training costs required to train BT engineers on jumpering products. Ongoing benefits are expected to reduce contractor levels equating to £2.4m per year and reduced Sunday overtime costs of £130K annually.

8/9/2010 : 14:30 : Room Windsor Auditorium

Dynamic Forecasting Support Tool for Optimised use of Process Gases

Leigh Perryman, John Albiston, Zoe Hughes, Corus Strip Products

Corus Strip Products is a steel producer based in South Wales and is part of Tata Steel. Two key drivers for the business are to reduce emissions and keep imported energy costs to a minimum.

During production, several process steps generate large amounts of waste gas. The aim is to collect the gas, rather than burn it off to atmosphere (flare) and utilise it on-site. In 2009 a major project was undertaken to collect and use one of these gases at the sites Power Station. The aim of the project is to maximise electricity generation, minimise flare and decrease energy imports. In doing this there is a significant reduction in CO2 emissions and imported energy costs. The scheme calls for two process gases to be mixed together in correct quantities to maximise power generation. This requires the use of a gasholder, enabling continuous flows of fuel to the boilers, as one gas is produced via a batch process.

Previous DES modeling work had been carried out on an existing gas collection/use system for the Energy Control Department. As this had proved successful they sought support from the Business Improvement and Excellence function to develop a tool for maintaining the new system.

The team created a dynamic model which forecasts the volume of process gas produced, and then recommends the optimum method of use. The finished model is a result of teamwork and stakeholder interaction. The presentations will demonstrate its use for both training and live decision making on site.