



Cream of the crop

This year's Awards showed the depth and breadth of engineering excellence in the UK. **Graham Pitcher** reports. The winners of the 2010 British Engineering Excellence Awards were announced at a gala luncheon at London's Globe Theatre on 14 October. Congratulations to all the winners and to Grand Prix winner Andrew Burrows in particular. And thanks to all the companies that entered. The BEEAs will be back again in 2011, so watch out for the call for entries next year.

1 Grand Prix 2010
Sponsor: Electronics Leadership Council
Winner: Andrew Burrows

The winner of the British Engineering Excellence Grand Prix was Selected from winning entries in the other Award categories, the winner of the Grand Prix impressed the Judges with an elegant solution to an urgent worldwide problem. They declared the solution had been arrived at 'by thorough process and methodology'.

A quarter of domestic water that has been collected, filtered, chlorinated and raised in pressure using large amounts of energy is lost during distribution through leaks: 32billion m³ of treated water a year, according to the World Bank.

With no available solution, Andrew Burrows designed an intelligent valve, controlled by a central server which learns the behaviour of the network and constantly adjusts the pressure to the optimum. This smart water system reduces leakage by reducing pressure to the optimum to satisfy demand.

On average each system installed reduces water leakage by more than 20%. Each of 50 systems installed in Malaysia during July 2010 are saving 250tonnes of water per day

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2 Judges' Special Award
Sponsor: Bloodhound SSC

Winner: Dexela

A number of finalists for the British Engineering Excellence Awards were considered by the Judges, but Dexela was selected as the winner, having made a strong showing in a number of categories.

The company, formed in 2005, has built a portfolio of IP and is now a leading company in computational techniques for image reconstruction.

Although four suppliers dominate the market, Dexela has a first to market approach. Its small fast moving development team and strong development partnerships, have allowed it to prototype and supply a new generation of large area CMOS x-ray detectors ahead of its competitors.

A responsive approach to market requirements and to the requirements of individual customers has meant that Dexela has developed new detector models, all employing a common modular technology platform, in a matter of months.

The Judges said that Dexela has exploited cutting edge technology to create a product that works and has proved its worth across the world.

3 Consultancy of the Year
Sponsor: Prototype Projects

Winner: Drive System Design

Many factors help to identify a good consultancy, but standing out this year was Drive System Design, which impressed the Judges with its innovative work for automotive manufacturers.

Formed in 2007, the company specialises in delivering cost effective projects against extreme time constraints and providing access to innovative technologies and solutions. By 2010, Drive System Design had secured contracts with Aston Martin Lagonda, Audi and Hyundai, amongst others. Now, it is looking to expand its work to address the military, renewable energy, rail and aerospace markets.

Drive System Design has also become an authority in hybrid and electrical vehicle transmissions.

4 Small Company of the Year
Sponsor: Technology Strategy Board

Winner: OC Robotics

Assessing entries from companies with no more than 20 employees, the Judges looked for those which demonstrated a sound business strategy

and addressed a particular market need.

Formed in 1997, Bristol based OC Robotics is extending the reach of robotics with a snake arm robot, for which it holds critical patents. The device can reach into confined spaces by following a defined path. The technology is scalable and can be adapted to fit any environment, space or task. Potential markets include nuclear inspection, security, aerospace and medical.

The 16 strong company's first product was a system to inspect and repair pipes beneath a nuclear reactor; business won against strong competition from multinationals.

One of the challenges in its latest product was to simulate the proposed design. Alongside helping to refine the specification, this also allowed the customer to use the device virtually and to provide feedback.

Highly commended: Congratulations to Dexela, whose entry was highly commended.

5 Green Product of the Year
Sponsor: National Instruments

Winner: Dunphy Combustion

Judged on the application of appropriate technology to the design of the entered product,

element14 **Rockwell Automation**

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