

2012 IET Innovation Awards finalists

Asset Management

Organisation	Innovation
Atrium Software Ltd	Implementation of CAIP (Capital Asset Investment Planning) Solution
Hydro-Quebec	LineScout - High Voltage Overhead Line Robotic Inspection and Repair Platform
SSE plc	Smart Integrity Assessment and Predictive Health Monitoring Techniques for Risk Management of High Consequence Assets
Thames Water	The Data Information and Decision Support Tools Programme
Toronto Hydro Electric System Ltd	Putting Brains behind the Operation of an Electrical Distribution System – Transformer Monitors (TMs)

Built Environment

Organisation	Innovation
Diverse Energy Ltd	Bringing Mobile Phone Coverage to Rural Areas With a Green, Off-Grid Energy Solution
Strainsonics Ltd	LoadSCAN: A Novel Ultrasonic Load Monitoring Technology
Szechwan Sunfor Light Ltd	AC Rare Earth (ACRE) LED Technology: Transforming Lighting Economics in the Built Environment
Transport Technology Consultants	Low cost, Mass-market Environment Sensor and Mobile Application
University of Leeds, Susiephone Ltd, Ordnance Survey, 1Spatial Ltd, ESRI(UK) Ltd, Symology Ltd, UK Water Industry Research Ltd (UKWIR), the VAULT Steering group and the VISTA consortium	VAULT: The Scottish Community Apparatus Data Vault - Real-time Integrated Utility and Underground Asset Data

Electronics

Organisation	Innovation
Analog Devices	ADSP-BF 608 dual-core, Blackfin® Processor with an Embedded High Performance Video Analytics Accelerator
ISDI Ltd	Very Large Radiation-hard CMOS Imagers for Medicine
Maxeler Technologies	MPC-X: A Scalable Supercomputing Fabric
Nujira	NCT-L1100 - Envelope Tracking chip
University of Manchester	Ultra Sensitive Quantum Hall Effect Current Meter

Embedded and Critical Systems

Organisation	Innovation
Analog Devices	ADSP-BF 608 dual-core, Blackfin® Processor with an Embedded High Performance Video Analytics Accelerator
Bombardier Transportation	TrackSafe, a System to Improve Safety and Productivity for Railway Track Workers
Cambridge Silicon Radio	SiRFusion Platform and SiRFstarV Location Architecture for Indoor Location
Nujira	NCT-L1100 – Envelope Tracking chip
Volvo Construction Equipment	Preheated Self-regulated Air Intake in an Articulated Hauler

Emerging Technologies

Organisation	Innovation
Arago Technology Limited	Arago_Insulating Cross Arms For Transmission Towers
Bar-Ilan University	A New Principle for Remote Continuous Monitoring of Intraocular Pressure Variation
Neul	Wide Area Wireless Networks in TV White Space that will Enable the Internet of Things
Sensor Electronic Technology, Inc	Novel High Intensity UV LED Light Source for Treatment of Skin Disorders including Psoriasis, Vitiligo
University of Sheffield	Development of In-situ Imaging Systems and Analysis Techniques for Spin Coating Applications

Healthcare Technologies

Organisation	Innovation
Bar-Ilan University	A New Principle for Remote Continuous Monitoring of Intraocular Pressure Variation
ISDI Ltd	Very Large Radiation-hard CMOS Imagers for Medicine
Nottingham Trent University and Olberon Ltd	Self-Retracting Medical Needle for Improved Insertion Success Rate
Sheffield Teaching Hospitals NHS Foundation Trust, with Sheffield Hallam University and University of Salford	ShefStim: A Unique, Automated, Multi-channel Array Stimulator to Improve the Gait of Patients with Foot-drop
Smith & Nephew UK Ltd and University College London	SmartNail: In Vivo Wireless Strain Measurement Tool for Monitoring and Diagnosing Fracture Healing

Information Technology

Organisation	Innovation
Actual Experience Ltd	Improving the global digital experience, unlocking important economic, social and environmental benefits
BlackRidge Technology	Caller ID for the Internet
Shoothill	Shoothill FloodAlerts
University of Leeds, Susiephone Ltd, Ordnance Survey, 1Spatial Ltd, ESRI(UK) Ltd, Symology Ltd, UK Water Industry Research Ltd (UKWIR), the VAULT Steering group and the VISTA consortium	VAULT: The Scottish Community Apparatus Data Vault - Real-time Integrated Utility and Underground Asset Data
Verdiem	IT Energy Management Solution sets a New Standard for the PC Power Management Market

Measurement in Action

Organisation	Innovation
AnTech Ltd	An Innovative Gyro System for Directional Measurement whilst Drilling within Oil and Gas Wells
Link Microtek Ltd	EMILI 2: Checkpoint bottle scanner based on the ElectroMagnetic Identification of Liquids
LUX-TSI Ltd	eyeLIGHT Optical Radiation Safety Software Platform
NATS	Air Traffic Management Environmental 3-Dimensional Inefficiency (3Di) Score
Strainsonics Ltd	LoadSCAN: A Novel Ultrasonic Load Monitoring Technology

Power/Energy

Organisation	Innovation
Arago Technology Limited	Arago_Insulating Cross Arms For Transmission Towers
Onzo	Enabling Energy Data to be Acquired, Analysed and Presented in Multiple, Compelling and Actionable Forms
Reaction Engines Ltd	Ultra-Lightweight Heat Exchangers for Aerospace Engine Applications
Smarter Grid Solutions	New Active Network Management Approach to Increase Electricity Grid Capacity
Szechwan Sunfor Light Ltd	AC Rare Earth (ACRE) LED Technology: Transforming Lighting Economics in the Built Environment

Product Design

Organisation	Innovation
Nottingham Trent University and Olberon Ltd	Self-Retracting Medical Needle for Improved Insertion Success Rate
OTSO LTD	Safe, Light weight and Low cost Innovative Transfer System for Offshore Wind Farm Turbine Access
Sheffield Hallam University	Respiration Monitor for Children: RespComf
Smith & Nephew UK Ltd	SmartNail: In Vivo Wireless Strain Measurement Tool for Monitoring and Diagnosing Fracture Healing
University of Huddersfield and The Royal College of Art	21st Century Medical Bag

Sports Technology

Organisation	Innovation
Impakt Protective Inc	Wireless Impact Sensors for Head Injury Detection
LEDSPORT	LEDSPORT Interactive Schoolgym Combines LED in the Sport Surfaces to open Numerous new Gaming Possibilities
P2i Limited	Liquid Repellent Nano-coating and Elite Athletic Applications
Reevu World Wide Ltd	World's First Rear Vision Helmet
The Chinese University of Hong Kong	An Intelligent Anti-sprain System to Prevent Ankle Sprain Injury in Sports

Sustainability

Organisation	Innovation
Advanced Plasma Power	The Gasplasma® Process
Geo-Mole Ltd	New Unparalleled Method of Installing Ground Loops for GSHPs, where Otherwise not Possible
Grune Energie	Smart Energy Management System to Reduce Energy Cost and Carbon Footprint
Highview Power Storage	Cryo Energy System - Pilot Demonstrator
Xeros Ltd	Xeros Bead Cleaning – Innovative laundry technology reducing water, chemical and energy usage.

Telecommunications

Organisation	Innovation
Actual Experience Ltd	Improving the global digital experience, unlocking important economic, social and environmental benefits
BT Research and Technology	Predictive Dashboards for Dynamic Resource Management
Cassidian Limited	Application-aware, Secure Mobile ad-hoc Networking – Mobile IP Node
Qualcomm Incorporated	Snapdragon Processors Revolutionise the Mobile Ecosystem
University of Surrey	Low-complexity High-performance Spectrum Sensing Method for Improved Signal Detection in Low-cost Wireless Devices

Transport

Organisation	Innovation
ABB Switzerland Ltd	Power Electronic Traction Transformer - PETT
NATS	Aircraft Pre-departure Sequencing at Heathrow to Optimise Queuing and Runway Throughput
NATS	iFACTS Controller Support Tools – the Biggest Advance in Air Traffic Control since Radar
Network Rail & First Scotrail	Paisley Canal 'Low Cost' Electrification
Qualcomm	No Fuss, Just Wireless: Wireless Charging for Electric Vehicles