Around the Commissions

TG92 - Wearable Sensor Technology

Introducing a New Task Group

The CIB Programme Committee has established the New Task Group TG92 on Wearable Sensor Technology and appointed Dr Andrew Ross from Liverpool John Moores University - School of the Built Environment, UK and Dr Serkan Kivrak from the Anadolu University, Civil Engineering Department, Turkey as the Joint Coordinators.

Scope and Objectives

The Task Group focuses on addressing the need for:
▪ an understanding of the potential for wearable and sensor technology during the construction and use of built environment assets
▪ the development of human computer interfaces that improve the health and safety and efficiency of the construction process
▪ a multi-disciplinary approach to the communication of visual and aural information by sensors to wearable technology to influence human behaviour in the construction and use of built environment assets.

This will create a more effective and reflective industry and deliver benefits to public and private asset owners. The scope of the Task Group is limited to the housing, building and infrastructure, design construction and asset management sectors. The potential to translate findings into other sectors will be of particular interest to government agencies and firms making significant investments in wearable and sensor technology for construction and asset management. Examples may include organisations with a significant property portfolio, manufacturing companies and service providers. This will be achieved through analysis at the level of the project, firm and industry, brought together through assimilating buildings and infrastructure case studies across the international industry research partners.

In particular, it is envisaged the Task Group's efforts will contribute to better designed approaches to information capture and analysis at both an asset level and construction level, will provide more appropriate visual and aural information to construction operatives and provide information that will support better analysis on human computer interactions. This will be achieved through analysis at the level of the project, firm and industry.

Current Work Programme

The Task Group Work Programme includes:
▪ conduct industry-focussed international case studies
▪ develop wearable technological guidelines
▪ develop a research roadmap for sensor and wearable technology in construction

In addition to annual real meetings that will take place in conjunction with the annual meetings of commission W078 - International Conference on Information Technology for Construction, the Task Group will have regular online meetings in support of the production of its planned output.

Planned Output

2015: Task group designated website
2016: publication of an industry-focussed CIB report on sensor and wearable technologies for use in property and construction
2017: publication of an industry-focussed CIB book on sensor and wearable technologies for use in property and construction
2017: publication of a research roadmap on sensor and wearable technologies for use in property and construction

Additional Information

For further information about CIB TG92 contact the Coordinators: Andrew Ross a.d.ross@ljmu.ac.uk and Serkan Kivrak serkankivrak@anadolu.edu.tr.

Introducing the Coordinators

Below follows a description of their CV

Dr. Andrew Ross

Andrew Ross' present post is Subject Head: Surveying at Liverpool John Moores University - School of the Built Environment.

His previous appointments include:
- Commercial Manager, at Balfour Beatty Construction Ltd. 1985-1990
- Senior Lecturer Liverpool John Moores University 1990-1994
- Principal lecturer, 1994-2006
- Subject lead 2006-to date

Academic qualifications

Andrew's academic qualifications include:
1985   BSc. (Hons) Quantity Surveying,
1993   MSc. IT in Property and Construction, School of the Built Environment at Salford University, Salford, UK
2005   PhD in Construction Economics, University of Salford, Salford, UK

Dr. Serkan Kivrak

Serkan Kivrak is Assist. Prof. Dr. at the Anadolu University, Civil Engineering Department, Turkey.

Education

His education includes:
- BSc, Civil Engineering Department at the Middle East Technical University, Turkey
- MSc, Civil Engineering Department / Construction Management, at the Anadolu University, Turkey
- PhD, Civil Engineering Department / Construction Management, at the Anadolu University, Turkey

Personal Statement of Dr. Andrew Ross and Dr. Serkan Kivrak

TG92 has a broad scope of engagement, which considers wearable technology and HCI from both construction management and property asset perspectives. It aims to bring together expertise from the IT and technology sector and the built environment disciplines to investigate how wearable sensor technology can improve the process of design, construction and use of buildings and infrastructure. It will be of interest to researchers and practitioners who are interested in exploring how this exciting and fast developing technology and in particular how the data that it can collect can be analysed to support changing how we currently practice.