

# **W098 - Intelligent and Responsive Buildings**



**International Conference**

**INTELLIGENT AND RESPONSIVE BUILDINGS**

**29 - 30 March 1999**

## **Bruges, Belgium**

### **Programme Co-Sponsored by:**

Technological Institute (TI)

Belgian Building Research Institute (BBRI)

Belgian Centre for Domotics and Immotics (BCDI)

Electrabel

Cobomedia

## **SCIENTIFIC PROGRAMME**

### **Sunday, 28 March 1999**

08.50 Introduction:

Building Construction on the Verge of the New Millennium

C. De Pauw, General Director, Belgian Building Research Institute, Belgium

09.00 Keynote 1:

Changing the Way we Live and Work in a New Building Environment

F. Garas, Consulting Engineer, United Kingdom

09.30 Keynote 2:

European Commission Research and Technical Development in the Field of Smart Home Technologies for the Disabled and Elderly

I. Ambrose, Coordinator W069 and European Commission TIDE UNIT, Belgium

10.20 Session 1A and Session 1B

13.50 Session 2A and Session 2B: the FACILE project

15.50 Session 3A and Session 3B: the FACILE project

19.30 Banquet

### **Tuesday, 30 March 1999**

09.00 Keynote 1:

New Developments in Construction of Government's Buildings in the Netherlands

J.A.J. Huijbregts, Director General, Governmental Buildings Agency, Ministry of Housing Special Planning and the Environment, The Netherlands

09.30 Keynote 2:

Accessibility of (Public) Buildings for Elderly and Handicapped People

L. Helsen, Deputy and President of the Center for Accessibility, Province of Antwerpen, Belgium

10.00 Keynote 3:

Intelligent Buildings and Demand Side Management

A. Demouselle, DSM Product Manager, Electrabel, Belgium

10.50 Session 4A and Session 4B

13.50 Session 5A and Session 5B

15.05 Farewell Drink

## ORAL PRESENTATIONS

### Topic 1:

#### **Intelligent and Responsive Buildings**

The Role of Intelligent Buildings in Sustainable Development  
A. Hamilton and M. Nelson, Salford University, United Kingdom

Education Needs for Intelligent Building Strategists  
D. Clements-Croome, University of Reading, United Kingdom

Habitability and Sustainability as the Complementary Criteria for the Evaluation of Building Intelligence  
A. Mahdavi, Carnegie Mellon University, USA

The Idea in Form  
G. F. van Helden, Atelier voor Onderzoek & Ontwerp, The Netherlands

Performance of the Intelligent Office Building in Profit Making  
M. Lehto, VTT Building Technology, Finland

Individual Thermal Comfort by Infrared Radiation; Controlled by Heated Artificial Skin  
E. Mayer, Fraunhofer-Institut für Bauphysik, Germany

Prototypical Development of an Integrated Smart Facade System  
G. Augenbroe and T. Messadi, Georgia Institute of Technology, USA

Study BCDI - Construction Trends and Teleworking  
G. Klepfisch, Belgian Centre for Domotics and Immotics, Belgium

Poster: Inventions Estimation Algorithm by the Value Analysis  
C.D. Lazarescu and M. Niculae, "Gh. Asachi" Technical University, Romania

### Topic 3:

#### **Accessibility of Buildings for Elderly and Handicapped People**

Accessible Environments an Achievable Goal?  
R. Newton, M. Ormerod and A. Lewis, University of Salford, United Kingdom

Applicability of Smart House Features for Homes of Elderly  
M. Lehto, VTT Building Technology, Finland

Improvement of Housing of Elderly Living in a Nursing Home  
Ch. Willems, iRv  
M. Louwerse, Interkerkelijk Verpleeghuis De Meent, The Netherlands

Rehabilitation of the Historical Building for Elderly Housing - Low Impact Project Principles  
G. Garau, University of Padova  
R. Continenza, University of L'Aquila, Italy

### Topic 5:

#### **International Inventory of "Best Practices" in the Field of Intelligent and Responsive Buildings**

The Intelligent Skin: A Case Study Review  
J. Harris, M. Wigginton, University of Plymouth, United Kingdom

The ENEA Laboratory Building "La casa intelligente"  
G. Fasano and G. Giorgiantoni, ENEA, Italy

The Comfort Project  
Ch. Willems, G; van Lieshout Ot and B.P. Dijcks, iRv  
M. Van Parijs, TNO-CVO  
R. Platteschorre and B. de Vries, St. Humanitas, The Netherlands

Poster: Heat Consumption in Old Typical Apartment Buildings  
T.-A. Koiv, Tallinn Technical University, Estonia

**Topic 7:**  
**Creating the Productive Workplace**

Person-Centred Design. The Keystone of an Intelligent, Responsive and Sustainable Building  
C.J. Walsh, Sustainable Design International, Ireland

The Need for a Responsive Workplace  
A. Rubin, Behavioural Research Consultant, USA

The Productive Workplace  
D.J. Clements-Croome, University of Reading, United Kingdom

A Building Performance Signature for the "Intelligent Workplace": Some Preliminary Results  
A. Mahdavi, D. Cho, R. Ries, S. Chang, V. Pal, E. Ilal, S. Lee and J. Boonyakiat, Carnegie Mellon University, USA

**Topic 8:**  
**Integration of Building Automation in the Intelligent Building**

Implementing the Latest Technology in Building Automation: A Project-Oriented Methodology  
W. Boone, Ingenium nv, Belgium

Model-Based Integration of Contextual Forces into Advanced Building Control Systems  
A. Mahdavi, S. Chang and V. Pal, Carnegie Mellon University, USA

The Role of the Internet in the Intelligent House  
H. Reiter and M. Goossens, EIBA s.c., Belgium  
D. Dietrich, Vienna University of Technology, Institut für Computertechnik, Austria

The Application of Learning Systems to the Control of Adaptive Facade Elements  
M. Skelly and M. Wilkinson, University of Bath, United Kingdom

Integration of Facility Management and Building Automation: A Basis for Intelligent Buildings  
A. Redlein and G. Schildt, Vienna University of Technology, Institut für Automation, Austria

Technology and Industry Trends for Building Controls and Facility Automation  
S. Thompson and R. Plouffe, Johnson Controls Ltd., USA

Windows CE and the Intelligent House  
H. Reiter and M. Goossens, EIBA s.c., Belgium

Using Smart Card Technology to Secure Data Exchange for Intelligent Home Nets  
M. Gordeev and P. Palensky, Vienna University of Technology, Austria

WWW Based Control of Smart System Components in Buildings

G. Augenbroe and T. Messadi, Georgia Institute of Technology, USA

## **Topic 9:**

### **Demand Side Management in the Intelligent Building**

Demand Side Management by Using Distributed Artificial Intelligence and Fieldbus Technology

P. Palensky and M. Gordeev, Vienna University of Technology, Austria

## **Topics 1 -7**

Towards the Intelligent City

A. Harrison, DEGW plc., United Kingdom

## **Other Topics**

Decision Support to the Application of Intelligent Building Technologies

J. Yang and W.P. Chang, Queensland University of Technology, Australia

From Home Automation to Evolutionary Architecture: Space as the Machine

M. Halkia, Starlab-Riverland Research, Belgium

## **BRUGES**

Bruges is a city full of canals and is often called "The Venice of the North". Its most beautiful spots can only be discovered from the famous city canals, the "reien", with the elegant company of the white swans. The market square, the heart of the old city, is dominated by the huge belfry and features many historic houses. The City Hall, with its many statues on the facade, is located on the "Burg", close to the market square. Stroll along the "Dyver" to the Gruuthuse museum and the Memling Museum with the masterpieces of the so-called "Flemish Primitives" (Jan van Eyck, Hans Memling, Rogier van der Weyden, )

## **SOCIAL EVENTS**

### **Sunday, 28 March 1999**

18.00 Welcome drink

at the Brewery "Straffe Hendrik". This family brewery has been active since 1856.

### **Monday, 29 March 1999**

19.30 Banquet at the "Saaihalle" in Bruges. A boat trip on the canals will be organised after the banquet.

## **HOTEL ACCOMMODATION**

Participants can book rooms through the Secretariat of the Conference (special rate). They only have to fill out the "Hotel Reservation Form" before 15 January 1999. After this date the organiser can no longer guarantee hotel reservation.

The hotel itself will confirm your reservation.

Conference rates in BEF (incl. breakfast)

### **Academie Hotel \*\*\*\***

Wijngaardstraat 7/9

8000 Bruges

Tel: +32.50.33 22 66

Fax: +32.50.33 21 66

Single Room: 3500 BEF

Double Room: 4200 BEF  
including breakfast and taxes

**Novotel\*\*\***

Katelijnestraat 65  
8000 Bruges  
Tel: +32.50.33 75 33  
Fax: +32.50.33 65 56  
Single Room: 3300 BEF  
Double Room: 3900 BEF  
including breakfast and taxes

Both hotels are located 5 minutes walking from the Old St Jans Hospital.

**GENERAL INFORMATION**

**Venue**

**Old St. Jans Hospital**

Mariastraat 38  
8000 Bruges  
Parking: Old St. Jans Hospital

**Registration fee**

The Conference Fee includes a copy of the Proceedings, lunches, refreshments during the Symposium and the welcome drink on Sunday evening 28 March.  
The banquet is optional.

	<b>before</b> 15 January 1999	<b>after</b> 15 January 1999
Authors	18.000 BEF	20.000 BEF
Participants	20.000 BEF	23.000 BEF
Students (undergraduates)	5.000 BEF	5.000 BEF
Banquet (optional)	2.500 BEF	2.500 BEF

**+21 VAT**

Note: VAT will only be charged to participants whose company/organisation is located in Belgium and those within the European Union who have no VAT number.

It is preferable to pay the registration fee by cheque to Technologisch Instituut. Remittance should be free of bank charges to the receiver.

An invoice will be sent upon request.

**Language**

The official language of the Conference is English. Papers and other documents will be in English.

## **Exhibition**

A small exhibition related to the themes of the technical program of the Conference will be held at the same venue. Companies and institutions who are interested are requested to contact the Secretariat.

## **Secretariat Address**

All inquiries may be directed to:

Conference Intelligent and Responsive Buildings

Attn. Rita Peys, Conference Manager TI

Technologisch Instituut

Desguinlei 214

B-2018 Antwerpen

Belgium

Tel: +32.3.216 09 96

Fax: +32.3.216 06 89

E-mail: [rita.peys@ti.kviv.be](mailto:rita.peys@ti.kviv.be) / [buil@conferences.ti.kviv.be](mailto:buil@conferences.ti.kviv.be)

An Internet WWW information service is established, where information is posted as it becomes available: <http://www.ti.kviv.be/conf/buil.htm>