

Camilla Rhone, David Gibson and Andrew Dupigny



## INNOVATION, INGENUITY AND HARMONISATION

The World Organization of Building Officials (WOBO), as part of its promotion and development, recently met in Orlando in conjunction with the 2006 International Codes Council (ICC) Conference. The event provided significant opportunities to exchange experiences relative to technical developments and managerial aspects of the creation of a safe and sustainable built environment. The event delivered by the International CC hosted in excess of 2000 delegates, the majority involved in creation and writing of codes, design and enforcement. The range of experiences delivered by the presenters and those held by the delegates was, in a word, phenomenal. WOBO participated in many of the prime activities but also presented a series of technical papers within parallel break-out sessions. The event also provided the opportunity for the governors to review current developments and plan for future activities.

The governors in attendance provided input from the USA, Jordan, China, Australia, Japan and UK with further participation from Canada and Dubai.

The subjects offered included presentations from Ann Borooah, the Executive Director, Building Division, City of Toronto, Canada, who presented a developmental paper analysing the role of green-roof technology and the development of an applicable standard of delivery within Canada. The presentation and the open forum analysed the technological form of green roofs, their

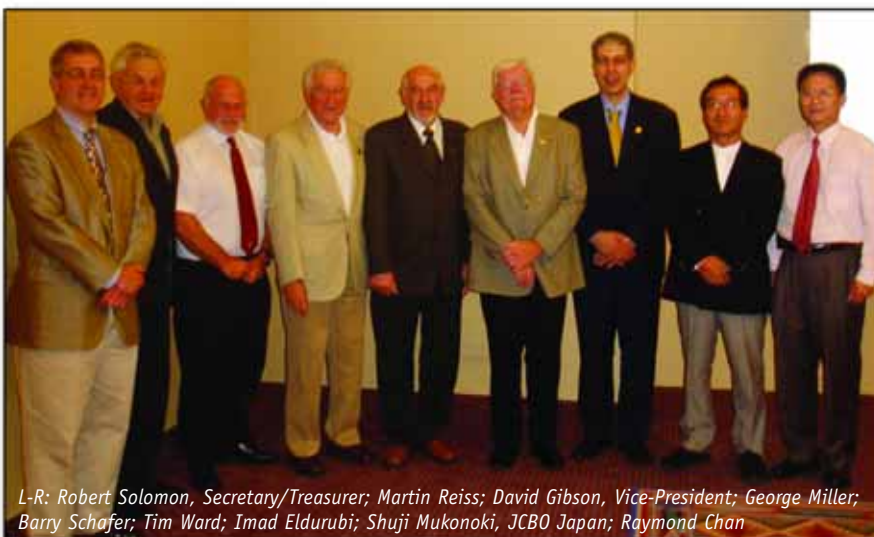
design, construction and maintenance around the world and the contributions made within the context of sustainability and maximisation of the energy resource. It was incredible how the aerial view of the city would change significantly if a green-roof philosophy was applied, and the extended benefits of leisure and relaxation within a roof-top environment.

One of the areas of common concern was that of inspections during the construction process of both commercial and residential properties. A paper by Imad Eldurubi from Amman, Jordan, reviewed the whole approach to the inspection process, enforcement and responsibility within the residential sector. A theme that was evident amongst the delegates was the need for ownership and responsibility in terms of compliance with the statutory codes both during the initial construction phase and throughout the ongoing life of the property, a philosophy of "get it right"; this philosophy enabling the maximisation of resources both human and physical.

A common theme apparent within the countries participating was that of fire safety and the progression to greater use of fire engineered solutions. Presentations by Randy Tucker (Executive Vice-President RJA group), Martin Reiss (President RJA-group) and Ray Grill (Arup Fire) addressed the application of building codes on an international basis, with reflection on properties, construction techniques and application to icon buildings. Discussion covered not only the role of passive and active measures but also the ever-increasing emphasis on management to deliver an ongoing safe environment.

Concepts of fire engineering relating to building heights, volumes, fire resistance and evacuation and the influence of people dynamics raised the proverbial question "how long is a piece of string?". It was apparent that the pressures for state-of-the-art design and maximum response are challenging both materials and technologies available. Success in many areas requires major investment in research development and training – "Exciting times" was a phrase put forward.

Within any conference setting it is of prime importance to relate legislation, techniques and delivery to the local setting and this was achieved by two presentations under the heading 'Building



L-R: Robert Solomon, Secretary/Treasurer; Martin Reiss; David Gibson, Vice-President; George Miller; Barry Schafer; Tim Ward; Imad Eldurubi; Shuji Mukonoki, JCBO Japan; Raymond Chan



designing and Imagineering at Walt Disney World'. The papers delivered by Steven Grant (Principal Project Architect, Walt Disney) 'Imagineering – Designing for fun thrills and safety' and Jerry Wooldridge (Manager of Building Safety, Reedy Creek Improvement District) were on the application of both legislation and codes in the delivery of health and safety within Walt Disney World.

The presentations from a legislative perspective showed how both commercial and safety requirements could be incorporated into developments that stretch the parameters of technologies and material capabilities. Throughout all aspects of the process the focus on appropriate design, appropriate setting and real safety is paramount. These particular presentations set the scene for technical visits to the underground elements of Walt Disney World to experience the technologies and their application, the precise time working of systems, properties and the actual rides available within the resorts. It is said that there are jobs to suit everyone within the built environment and Jerry's role was interesting in that not only did he have to manage the safety of the building design and construction but also the test running of the rides. A man with a good stomach and a head for heights! As part of the joined-up working between WOBO and the ICC, governors participated in the 2006 International Forum: Working to build a safer world. The programme was developed by Rick Okawa (Vice-president of ICC International Services) and chaired by Henry Green (President of the ICC board of directors). The presentations included speakers from Canada, Mexico, Japan, Kenya, Saudi Arabia, the Caribbean, the United States, China and the UK; the following is a snapshot of the themes that progressed through the proceedings. The alliance of Canadian Building Officials Associations and the National Certification and Accreditation Models within Canada was presented by Terry Hewitson (President of Ontario Building Officials Association) who set the scene exploring the skills, responsibilities and recognition of professional building officials and home/property inspectors. It reflected on the legislative requirements and the transition from high school through to the achievement of recognition as a registered

Canadian Building Official. This theme was followed by delivery on the development of the Model Residential Building Code for Mexico, presented by Ivan Evangelina Hirata Nagasaki (Director of Housing Promotion, the National Housing Commission, Mexico City). The policy was to create standards and rules for urban planning, urban design and building construction. There is currently no national law that defines the basic premises for regulations on safety and the protection of buildings and structures in a national context, much of the controls being carried out by local jurisdiction and application. The proposed Residential Building Code is seeking to address and provide basic guidelines on regulating the housing construction process and to standardise local building codes; the aim being to enable developers and builders to carry out projects across jurisdictions and ensure a basic level of safety for all occupants. The presentation reviewed the current situation, current problems and reinforced the need to work with the International Codes Council and fellow professionals around the world to develop a model residential building Code to ensure code application and enforcement and the creation of pilot programmes to bring the proposals into being. It was recognised that the proposals once created would need significant promotion and training to create the environment sought.

The construction industry is always challenged by developers within the construction team as to legislative requirements, relevance and application. A presentation by Kimihiro Hasahimoto (Director of Urban Housing, Improvement Office, Tokyo) addressed the fabrication of quake-resistance data ('Aneha scandal') and amendment of the building standard law and other regulations. This paper addressed the need to have regulations and laws to ensure that construction was appropriately designed and constructed to avoid the detrimental effect of earthquakes. It reviewed the problems relating to the 'Aneha scandal' and the production of buildings, their failure to comply with the law and the creation of potentially unsafe properties. The presentation not only reviewed the current law but also focused on the amendments brought into place to ensure that the building confirmation and





Imad Eldurubi



Ann Boroah

inspection process had far greater rigour and greater penalties for non-compliance. These penalties include not only fines but potential imprisonment for up to two years. The paper emphasised the fact that if you were charged with acting responsibly you would be heavily penalised for failing to do so. An international forum such as this provided an open, comfortable setting for people to address their concerns and seek professional and international support. A presentation by Michael Nyangweso (Executive Secretary/CEO ICC Kenya) addressed the non-enforcement of out-dated building codes and made a call for global professional intervention with a reflection on the Kenyan experience. This paper introduced the concept of delivery, the form and function of a poor building stock and related that to the life of urban dwellers. It was apparent that whilst many regulations exist, the level of enforcement is not ideal. Issues relating to the infrastructure highlighted problems relating to housing, water resources, sewage systems, solid waste disposal, transportation and recreation and leisure. A review of these matters placed significant emphasis on environmental and health problems. The range and nature of the problems really caused the delegates' minds to focus and consider ways in which support could be provided. The role of the ICC in the support of this process was noted and the call for global professional intervention recognised.

The Kenyan paper, having raised many issues, was followed by Camilla Rhone (Executive Secretary and Chief Executive Officer CARICOM regional organisation for standards and quality). Her presentation addressed the Caribbean model for developing a harmonised building standard, it explained the Caribbean region and the role for national building codes as applied within the various parts of the community. The range of codes applied reflected anything but consistency. You were looking at uncoordinated national building codes and enforcement processes. She placed great emphasis on the need to understand the challenges and recognise the difficulties associated with centralisation of management, the harmonisation of standards and the promotion of awareness to achieve compliance. The key

to their process, and common within the international presentations, was that of the identification of the resources available, their limited supply, the agreement for international norms and the issues of responsibility. The focus on stakeholder participation provided a key towards progress and delivery. Her presentation realised that all this has costs and the essential need for collaboration and promotion.

The final two papers in this series related to regulatory changes within Hong Kong and United Kingdom. The presentation by Raymond Chan reflected on the changes taking place within Hong Kong and the transition and challenges of developments within the context of China. Raymond (Senior Vice-President Hong Kong Institute of Surveyors) addressed the changes taking place relative to both planning and technical controls. Issues relating to zoning and building design created further issues linked to safety, environment protection and drainage, amongst other matters. The coming year will provide many challenges relating to standards and legislative application across Hong Kong and China. The developments in the UK were presented by David Gibson (Chief Executive – Association of Building Engineers). The presentation reviewed the current themes of fire safety and risk assessment, energy pollution and sustainability, residential transactions and condition surveys. His paper drew together the common threads of the day, regulatory reform, legislation and guidance, financial implications, lack of understanding by consumers and owners and concerns amongst the professionals, together with the difficulties of balancing greater demands, risk assessment and ownership within an environment constrained by fear, fiction and facts and the ever-pressing need for change. In summarising the seminar, it was recognised that success in the creation of a safe environment, geared to sustainability, revolves around the themes of involvement, understanding, consolidation and delivery with clear ownership and responsibility; a reflection of the generation of clear regulations and an ordered delivery process by fully competent and qualified people. The governors of WOBO took this opportunity to review their activities around the globe and will be looking forward to welcoming more individuals and organisations into membership during the coming year.

- Further details on WOBO and the ICC can be found at [www.nfpa.org/wobo/index.html](http://www.nfpa.org/wobo/index.html) or [www.icesafe.org](http://www.icesafe.org)

