The Singapore British Business Council Presents:
"Intelligent Buildings & Cities – Technology, Industry, Collaboration Prospects for UK & Singapore"
Grand Copthorne Waterfront Hotel, Riverfront Ballroom
Thursday, 18 November 2004

8:30 am	Registration
9:00 am	**Opening Session** - *Welcome Address by Co-Chairman of SBBC, Dr Albert Hong* - *Address by Mr Michael Koh, Director of Urban Planning & Design, Urban Redevelopment Authority* - *MOU Signing Ceremony between Temasek Polytechnic Singapore and University of Reading, England*
9:20 am	Session 1 **The Intelligent City** - *Mike Williams, Managing Director, CDC, UK* - *Louis Tay, Managing Director, Surbana Technologies, Singapore*
9:55 am	Session 2 **Building Intelligently** - *Jim Read, Associate Director, Arup Communications, UK* - *Liu Thai Ker, Director, RSP Architects, Singapore*
10:30 am	Tea Break
10:50 am	Session 3 **Facilities & Operational Management** - *Keith Waterman, UK Facilities Director, GE Healthcare-BioSciences* - *Wong Yew Heng, COO, Colliers Intl. Asset Mgt, Singapore*
11:25 am	Session 4 **International Standards** - *Giles Grant, Managing Director, BSI, UK* - *T. K Woo, Director, Citech Systems, Singapore*
12:00 pm	Session 5 **Education and Research** - *Prof. Derek Clements Croome, University of Reading, UK* - *Mr Chan Kim Kai, Temasek Polytechnic, Singapore*
12:30 pm	**Concluding Remarks** by SBBC Co-Chairman, Sir Mark Moody Stuart
12:45 pm	**Networking Lunch**, visit Exhibition
2:00 pm	***Start of Optional parallel breakout sessions on*** *(1) The Why's not the How's of Systems Integration,* *(2) Intelligent Building Trends, and* *(3) Facilities and Operations Management* *Each session will comprise two presentations, on UK and Singapore perspectives.* *The Exhibition will be on display between 9:45 am and 3:00 pm, participant will have opportunity to interact directly with exhibitors during tea break and networking lunch session.*

Keynote Address

Michael Koh, Director, Urban Redevelopment Authority

Michael Koh is currently appointed as Director (Urban Planning & Design) at the Urban Redevelopment Authority (URA). He holds a B. A. (Arts Studies), a B. Arch (Honours) from NUS and a Master of Design Studies from Harvard University. He has worked with the URA for 14 years from 1988 to 2002, and with Mapletree Investments, a subsidiary of Temasek Holdings from 2002 to 2003.

Whilst at the URA, he has been actively involved in the preparation of two Concept Plans (1991 and 2001), the Parks & Waterbodies Plan & Identity Plan, Island-wide Structure Plan (2001) and the review of the Master Plan (1998). Other key projects he has been involved in include the design and implementation of the plans for the new Downtown (1997), the Arts & Entertainment District at Bugis (1996), China Square development area and Novena fringe centre. At Mapletree Investments, he was involved in project implementation at Harbourfront, design of Harbourfront Mall and the consultancy for the Business and Financial Centre.

One of his key passions is understanding the intricate workings and dynamics of cities. He strongly believes in making Singapore a great city to live, work and play in. He plays this role in his current appointment at URA, where he leads the Central Area team, responsible for the realisation of the Downtown at Marina Bay and making the city distinctive, dynamic and delightful.

He is married and is learning daily about the growing needs of his two children.

Session 1 - Intelligent Cities

Mr. Mike Williams, Managing Director, CDC- UK

Founder of CDC and widely recognised as the UK's leading visionary in the field of Intelligent Buildings and integrated systems within the built environment. Initially qualified as a chartered engineer, and later qualifying as a chartered accountant, Mike has demonstrated a strong track record of turning vision into reality, through various high-profile committees: BSRIA the BEMS Centre, British Council of Shopping Centres (BCS Technical Services Committee), British Standards Institution (BSi) Working Party on Standard for Integrated Systems,).Treasurer and Chairman of the Greater China Focus Group of the Intelligent Building Group (IBG), CIBSE - Secretary of the Controls & IT Group

Er. Louis Tay Heng Hock

SVP (Business Development - Middle East) - Surbana International Pte Ltd
SVP (Technical Director –Civil & Structural) - Surbana Consultants Pte Ltd
Managing Director - Surbana Technologies Pte Ltd

Er. Tay has an Honours as well as a Master's degree in Civil Engineering from the National University of Singapore. He is currently a practicing Professional Engineer in Singapore and a member of the Institution of Engineers S'pore. Prior to joining HDBCorp in Jul 2003, he had served 20 years in the then Structural Engineering Department of the Housing & Development Board Singapore.

During his HDB stint, he was involved in the development of construction technology for high-rise public housing design and construction. Infact, he was a pioneer who had spearheaded the development of precast design and construction techniques, which were crucial in helping to ensure the success of the government's massive public housing upgrading programme when it was first launched in 1990.

For his distinguished contributions in this area of work, he was in 1997, awarded the **Public Administration Medal (Bronze)** by the Government of Singapore. In Jun 2001, he was conferred with the Diploma of the **Derrington Award for Construction** by the Institution of Engineers, England in recognition for his contributions to the innovative use of precast technology in public housing upgrading.

In Jul 2003, Er. Tay joined HDBCorp a subsidiary of the HDB. He currently holds several key appointments in the organization. As MD of HDBCorp's subsidiary - **Surbana Technologies Pte Ltd**, he manages HDBCorp's innovation, R & D as well as IP commercialisation programme. As SVP in **Surbana International Pte Ltd** (another subsidiary), he is responsible for developing HDBCorp's strategic consultancy positioning in the Middle East.

And finally as Technical Director in **Surbana Consultants Pte Ltd,** he manages the technical development, operations and professional content of the HDBCorp's consultancy business encompassing all matters related to civil and structural engineering issues.

Session 2: Building Intelligently

Jim Read, Associate Director, Arup Communications, UK

Jim's career background covers work in system design, research, training and project management for telecommunications providers, consultants and private industry both in the UK and overseas.

His work embraces technical and strategic consultancy assignments for projects covering all aspects of information and communications technology.

He has in-depth experience of the technology and its demands on building design and operation and is well known internationally for his research into Intelligent Buildings. He has published several articles and has presented at many conferences around the world.

Liu Thai-Ker, Director, RSP Architects Planners & Engineers (Pte) Ltd., Singapore

Mr Liu Thai-Ker is a renowned architect-planner. He is Director of RSP Architects Planners & Engineers Pte Ltd.

Mr Liu is also the Chairman of the National Arts Council and a member of several governmental and academic bodies in Singapore. He has also been appointed the planning advisor to Shandong Province and ten major cities in China.

As Chief Executive Officer of Urban Redevelopment Authority, 1989-1992, he spearheaded the major revision of the Singapore Concept Plan. The Concept Plan is widely recognised to be both visionary and pragmatic, and one that will help contribute towards making Singapore a city of excellence.

As architect-planner and Chief Executive Officer of the Housing & Development Board, 1969-1989, he saw the completion of over half a million dwelling units. Architecturally, Mr Liu led his team of designers to cross the journey from functionally well planned, neatly sited simple building blocks, to architecture of aesthetic merit. In terms of engineering design, Mr Liu encouraged his professional staff to explore new structural systems seldom tried in Singapore.

Academically, Mr Liu obtained his Bachelor of Architecture with First Class Honours & University Medal from the University of New South Wales in 1962 and Master in City Planning with Parsonís Memorial Medal from Yale University in 1965. He later attended Stanford Insead Advanced Management Program, Fontainbleau, Paris in July 1980. In 1995, he was conferred Doctor of Science honoris causa by the University of New South Wales.

Mr Liu is also a recipient of several awards. They include the Public Administration Medal (Gold) in 1976 and the Meritorious Service Medal in 1985 from the Singapore Government. In 1993, he was bestowed the 2nd ASEAN Achievement Award for Outstanding Contribution to Architecture.

Session 3- Facilities and Operations Management

Keith Waterman, UK Facilities Director for GE Healthcare.

GE Healthcare began in April 2004, by merging three companies GE Medical Systems, Instrumentarium and Amersham plc. Keith has worked for Amersham plc, now GE Healthcare Biosciences, for 21 years, joining just after its privatization by Margaret Thatcher, the first UK Company to be privatized in 1982.

He started his career as an Electrical Controls Engineer serving an apprenticeship at Harwell Atomic Energy Authority. Following qualification he returned to Amersham in 1987 and embarked on a career within the Engineering department in building and process controls, electrical distribution and generation and then ventilation and air-conditioning and became the UK appointed expert for Nuclear Ventilation and Filtration. In 1997 he headed the engineering operations team and continued in that role until taking an opportunity to help create a UK Facilities team in March 2002. In June 2003 he was appointed UK Facilities Director and works as part of a team responsible for the global asset management of 213 properties worldwide. GE Healthcare's business is within health diagnostics and biosciences instrumentation with a turnover of $14 billion and >40,000 employees worldwide. GE Healthcare is committed to changing the healthcare industry by bringing personalized healthcare from late disease to early detection for the fulfillment of life. This year Keith was a finalist in the British Institute of Facilities Management (BIFM), Investors in FM Excellence International Awards Programme 2004 for 'The Facilities Manager of the Year' award.

Mr Wong Yew Heng, Chief Operating Officer, Colliers International Asset Management

Mr Wong is the current Chief Operating Officer of Colliers International Asset Management, a former Division of Colliers Jardine (Singapore) Pte Ltd, which was hived-out and corporatised on 1st July 2001. Prior to that, Mr Wong was the Director in-charge of Real Estate Management Division of Colliers Jardine.

Mr Wong graduated with a Diploma in Building Maintenance and Management from Ngee Ann Polytechnic in 1983. He further obtained his first degree in Estate Management from the UK in 1988. Prior to his joining Colliers Jardine in Singapore in 1991, he worked for a professional surveying firm in the UK for three years after he graduated from the university. He brings with him 16 years of experience in property and asset management. As a professional, he is a Fellow of the Association of Property and Facility Manager. He is a member of the School Advisory Committee of Fuchun Primary School and was recently appointed by the Honorable the Chief Justice to the Inquiry & Disciplinary Committee of The Law Society of Singapore.

Session 4: International Standards

Giles Grant, Managing Director, BSI Business Information, UK

Giles Grant is the Managing Director of BSI Business Information based in Chiswick in London, UK. BSI Business Information sells standards, and standards related products and services worldwide, equipping businesses with the knowledge needed to succeed in their markets.

Giles has worked for the BSI Group for over 5 years, firstly setting up an Internet joint venture BSPL (British Standards Publishing Limited) and then moving on to create the BSI Business Information Division. Prior to joining BSI, Giles held senior positions with Reed Elsevier in the UK, Americas and Asia Pacific. He has also worked in the retail and service sectors.

Giles holds Degrees from several UK universities, including an MBA in Marketing. He is a Fellow of the Institute of Direct Marketing and a Member of the Chartered Institute of Marketing.

TK WOO, Director, Citech Systems

Mr. Woo is the director of CITech Systems Pte Ltd in Singapore. He is a professional control and communications engineer having more than 18 years experience in large scale building projects including Hong Kong Convention and Exhibition Centre, Suntec City in Singapore, Singapore Post Centre, Singapore Exchange Center, Capital Tower in Singapore, Kiara Hill at KL of Malaysia, Enterprise Square in Hong Kong, etc.

Mr. Woo is specialized in study, design and project management for intelligent building systems which is based on highly integrated system with intelligence functions to enhance the manageability and marketability of the building.

In the Capital Tower project, Mr. Woo is the principle consultant in charge of the design and project management of system integration for more than 20 systems under different disciplines such as M&E, IT, Audiovisual, Facilities Management, Property Management, Office Automation, etc.

At this seminar, Mr. Woo will use real-life experiences through case studies to present the concept of intelligent building and design practice covering design objectives, design team co-ordination, open system standard, system integration, building infrastructure, technology assessment, system implementation, testing and maintenance.

Session 5: Education and Research

EUR ING PROFESSOR DEREK J CLEMENTS-CROOME, Director, University of Reading, UK

Director of MSc Intelligent Buildings and Director of Research in the School of Construction Management and Engineering at the University of Reading. Set up MSc in Intelligent Buildings in 1996. Past Chairman and founder of the South East (formerly Thames Valley) Centre for the Built Environment in Construction. Chairman of European Intelligent Building Group (2002 – 2003).

Member of EPSRC Engineering & Physical Sciences Research /Department of Trade and Industry Engineering Research Management Committee on Ventilation and Airconditioning and Refrigeration Link Programme. Former member of Science and Engineering Research Council/Department of the Environment Link Construction Maintenance and Refurbishment Programme Management Committee. Member of CEN Working Group 6 on European Indoor Climate Standard. Chairman of: European Intelligent Group Management Board; Natural Ventilation Group and Educ ation and Learning Group for Chartered Institution of Building Services Engineers; Electromagnetic Biocompatibility Association.

Author of several books: including Airconditioning and Ventilation of Buildings, Pergamon Press, 1981(Second Edition), also published in Chinese and Russian; Noise, Buildings and People, Pergamon Press, 1977; a principal contributor to Investing in Building 2001; Editor and part author of Naturally Ventilated Buildings Spon (1997); Creating the Productive Workplace (2000) Spon. Electromagnetic Environments and Health in Buildings, E & FN Spon (2003); Intelligent Buildings, Telford Press (2004).

Visiting Professor at Chongqing; Tianjin; Benxi; and Lidong Universities in China. Honorary President of Intelligent Buildings at Cracow University, 2000, 2002, 2004. Honorary Visiting Professor at Shijiazhang University; Shenyang Industry University and Benxi University in China in 2002.

Silver and Bronze Medallist of the Chartered Institution of Building Services Engineers and the Institute of Hospital Engineering. Nominated and elected Fellow of the American Society of Heating, Refrigeration and Airconditioning Engineers in 1997.

Member of Internal Society on Indoor Air Quality Task Group on environment and productivity.

Nominated and elected Lifetime Member of the International Academy of Indoor Air Sciences in 2000.

Research interests include intelligent buildings; productivity in the workplace; logistic support and reliability analysis; individual environmental control; smart housing; indoor air quality and alternative approaches to heating, ventilating and air-conditioning of buildings; innovation and technology; environmental issues for the construction industry; value of plants in buildings. Research grants awarded by EPSRC, Royal Academy of Engineering, Industry and EU. A Freelance Consultant in Environmental Design.

Mr. Chan Kim Kai, Professor, Intelligent Building Technology Department, Temasek Polytechnic, Singapore

Mr Chan Kim Kai is the Course Manager for the Intelligent Building Technology Department, Temasek Engineering School, Temasek Polytechnic. He is also a member of the Senate at Temasek Polytechnic. Prior to joining Temasek Polytechnic, he was working in the Offshore as well as Oil and Gas and Construction Industry.

Mr. Kim Kai obtained his Masters of Science in Architecture from Carnegie Mellon University in 2001 under Temasek Polytechnic's Scholarship programme. He obtained his Bachelor of Science in Mechanical Engineering with a concentration in Aerospace Engineering from Rose-Hulman Institute of Technology in 1988, where he also obtained the Rose-Hulman Scholarship.

Mr. Chan Kim Kai is listed in the Who's Who in the World as well as Who's Who in Science and Technology. He is a Member at the Pi Tau Sigma National Honorary Mechanical Engineering Society as well as a Member at the American Society of Mechanical Engineers. He is also a member of the National Energy Efficiency Committee, R&D Workgroup. Energy conservation and building performance simulation are his main areas of interests.

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Singapore British Business Council Presents

Seminar on Intelligent Buildings and Intelligent Cities: Technology, Industry, Opportunities

Venue: Hotel Grand Copthorne Waterfront, Singapore
Date : 18th Nov 2004

The details of the breakout sessions are as given below:

All sessions running concurrently, for 90 minutes.

Break-out Session 1
Date: 18th Nov 2004
Time: 2:00PM to 3:30PM

The Why's and not the How's of System Integration hosted by Mr. Mike Williams, CDC, UK

The session has two distinct themes. The first deals with achieving capital cost savings and benefits on new design/ build projects. The second handles the operational cost savings and benefits impacting the fm and maintenance services dimension of running buildings.

Firstly, the session explores and explains how, for all systems; integration techniques are used to simply deliver "more for less" on new build capital projects. Compared to the traditional stand alone systems approach, the integrated systems alternatives are shown to be easier to design, easier to install, easier to commission, less expensive in capital cost terms, with less project risk. Operationally these integrated systems are easier to use, easier to maintain and less expensive to maintain.... and they work!

Second, it will address issues relating to how these systems integration techniques may be used, in both new buildings, and in existing buildings with existing legacy systems. The techniques allow the cost of FM and maintenance services to be driven down whilst at the same time driving up the quality of service provision. These techniques enable the actual KPI performance of fm and maintenance providers to be automatically captured from the systems, and thus enable performance to be measured and better managed using a new cost effective condition monitoring output based maintenance regime. Various case studies will be used to demonstrate the benefits.

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Breakout Session 2
Time: 2:00PM to 3:30 PM
Date: 18th Nov 2004

Intelligent Building Trends - hosted by Arup Communications

The session proposes to cover the following different aspects of trends in the Intelligent Building industry.

1) **Climate, building fabric and façades – Presented by Russell Cole.**

Buildings provide enclosed spaces that protect people from the rigours of the outside climate, but also allow in those elements that add to comfort of occupants. Russell will highlight the main current drivers in building design and try to identify some future trends in the building's construction and fabric. The role of the building's envelope and structure will be discussed and ways in which people interact with them.

2) **Uses of buildings – IT – Presented by Michael Tomordy**

Michael will talk about how IB's they are becoming increasingly sophisticated as part of intelligent building components and how the ICT and controls market, largely driven by the deployment of IP, is providing the integration platform for these and other building elements. I will also touch on the technical design approach to integrating an IBMS with other MEP systems and procurement, implementation and on-going development issues and approachesComfort and controls - M&E aspects, Jeffrey Willis

3) **Comfort and controls - M&E aspects – Presented by Jeffrey Willis**

Jeffrey will talk about how the comfort of occupiers can be addressed by the integrated design of the component parts and how the integrated design needs to be managed and controlled. Also the importance of testing and commissioning the integrated solutions to be sure that they are working as designed and the need to provide systems that are not only maintainable, but also scaleable.

Structured Discussion – directions & drivers for the intelligent building. Deliverable:- Integration of concepts for the next Generation of buildings

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Breakout Session 3
Time: 2:00PM to 3:30 PM
Date: 18th Nov 2004

Facilities and Operations Management hosted by GE Healthcare: Hosted by Mr. Gordon Davies of GE Healthcare.

Mr. Wong Yew Heng from Colliers International Asset Management will highlight some of the FM issues which are of greatest interest to the situation in Singapore;

Mr. Keith Waterman of GE Healthcare will then follow with his comments on the UK perspective.

At the end of the outline presentations, the top 3 issues related to Facilities and Operations Management will be open to the floor for general comments and questions from the delegates.