

CTBUH 2009 Chicago Conference

It was a pleasure to attend the recent 2009 Chicago conference ‘Evolution of the Skyscraper: new challenges in a world of climate change and recession’. Looking at the high number of participants, in excess of 600 from 35 countries, the event seemed to have more the flavour of a CTBUH World Congress than a regional conference...

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On October 22nd and 23rd, the campus of the Illinois Institute of Technology in Chicago was the gathering place for everyone involved or interested in the latest developments of tall buildings worldwide. A massive 615 delegates, representing 278 companies and 35 countries, registered to attend the Council on Tall Buildings and Urban Habitat’s 2009 Chicago Conference, featuring a world class lineup of speakers and panelists. The program also included a celebration of the 40th Anniversary of the Council, a variety of technical tall building tours and the CTBUH 8th Annual Awards Dinner in recognition of the Council’s selection of the Best Tall Buildings 2009 and lifetime achievement award winning projects. Looking back, we are proud to be able to say that the conference was a smashing success!

Welcome

On Wednesday, October 21st, just prior to the conference, delegates had the opportunity to tour one of several buildings recently added additions to the Chicago skyline, through the pre-conference technical tours. Professionals involved in designing, developing and constructing The Trump International Hotel & Tower, Aqua Tower, Blue Cross Blue Shield Headquarters, Legacy at Millennium Park (see Figure 1) and One Museum Park West, guided delegates through their topped out or nearly completed skyscrapers. The Chicago classic John Hancock Center was also part of the technical tours program. During that evening,

the conference Welcome Reception (see Figure 2) was held in the luxurious ballroom on the 16th floor of the Trump International Hotel & Tower Chicago where, amongst other things, CTBUH presented a plaque to Eric Trump of the Trump Organization (see Figure 3) recognizing the Trump International Hotel & Tower Chicago as tallest building in the world with an all-concrete structure, the tallest mixed-use building in North America, the 2nd tallest building in North America, the 6th tallest building in the world and the tallest building built in the US in the past 35 years, since Willis (Sears) Tower.

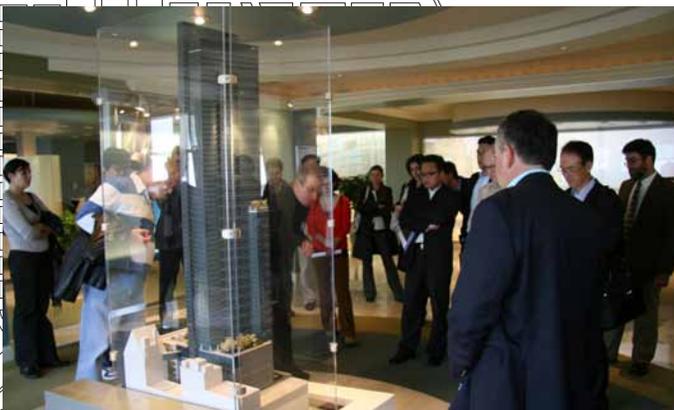


Figure 1. The Legacy at Millennium Park - Delegates viewing model in the lobby



Figure 2. Welcome Reception on the 16th floor of the Trump International Hotel & Tower

Theme

The title for the conference was *The Evolution of the Skyscraper: New Challenges in a world of Climate Change and Recession*. Tall buildings have enjoyed almost two decades of unprecedented development, built in greater numbers, height and geographical spread than at any time in history. In the course of the 20th century, the side effects of skylines and icons gradually became another main cause for tall buildings, overtaking the need for density, especially when it comes to supertall buildings. Tallness (and hence visibility) can embody various messages, from an individual expression to values representing a society as a whole or the time of development.



That position is now under threat from the twin challenges of global climate change and a severe international economic recession. Despite the crisis element of this, it is also be a moment to rethink what has been taken for granted and an opportunity to discard old habits. New problems or challenges ask for creative solutions and the goal of the conference was to learn in what direction we in the 21st century are and should be heading.

New icons

Two supertall towers that embody the latest iconic generation of tall buildings were specially featured at the conference: the Trump International Hotel & Tower Chicago and the Burj Dubai. Eric Trump and Andy Weiss (Trump Organization) showed that phased occupancy can contribute significantly to the financial feasibility of supertall buildings. Trump also mentioned that if you are going to do something the size of a supertall building, you must be prepared for the publicity, something which is also very much true for the Burj Dubai. Mohamed Ali Alabbar's (Emaar Properties) presentation of the Dubai Tower showed that the 800+ meter tall tower embodies the development of Dubai as a whole on a global level (see Figure 4). It also showed that supertall buildings and the direct urban environment of these towers are two entangled developments which enforce each other's presence.

Future Icons

Tony Kettle (RMJM) and Arthur Gensler (Gensler) presented supertall projects that are currently under construction or development: Gazprom Tower in St Petersburg and the Shanghai Tower. Kettle also commented on the debate about designing a supertall building in a city whose historic center has been recognized as a world heritage site by UNESCO. He argued that the location of the tower, a brownfield regeneration site, isn't a threat to the character of the preservation area, and that in a city with an iconic history,



Figure 4. Mohamed Ali Alabbar, Emaar Properties

there should be room for an iconic future as well. The building will be an icon for our 21st Century of Energy, just like the 18th, 19th and 20th centuries were dominated by the context of religion, trade and communism respectively. Gensler talked about designing a building as part of a trio of supertall buildings (see Figure 5). In this context, the Jin Mao Building (1999) was designed to honor China's past and the World Financial Center (2008) as a tribute to the present. The naturally shaped Shanghai Tower reflects the future of China. The 120 degree twist is stretched over 140 floors. ↻



Figure 3. CTBUH presenting plaque to Eric Trump of the Trump Organization

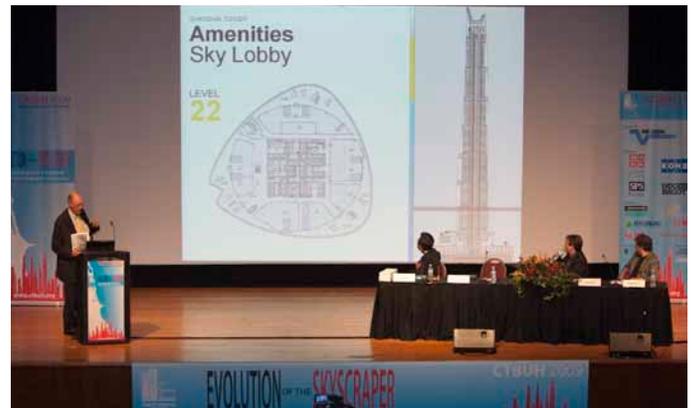


Figure 5. Arthur Gensler on the design of the Shanghai World Financial Center



Figure 6. Richard Tomasetti, Thornton Tomasetti presented the Chicago Spire



Figure 7. Mark Mitcheson-Low, Woods Bagot on the Nakheel Tower in Dubai



Figure 8. Erik Kuhne; Erik Kuhne Associates explains the design of Burj Mubarak al Kabir in Kuwait

Aspired Icons

How high can a tower go? Is one kilometer realistic? Nakheel Tower Dubai is a futuristic example. Towers at these heights can be constructed and have the potential to be financially successful. New equipment and partial occupancy construction techniques will need to be developed. Any tower over two kilometers will probably need pressurization to deal with our inner ear pressure. Many other issues related to accessibility and circulation, will also need to be addressed. The sustainability of these super-tall towers is also being questioned. Projects have been cancelled, put on hold or are reducing their pace of moving forward due to the economic crisis of the recent past.

Richard Tomasetti (Thornton Tomasetti) and Mark Mitcheson-Low (Woods Bagot) presented on the Chicago Spire and the Nakheel Tower in Dubai, respectively, offering their specific design solutions to problems that arise when building at extreme height, such as wind issues. Mitcheson-Low explained that the Nakheel Tower is not one solid tower but actually designed as stacked groups of four towers, which allow the wind to flow through the spaces in between these towers. Also some of the tall, but yet to be seen,

developments were introduced, such as the American Commerce Center in Philadelphia presented by Garrett Miller (Hill International Real Estate partners) and Eric Kuhne's (Eric Kuhne Associates) spectacular display of the Burj Mubarak al Kabir in Kuwait and other large scale projects. Although it's tempting to focus on the supertall aspects, Kuhne described how his projects connect to the society in which they are placed. Contextuality and the connection of the ground plane to the neighborhood are very important elements in today's designs. To qualify as an asset, it must be created to fit into its neighborhood.

Sustainability

In the course of the 20th century, the iconic effects of skylines and skyscrapers gradually became another main cause for tall buildings, overtaking the need for density, especially when it comes to supertall buildings. Density became visibility, which is now being used to mimic density. Tallness (and hence visibility) can embody various messages, from an individual expression to values representing a society as a whole or the time of development. A very current theme is the topic of sustainability. Many new developments are now underway trying to make towers more durable and sensible through green technologies,



Figure 9. Delegates at the CTBUH 2009 Chicago Conference, Hermann Hall, Illinois Institute of Technology, Chicago

smart and ecological design, green policies and certification programs. Speakers who presented individual projects eagerly pointed out the sustainable features.

On the first day, Steve Watts (Davis Langdon) introduced the topic by showing that next to economic maximization, ecological and social optimizations are also an important part of the triple bottom line of sustainability. Watts also suggested that nanotechnology might become the next big development in the structural design of tall buildings. Dan Probst (Jones Lang LaSalle) noted a growing awareness of the importance of sustainable building performance amongst office clients. Representative green buildings matter, especially to the financial industry. It is up to the suppliers of office space that an investment in sustainable features can be cost effective and beneficial to the working environment, especially in the long run.

Projects

Mun Summ Wong (WOHA) and Russell Gilchrist (SOM) presented projects where sustainability has a profound impact on the appearance of the tower. Wong showed the Newton Suites Tower in Singapore, a green tower which uses wind to naturally ventilate the building and employs a 30-storey continuous green wall. Gilchrist talked about the Pearl River Tower in Guangzhou, which has been designed to optimize the capturing of wind for energy production through turbines. Adrian Smith (Adrian Smith + Gordon

Gill Architecture) presented the plans for a green retrofit of the Willis (Sears) Tower in Chicago and the results of a study on how the Chicago Loop could be “decarbonized.” Russ Huffer (Viracon) and Guy Turner (Intelligent Engineering / SPS Floors) talked about sustainability at the product level through glazing and floors.

...and Urban Habitat

Another theme that received a good amount of attention was that of the urban habitat. Through comparing East and West coast cities in the United States, Clark Manus (Heller Manus Architects / AIA) recommended more attention to the urban space between the tall buildings and the livability of city centers and communities. Development should be focused on more than obtaining LEED certification alone. Sustainability is more than the sum of the proper ingredients, it’s also about how these are mixed synergistically that really adds value. To grasp the qualities of the combination of urban density and tall buildings, Carol Willis (Skyscraper Museum) compared several examples of density by displaying cities which are generally considered to be dense. By doing so, she showed that density comes in many shapes and forms. In order to distinguish the urban density and the life styles that come with it as seen in Manhattan, she introduced the term of “Vertical Density”.

The topic was further discussed in a panel which included Sandy Diehl (United Technologies), Richard Hanson (Mesa Development), Carol Willis (Skyscraper Museum) and Adrian Smith (Adrian Smith + Gordon Gill Architecture), which was moderated by Janice Tuchman (ENR/McGraw-Hill). The panel debated the sustainable merits of dense living, compared to low-rise and out-of-town living. The importance of livable city centers was also the focus of the presentation by John Portman, the Lynn Beedle Lifetime Achievement Award winner. He reflected on his impressive career, which spans almost five decades.

Happy Anniversary!

As part of the celebrations of the 40th Anniversary of the Council, one session brought six past chairmen onto the stage. Leslie Robertso (1985–1990), Charles DeBenedittis (1990–1993), Gilberto do Valle (1993–1996), Shankar Nair (1996–2001), Ron Klemencic (2001–2006) and David Scott (2006–2009) were asked to reflect on the time that they had lead the Council (see Figure 11). These memories showed once again that the founder and long time chairman and director Lynn Beedle really embodied all that represented the Council on Tall Buildings.

Prior to his induction as the new chairman at the awards dinner on the Thursday evening, Chairman Elect Sang Dae Kim was asked to say a few words by outgoing Chairman David Scott. Kim told us that he hopes to make the Council as strong in Asia and South East



Figure 10. Richard J. Daley, City of Chicago



Figure 11. CTBUH Chairman. From left to right: David Scott, Shankar Nair, Ron Klemencic, Charles DeBenedittis, Leslie Robertson & Gilberto Do Valle



Figure 12. Prof. Sang Dae Kim, new CTBUH Chairman closing the successful conference



Figure 13. Poster exhibit at CTBUH 2009 Chicago Conference

Asia as it is in the US. His main areas of focus will be threefold: the Council's finances, bringing in more academic people, and bringing in more experts.

Closing

On Friday, the final Conference presentation looked forward to next year, as the Mumbai Metropolitan Region Development Authority described the current state of urbanization in Mumbai. This was an excellent introduction for us as we are anticipating our Mumbai World Conference in February 2010.

Professor Sang Dae Kim, newly installed Chairman of the CTBUH, closed the Conference with final words and an invitation to attend the Mumbai World Conference (see Figure 12). As the CTBUH changes leadership and looks to the future of Tall Buildings, the questions of urban design will become more focused as we approach our next gathering in Mumbai.

Conclusions

The general sentiment about the future of tall buildings is leaning towards optimism. The future is actually here. We are constructing today what had been dreams just a few years ago. As large scale and supertall projects can require ten years to design, develop and construct, one is aware that these projects are going to run into an economic downturn sooner or later within this time span. Timing

is of great importance, and financial times are not great currently. But projects have not been written off completely; they are just awaiting better times, which are expected to lie ahead.

The conference also reinforced the fact that sustainability is here to stay. It reconfirmed the importance of sustainable design and development and the creation of attractive urban densities as lasting legacies of our time. Through their iconic presence tall buildings are excellent showcases of green building technology. Although sustainability sometimes feels like "nailing a jellyfish to the wall" (to quote conference speaker Steve Watts), it is also a topic that penetrates its way into the design, from the smallest detail of the building to the general planning of cities. It influences every profession related to the design, development, construction and management of tall buildings. Tall buildings will most likely continue to play a role as icons embodying these developments and ingredients to create attractive urban densities.

The concept of creating neighborhoods and livable cities is becoming increasingly important. "Public perception" and "differing views from each generation" are not the type of technical terms that previously had been considered in the design of the urban habitat. Tall Building design also needs a dialogue with the community and must have positive momentum to confront the potential resistance that may exist when they enter a new neighborhood.

The challenges of this era's tall building and urban habitat, engineering, design and construction are being tackled head-on by the global leaders in the industry, as made evident through the creative solutions presented by these leaders at the CTBUH 2009 Chicago Conference. Even in hard economic times, designers, builders, and manufacturers of tall buildings and urban habitat have never been more dedicated to designs for responsible and sustainable living.

Thanks

CTBUH would like to thank all sponsors, speakers, volunteers, delegates and everyone else who helped to make this conference a success. ■

Please visit <http://ctbuh2009.ctbuh.org> for a summary of delegate feedback together with all the images taken at the event and a range of written reports. Videos and the published post-conference report will be coming early in 2010.

Report by Jan Klerks, CTBUH Research & Communications Manager

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