

CONtact Singapore



Foreward by the President

David Shuttleworth
President



The CIOB Singapore Centre has grown in membership since this time last year and whilst the effects of the severe downturn in October 2008 that has affected the World over has impacted upon companies and individuals training and marketing budgets, there has been a steady increase in interest in how the CIOB can provide a very good support service to members and a platform from which to enhance skills, improve awareness of construction and communicate ideas and knowledge with fellow members.

Over the last year we have conducted a series of evening seminars on a diverse range of subjects together with several training programmes such as the Finance for non-Finance Managers Course in March and April and the Annual International conference in February which was very well attended. We are committed to continuing these endeavours and the conference to be held in 2010 will focus on Project Management and how this can be improved in future in the light of previous experiences and from the implementation of new techniques and initiatives now emerging. We shall also be holding

even more of the popular evening seminars on a diverse range of interesting topics from a wide range of speakers together, more training programmes and several informal social networking and other functions.

As the effects of the financial crisis settle down and the construction industry move forward, there is no doubt that companies will from now on will have to operate on a much leaner and fitter level; efficiency and value for money will be the order of the day. In this regard CIOB provides a means to communicate and exchange ideas etc. with fellow industry professionals and to update and increase knowledge through the Continuing Professional Development (CPD) opportunities available.

I look forward to meeting as many members as possible over the next year and hope that you will all participate in the many events we plan to hold.

Finally on behalf of the new council I would like to thank the previous council under the excellent guidance and leadership of Mr. Christopher

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CIOB-NUS International Construction Conference

Chuah for the contributions they have made over the last year and the considerable achievements made in raising the profile of the CIOB in Singapore. Wishing you all very Merry Christmas and a Happy New Year.

Report on the Annual General Meeting

The Annual General Meeting was held on 18 September 2009 at The Pines Country Club. The meeting was chaired by the outgoing President Mr Christopher Chuah.

A new council was elected uncontested. Mr Christopher Chuah stepped down as President and Mr David Shuttleworth, the former Vice President, was voted in as the new President. Mr Christopher Chuah assumed the role of Vice President.

The list of new council members is given below.

The outgoing President said that this year has been another fruitful year for CIOB Singapore. In the course of this year CIOB Singapore continued to organise the International Construction Conference which was held in February at the Goodwood Park Hotel. The seminar was well attended with an attendance which exceeded 80 people. The conference was once again a joint partnership with the NUS Building Faculty. The conference's topic this year was "Managing Construction in an Economic Crisis" and the range of international speakers were from America, Africa and Singapore. The conference was a whole day event and was attended by people from various backgrounds and countries such as Singapore, Malaysia, Hong Kong and China.



CIOB Singapore also organised several courses and seminars throughout the next few months. The Finance for Non-Financial Managers was a 2 part course in March and April organised for members and open to members of kindred organizations. The response was overwhelming and the course was over-booked. A social networking night was organised at a wine club in Roberston Quay in May. Two evening seminars were also organised and held at SMU in July and August. The seminar in July was a talk by David Shuttleworth on Dubai and the seminar in August was a talk by Anand Jude Anthony from Hill on India. Both seminars were well attended with more than 30 people attending each of the

seminars. More details on these events can be found in this newsletter.

The newly elected President Mr David Shuttleworth said that the new council will also take on the responsibility of organising the next International Conference in March which will be a one day event and have speakers from around the world similar to this year's conference. The new President also spoke of generating more interest in CIOB Singapore and increasing the profile of CIOB Singapore. The new President noted that attendance at CIOB events are getting better and looks to increasing membership numbers here in Singapore.

After the meeting, all members adjourned for a buffet dinner at The Pines Room.

New Council for Year 2009/2010

<i>President</i>	David Shuttleworth
<i>Vice President</i>	Christopher Chuah
<i>Honorary Secretary</i>	Mark Borland
<i>Assistant Honorary Secretary</i>	Frankie Fong
<i>Honorary Treasurer</i>	Tolu Sanni
<i>Assistant Honorary Treasurer</i>	Shirley Tan
<i>R & D Secretary</i>	Nicolas Moossa
<i>Social Secretary</i>	Tristan Allan
<i>Committee Members</i>	Philip Soo Hoon Wing
	Wilson Cheung
	Scott Muir
	Angelino Sing Jr
	Wang Huijing



Evening Seminar "Dubai Revisited" by David Shuttleworth, FCIOB

written by Angelino Sing Jr, ICIOB, Council Committee Member

It was over a year ago when David conducted a short talk on Dubai Mega projects and in that room that day I sensed the amazement from the audience on how the government and the construction industry transformed Dubai from a vast desert into a City nobody could imagine. The magnitude of transformation was incredible in that short span of time.

Now here I am again listening to David Shuttleworth on 9 July 2009 at the Singapore Management University updating his audience on Dubai Construction projects and yet again, I can sense the excitement in that room but not on the projects' progress but more on the effect of the Global Financial Crisis on Dubai. Everybody was aware that a bubble has been created in this country and this will surely burst if poor planning continued or maybe if pure greediness continued with a hope that everything will always be as good as it is.

Suddenly the bubble did burst and most of the projects were being shelved,

contracts were terminated and those people who are there to earn a living through hard work or even those financial capitalists and business minded individuals are now struggling to quickly get away from that country to minimize their losses and start all over again.

The next question is, what will happen to those unfinished projects and to those projects that are previously in the pipeline? Obviously contract managers, lawyers, law firms and insurance companies will be fully occupied in the years to come due to this catastrophe. A few iconic projects as well as those financed by the Dubai government will continue but no matter what, the events are painful lessons to everybody involved in the transformation of Dubai and the most painful lesson of all is the movement of all resources away from that country.

In the coming years as the world recovers from the financial crisis, construction professionals or even business minded people and even real property investors



will think twice before going to Dubai unless there are assurances from the host country.

Indeed Dubai is a country of extremes. They have their extreme engineering and architectural designs, the extreme construction progress, the extreme amount of capital and after this global crisis, extreme chaos.

I'll end up my views with this note "It is good to dream but it is better to wake up and face reality".

Angelino Sing Jr is a Construction Manager with Marina Bay Sands and he is also a council member with the CIOB Singapore Council.

Evening Seminar "The Indian Experience" by Anand Jude Anthony, ICIOB

written by Nicolas Moossa, MCIQB and R & D Secretary

CIOB conducted an evening seminar on the construction opportunities in India in August this year. The seminar was by Mr. Anand Jude Anthony (MSI Arb, LL.M London, LL B (Hons) London, MSc Int'l Constrm Mgt NTU Spore, B.Eng (Civil NUS Spore). Mr. Anthony shared his recent experiences in a country on what he considered were hot growth areas.

Mr. Anthony gave a very good geographical introduction of India to put everyone up to speed and provided a handout of a map of the country with the major states and cities highlighted. This proved useful as the seminar progressed.

From airports to ports, highways, energy, transportation, building, manufacturing, etc., Mr. Anthony gave brief but yet clear and inspiring accounts of the potential of

these areas of growth around India. I was amazed by the scale of the potential for growth; over 200 airports are set for development and redevelopment in the near future; Bangalore's 35 stations metro rail system; hydropower and coal-fired power plants; Karnataka five coastal town urban infrastructure developments, which is meant to relieve the population concentration in Bangalore; and many more.

Mr. Anthony also introduced the views on the lack of support from the state government in terms of participation and policies, labour management and law & dispute resolution. It was a stark reminder of the hindrances to business in foreign lands and what one has to at the minimum consider when working out the project risks.

The seminar was informative and I look forward to such seminars in the future.

Nicolas Moossa is an Associate Director with Building Systems & Diagnostics Pte Ltd and he is also the R & D Secretary for the CIOB Singapore Council.



Calculating and Using Float

by Patrick Weaver, FCIOB and Immediate Past Resident CIOB Australasia

Origin of Float

The concept of schedule float is the creation of the Critical Path Method (CPM) of scheduling. As part of my research for the new CIOB scheduling guide due for publication in 2010, I have been digging through some old books and resources from the 1960s and 70s. As a consequence, I can definitely say scheduling has lost a lot of float in the last few years! 40 years ago, float was a far more sophisticated concept compared to today but how significant is this loss of insight?

The origins of scheduling and consequently float is discussed in two earlier papers:

- *A Brief History of Scheduling*¹.
- *The Origins of Modern Project Management*².

The issues of creating float within networks and the options for manipulating float (legitimately or otherwise) through the structure of the schedule has been discussed in the papers:

- *Float - Is It Real?*³
- *The Cost of Time - or who's duration is it anyway?*⁴

The purpose of this paper is to support the concepts discussed in these earlier papers by analysing the various types of float that have been defined in the last 50 years and considering how they may be used in modern scheduling practice.

Float in ADM Networks

The biggest difference between ADM networks and PDM networks is the importance of the events (nodes) at the beginning and end of each activity.

In an Activity on Arrow network, the computers calculate data for both the events at the end of the arrows and the activity itself (the arrow); refer Figure 1. As a consequence, a rich data set is available to define:

- the scheduling flexibility at the start of the activity,
- the scheduling flexibility of the activity itself and
- the scheduling flexibility at the end of the activity.

Float in PDM Networks

Precedence networks position the activities on the 'node' (ie, the event in an arrow

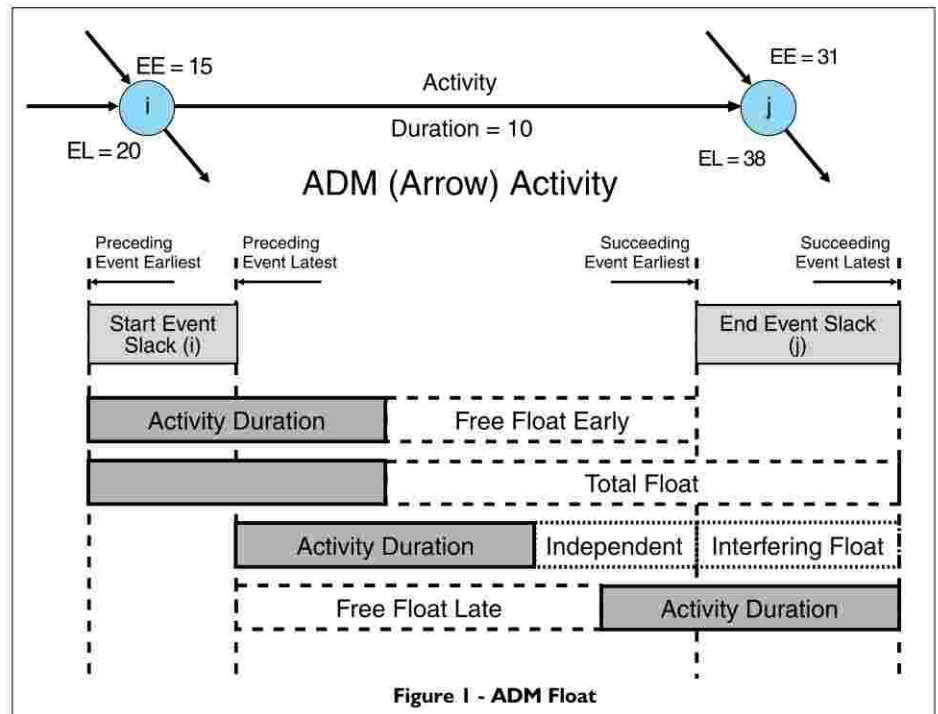


Figure 1 - ADM Float

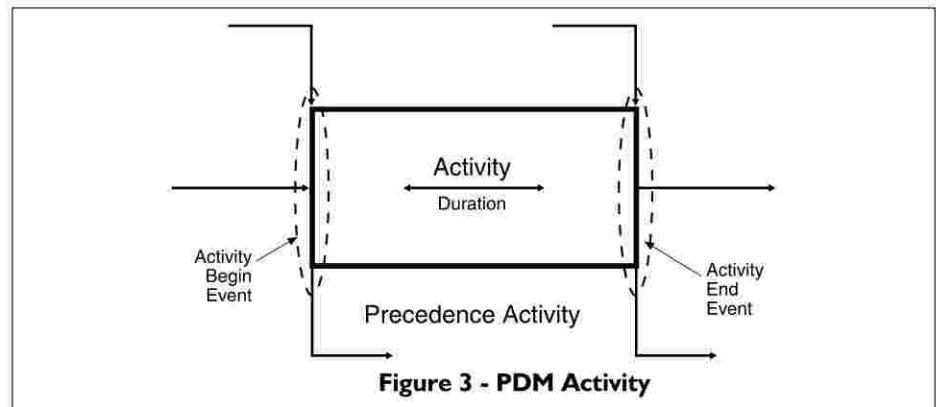


Figure 3 - PDM Activity

network) and connect the activities with 'arrows' called links. The PDM methodology does not attempt to calculate any values for its links; each link merely defines a logical relationship between two activities⁵.

However, given links can be connected to or from the start and the end of a precedence activity, the issues of the existence of pseudo start and end events independent of the activity duration remain; refer Figure 3. But, whereas Arrow diagrams had discrete components and precise rules as to how these were calculated, the PDM methodology has never defined an agreed set of calculations to deal with the same issues.

Using links other than Finish-to-Start can cause unexpected problems. Figure 2 represents the dry walling work on Level 5 of a high rise block of units (one complete floor):

- Task A is the erection of the framing. This 10 day activity involves 2 days to set out the walls and fix the head and floor tracks and 8 days to fix the rest of the studs and frames
- Task B is the in-wall services rough-in. This involves a total of 3 days work by electricians, plumbers and others to run their pipes and cables inside the wall ready to connect to fixtures and fittings at a later date. This task can start 4 days after Task A has started (this allows time for the framers to have installed around 25% of the studwork) but cannot finish until 1 day after all of the framing is installed. By its nature this work is intermittent requiring several short visits to the floor by each of the services trades.
- Task C is the fixing of the wall sheeting. This can start one day after the 'in-wall services rough-in' has started and needs 3 days to finish after the last of the services are installed in the wall. The

three days allows sufficient time to fix the last sheets, finish setting the joints and on the final day complete the sanding of the joints. However, fixing, setting and sanding the wall sheeting will take 12 days overall. Progress on the wall sheeting is only partly dependent on the in-wall services because not every wall has services inside it and as long as the service trades have access to one side of the walls where there are internal services, the sheeting can be installed on the other. The sheeting also needs at least 3 days after the completion of the framing (Task A) before it can finish.

The situation in Figure 4 represents the optimum situation. Task B starts 4 days after Task A allowing Task C to start one day later. Task B finishes 1 day after Task A allowing Task C to complete 12 days after it started. The overall duration of this work is 4 days at the start of Task A, plus 1 day at the start of Task B plus the full 12 days for task C equalling 17 day work.

Figure 3 shows a typical software solution to this complex problem where all three tasks are deemed critical and the overall duration is assessed as 21 days.

Paradoxically, in this situation whilst all three tasks are on the critical path, increasing the duration of Task B actually reduces the overall time for the three tasks to complete!

Practical Considerations

The predominance of PDM is absolute, well over 95% of the software used by schedulers today cannot create an ADM schedule⁶ and probably 99% of schedulers under the age of 40 have never seen or used an ADM schedule. What's needed to advance the practice of scheduling is a standardised way of dealing with calculation conflicts in PDM schedules; the problems are well known⁷, but the

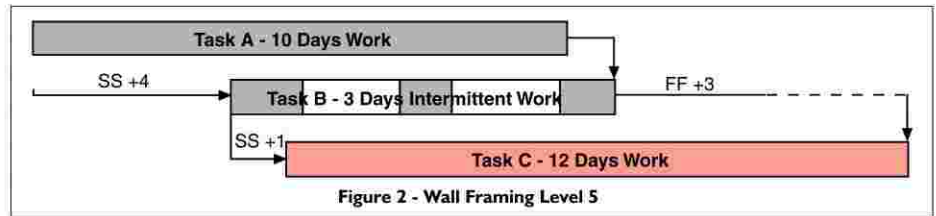


Figure 2 - Wall Framing Level 5

solution has been elusive. To date a standardised solution has not been achieved and consequently, with the exception of total float, float in a PDM schedule is uncertain.

From a practical perspective this creates two issues of paramount importance:

- Resources levelling and smoothing is completely reliant on having access to accurate and understandable float values. The absence of these means the scheduling algorithms are likely to be less efficient.
- Contract management relies on clearly defining critical and non-critical activities and knowing how much flexibility (float) is reasonably available on the non-critical activities.

The lack of defined calculations for most of the float values in a PDM schedule must reduce the overall value of the schedule model compared to more rigorous approaches. Though how important this reduction in schedule integrity is, is questionable. Certainly there has to be some loss of value, what's not determined is, is this loss of value generally significant?

If scheduling is a modelling process designed to affect the future behaviours of people working on the project (ie, persuade them to work to the plan), other factors may be more important⁸. However, from an analytical view point, any loss of accuracy is undesirable and this paper has clearly demonstrated PDM has less rigour in its float calculations than ADM.

Patrick has been a CIOB member since 1970; he is currently a Council Member of CIOB Australasia. He is the Managing Director of Mosaic Project Services Pty Ltd, an Australian project management consultancy business specialising in project scheduling and project management training. His consultancy work encompasses: developing and advising on project schedules, forensic analysis of project data, developing and presenting project management training courses (including PMP and CAPM courses for PMI accreditation), acting as an expert witness and assisting with dispute resolution and claims management, he is a qualified Arbitrator and accredited Mediator.

Reference

- ¹ A Brief History of Scheduling: <http://www.pmforum.org/library/second-edition/2008/PDFs/Weaver-2-08.pdf>
- ² The Origins of Modern Project Management: <http://www.pmforum.org/library/second-edition/2008/PDFs/Weaver-3-08.pdf>
- ³ Float - Is It Real?: www.mosaicprojects.com.au/Resources_Papers_043.html
- ⁴ The Cost of Time - or who's duration is it anyway?: www.mosaicprojects.com.au/Resources_Papers_009.html
- ⁵ For more on links see, Links, Lags & Ladders: www.mosaicprojects.com.au/PDF/Links_Lags_Ladders.pdf
- ⁶ The Micro Planner range is one notable exception - the origins of this software was the ICL Pert mainframe software. See: <http://www.microplanning.co.uk/>
- ⁷ See, Links, Lags & Ladders: www.mosaicprojects.com.au/PDF/Links_Lags_Ladders.pdf
- ⁸ For more on this topic see: Scheduling in the Age of Complexity: www.mosaicprojects.com.au/Resources_Papers_089.html

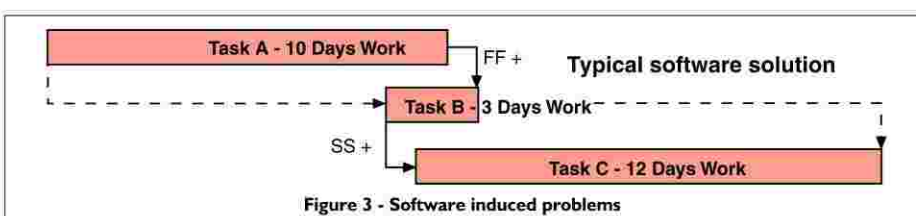


Figure 3 - Software induced problems

Keeping It Cool

by Nicolas Moossa, MCIOB, R & D Secretary

Many urban areas experience elevated temperatures compared to their outlying suburban or sometimes rural surroundings. This phenomenon is coined the Urban Heat Island (UHI) effect. Urban areas that have a higher average temperature than surrounding suburban or rural areas are termed urban heat islands.

In Singapore, the urban and suburban areas were found to experience temperature differences of around a significant 3°C. The UHI phenomenon is attributed to the heat built-up from the introduction of buildings, roads, infrastructures, a result of urbanization and development, within densely constructed areas. Development and urbanization has caused replacement of green space, open land and vegetation with buildings, roads and other infrastructures. Surfaces that were once soft, pervious and wet, generally became hard, impermeable and dry.

Impact of UHI

Higher temperatures from urban heat islands have many negative impacts on a community environment and quality of life.

Increased energy consumption

A higher average temperature increases the energy required to cool buildings and therefore higher utility bills.

Higher emission levels of air pollutants and greenhouse gases

Higher temperatures lead to higher energy demands, which therefore generate higher pollution levels and greenhouse gas emissions.

Reduced water quality

Green spaces help to slow down storm water runoffs and improve its quality. Green spaces have water retention capabilities and this significantly contributes to reduce storm drains sizes and the risks of floods. Green spaces also improve the quality of the water by binding heavy metals and pollutants within the water rather than discharging those into the drains to the reservoirs and rivers.

UHI mitigating strategies

The contributions of buildings, roads and infrastructures in urban areas can make towards environmental sustainability is rarely utilized to its full potential, and they present opportunities to tackle the problem that is UHI. Various heat island strategies that have been developed and are available: 1) trees and vegetations, 2) green roofs, and 3) cool paints.

This article aims to introduce the technology of cool paints and how it works to reduce the impact of buildings on UHI and the environment.

What can cool paints do?

Urban areas are densely built up; buildings are constructed close to each other; networks of roads and pavements provide community connectivity. There is hardly space left for extensive vegetations and greeneries at the street level or even sometimes at the roof level due to the building equipment installations.

Cool paints can be used almost any hard surface where the application of trees and vegetations is constrained: roads, roofs and facades.

Defining a cool paint

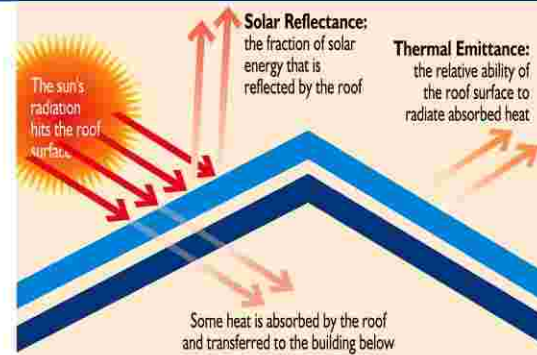
In simple terms, a cool paint is a paint or coating that reflects and emits the sun's incident heat back to the sky instead of absorbing the heat and transferring it to the building. If one leaves two similar pieces of steel in the sun, one painted white and the other painted black, one can expect that the white-coloured steel will be at a lower temperature. This is because the white colour reflects more and absorbs less heat compared to the black-coloured piece. Cool paints are however not confined to white or light-coloured; there are 'bright' or even 'dark' cool paints. The 'dark' cool paints use special dark pigments that reflects part of the insolation back to the sky.

The use of cool colours in buildings is an old concept: In the Middle East and the Mediterranean, native houses a lime-washed white to reduce the heat absorbed by the envelopes to improve thermal comfort.

How does cool paint work?

Incident solar radiation that reaches the earth surface is classified as comprising 1) ultraviolet (UV) rays, 2) visible light and 3) infrared (IR) rays. UV and IR are invisible to the human eye. Infrared rays account for about 45% of the incident heat energy from the sun, i.e. if we were to find a way to block infrared rays from reaching us, we would roughly halve the heat felt from the sun. Cool paints function by additionally reflecting the infrared (IR) portion of the incident solar radiation back to the sky at the incident wavelength; the incident radiation is thus not trapped by the atmosphere.

In doing so, the material absorbs less radiation and therefore transfers less heat



Courtesy "Cool Roofs and the Cool Roof Rating Council

into the building. This reduces the cooling load on the buildings. Moreover, given that the temperature of the cool painted surface is now lower, the said surface emits lesser infrared heat back to the atmosphere during a cool night. This form of infrared radiation has a wavelength different from the infrared radiation from the sun, and it gets trapped within the atmosphere (greenhouse effect).

Where can cool paints be applied?

Cool paints can be applied onto roofs, facades and pavements. It does not require any special application techniques or equipment. It is similar to the protective and decorative paints common in buildings and constructions.

Cool paints for pavements are being used on the major streets of Tokyo as a mitigating strategy against the urban heat island phenomenon. They have also found applications on various buildings in Singapore and South East Asia.

Terminologies

Solar Reflective Index (SRI) measures the ability of a material to reject solar heat as compared to a standard black and standard white that have been defined to have an SRI of 0 and 100 respectively. In other words, a higher SRI suggests a lighter coloured paint and a higher 'cool' performance than a material with a lower SRI.

Thermal emissivity (between 0 to 1) is a measure of a material's ability to shed some of its heat.

Reflectivity is a measure of the ability to reflect incident heat radiation. Its value is between 0 and 1. The ability of a cool paint to reflect incident heat radiation varies with the wavelength of the incident radiation and it is common to average the reflectivity over the various wavelengths into a total solar reflectance value (TSR).

Nicolas Moossa is Associate Director with Building System and Diagnostics Pte Ltd and he is also the R & D Secretary of the CIOB Singapore Council.

What is Research and Development in Construction?

by Tolu Sanni, MCIOB and Honorary Treasurer

Research and Development (also known as R and D or, more often, R&D), refers to "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications" according to the *OECD Factbook 2008: Economic, Environmental and Social Statistics*.

My research on R&D began after my appointment to the post of CIOB R&D Secretary in September 2008. What typically comes to mind when R&D is mentioned varies from the new breakthrough drug in the pharmaceutical industry to the new hybrid car or electricity operated car by the automobile industry to the new frameless flat screen TV by the electronics industry. All of these industries have one thing in common - the capital they invest in developing the next new product to beat their competitors and ensure they maintain the lead in the market for that class of product.

I found that when put side by side with the automotive, electronics or pharmaceutical industries where capital and human resource is readily invested into research and development, the construction industry is not known to have carried out a similar amount of recognised research. However these other industries are obliged to devote resources to R&D as their product life cycles are so short they cannot remain viable unless they keep up with the state of the art technology by committing vast capital to R&D.

These technology intensive industries differ from the construction industry in a basic way. Technology in construction has not been perceived as the crucial factor of competitiveness because it does not directly relate to the appeal of the final product. The product growth cycle as well as the life cycle is also much longer in construction.

It is a well known saying that necessity is the mother of invention and this saying is most applicable to the construction industry in that as long as construction can be carried out safely and bring considerable amount of profit by conventional process there is little incentive to innovate the processes which involve several risks. However when it is impossible

or difficult to achieve this goal, necessity of innovation arises and people will try to solve the specific problem by modifying conventional methods or creating new methods, gathering information from those who have similar experiences or by contracting another firm or consultant. The important thing to consider is that many of these innovations are project specific, are not applicable to every project directly and are not intentionally developed for future use. As a result in many cases this knowledge is stored as individual knowledge or know-how and makes the systematic development of innovation difficult.

Whilst construction is a process using an assembly of constituent products, none of these has to be the latest, the best or the most innovative for the end product, i.e. the building, to be more appealing. There is a profusion of innovative construction products released every year by construction companies similar to their counterparts in the automotive, electronics or pharmaceutical industries as they also need the latest products to get ahead of their rivals. Photovoltaic roof tiles, polymer based wall finishes, recycled plastic floor finishes all give testament to this.

There is also R&D in academia for construction where new products for example Fiber Reinforced Polymer (FRP) bars as an alternative to steel reinforcement in concrete structures such as marine structures, parking structures, bridge decks, highways under extreme environments and structures highly susceptible to corrosion and magnetic fields have been developed. FRP rebar has several benefits over conventional steel rebar including its imperviousness to chloride ion and chemical attack, a tensile strength which is greater than steel, its weight which is a quarter of normal steel reinforcement amongst others. However it also has certain disadvantages key of which is its cost per metre which is typically higher than conventional steel rebar. It should also be noted that it is not currently possible to make direct substitutions from steel bars to FRP without applying the appropriate design principles as a guide.

Another new development is that of 'smart concrete' which was developed by Dr. Deborah D.L. Chung from State University of New York at Buffalo. Smart concrete is

reinforced by carbon fibre as much as 0.2% to 0.5% of volume to increase its ability to sense strain or stress while maintaining its mechanical properties. This reinforcement helps concrete withstand tension and overcome its inherent weakness of cracking under strain. Smart concrete potentially has the ability to sense tiny structural flaws before they become significant, which could be used in monitoring the internal condition of structures and following an earthquake.

Its benefits are its strength over conventional concrete due to the use of carbon fibres; it also takes greater force for smart concrete to bend, so it absorbs more energy before fracture. Although this technology has been through extensive laboratory testing, it still needs field testing and it is not yet available in the market. The two examples of innovation in construction above were found on the Emerging Construction Technologies webpage of the Division of Construction Engineering and Management of Purdue University.

Innovation in construction depends greatly on the location of the project and labour costs as low labour costs generally engender a lack of innovation in the process. True innovation in construction occurs where labour costs are too high for manual means of construction. Other examples of innovation in construction include prefabrication and green/sustainable building products, the processes developed for the management of managing construction projects, the development of software tools such as Primavera or AutoCAD as well as risk management techniques which reduce risks to the client.

On a final note the importance of R&D in Construction cannot be over emphasised, it can be channeled into growing markets such as the green sector, can help develop efficient building products and systems which can be exported and can bring about increased competition between companies thereby creating more jobs. R&D should be developed by organizations as an internal culture which is viewed not as a short term venture but an investment for the future.

Tolu Sanni is a Design Manager with Marina Bay Sands and she is also the Honorary Treasurer of the CIOB Singapore Council.

Social Networking Events in May and November

by Tristan Allan, MCIOB, Social Secretary

May 26th 2009 Social Event - Robertson Quay

This year the CIOB initiated their first Social Event in March at the Wine Bar at Robinson Quay, managed by Cornerstone Wine. On offer was a selection of red and white wines as well as the traditional beers of Singapore. The aim of the event was to bring construction individuals together to share knowledge and market information in a relaxed atmosphere.

A successful night was enjoyed by all, with guests of CIOB members also being welcomed. We were encouraged by the number of individuals from a variety of construction backgrounds, including a selection of students who took the opportunity to attend and mix with 'seasoned' construction individuals.

Notably there were representatives from Contracting, Architectural Practices, Consultancies, Client Representatives, Quantity Surveying Firms and Sub-Contractors. The diverse nature of the CIOB brings together individuals from all disciplines in the Construction Sector, an aspect that we are very proud of, and continue to build upon.

Friday 13th November 2009 - Pre Christmas Networking Event

Following the success of the May social event, we organized a pre-Christmas networking evening at Pierside Kitchen and Bar at One Fullerton. Once again, we teamed up with Cornerstone who provided free flow wine and delectable canapés. The waterfront setting was apt, with the backdrop of Marina Bay Sands Integrated Resort, across the water.

Guest were served a choice of a fine Shiraz and Sauvignon Blanc. Mouthwatering canap's ranged from soft shelled crab maki, wasabi mayo, ceviche of scallops with coriander & chilli, and salt and pepper prawn with passion fruit to name a few.

The event was a success, once again attracting individuals from all sectors of the construction industry, and continuing



long after the free flow stopped (a sign of a good night and jolly spirit).

Due to the popularity and keen demand for regular CIOB events, we are planning to hold quarterly social gatherings. The next event is already being planned for early 2010, and is likely to be even bigger than the last two. We thank all of those who have attended previous socials, and for those who could not attend, we hope to see you at our next event.

Last but not least, here's wishing you a very Merry Christmas and a Happy New Year.

Tristan Allan is Director of 3C Synergy and he is also the Social Secretary of CIOB Singapore Council.

Forthcoming.....

CIOB-NUS International Construction Conference 19 March 2010

The CIOB-NUS International Construction Conference will be held on 19 March 2010 at The Goodwood Park Hotel. The conference will once again feature international and local speakers. Look out for the conference brochure which will be released in early January.

Your Contributions

The Institute welcomes suggestions and contributions to our newsletter from all members.

Please forward articles and suggestions by e-mail to akathirayson@ciob.org.sg

Disclaimer

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