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The Malaysian Surveyor

THE PROFESSIONAL JOURNAL OF THE INSTITUTION OF SURVEYORS, MALAYSIA

Interview with YBhg Senator Dato' Sr Abdul Rahim Rahman

Green Technology
Building Indoor Environmental Quality

Quantity Surveyors Job Vacancy on Pg52

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The Malaysian Surveyor is a quarterly publication which touches upon the development of the surveying profession, innovations in the surveying technology and surveyors' contribution towards market and building industry.

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The Malaysian Surveyor

THE PROFESSIONAL JOURNAL OF THE INSTITUTION OF SURVEYORS, MALAYSIA

CONTENTS

EDITORIAL

THE GREEN BUILDING AGENDA

The emphasis of green building is still taking place. There are over 150 rating tools for green buildings across the globe and the building industry professionals have to incorporate the green agenda in their projects so that they can remain competitive in their business. The new budget announced by the Prime Minister also highlights the government's support for those who go green for their buildings and assets. In line with this green theme, I'd like to highlight the green agenda in the Cover Story and Professional Practice sections where these articles address the issue of indoor environmental quality and the existing green incentives in Malaysia, respectively.

In the Peer Review section, we cover four areas namely the usage of suspended ceiling, the practical approaches for the management of residential stratified property, the effective use of software in construction project management, and property management and tenant's satisfaction.

The paper on suspended ceiling discusses about the current vast range of building services that run their installation inside the ceiling area. The author stresses the need for designers to provide proper space design to accommodate these needs. A wrong decision can raise the installation cost of building services up to 75% of the total construction cost. Additionally, the need for maintenance access should also be considered in the design.

The concerns about managing strata property is constantly reported and discussed in the media. The paper about residential property management highlights the practical approach in achieving realistic end results in the management and maintenance of strata properties. This issue is important to be resolved as this type of residential development is amongst the most preferred by young professional urban dwellers.

On construction project management, we bring forward the paper on the effective use of software for construction project control, planning and scheduling. The paper discusses the problems associated with the implementation of project planning and scheduling in construction projects and how it reflects the use of software in managing projects. Interestingly, despite the availability of planning software in the market, there are construction professionals who still prefer to use the Gantt chart during a meeting.

Last but not least, on property management again, we have a paper that describes the advantage of measuring tenants' satisfaction for office buildings and its significance to property management professionals. Delivering services is unique in the sense that they are intangible, property managers have to ensure tenants' loyalty, which ultimately depends on their satisfaction. The humanistic aspect needs to be emphasised in delivering property management services that combines the service quality dimensions and property dimensions.

A.I. Che-Ani
Guest Editor

ANNOUNCEMENT

New Format for ISM Publications Beginning 2011

Publications	Features	Publications	Features
The Malaysian Surveyor	• Announcements • ISM activities • short articles e.g. general articles on health and management • conference papers • CPD papers • articles on professional issues • articles on surveying issues • opinions, comments, letters to the Editor • students column • Divisional publications e.g. QS Bulletin, PCVS Bulletin etc. • Advertisements • To be published quarterly per year	**International Refereed Journal** (*title of journal to be decided by the Editorial Board*)	• **Refereed section:** - academic research papers - professional research papers - peer reviewed industry papers • **Opinion/Point of View section:** - comprehensive and detailed articles on current issues of professional or industry matters • **To be published twice a year** • **To qualify as a SCOPUS journal within two (2) years**

All members are encouraged to submit their contributions to: editor@ism.org.

47 YEARS OF PUBLICATION AND A FORTHCOMING NEW ERA

With The Institution of Surveyors, Malaysia (ISM) celebrating its 50th Year Anniversary in 2011, *The Malaysian Surveyor* will be in its 47th year of publication. The predecessor of *The Malaysian Surveyor* was the *Surveyors Quarterly Gazette* which was first published in December 1964.

Since its beginning, *The Malaysian Surveyor* has helped shape our local body of knowledge and contributed scientific thought to the field of surveying, appealing not only to surveyors, but also to educators and other professionals in the built environment. The transformation of the *Gazette* to *The Malaysian Surveyor* is a testament to the ideals of ISM, and as the ISM has grown over the years, so too has *The Malaysian Surveyor*.

As a member of the Editorial Board since the 2nd Quarter, 1994, I noted the change in the types and content of articles published in the Journal.

Notably, the GLS articles show more applications of technology to surveying issues e.g. the use of GIS, and satellite technology; the Quantity Surveying articles are covering international construction issues, the PCVS articles are using more quantitative techniques and the BS articles are delving into more details of building construction and technology.

With the growth and transformation of the institutions of higher learning in Malaysia which involve the establishment of research universities and the aim of the government to made Malaysia a regional education hub have lead to more emphasis on research and publication by local universities. There are now more article contributions from the local academics. The 'publish or perish' requirement forced local academics to obtain research grants, conduct research, present findings in conferences and subsequently to publish their findings in journals. The articles from the academics show a wider application of research techniques and methods being applied on a variety of surveying issues and topics in *The Malaysian Surveyor*.

The Council in 1986 has approved the award of a yearly book prize for the best article for each Division. However no award has been made. My suggestion for a Best Article Award in 1998 was adopted by the Editorial Board in 1999 and the impact of this award can be seen on the various quality submissions of articles from both the academics and professionals.

The New Publication and Structure

The year 2011 will be the beginning of a new era of journal publication by ISM. To move with the times, from 2011, there will be two publications i.e. *The Malaysian Surveyor* and an international refereed journal. *The Malaysian Surveyor* will continue to play its role of promoting the aims and achievements of the Institution. The refereed journal will be supported by an international panel of eminent academics and practitioners (please refer to page 4 on the content and structure of the two publications). Having an established local international refereed journal is desirable as it reduces the dependence of local academics to publish in overseas journals which may have different focus and priorities. The journal is also in line with the growing stature and the vision of the Institution in increasing its influence in the regional and international arena.

The New Publication Format

This issue, 45.4, will be the last issue to be produced as a hardcopy version of the journal. Beginning 2011, both publications will be published in softcopy format. This electronic online publication will usher in a new era of free and open access to the journal as it allows the publication to reach a wider audience of professionals, researchers and academics. The free access allows the research works to be cited more frequently and this would imply an increased status for the journal.

The leadership of the Editorial Board is committed to the improvement of the Institute's publications as the premier periodicals for the advancement of the surveying disciplines. Its success requires the cooperation and contributions from both the professionals and academics.

Associate Professor Sr Dr. Ting Kien Hwa FISM

Editor

Editorial Board

21ST NATIONAL REAL ESTATE CONVENTION

3 - 4 AUGUST 2010

This year's 21st NREC is aptly themed "Opportunities in the New Decade" and is timely in view of the 10th Malaysia Plan (10MP) recently tabled at the Parliament by the Honourable Prime Minister.

The 10th Malaysian Plan emphasises the need to innovate in many areas of business and this does not exclude the real estate sector. Business is no more as usual. The economy will be private-sector driven. The main players will be the private entities whilst the government will be the facilitator of the supporting driving forces of economic activities.

The 2010 NREC prepares the platform for the whole spectrum of the real estate industry professionals and practitioners, to deliberate the pathway and strategies in moving ahead. Reputable and renowned industry players share their views on pertinent issues for the delegates to have the opportunity for an intellectual discourse. NREC brings to the participants the economy at large, the international opportunities, managing and mitigating the potential risks and certainly, innovative attempts in the creation of Malaysia as a World Class destination hub for real estate investments and the export of professional services.


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OPPORTUNITIES IN THE NEW DECADE
Official Opening and Keynote Address By
YB. Tan Sri Nor Mohamed Yakcop
Minister in The Prime Minister's Department
HOTEL ISTANA


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YB. Tan


21ST NREC
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HOTEL ISTANA, KUALA LUMPUR

Dato Sri Douglas Unggah Embas, Minister of Natural Resources and Environment greeted by the Organising Committee

MAP ASIA 2010 & ISG 2010

26 - 28 JULY 2010 KUALA LUMPUR CONVENTION CENTRE

This year, the GIS Development and The Institution of Surveyors, Malaysia organised the Map Asia 2010 and the International Symposium and Exhibition on Geoinformation to foster the growth of geospatial science and spread its benefits for the community with a synergised effort of discussions and deliberations among academicians, researchers, policy makers and industry representatives. The joint platform provides the Asian geo-informatics community to realise, recognise and reveal the stages of dissemination of geospatial information. It offers a unique branding, networking and marketing opportunity to the local and international geospatial industry.


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INTERVIEW WITH YBHG SENATOR DATO' SR ABDUL RAHIM RAHMAN

What is the current discipline and what position do you hold now in your profession?

Property Consultancy and Valuation Surveying.

Current position: nominated council member.

What is your opinion about the liberalisation of surveying services?

This should have come a long time ago. I have spoken on this subject as long as 20 years ago and questioned why our surveying practices cannot go public when countries like the UK have allowed companies to be listed in the London Stock Exchange.

The trouble with us is whilst most of our rules and regulations on the surveying profession are modeled after the RICS, when the RICS changed its rules, we did not do so. We are therefore left behind, thus negating Malaysian firms from expanding overseas due to the lack of capital.

It is therefore timely that the Government, in order to conform to WTO and AFTA regulations, is "forcing" us to liberalise. Of course, we need to take care of our local professionals and I support the Institution's stand that the opening up of ownership of firms to foreigners should not be more than 49% initially.

It is also necessary that the various Boards should enforce its rulings on registration and practice requirements.

The challenge ahead is to remain relevant and be able to continue to contribute towards nation building including the Government's effort to turn the country into a high income economy by 2020.

The Institution must continue to "fight" for the establishment of a Board for Building Surveyors. I believe we will succeed in the end with the support of members from the other sections.

What are the progresses that you have seen for the profession and the Institution in particular?

I have seen the following main changes:

a) When I first entered the profession in 1968, there was no requirement for registration. This has since changed with the introduction of the various Acts of Parliament such as the Valuers, Appraisers & Estate Agents Act 1981.

b) The increase in the number of practitioners and professional firms.

c) The increase in the number of universities giving degree courses for the profession. During the 1960s, the only qualification for the profession was membership of the RICS and one can only qualify to be a surveyor by attending colleges in the UK or taking correspondence courses organised by the RICS.

How do you contribute to make ISM relevant to the industry and the country?

Out of the 40 years involvement in the profession, I have actively participated 25 years in ISM, including being Sectional Chairman and President (1986 - 1987). I will continue to contribute by participating in its activities and work toward ensuring that ISM remains as one of the leading Professional Institutions in the country.

At present, I am assisting the Council towards the conferment of royal status to ISM which I think it deserves.

Is there a role model that has inspired you and how do you do the same to inspire others in ISM, especially to the younger members?

I started my firm more than 30 years ago and was not based on any role model except the will and desire to succeed. Ever since finishing my course in 1966 and working in the UK for two years, I always had the intention to start my own firm. Malaysia was a young country then and there was a lot of opportunities for young professionals to succeed if one was willing to work hard.

The same is still true today except that competition is stiffer; but there is still room and opportunities for success.

After nearly 50 years of existence, what are the achievements that ISM has had and what could be the challenges ahead?

ISM has come a long way since its inception in 1961. From a membership of 38, it has now grown to 2282. It also has members "dari Perlis ke negeri Sabah".

Through its examinations, ISM has also supplemented the universities in producing

The prospects for careers in the surveying profession are bright. The profession is also varied and there are opportunities both in the public and private sector. My advice therefore is "go for it".

professional surveyors in all the four sections and is instrumental in maintaining a high standard of professionalism.

The challenge ahead is to remain relevant and be able to continue to contribute towards nation building including the Government's effort to turn the country into a high income economy by 2020.

Building surveying is the only profession under ISM that still do not have their own Act to-date. What is your view about this matter?

The Institution must continue to "fight" for the establishment of a Board for Building Surveyors. I believe we will succeed in the end with the support of members from the other sections.

What is your advice to those who wish to pursue a career in the surveying profession and the prospects of this career in the future? Do you wish to see changes in the education system that may give impetus to Surveying as a profession?

The prospects for a career in the surveying profession is bright. The profession is also varied and there are opportunities both in the public and private sector. My advice therefore is "go for it".

Any final words to the members of ISM?

Happy 50th Anniversary ISM!

ANNOUNCEMENT

THE INSTITUTION OF SURVEYORS, MALAYSIA
BEST ARTICLE AWARD 2009

The Editorial Board for the session 2009/2010 is proud to present the 2009 Best Article Awards to deserving authors who have published their winning papers in The Malaysian Surveyor Journal. The Selection Panel was chaired by Prof. Dr. Shattri Mansor and four other panel members representing each divisions of the Institution.

I. Property Consultancy and Valuation Surveying (PCVS) Division

Energy Saving Features in Office Building towards the Achievement of Energy Efficient and Sustainable Buildings in Malaysia

by Aniza Abdul Aziz, Yasmin Mohd Adnan

II. Geomatic and Land Surveying (GLS) Division

Optimisation and Maximisation of Energy Yield in Low Wind Speed Regions: A Case Study in Malaysia

by Wan Mohd Aminuddin Wan Hussin, Mohammed Ahmed Mubarak Bawadi, Shamsad Ahmad, Taksiah A. Majid, Mohd Sanusi S. Ahamad

III. Building Surveying (BS) Division

Penyenggaraan Bangunan Resort Seni Bina Melayu di Malaysia

by Adi Irfan Che Ani, Ahmad Sairi, Muhammad Fauzi Mohd. Zain, Mazlan Mohd Tahir, Abdul Halim Ismail

IV. Quantity Surveying (QS) Division

Continuing Professional Development (CPD): A Study on the Perception and Motives between Board of Quantity Surveyors and their Members

by Hamimah Adnan, Norfashiha Hashim, Nurul Afida Isnaini Janipha, Fadzil Hassan, Hafiszah Ismail

A REVIEW ON THE USAGE OF SUSPENDED CEILING IN PROVIDING BUILDING SERVICES INSTALLATION IN COMMERCIAL BUILDINGS

Nur Azfahani Ahmad
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A modern building is expected to be a source of energy appliances which provides the means for communication, electricity, telecommunication, networking and much more whilst providing facilities for visual and acoustic comfort. Space will always be required within a building to accommodate these building services. Today, with rapid technological changes, it is common to have a ceiling in offices where these services are installed. This ceiling is called as a suspended ceiling. A suspended ceiling is essential in providing the means of access and space for building services components. Commercial buildings require a vast range of services and it is important for designers and engineers to design proper spaces to accommodate these needs. Their decision will contribute to the quality and effectiveness of this element in distributing services to the entire building. A wrong choice can raise installation costs of building services between 50% or up to 75% of the total construction cost.

Introduction

Greeno (1997) reports that a modern building is expected to be a source of energy appliances which provide the means for communication and electricity whilst providing facilities for visual and acoustic comfort. With increasing mechanisation of modern offices, more and more attention has been given to the proper accomodation of electric cables and wires, and their accessibility at all times. In office buildings, it should be possible to install a good deal of additional electrical services at a later date. With the increasingly extensive use of computer in offices, more data terminals are being provided, requiring cables for their connection to the data communications system.

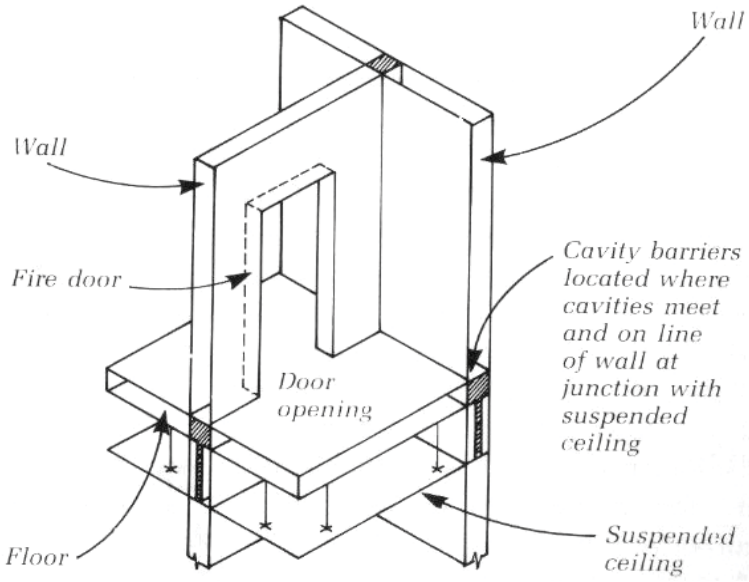
All these criteria and performance requirements can be carried out by the innovation of internal construction element that are recognised as the suspended ceiling. During the late 1960s, the suspended ceiling has been developed to support building's performance requirements which consists of commodity, firmness and delight aspect. By the early 1980s, the Construction Industry and Research Association (CIRIA) recognised that this internal element can facilitate more, including visual and acoustic comfort.

What is Suspended Ceiling?

BS 6100: part 1 (1984) defines suspended ceiling as 'a ceiling hung at a distance from the floor or from the roof above and not bearing on the walls'. Ambrose (1991) defines suspended ceiling as a 'separate ceiling structure that hung from the overhead structure, deriving support from it but not necessarily reflecting its profile or detail'. This is done to create needed space for services element such as lighting, HVAC service, fire sprinklers, and smoke detectors. It also can provide different form of ceiling and aesthetic functions.

The increasings demand for sophisticate services provision in buildings has resulted in an increased use of suspended ceiling to house all building services. Burberry (1997) states that the design decisions of suspended ceiling were influenced by the balancing required performance against acceptable cost. Designers, owners and users of buildings have a responsibility not only to design well but also to adopt responsible standards towards building services installation. The economical layout and careful analysis of loads to be met are critical to the efficiency of economy and installation at suspended ceiling.

Figure 1: Fire barriers to cavities-closing of cavities (junctions at ceilings, floors and hollow partitions) (Blanc, 1994)



Performance Requirements Of Suspended Ceiling

There are several British Standard references that can describe the performance requirements for suspended ceiling in detail. It is essential to overview the performance requirements of suspended ceiling and use the British Standard references as a guide and benchmark. It is also important to consider the ceiling in relation to partitioning system and raised floor system especially when the building consist maximum usage of mechanical services that may be used by the building. Holgate (1987) lists the performance requirements for suspended ceiling as follows:

(i) ***Accessibility*** - It is important to consider the provision of access point which is often associated with future need to change lighting or partitions. Adequate space allowance must be provided within this void for installation as well as maintenance. The most noticeable development over the past years is the easiest means of access, which is modular panel, which can be removed over the whole area of the ceiling.

(ii) ***Fire Precautions*** - Any fire resistance of a suspended ceiling can be added to that of the floor above. Experience of real fires has shown that dry suspended ceilings have to be carefully designed, installed and maintained. The more complex the ceiling the less likely it is to contribute to fire resistance. If access for servicing is to be provided, care must be taken not to affect the fire resistance. Figure 1 shows the basic approach to avoid fire from spreading to the other compartment of cavity in the building.

(iii) ***Appearance*** - Suspended ceiling is essential in providing concealment for services pipes or for visual and aesthetic purposes. A lowered ceiling can be applied to increase the quality of interior space and improve its height proportion.

(iv) ***Durability and Maintenance Aspects*** - Suspended ceilings need to be designed properly before its installation, to extend its working-life durability. Its maintenance need to be carried out regularly to avoid any emergencies or complaints from client. Building maintenance manuals should include very detailed information about cleaning and maintenance methods that is suitable for each type of ceiling systems.

Table 1: Types of acoustic absorbent for suspended ceiling (Blanc, 1994)

Types	Characteristics
Resonant Panels	To absorb sound near their resonance frequency (50-500 Hz). The examples of material are plywood and hardboard.
Porous Surface Panels	To absorb frequencies of 500 Hz – 4000 Hz. The example of material is mineral fibre.
Semi-Perforate and Perforated Composite Panels	It has a porous material surface which is textured, perforated or drilled to improve acoustic efficiency and appearance. The example of material is Gypsum Plasterboard.
Perforated Panels	These panels are backed with independent acoustic absorbent materials used over an airspace combines the advantages of porous absorbents with resonant panels.

Table 2: The advantages and disadvantages of frame and tile systems (Holgate, 1987)

Criteria	Advantages	Disadvantages
Access	All panels are easily removed thus provide easy access for maintenance. Good access to the ceiling void at the head of partitions.	For concealed panel framework, it will make access difficult compared to exposed panel framework.
Sound	Good for sound absorption.	Low in sound insulation because of the lightness of the ceilings.
Lighting	Concealed System provides good surface and good reflective finish.	Provide Exposed System-Provides poor surface for uplighters.
Installation	Easy connections to adjacent surfaces because tiles can be cut to fit.	Materials can be easily damaged during services installation.
Fire	-	Have large number of joints thus reduce fire resistant capability.

(v) Sound Control - A measure of sound absorption is shown in the sound absorption coefficient; the higher the coefficient, the better the absorption. Absorption material that is suitable for sound control is mineral fibre-tiles. Suspended ceilings are normally used to provide the correct acoustics requirements in a room. The machinery used in an open-plan office such as computers and printers, needs acoustic absorbent material which can only be suitably placed at ceiling level. Wall finishes, partitions, carpet and furniture need to be taken into account when considering the acoustics of the space (Holgate, 1987). Table 1 shows the types of acoustic absorbent for suspended ceiling.

The Common Types Of Suspended Ceiling Used In Commercial Buildings

In providing building services installation to commercial buildings, suspended ceilings are categorised by the method of construction and type of form. One of the most familiar and economical option for suspended ceiling is a *Jointless Ceiling Systems* (See Figure 2). This type of suspended ceiling has two to four hours fire resistance with a Class 0 surface spread of flame specification. Light fittings, ventilation ducts, electrical cables and many more services can be easily accommodated in the suspended ceiling if there is proper design plan during the early stage of construction. This ceiling is suitable to be applied to any building shape and is easily accommodated to any size of light fittings. There is absorbent quilt for sound absorption purposes. There is also another option of suspended ceiling, which is known as *Frame and Tile Systems*. It consists of tiles or planks laid into a framework suspended from the structural ceiling above. The framework may be exposed, concealed or semi-concealed. Materials and finishes for tiles and panels can be a variety including mineral fibre tiles, metal trays and open grid tiles. Mineral fibre tiles need to have protective edges because this material is vulnerable and easily damaged.

Integrated Services Frame and Tile System ceiling is the new breed of frame and tile system. It has a much larger grid layout than the other ceiling systems. The frame can support air intake or extracts for air-conditioning system, light fittings, alarm system, audio and speaker or fire protection system to suit within the module. In the mid-90s, the new era of building designers have preference for a new ceiling system that is more artistic, hip and stylish to represent a serious attempt to generate a passively-ventilated building without losing architectural repose. *Louvre/open grid system* is the new option of ceiling system that consists of a series of louver panels made from timber or metal. These types of ceiling effectively provide support within as a suspended ceiling and give a visual cut-off when seen from below, although most of the area is open. The grid or louver area is generally made of timber or metal suspended

Figure 2: Jointless system: Prefabricated access door to suspended ceiling (King, 1985)

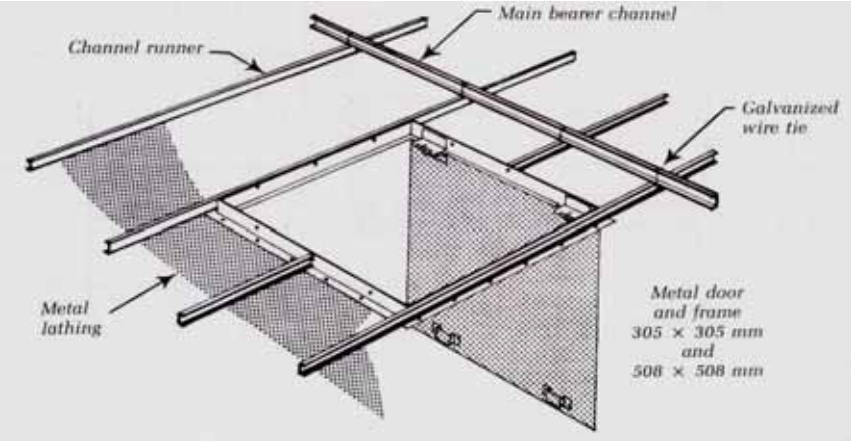
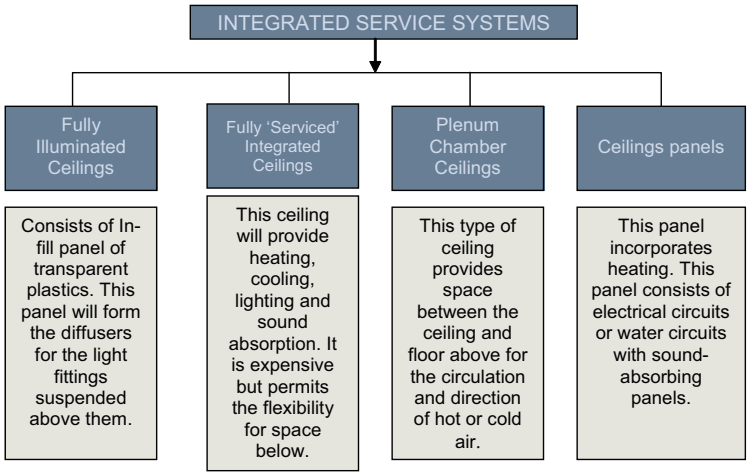


Figure 3: Integrated Service Systems (Blanc, 1994)



from the structural ceiling above (See Figure 3).

This type of ceiling is used in areas where there are large numbers of services. It can conceal service pipes and ducting.

Services Accommodation In Suspended Ceiling

In most multi-storey commercial buildings, suspended ceilings fulfill its purposes of providing services, distribution space, conceal both services and structure, protect structure against fire and also give acceptable decoration internal finish.

In general office buildings throughout the nation, users tend to operate mostly as individuals. Thus, each work station has one electrical supply outlet, telephone cable supply outlet and computer supply outlet from the multi-sided power post that comes from suspended ceiling. The arrangement is designed to maximise flexibility so that computers and furniture can relocated easily. In each work station, the user needs to be encouraged to use their power post appropriately.

Heating, Ventilating, Air-Conditioning and Cooling Systems (HVAC)

The interior of buildings are ventilated in order to provide comfortable environmental condition. Thus, there is a need to provide natural air inlet, natural air outlet and mechanical inlet and outlet as well. Heating, ventilating, cooling and general treatment of the building's interior thermal and atmospheric condition is a multi-dimensioned task. Air conditioning in HVAC term can be defined as the cooling of interior air, which includes filtering out of dust and odours, freshening with outdoor air, adjustment of temperature and relative humidity (Ambrose, 1991). The HVAC systems generally include the heat-generating system, a cooling system, an air-handling system, a control system for hand adjusting and automatic monitoring of the system operation.

In Malaysia and other tropical countries, designing the air-conditioning system for a building requires a balanced temperature within the comfort natural environment and the outside within a range of 17-22°C. A wide range of air-conditioning system can be installed to supply fresh air and extract heat. A centralised unit of air-conditioning system is essential to allocate into a suspended ceiling to provide thermal comfort to the occupants. The suspended ceiling helps to provide space for fresh air distribution from the central air handling unit.

Electrical Installations

Installations using electricity for power supply, lighting, environmental control, communications, security and computing are now essential provisions in all buildings. In some large commercial buildings, the layout pattern and use made of electronic equipment connects very large open spaces with cable access to every point. There are many user outlets to serve, especially in multi-storey structures, there will be items in common used which will require a power supply, particularly the heating boilers and air-conditioning.

A three-phase busbar panel can present a means of easy connection for single-phase rises to the various level in the building. A final sub-circuit will extend into the user's area via a consumer control board where the isolation switch and fuses are located. There is a three-phase supply busbar throughout the full height of the building and tap-off single-phase supplies as required for each floor level (Howard, 1988).

Fire Fighting Installations

Fire fighting installations that usually installed in suspended ceiling are categorised under active fire control and this includes the sprinkler systems, smoke and heat detectors, fire detectors and fire alarms. As an office with full technology components, the suspended ceiling system needs to be provided with fire protection system that links directly to the nearest fire station. In the event of fire, a direct signal will be transferred to the fire station within 30-60 seconds. There are sprinkler heads, smoke detectors and heat detectors in a range of 12 square meters for each components. Water sprinklers will provide an automatic spray out-and-out to the fire area. The water supply for sprinklers comes from the suction tank that supplies water from a water main. For the office area that has a floor area of 1500 square meters, the number for sprinkler heads are 125 sprinkler heads. All fire protection system in the building is controled by the system control unit in the control room.

Sprinklers consist of a grid of water pipes under the ceiling with delivery heads. When the temperature rises, the liquid will expand breaking the sprinkler's bulb that prevents the water from passing. A jet of water then impinges on the shaped plate, delivering a spray of water over a 10 meter square area. Smoke and heat detectors have sensors that can close an electrical circuit to provide alarm. They are widely used and supplied with battery backups (Burberry, P 1997).

Signal and Communication Systems

Every commercial building these days has communication systems fully operated for the building. In many buildings, there are close circuit television (CCTV), public address, computer networks or intercom systems. Each of these systems is typically operated with separate wire, low voltage and direct-current electrical system.

Lighting System

Individual lighting fixtures, both permanently installed and movable, are

abound in variety. There are pendant types, surface mounted types, semirecessed, recessed any many more. Lighting require considerable structural support from suspended ceiling, but small fixtures are often structurally supported by the connecting boxes installed with wiring. The benefit of this lighting system is there is no need for installation of a switch drop in the wiring circuits. This not only saves installation costs but also increases the flexibility to mix other services in the suspended ceiling.

Space And Protection Requirements

Space and the cost of providing space for building services distribution is usually a high priority. Considerable care is needed in providing adequate space for the safe and efficient maintenance of the installations of building services. Access is important and it must be restricted for maintenance purpose. There is a guideline for space requirement provided in the BS 8313 (1997). This code provides recommendations on space provision for safe access, installation and maintenance of service ducts. Below are the requirements for building services accommodation based on the BS 8313 (1997) guide:

Installation

To avoid difficulties during services installation, the minimum distance between the outer space of any service and any obstruction should be 25mm for pipes and cables, 75mm for union joints and 100mm for ducts. The suitability of the building structure from which the ceiling is to be suspended should be verified. Then, top fixings can be installed. Hangers for ceiling should be vertical and should not press against insulation covering ducts or pipes. Wire hangers should be carefully straightened and tensioned before use. Installation should be considered whether the the grids are exposed or concealed. For service outlets, the air terminal devices or similar equipment should be incorporated into the ceiling (BS 8313: 1997).

Maintenance

i. For maintenance purposes, sufficient space should be provided for the operation, inspection and repair of valves, dampers, cleaning points, expansion joints and other fittings, and the cleaning and painting of the inside of the duct and the services within it. Additional spacing exceeding 250mm is needed for access of tools and work on pipes and ducts.

ii. Services should be arranged so that it is possible to remove one without disturbing the others.

iii. Careful consideration should be taken to the demolition of the duct, and disruption of other services will be acceptable when a service is to be maintained.

iv. The manufacturer should provide advice on the care and maintenance of ceiling components especially at access locations. If replacement of lamp is needed, the ceiling should be clean afterwards.

v. For decoration work, manufacturers should provide recommendations on the best method for redecoration.

vi. For surface spread of flame characteristics of the infill units, care will be needed to make sure that maintenance works do not change it. Paint of non-bridging consistency should be applied to prevent bridging the joints between units or filling in the face of units.

vii. In terms of extensive removal and replacement works, it is wise to appoint suspended ceiling specialist to do it (BS 8290-3:1991).

Access

It is important that access is provided to ducts, large enough to be entered. Access is needed to achieve good maintenance, operation and installation of the services. The BS 8313 (1997) stated that there are minimum sizes for horizontal ducts and vertical ducts that should be followed. For horizontal ducts, it is 600mm x 900mm wide/long or 600mm wide x 600mm high. For vertical ducts, it is 600mm wide x 1800mm high or 600mm wide x 1400mm high. If it is necessary to maintain and enter the duct, the maintenance working space should be less than 700mm (width), 1000mm (height) with volume 1.4 m^3 for horizontal ducts or 600mm (width), 750mm (depth) with volume 0.9 m^3. There is also a need to consider access level based on maintenance frequency especially on electrical services.

Conclusion

Highly serviced buildings, such as commercial or office buildings, can raise the installation costs of building services by up to 50%-75% of the total construction cost. Whilst, services element can also take up 15% of a building's volume, this shows that building services are very important to commercial buildings and must not be neglected. It is important to accept and understand the increassing need for building services element in the building. One of the major factors that needs to considered in providing spaces for building services installation is the choice of suspended ceiling. The relationship of this component towards buildings services installation, contribute to the quality and effectiveness in distributing services to the entire building.

Suspended ceiling is the most economic and wise option in providing space for building services installation. This is because, suspended ceiling provides 60% of building services installation in the commercial buildings and raised floor only provides 40% of building services installation. Today, the structure of suspended ceiling can be integrated with the new technology of the Building Management System (BMS) and at the same time, remain cheaper than raised floor. A good suspended ceiling should obtain all performance requirements that are essential and these are best followed using the BSI Standard Guide. High consideration should be taken on the costs of the construction, the maintenance and the access to install the services.

REFERENCES

Ambrose, E. (1991), Building Construction - Interior Systems, Van Nostrand Reinhold, New York.

Blanc, (1994), Mitchell's: Internal Components, Longman Scientific and Technical, Essex.

BS 6100 [1984], Glossary of Building and Civil Engineering Terms, BSI, London.

BS 8290-3 [1991], Suspended Ceilings (Part 3)-Code of Practice For Installation And Maintenance, BSI, London.

BS 8313 [1997], Accomodation of Building Services in Ducts, BSI, London.

Burberry, P. (1997), Mitchell's: Environment and Services (8th Edition), Addison Wesley Longman Limited, Essex.

Greeno, R. (2003), Building services Handbook (Second Edition), Butterworth-Heinemann, Oxford.

King (1985), Mitchell's: Components, BT Batsford, Limited, Essex, London.

PRACTICAL APPROACHES FOR THE MANAGEMENT OF STRATA RESIDENTIAL PROPERTIES

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The issues and problems relating to the management and maintenance of strata properties have been perennial problems. The local media has been reporting these issues regularly. Amendments to the existing act have been made and new acts have also been introduced but none seem to have provided solutions to the problems faced in the day-to-day management of these residential strata properties.

1.0 Introduction

A more pragmatic and practical approach is necessary in view of the current deficiencies in the acts and the inadequacies faced in the management of these strata properties. This article highlights some of the practical approaches in achieving realistic end results in the management and maintenance of strata properties. It is hoped that through the sharing of these approaches, practitioners can learn better practical ways of achieving the objectives of property management.

The supply of strata residential properties has been an effective alternative to meet the housing needs of the country besides landed properties. There is always a choice for purchasers whether be it for investment or owners' occupation.

The demand of strata residential properties has gained much popularity. However, purchasers must understand what they are buying, their rights and obligations in relation to strata properties.

In Malaysia, all management of strata properties fall within the jurisdiction of the Building and Common Property (Maintenance and Management) Act 2007 and The Strata Title Act 1985.

2.0 Common Problems of Management of Strata Residential Properties

As far as purchasing strata residential properties is concerned, the purchaser must understand that the management of the property will bring about the success of the development which will benefit all owners in terms of their enjoyment and value of their investment.

In a general sense, management is about control and decision making in an organisation. In community living within a strata residential property, the management of such properties face the challenge of dealing with all owners and residents to the best of their interests within constraints, especially when the income cash flow is low and owners are not cooperative. Therefore, the purchasers must make the effort to know what to look for when dealing with the problems of strata residential property management.

The following highlights some of the common problems of strata residential property management:

2.1 Definition of Common Property

Section 4 of the Strata Titles Act 1985 defines "common property" as the lot (area/space) not comprised in any parcel (including any accessory parcel), or any provisional block as shown in an approved strata plan.

Under Section 42 (1) of the Strata Titles Act 1985, the management corporation shall, on coming into existence, become the proprietor of the common property and be the custodian of the issue document of title of the lot.

Also under Section 42 (2) of the Strata Titles Act 1985, the management corporation shall have in relation to the common property the powers conferred by the National Land Code on a proprietor in relation to his land:

Provided that:

(i) Except where it is specifically provided otherwise in this Act, those powers may be exercised only on the authority of a unanimous resolution; and

(ii) The corporation shall not have power to transfer any portion of the common property which forms part of the building or of the land on which the building stands.

Under Section 43 (1), among the duties of the management corporation are to manage and properly maintain the common property and keep it in a state of good and serviceable repair.

In a strata residential property, the frequently asked question is who is responsible for the repairs and maintenance of a particular part of the subdivided building. The concept of "common property" employed in the Strata Titles Act 1985 helps to indentify the part of the strata scheme that is the responsibility of the management corporation. Depending on whether the relevant part of the building concerned is part of the lot/parcel or part of the common property, the proprietor or the management corporation is under a duty to effect the necessary repairs or maintenance. It is also important to determine where the boundary lies between a lot/parcel and the common property. This is because the right or power to deal with the former lies with the proprietor, while in the case of the latter, it lies with the management corporation.

Disputes frequently arise between subsidiary or parcel proprietors and the management corporation as to who is responsible for the repair of pipes, wires, cables or ducts located within the subdivided building. This would depend very much on whether such items are part of the lot or parcel, or part of the common property. Where it is determined that they are common property, it is the duty and responsibility of the management corporation as provided under the respective legislation to maintain and repair it. The combined effect of the definition of "common property" and the provision relating to common boundary in the respective legislation would make that portion of such pipes, wires, cables or ducts described specifically as comprised in a lot or parcel (including in an accessory lot or accessory parcel) not a common property, with the consequence that the subsidiary or parcel proprietor concerned is responsible for its repair.

To overcome the developer's misused of these funds and any other matters relating to developer's default, house owners are recommended to form a Resident Association...

We have to refer to By-law 5 (a) and (c) the Third Schedule of the Strata Titles Act 1985 which provides that the management corporation is responsible for maintaining and repairing items such as pipes, wires, cables or ducts existing on the lot if they are used or capable of being used in connection with the enjoyment of **more** than one parcel or of the common property. If they are not so described as comprised in a parcel as mentioned above, they will still be common property and the management corporation will be responsible for their maintenance and repair provided that such pipes, wires, cables or ducts located with the boundaries of a parcel are not for the exclusive use of the parcel. A drainage pipe running from one parcel to another parcel which bursts would then be the responsibility of the management corporation.

Where the pipes, wires, cables or ducts are located outside a parcel or an accessory parcel but is for the exclusive use of the parcel such as a service pipe which is connected to a common water riser pipe and which serves exclusively a parcel, the parcel proprietor will be responsible for its maintenance and repair. This is so even though it is embedded in concrete slab which is common property. Only where it is not for the exclusive use of a parcel, it will be the responsibility of the management corporation.

Thus, under the Strata Titles Act 1985, pipes, wires, cables or ducts is the responsibility of the parcel proprietor where:

1. It is described as comprised in any parcel (including any accessory parcel) or any provisional block as shown in an approved strata plan; or
2. It is not for common usage but for the exclusive use of a parcel even though not described as in (1) above.

2.2 Claims Against Developers

Under the Sale and Purchase Agreement (Deed of Mutual Covenant), there is a provision that purchasers are obligated to pay a monthly maintenance fee upon vacant possession of the purchased unit. The purpose of this collection is for the maintenance of the common property at an initial stage before the formation of the Joint-Management Body (JMB) and thereafter, the Management Corporation. Therefore, the developer is responsible and accountable for this collection. There have been records that some developers have misused the funds for the expenses which are supposed to be borne by them. Arising from this, claims might be made against such irresponsible developers. Examples of such misuse of maintenance funds are:

- Recovery of costs for expenses which are the developers' obligations e.g. some developers are charging the parcel owners for expenses incurred prior to the formation of the Management Corporation; these expenses can include security, rubbish collection and other operational costs etc.
- Rectification of defective installation due to developers' fault/negligence.
- Developers are responsible for the costs incurred due to their fault and negligence especially for design failure and faulty installations.
- Recovery of sinking fund from the developer. A sinking fund is the reserved fund for the replacement of capital items for the building fabric. Developers are refrained from using the funds for repairs and maintenance during the pre-JMC stage. As such, claims can be made against the developer should such a fund be misappropriated.

To overcome the developer's misused of these funds and any other matters relating to developer's default, house owners are recommended to form a Resident Association even on day one before the formation of the JMB to negotiate, coordinate with the developer on the management of the strata units. The Resident Association representatives have to hold hands with the developer with a view to understand proper management and various problems of strata units particularly the common property and common facilities such that when the Management Corporation is formed, the council members are able to manage the condominium or even when engaging a property management company, they know how the condominium can be managed.

When the management services company is formed by the developer to manage the condominium, the Resident Association must ensure they are to co-manage the sinking fund account to avoid any abuse of funds and be able to set priorities in the management of the condominium.

The writer recommends that legislation be in place after the delivery of vacant possession of the strata units, the developer is obligated to assist the owners to form a Resident Association. Once the Resident Association is formed, the developer can then invite representatives from the Resident Association (RA) to work closely with the management services company formed by the developer in managing the condominium. Management accounts of the management services company should be readily available for cross checking by the RA representatives and the sinking fund account must have joint signatories of the RA representatives. This is a more proactive approach to the future management of the condominium so that once the strata titles are issued and the Management Corporation formed, the developer can confidently hand over the management of the condominium to the council of the Management Corporation. It will also minimise any claims on the developer on any misuse of funds from the management accounts and sinking fund accounts.

Good property management will definitely enhance and maintain the value of strata properties because proper maintenance will prevent the deterioration of the building's fabric. This will encourage better collections from the parcel owners.

Also, this will give confidence to potential buyers of strata residential properties of the proper management of the condominium.

2.3 Claims Against Subsidiary Proprietors

The Strata Titles Act provides that the maintenance of the individual unit falls within the jurisdiction of the individual proprietors. Therefore, all individual owners are liable for claims from their neighbours should they find the defects of their units affecting their neighbours.

The most common defect found in adjoining strata property parcels are water seepage to the lower strata units:

- Through joints in tiles.
- Defects in the floor of the common bathroom. If the unit is still within defect liability period, this shall be the responsibility of the developer to repair the defective pipe. If the defect liability period is over, the unit owner shall have to carry out the repair works at his own cost.

It is the duty of the individual unit owners to prove that their own unit is affected by the defect of their neighbour's property. Appropriate actions have to be taken because arguments can arise since some subsidiary proprietor can be unreasonable.

For instance, in a case where a leaking pipe is embedded in the main sewerage piping, the affected owner may seek assistance to establish the root cause of the problem and seek help from the developer, if the unit is still within defect liability period.

Sometimes, the repair works are the responsibility of several neighbouring owners. The affected unit owner will have to seek the cooperation of the neighbours to apportion out the repair costs. If no amicable agreement is achieved between the owners, they may refer the case to the Commissioner of Building (COB).

Under such a situation, the Management Corporation can play a role to assist in resolving the matter. One of the ways could be through the use of by-laws of the Management Corporation duly approved in a properly conducted AGM.

For example, the following clauses on upkeep, maintenance and repairs can be incorporated into the Management Corporation's by-laws:

a. Occupants should keep their units at a reasonable level of maintenance, cleanliness and appearance at all times. Occupants should not do anything that may interfere with or impair the common utility services which run through the occupant's apartment unit.

b. Occupants should allow the Management or his agents, at all reasonable hours of the day, to inspect, maintain and repair pipes, wire cables which run through the apartment.

c. From the delivery date of vacant possession and until the issuance of a separate issue document of strata title to the said unit and the transfer thereof to the owner and the formation of the Management Corporation (whichever shall be the earlier), the owner shall at all times keep the said unit including all fixtures and additions thereto in good and substantial repair and condition to the satisfaction of the Management and shall permit the Management or its agents with or without workmen or others at any time or convenient hours to enter the said unit and examine the state and condition thereof and the owner shall at his expense forthwith and in any event not later than seven (7) days from the notice by the Management herein provided repair and make good all defects on the said unit and all units adjoining adjacent below and above that may be affected by the failure of the owner to keep the said unit in good and substantial repair and condition of which notice in writing shall have been given to the owner by the Management.

d. The owner shall give notice to the Management and other owners or occupants of all units adjoining below and above the said unit, the owner's intention to repair or replace any joints or beams on which the floor and the ceiling of the said unit are laid and shall make good any damage to the floor, ceiling and walls of the unit affected thereby.

e. The owner shall repair and maintain at the joint expense of the owner and all other owners or occupants of the units adjoining adjacent below and above the party structures which shall include the entrances, walls, floors and ceilings separating one unit from the others.

f. The owner hereby agrees and declares that the walls separating the said unit from the adjoining unit or units shall be deemed and acknowledged to be a party wall or walls as the case may be and the same shall be maintained and kept in good repair from time to time at the joint costs and expenses of the owner and the owners of such adjoining units or units.

2.4 Collection of Service Charge/Maintenance Fees and Sinking Fund

The maintenance and management of the building's fabric is closely related to the collection of service charge/maintenance fees and sinking fund. A good collection will reflect a positive cash flow in the accounts. This will ensure a smooth flow of the maintenance operations.

This is one of the most problematic areas where most Management Corporation find difficult to handle. It is difficult to collect all the service charge/maintenance fees and sinking fund due to many reasons such as owners' cash flow problems and those who are simply not willing to pay.

However from the writer's experience of managing **Endah Regal Condominium in Seri Petaling**, the collection of service charge/maintenance fees and sinking fund for the last few years has been around 100%. We have used the strategy of motivating the owners to pay rather than compelling them to pay by creating **value** for the units. Rentals have steadily increased for the last few years with capital values increasing in tandem. This is possible through better maintenance and improvement of the condominium in the following areas:

(a) Installing of CCTVs at every floor of the condominium. Records show, there were no break-ins including theft of cars for the last two years since installing the CCTVs.

(b) Better guards were employed to give the residents/owners a feeling of a very secured and guarded condominium. Guards are also constantly monitored by the Management through CCTV and log books.

Have formed a vision and well communicated among the condominium owners as "Garden Home" where we have extensively landscaped the area and making significant changes in moving towards Garden Home. Feedbacks and comments are obtained from residents/owners when they come to pay for the maintenance and sinking fund on how they feel on the various areas or aspects of the condominium that can be improved.

Cleanliness is important to property maintenance. Cleanliness in common areas are checked daily and are conducted by the management staff.

2.5 Non-compliance with House Rules

Basically, house rules govern the operational procedures and control the operational matters related to the property. Any non-compliance with house rules is not an offence in the eyes of the law. However, the Management Corporation must follow what is being covenanted in the deed of mutual covenants, which in most circumstances are reflected in the house rules or by laws. This must be carried out immediately by the developer upon handing over.

The developer must be very strict in ensuring that owners/residents comply with house rules particularly in the area of renovation of the individual Strata units. Proper layout plans for renovation should be drawn out for guidance to the owners/residents particularly on fixing of air conditioning units and Astro Dish.

Failure to comply with house rules may invite much uncalled for challenges from the occupants of the strata property. In short, once a bad habit is formed, it would be extremely difficult to bring changes especially when the property is facing with unreasonable owners or tenants.

Co-operations between the residents and the property managers will be necessary for the practical approach to bring fruitful outcomes.

A good system will create a peaceful, safe and harmonious community - a place where all owners can call a "Home".

3.0 Problems in Setting Up JMB

Under the new Building and Common Property (Maintenance and Management) Act 2007, developers of high rise buildings are required to jointly set up a Joint Management Body (JMB) with high rise unit owners or be fined. The Joint Management Body is to be formed within 12 months of vacant possession or 12 months from the date when the Act came in force i.e. before 11 April 2008. JMB is formed prior to the formation of Management Corporation.

The developer may have problems in setting up JMB when:

(a) There are no volunteers

(b) Volunteers have no idea on how to carry out their roles and functions

Therefore, it is very essential for the developer to create the awareness to the purchasers even during the sales of the property. Months before the forming of the Joint Management Body, the developer has to be more proactive in wooing volunteers to come forward and guide them on various aspects of the management of the condominium such as administration, building maintenance and services maintenance. However, volunteers selected must have some knowledge on basic management, accounting and building management. Retirees are good target as volunteers. Of course, the RA members would be the primary source for volunteers.

4.0 Problems in Setting Up Management Corporation

Management corporations are the conduit through which the parcel proprietors control and manage the strata schemes. The management corporation comes into existence upon the opening of a book of the strata register in respect of a subdivided building or land there shall, by the operation of Section 39 of the Strata Titles Act 1985 consisting of all the parcel proprietors including in the case of phased development, the proprietor of the provisional block or blocks. The council of the management corporation is elected through the first AGM after one quarter of the owners of the strata scheme (in share units) are being transferred and registered in their respective title and it shall be the duty of the original proprietor to convene the first AGM of the management corporation within one month after the expiration of the initial period. "Initial period" as defined under Section 4 of the Strata Titles Act 1985 as in relation to a management corporation, means the period commencing on the day on which the management is formed and ending on the day on which there are proprietors, excluding the proprietor of the lot who is registered as the proprietor of a parcel or parcels or a provisional block or blocks the sum of whose share units is at least one quarter of the aggregate share units.

The management corporation consists of all the owners of the parcel units. It plays the role as the medium through which the parcel owners control and manage the strata scheme.

Problems in setting up Management Corporation can be summarised as follows:

a. Owners are not aware of their responsibilities and obligations.

b. Extra expenses incurred for the memorandum of transfer and legal fee.

c. The delay for the application of Strata Title discourages owners to pursue the matter.

d. Owners refuse to be involved as the responsibility in the running of Management Corporation can be heavy.

The problems in setting up the management corporation are similar to forming the Joint Management Body. If the Joint Management Body is well managed, then this group should be able to form the base for the Management Corporation.

5.0 Impact of Good Property Management on Values of Strata Properties

Good property management will definitely enhance and maintain the value of strata properties because proper maintenance will prevent the deterioration of the building's fabric. This will encourage better collections from the parcel owners.

A good system will create a peaceful, safe and harmonious community - a place where all owners can call a "**Home**".

6.0 Conclusion

In conclusion, it is very vital that the Management Corporation of the strata scheme must have a good approach to property management. A practical approach will be acceptable by all the residents of strata properties. Co-operations between the residents and the property managers will be necessary for the practical approach to bring fruitful outcomes. Residents should respond by paying their financial dues and meet other commitments. The property management team should be transparent to provide the confidence that the actions and programmes undertaken are aim at maintaining a certain level of building quality and enhancing the value of properties under its management in the long run.

REFERENCES

Strata Titles Act 1985

Building and Common Property (Maintenance and Management) Act 2007

Teo Keang Sood (1998) Strata Title in Singapore and Malaysia Butterworths

Richard Ellis (1996) Handbook on condominium and strata title property cases Heinemann

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EFFECTIVE USE OF SOFTWARE FOR CONSTRUCTION PROJECT CONTROL, PLANNING AND SCHEDULING

Project Management is the process of planning, organising, and managing tasks and resources to accomplish a defined objective, usually within constraint of time, resources and cost. The aim of this paper is to ascertain the problems associated with the implementation of project planning and scheduling in a construction project and how it reflects the use of software in managing projects.

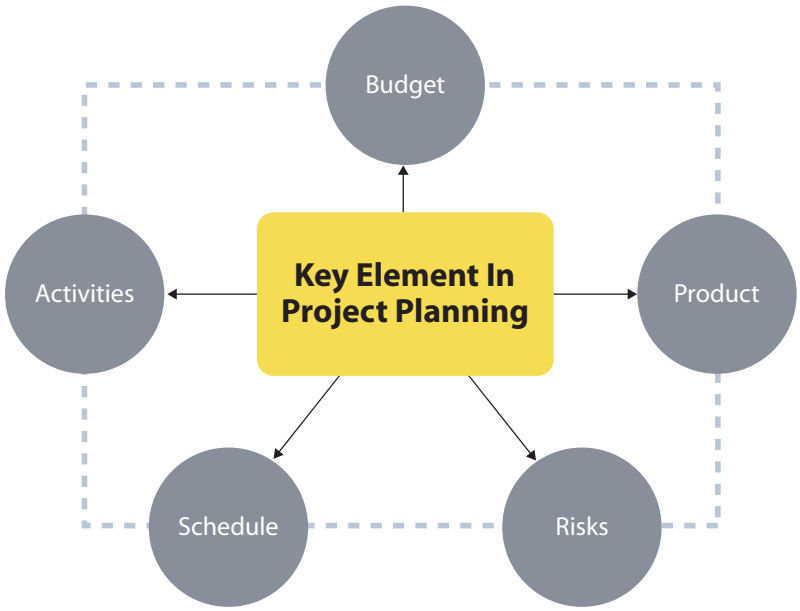
The survey population consisted of G7 Contractors in Malaysia based on the database from the Construction Industry Development Board (CIDB). Postal surveys were collected between January 2009 and April 2009. Out of 300 questionnaires that were sent, 63 firms responded thus giving a reply rate of 20%. The result shows that most of the project managers lacked knowledge and skills in computer software. Hence, this research has revealed the underlying problems in project planning despite numerous planning software which has been introduced to monitor construction projects in the Malaysian market.

Introduction

The role of project planning and project management is becoming more important for all kinds of organisations. Businesses regularly apply project management to accomplish unique outcomes under constrained resources, and project management turned out to be one of the essential ways of achieving an organisation's strategy. Project planning and control have become the most important responsibilities to all project managers. It is more likely to develop greater mutual understanding and more commitment to achieve the objectives within the project team. On the other hand, good project planning and control are able to act as an 'early warning system' to detect problems at early stages while there is still solution available.

In line with the Malaysian policy to embrace technology and information technology in all areas, it is expected that the contractors and project managers were also in the loop. Microsoft Project and Primavera software have enabled the project managers to help them track and manage a project. Although such software has been in the industry for quite some time, many of them are slow and almost do not bother to apply this technology. The most utilised scheduling tools in the construction industry are CPM/PERT. However, the limitations of these tools are also being realised and research is going on to improvise these tools and increase utilisation of other tools such as linear scheduling and simulation techniques (Ahuja and Thruvengadam, 2004). CPM scheduling does not seem to get much respect in construction. It is considered to be burdensome, an archaic tool not adding value to a busy project manager's daily life (Basu, 2003). This problem has attracted considerable attention for further research to identify its importance on practical applications in construction projects. Thus, this paper discusses the underlying issues and challenges in implementing software as a tool for planning and control of construction projects in Malaysia. This would provide a first indication on how effective the tools are performing and identify any room for improvement.

Figure 1: Key Element of a Project Planning



Businesses regularly apply project management to accomplish unique outcomes under constrained resources, and project management turned out to be one of the essential ways of achieving an organisation's strategy.

The IT Knowledge of Construction Project Management

Project Management is a process of planning, organising and managing tasks and resources to accomplish a defined objective, usually within constraints of time, resources, and cost (Kumar, 2005). Most projects share common activities, including breaking the project into easily manageable tasks, scheduling the task, communication with the team and tracking the task as work progresses. Project planning is the essential part of good project management and the key element in project control. The principles of management are normally associated with the management of people. The management of people includes defining what the business unit will do, planning for the number and type of staff who will do it, organising the staff, monitoring their performance of the tasks assigned to them, and finally, bringing a close to their efforts. Those same principles are also applicable to projects.

Robert et al. (2000) stated that project management is a method and set of techniques based on the accepted principles of management used for planning, estimating, and controlling work activities to reach a desired end result on time - within budget and according to specification. In addition, Kumar (2005) described project planning within project management as the process to quantify the amount of

Figure 2: Software Learned at University and College Level

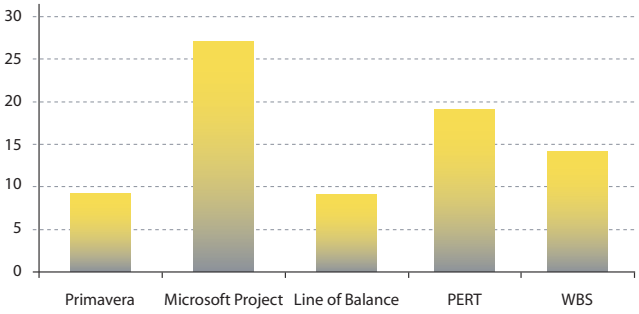
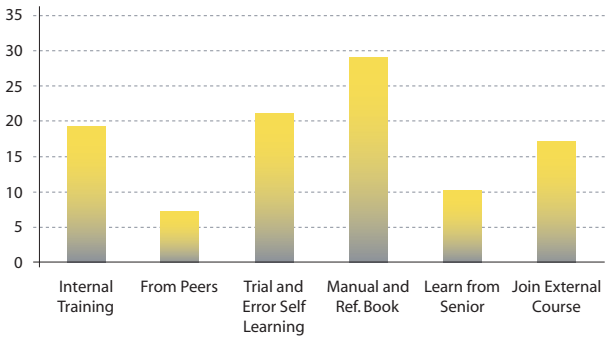


Figure 3: Methods of Learning Software



time and budget a project will cost. Figure 1 illustrates the key element of project planning. Five elements are included such as budget, product, risks, schedule and activities. Everyone in the project team should be involved in developing the plan. It should be a collaborative effort. The project manager should provide leadership in this area but may delegate some of the administrative aspects and detailed analysis to a project support role. On a larger project, there may be one or more dedicated planners.

Ahuja and Thruvengadam (2004) noted that project scheduling occurs in all stages of projects from feasibility stage to monitoring stage until completion. While planning is consider as a decision making process that performed in advance of action which endeavours to design a desire future and effective ways of bringing it forward (Laufer and Tucker, 1987). The purpose of project planning is to create a project plan that a project manager can use to track the progress of his team. Effective project planning will help to ensure that the projects are delivered both within the time constraint and to a pre-defined standard of quality.

Mui et al. (2008) conducted a survey on quantity surveying firms to investigate the benefit and barriers of the construction project software. The survey found that the majority agreed it gives higher accuracy, ease in editing quantities, allow faster measurement and also enable a reduction in workforce. It clearly shows the importance of IT and technology in reducing office workload. In line with the IT agenda, which was formulated in 1996, the Malaysian Government has been aggressively promoting IT and its application in every sector including the construction industry (Mui et al., 2002).

At present, Microsoft Project and the Primavera are the two most commonly used computer software in construction project management. This software is used in conducting planning, scheduling and monitoring of projects from the inception until completion. Interestingly, Microsoft Project is found to be more popular and most likely used by contractors/project manager to plan, schedule and monitor the project's progress compared to Primavera. This is because of few factors including the availability of skilled resources and the price. Nevertheless, people have to agree that the power of computer technology knows no boundary. Anything and everything can be computerised (Mui et al., 2008) hence, the reason about having difficulties and financial matters are no longer valid.

There are many approaches adopted for planning and control in the industry such as Critical Path Method (CPM) and Programme Evaluation and Review Technique (PERT). However, CPM scheduling does not seem to get much respect in construction. It is considered to be burdensome, an archaic tool not adding value to a busy project manager's daily life (Basu, 2003). This is the reason why most people ignore and are reluctant to continue with the flow of the planned project.

Galloway (2006) has conducted a university comparative study and found that both Microsoft Project and Primavera software were extensively used in their teaching and learning module. Besides that, his survey to the stakeholders found that the CPM scheduling has become very sophisticated while Primavera software is the number one choice amongst the stakeholders. It is believed to be complex and difficult to understand thus increasing the cost to the project. He has identified that CPM schedule are easily manipulated, especially with respect to logic abuse.

...good project planning and control are able to act as an 'early warning system' to detect problems at early stages while there is still solution available.

Survey and Data Acquisition

The survey questionnaire contained four sections of questions in two sheets of A4 size paper. The objective of this survey was to obtain the knowledge level of software used in planning and monitoring construction projects. Some of the questions allowed the respondent to give multiple responses to a question. The survey population consisted of G7 Contractors in Malaysia based on the database from the Construction Industry Development Board (CIDB). Postal surveys were collected between January 2009 and April 2009. Out of 300 questionnaires that were sent, 63 firms responded thus giving a rate of 20% reply. The survey included a review of the following specific areas:

- Respondent background
- Knowledge towards IT/ICT in construction project
- Management issues in planning, controlling and monitoring using the software
- The future of project planning

Table 1: Management Issues in Planning and Controlling Construction Project Using the Software

	N	Mean	Std. Deviation
Project managers consider planning too time consuming	63	2.7460	1.17732
The advantage and surplus value of planning are unclear	63	***2.3016***	.96110
Planning has low status among project and company managers	63	***2.2381***	.99538
Planning outputs such as schedules and reports do not serve as foundation for decision and communication	63	***2.3968***	1.10044
The actual planning and project analysis is carried out manually	63	2.7460	1.16354
Company fail to perform timely schedule updates on a regular basis	63	2.6667	.98374
Critical path method schedules are easily manipulated	63	2.6508	1.08000
Data transferred from sire to planning department is insufficient	63	2.9048	.99538
The engineers responsible for the site have negative approach towards planning	63	2.5397	1.08992
The duration of activities in CPM are wild guesses and unrealistically short	63	***2.2222***	.79198
Primavera is too complex and difficult to understand	63	3.0476	.97432
The revised work programme is only required for the purpose of contractual requirement and claiming Extension of Time (EOT)	63	3.1746	1.30186
The parties involved in a project are more interested towards the overall completion rather than the individual work completion within the programme	63	3.0952	1.08827
There are insufficient numbers of people who have education about planning system and tools	63	3.1429	1.01373
Valid N (list wise)	63		

Knowledge towards IT/ICT in Construction Project

Figure 2 shows that most project managers were introduced to the Microsoft Project at their university or college level (24% responses). Project Management Software such as Line of Balance, PERT and WBS were also introduced at the university/college level. Primavera seems to have little exposure as it can be considered a new software for project management among others in the market.

Skill and knowledge is very important in management. There are many ways of exploring knowledge and enhancing skills. In this section, respondents were asked to rate their skills in project management software. Figure 3 indicates that majority of respondents referred to the manual and reference books in acquiring the skills and knowledge in project management software. Furthermore, 29% of the respondents choose to use the manual provided by the purchaser of the software. 22% of the respondents preferred the trial-and-error self-learning approach. The percentage difference of internal and external training is not much with 18% and 16%, respectively.

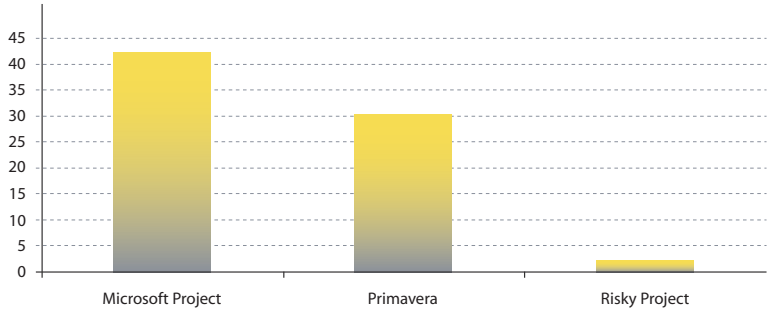
There are many project management software available in the market. Figure 4 indicates only three software are familiar to most project managers. 42% of the respondents used Microsoft Project, 30% of them use Primavera and only 2% used Risky Project.

Management Issues in Planning, Controlling and Monitoring

There are many issues debated in planning, controlling and monitoring construction project. The survey found that there are four variable turned into unsatisfactory levels as listed in Table 1.

1. The advantage and surplus value of planning are unclear. It clearly shows that most project managers are not really aware about how planning procedure could benefit them in constructing a project. This is very serious where project managers rely much on project implementation rather than the planning process. If all project managers believe this, it is fearful that the problem faced during construction stage will increase which will eventually cause more delays and the project becomes more costly.

Figure 4: Common Software Used Among Contractors



The main goal for planning is to complete the construction project in due time with a minimum cost. Planning in construction could be in any method.

2. Planning outputs such as schedule and reports do not serve as foundations for decision and communication.
3. Planning has low status among project company managers. Managers tend to focus more on implementation rather than spending some time for planning.
4. The last variables seem to be very much related to the use of software. It is expected at the beginning of this research that new project management software such as Primavera is not very popular among contractors due to its limited exposure in planning, monitoring and controlling construction project. However, this research found that the reason of why not many companies utilise Primavera was due to its high complexity and difficulties in understanding the software. Primavera in general has more function and tools for planning, controlling and monitoring project rather than other software in the market. It is believed that this kind of software could be one of the tools in helping project managers in monitoring construction project.

The Future of Project Planning

It is hope that in the future, more contractors will be aware of the need of software and technology in planning, controlling and monitoring construction project. It is also expected that more research in this area will be explored. There are many loop holes that researchers could look into. For example, researchers can study the implication of costing when using software. Researchers can also conduct a specific case study on how the project planning tools can effectively help the company to achieve completion on time. From there, the framework of project success can be shared amongst the players in the construction company.

Conclusion

The majority of respondents in this research are very familiar with Microsoft Project. None of them denied the huge advantages of computer software in managing projects. This clearly shows that the contractors in Malaysia agree on the contribution of computer software in planning, controlling and monitoring of construction projects. The only worry is how do they benefit and make use of the project management software in making their projects a successful one. There are also project managers who only view the Gantt chart during the meeting. The key of success in project management highly depends on planning efforts. This is where computer software plays its role in monitoring the progress of the project.

The main goal for planning is to complete the construction project in due time with a minimum cost. Planning in construction could be in any method. Thus, the use of computer software for this purpose could make the planning process smarter and easier. It is agreed that factors influencing the effectiveness of project planning and control such as past experience of staff, attitude towards planning and control, top management support and appropriate choice of planning and control techniques could be considered (Rahman et al., 2005). However, due to its limitation, this research was unable to finalise the effectiveness of using computer software in planning, controlling and monitoring construction projects. More data is required hence, it further research needs to be done in the future. Nonetheless, this research has managed to reveal the underlying problems in project planning despite numerous planning software have been introduced to monitor construction projects.

REFERENCES

Ahuja, V. and Thruvengadam, V. (2004) Project Scheduling and Monitoring: Current Research Status. Construction Innovation, Vol.4, pp 19-31

Basu, Abhi (2003) CPM Scheduling in Construction: A Case Study,AACE International Transactions

Kumar, Pankaja Pradeep (2005) Effective Use of Gantt Cahrt for Managing Large Scale Projects. Cost Engineering, Vol 47, No.7, July 2005, pp 14-21

Laufer, A and Tucker, R.L. (1987) Is the construction project planning really doing its job? A critical examination of focus, role and process. Construction Management and Economics, Vol.5, pp 243-266

Galloway, Patricia D. (2006) CPM Schedulling - How Industry Views Its Use, Cost Engineering, Vol.48, No.1. pp24-30

Mui, Lim Yoke., Aziz A Rashid A., Ni, Ang Cheng., Yee, Wong Chee., Lay, Wong Shiau (2002), A Survey of Internet Usage in The Malaysia Construction Industry', Itcon Vol.7. pp 259-269

Mui, L.Y., Aziz., Tat, O.C., (2008) (2002), A quick survey on the use of CAD Base Measurement Software (CBMS), The Malaysian Surveyor, Vol.43, pp. 10-215. Construction Industry', Itcon Vol.7. pp 259-269

H. Abdul Rahman,M. Othman, N. Zakaria, I.A. Yahya, O. Mohamed and L.C.Lan (2005) Project Planning and Control in Developing Economy: Implementation and Realisation, Journal of Design and the Built Environment, Vol. 1, No.1, University of Malaya Press

Robert K. Ph.D. Wysocki, Robert Jr. Beck, David B. Crane (2000) Effective Project Management, 2nd Edition, Wiley, London

Effective project planning will help to ensure that the projects are delivered both within the time constraint and to a pre-defined standard of quality.

PROPERTY MANAGEMENT AND TENANTS' SATISFACTION: A LITERATURE REVIEW

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Tenants' satisfaction which relates to product and service quality has been identified as one of the most powerful marketing tools. In rendering their services to the tenants, property management companies may strive to achieve 'quality' and 'satisfaction' that may then increase economic returns on investment. This paper aims to highlight the advantages of measuring tenants' satisfaction and the significance of this research to the property management profession.

1.0 Introduction

Measuring customers' satisfaction is one of the most powerful tools in marketing. Survey has shown that customer satisfaction measurement is used universally by more than 70% of managers' worldwide (Rigby, 2001). Knowing tenants' wants and needs is important because failing to do so leads the service provider guessing; and guesswork makes dissatisfaction inevitable (Tschohl, 1996).

Property management companies are also striving to deliver to their tenants not only their products and services, but also 'quality' and 'satisfaction' that may lead to increase economic returns on investment. As emphasised by the Building Owners and Managers Association (1999) - "Rating tenant satisfaction is no longer an option for property management professionals; it is imperative. The market place is too competitive for guesswork, and if you do not have happy tenants, eventually you won't have any tenants."

2.0 Problem Statement

Property management can be defined as the total care of the building during the operation stage; the extend of management service will vary according to the building's use, quality, size, location and age, the ownership profile, and the capability and the strategy of the property management company itself (Baldwin, 1994). In the property management context, the customer is the tenant and in the past, property managers have shown little concern for tenants needs (Dismukes, 2002; Kingsley Associates, 2004; RICS, 2005).

Tenant retention is a big part of the business and a key to the success of the property management company. The RICS Report (2005) on tenant satisfaction found that in the United Kingdom (UK), tenant satisfaction has become increasingly critical to the long term success of the property investment industry as the market evolves. Moreover the pattern in the UK now is that lease lengths are shortening and tenant retention is becoming more important.

Tenants have become increasingly aware and concerned about the level of service they receive (Bell, 2001). Historically, the main concerns of a tenant have been location, standard, and rent but this is changing. Driven by necessity, tenants are being forced to take a closer interest in the property that they use and are using even more sophisticated means of valuing their portfolios. This leads to stronger negotiation from tenants. Property management company must now accept voice of the tenant survey, and acknowledge that the market is evolving to rise to the challenge. To do this they need to see the tenant as a customer and begin to offer a service that meets their needs.

Nonetheless, there is a changing tenants' market and there has been suggestions to formally monitor tenant satisfaction and the drivers of that satisfaction (RICS, 2005). The challenge for the property management company is perhaps to understand how to take advantage of the changing balance of power so that they can begin to benefit in the service provision. Clearly, service is now the criteria upon which the clients, customers, and users of property product and services differentiate one organisation from another. In order to remain competitive, property managers must listen and respond to tenants' needs, concerns and expectations, as well as opinions, and use this information to quantify their performance and compare them with best practice (Muhlebach, 1998).

With the increasing sophistication of tenants in judging quality and the many strategic issues facing the property management industry, such as environmental concerns, sick building syndrome, health's risk etc., a more comprehensive definition and understanding of the industry's quality characteristics is long overdue. Furthermore, tenant is a building's most valuable asset. It is important for a property manager to understand the needs of their tenants in order to retain and renew leases. Managing property effectively and efficiently is a complex and dynamic phenomena due to the business environment which is constantly changing and becoming sophisticated. Thus, this creates a driving force in the changing skill set of the property manager which is termed as a paradigm change for the property management profession as compiled by CEL & Associates, Inc. (2001) and tabulated in Table 1 below.

In the new paradigm, a property manager is not only managing the four walls but also what are within the four walls. The question is how far has the property management organisation realised this change and anticipate to it, particularly in Malaysia.

Managers are increasingly developing tools to manage this complex relationship. Hurner (2001) discovered that the key to keeping tenants satisfied is to understand what they expect, meet those expectations, and then give them something more. This is because tenants expect a clean, safe building that is up-to-date, and in good repair. Tenant expects the building to be at a comfortable temperature, with driveways and walkways cleared of snow and ice in winter, grass, and shrubbery maintained in the summer. They expect offices and hallways to have ample lighting, plumbing, elevators and water fountains to be working order, and if there is a lobby, the furniture to be in good condition.

Therefore, it is important for a property manager to be as pro-active as possible, where listening becomes very important. If a property manager maintains good communication with tenants, the tenants will tell them about problems as they arise so the property manager will be able to avoid major failures. Real estate customers, clients, and users do not buy *things*, they buy *expectations*. Understanding those expectations and opinion or perceptions is critical in the management of those expectations.

Despite the importance of measuring customers' satisfaction across industries and nationwide, little empirical research has been conducted in the property management services in Malaysia. This research is an effort to gain insight into the importance of such measure in the property management service.

Table 1: The Paradigm Change for the Property Management Profession

Today	Tomorrow
Property Manager	Value Creator
Managing Process	Managing Resources
Industry knowledge	Business Acumen
Reporter of Facts	Communicator of Knowledge
Process Manager	Relationship Manager
Manual-based	Customer Based
Tactical	Strategic
9-6	24/7
Reactive	Insightful

(Source: Cel & Association Inc, 2001)

3.0 Objectives

This paper aims at highlighting the advantages of measuring tenants' satisfaction and the significance of this research to the property management profession.

4.0 Background of Tenants' Satisfaction and Property Management

4.1 Customer Satisfaction

Satisfaction comes from the Latin words *satis* (enough) and *farcere* (to do or make) (Oliver, 1980). Satisfaction is an emotional or feelings reaction. Moormann (2000) defined satisfaction as a positive feeling about a particular entity. Rust et al. (1996) defined satisfaction as how customer *perceives* service and how they *feel* about it. This is because customer decisions take place in the customer's mind. Therefore, the focus is on perception as well as emotional responses and not just reality. Such feeling, if positive, can range from mild (satisfaction) to extreme (delight) as illustrates in Figure 1 below. The depth of feeling generally results from the degree to which the customer's perception of the service meets or exceeds what the customer expected. Customer satisfaction is a short-term, transaction specific measure, whereas service quality is an attitude formed by a long term, overall evaluation of a performance.

Customer satisfaction is the degree to which a customer perceives that an individual, firm or organisation has effectively provided a product or service that meets the customer's needs in the context in which the customer is aware of. It has a direct impact on relationship strength (Gronroos, 2000). There are three types of relationship. Firstly, the relationship between a customer and a product/service; secondly is the relationship between the customer and the provider of the product or service; and thirdly is the relationship between the provider(s) of a product or service and their product or service.

Satisfaction is very subjective. Therefore, it is not inherent in the individual or the product but is socially constructed response to the relationship between a customer, the product/service, and the provider (product/service). Thus, the provider (product/service) can influence the various dimensions of the relationship as well as customer satisfaction.

Marketing researchers have long examined customer satisfaction (Parasuraman, Zeithaml, & Berry, 1985, 1988; Zeithaml, Parasuraman & Berry, 1985). These and other researchers postulate that customer service includes the managerial and staff tasks that involve interaction with customers to provide efficiency and result in satisfied customers.

Bolton & Drew (1991) suggested that customer expectations, their perceptions of current performance, and disconfirmation experiences affect their satisfaction or dissatisfaction with a service, which in turn affects their assessment of service quality.

Accordingly, most customer satisfaction discussion falls under the umbrella of the expectancy disconfirmation theory. This includes the Gaps model of satisfaction developed by Parasuraman et al. (1985, 1988). One of the most important premises behind the Gaps model is the notion of discrepancy between an individual's expectations and performance.

4.2 Literature on Tenants' Satisfaction and Property Management

Madden, C. S. (1989) has pointed out that good tenant relationships are important for the success of a property. In addition, Jacqueline C (1991) explained that occupant surveys can be an important tool in changing and improving tenant-manager relations in office buildings. The appeal of a well executed survey is threefold (Jacqueline C, 1991):

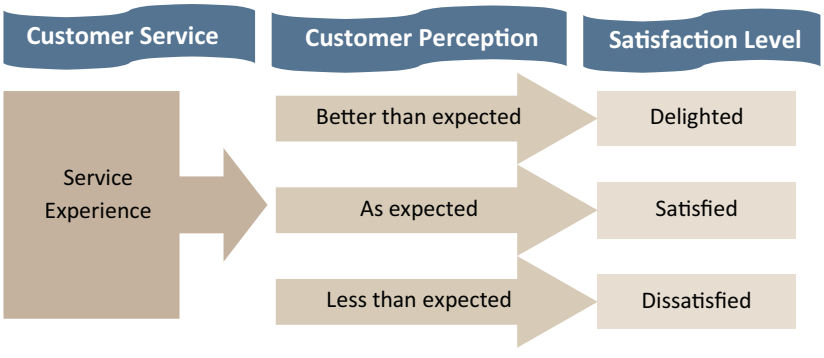
1) It provides systematic feedback on issues of concern to management in a form which can be organised and analysed;
2) Initiating a survey implies a proactive concern for the quality of occupants' experiences in the building, rather than one that is reactive; and
3) Most important perhaps, survey results can open a door to a variety of communication possibilities between tenants and managers.

Keeping tenants in a building requires a tenant programme that involves (Kusbit, C. S., 1991): 1) personal tenant contact, 2) excellent service, including emphases on responsiveness and constant maintenance, and 3) good value. Vischer, J. C. (1991) has also suggested that the questionnaire survey is one communication tool available to management that provides systematic feedback on issues of concern in a form that can be organised and analysed. In addition, survey implies (i) a proactive concern for the quality of tenants' experiences in the building; (ii) survey can open a door to a variety of communication posibilities. Thus, effective follow-up is important to surveys' success. It is therefore pointed out by Vischer (1991) that in order to get the most from a survey, it must be placed in the context of an overall strategy of communication and feedback.

No doubt that the role of the property manager has changed dramatically. Thus Gallahan, N. (1992) emphasised that in an increasingly soft market, the issue of tenant retention is becoming more and more important. Property managers must therefore redirect their focus from simply resolving problems to achieving and maintaining positive tenant/manager relationships.

On the other hand, John, G. (1992) is also in agreement with the other authors as he mentioned that

Figure 1: Delivering Results: Every Moment of Truth Counts



(Source: Anton and Perouhoff, 2002)

In order to remain competitive, property managers must listen and respond to tenants' needs, concerns and expectations, as well as opinions, and use this information to quantify their performance and compare them with best practice

quantifying customer service also helps identify strengths and shortcomings so that they can be capitalised and improved upon. The focus here is by comparing these strengths and weaknesses with the competitors, a property management company may be able to establish an advantage that can be communicated to potential customers.

In a competitive real estate market, tenant satisfaction is a critical component for maintaining a healthy bottom line (BOMA, 1998). It is therefore, imperative to understand how tenants feel about current services, as well future demands.

Dean (1998) has also commented that building owners, asset managers, and property managers throughout the real estate industry have recognised the value of measuring and benchmarking the level of tenant satisfaction as a means of tenant retention at their properties. He suggested that this shift toward more tenant-based business practices has occurred as result of several mega shifts within industry: 1) recovery to growth, 2) variety to standardisation, 3) gut driven to information driven, 4) qualitative to quantitative and 5) founder identity to brand image. Thus, by using performance measurement techniques such as a quantifiable tenant surveys, owners and, managers not only improve performance but build a competitive advantage.

It is crucial that to remain competitive, property management company must not only listen and respond to tenants' needs, concerns and expectations and opinions, but they must also use this information to quantify their performance results and compare them with best practice indices (Muhlebach, 1998).

The Building Owner Manager Association (1999) also emphasised that in the property industry, outstanding customer service means meeting - and anticipating - a tenant's needs. This is because the tenants are the lifeblood, and must be treated as such. The BOMA suggested that managers must move from being superintendent managers - who took our suppliers out to lunch to talk business - to tenant relations manager, who take our tenants out to lunch to see what's on their mind. This means moving outside of the traditional avenues of third party management and recognising opportunities that can be accommodated using personal skills and knowledge (Klien, 1999).

Schwenker (1999) pointed out that the source of the problem is that property managers have focused only on those performance variables that can be easy and readily available, mainly because there was a limited number of cost-effective methods to make other performance measurements. This has forced them to measure end results as opposed to the incremental processes that actually combine to make up the end result. Thus, what happened here is that these measurements tend to explain 'what' but provide little insight into the 'why'. As a result, the manager can only hypothesise or make guess regarding the actual cause. Managers need more useful performance data to help answer the 'why'.

In addition, Bell (2000) highlight the issue of the formula for business success in the property management industry has never been a secret; CAPABILITY to provide services + AVAILABILITY of customers who want those services + PROFITABILITY of pricing or fees = BUSINESS SUCCESS. Bell commented that too often we skip past the all-important second element of this common sense formula: What keeps customers available to you? The greater your customers satisfied, the greater your chances for sustained success.

Successful real estate managers and owners seize all the opportunities - be they relationships, timing or market knowledge - to renew good tenants (Devine. 2000). Mahanna (2000) also supported the idea and suggests that while providing service amenities is essential, excellent service remains the key; tenants are drawn to an atmosphere that enables efficiency and supports productivity through advanced levels of service and reliability. Thus, the changing role of a property manager is to be a value creator and understand the needs of customers (Bell, 2001).

Hurner (2001) has also emphasised that the key to keeping tenants satisfied is to understand what they expect, meet those expectations, and then give them something more. In addition, Dismukes (2002) has also pointed out the best approach is to treat tenant satisfaction as the only thing that matters because, from a property service perspective, it is.

McKenna-Harmon, K. (2002) strongly suggests that customer service is an attitude, a lifestyle, a philosophy that must be lived and celebrated every single day. The customer may not always be right, but the customer is always the customer. Customer service in the real estate business is evolutionary, rather than revolutionary. At best, it's a couple of steps forward, one back, another side-ways. One step forward is the simple realisation that the current customers are potential gold-plated, low cost ambassadors - the bottom-line lifeblood of the property management company.

Thus, in a competitive business environment where it costs far more to acquire a new customer than to retain one, the rewards of a successful customer service strategy particularly, tenants' satisfaction directly impact the bottom line (Wilson, 2002).

5.0 The Importance of Measuring Tenants' Satisfaction

Tenant is a building's most important asset. It is therefore, essential to find out what tenants want and how the products/services are meeting their needs (Kilton, 2000). Surveying tenants is the only way to see the company through the tenant's eyes. Tenant's perception is the reality, no matter what the companies think they are doing.

Measuring customers' satisfaction is emerging as the single most powerful tool for achieving and sustaining a competitive advantage (Cel & Associates, 1996; Lee & Dean, 1998), as determinant of business success and failure (BOMA, 1998)

and as a barometer of corporate performance (Javitch, Church and Burke, 1995).

Successful property management company can no longer focus inwards on their own capabilities and processes. Property managers must understand the complex relationship they have with tenants and co-operate with them to deliver quality services and continuously improve according to the changing demands (expectations) and technological potential. The perceived service quality measurement helps identify the strengths of the property management company, so that it can be capitalised on and any shortcomings can be improved upon. By comparing these strengths and weaknesses to the competitors, the property management company may be able to establish an advantage and able to communicate it to potential tenants/customers (John G, 1992).

It is more cost effective to keep a tenant than to attract a new one, thus, knowing what tenants want is the key to retention (BOMA, 1999). Zeithaml and Bitener (2000) reported that attracting a new customer is five times as costly as retaining an existing one, and depending on the industry, companies can increase profits from 25% to 85% by retaining just 5% more of their customers. Customer dissatisfaction is expensive and this does not include the additional potential loss due to bad word of mouth. According to Tom Peters in 'Thriving on Chaos (1988), the actual business impact of customer dissatisfaction is as follows:

- 26 out of 27 customers fail to report a bad experience.
- Customers' won't report it because they feel you won't do anything about it.
- 91% won't return.
- 13 % will tell 20 or more people, further polluting your reputation.
- 82% to 95% come back if the situation is resolved well and promptly.
- A well-handled problem usually breeds more loyalty than existed before the negative incident.

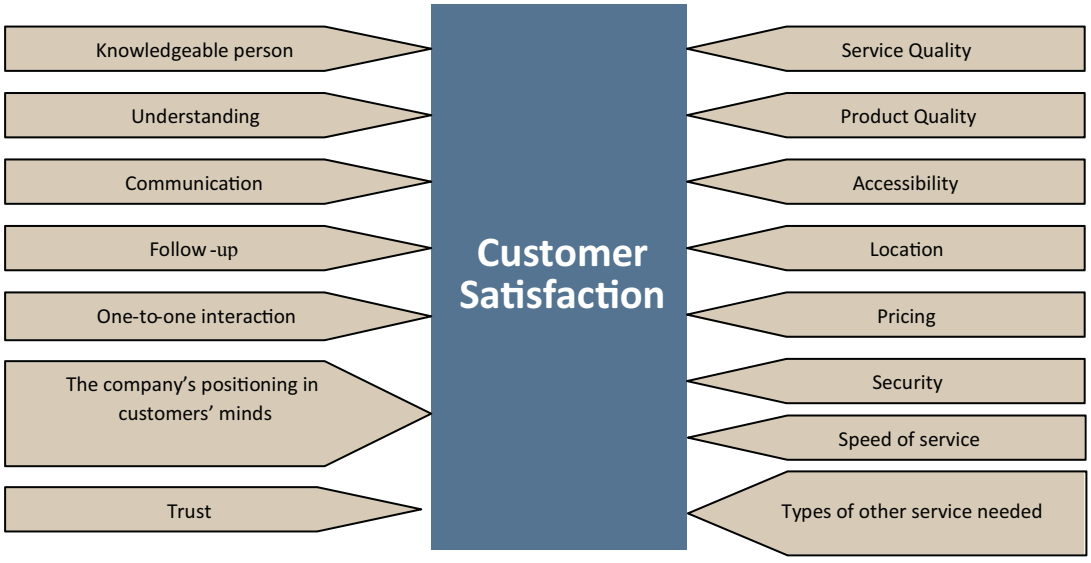
In the property industry, outstanding tenants service means meeting - and anticipating - a tenant's needs. This is because the tenants are the lifeblood. Negative tenant relations can have a serious effect on property returns, as letting space is the prime income generator for the owner and the management company. A recurring problem is that tenants' needs and dissatisfactions are discovered too late, as when a tenant announces that he will not be renewing the lease.

There are various variables that influence tenants' satisfaction. This is illustrated in Figure 2 below.

However, studies showed that there is a positive correlation between property management related variables and overall tenants' satisfaction. Table 2 illustrates the dimensions that were used by various studies to measure tenants' satisfaction. For the purpose of comparison, the dimensions are divided into two categories, service dimensions and property dimensions. This is due to the fact that services are very subjective in nature and the production and consumption activities take place simultaneously. This is where the interaction occurs between the service provider and the tenant. Critically, this interaction will have an impact on the perceived service and satisfaction. For example in the property management services, the tenants will be provided with a space to do their business, facilities and amenities in the buildings, a café, mini-market, etc. All of these are obviously part of the satisfaction experience. *What* tenants receive in their interactions with the property management company is clearly important to them and their evaluation of satisfaction. However, this will only cover one satisfaction dimensions, called *property dimensions*.

The tenants will also be influenced by the way, in which the end result of the process is transferred to him. In addition the tenant's view of services is also influenced by the appearance and behaviour of the property management staffs, repairmen, and service and maintenance technicians, how the tasks are perform what they say, and how they do it. Thus, the tenant is influenced by how he receives the service and how he experiences the simultaneous production and consumption process. This is another satisfaction dimension which is closely related to the service delivered or being taken care of and how the service provider functions. This is known as *service dimensions*.

Figure 2: The Components that Contributes to Customer Satisfaction



(Source: Z A Baharum, 2006)

Table 2: Dimensions of Tenants' Satisfaction by Various Studies

Studies	Birkeland & Bettini	BOMA	NREA	Kingsley Associates	Dismukes	RICS	Zarita
Year	**1995**	**1999**	**2000**	**2002**	**2002**	**2005**	**2005**
Service Dimensions	Leasing personnel Rent billings			Problem resolution Responsiveness Accommodation of unique needs Professionalism/ Courtesy Follow through Accounting and billing procedures	Curb appeal Capital improvements	Problem resolution Contract detail Landlord/ agent communication Lease flexibility	Responsiveness Assurance Reliability Empathy Tangibles
Property Dimensions	Heating & air conditioning Cleaning service Security Elevators Building maintenance Parking Amenities	Visual appeal Overall condition Elevators operation Landscaping Emergency/ fire safety HVAC Technological amenities Overall parking	Visual appeal Comfort of office space Elevators operation Landscaping Emergency/ fire safety HVAC Interior lighting Interior décor maintenance Building amenities Cleanliness Building aesthetics Parking Security	Accessibility Quality of building Fire/life safety procedures Exterior building maintenance Security policies & procedures Appearance of common areas Quality of cleaning	Tenant relations Cost controls	Location of premises Standard of premises Value for money	Cleanliness Building services Security Signage Parking Building aesthetics

Satisfaction in turn, has a positive relationship to tenants' retention and loyalty (McAlexander et al., 1994). Tenants' retention is about retaining the tenant to renew their lease. This problem is not so obvious when the economy is good. On the other hand, it will definitely influence the profit when the tenants leave and no one to take up the space during economy downturn. It is believed that enhancing service quality and professionalism is the key to tenants' retention in the property management services. Furthermore, this will enable the property management company to enhance their expertise in order to compete locally and globally.

6.0 Tenants' Satisfaction is the Key to Retention

Kingsley Associates (2002) found that 7% to 12% of tenants are more likely to renew their lease if they were more highly satisfied with several important aspects of property management services. In addition, the research also discovered strong link between tenants' satisfaction with property management and their overall satisfaction. As satisfaction with property management increases, so does overall tenants' satisfaction. Thus, a more satisfied tenant is statistically more likely to renew their lease. This showed the importance of service which has grown even more significant with the growth in the economic and the property market.

Thus, both tenants and property managers should be acutely aware of the need for the increased focus on tenants' satisfaction and its importance in the tenant retention equation.

The BOMA's tenant telephone survey (2002) also discovered that 'service' and the responsiveness of the property management company was of paramount importance when evaluating workplace performance and ultimately, decision to lease renewal. Table 3 illustrates the factors that tenants feel are the most important determinants of retention (by ranking).

Moreover, Dismukes (2002) reported, "Tenant retention is not something that can be addressed solely at the end of the lease term, but must be the goal of every service professional every day. Although there are many ways to improve tenant service in a short time-frame, the best approach is to treat tenant satisfaction as the only thing that matters because from a property service perspective, it is."

7.0 Conclusion

In this type of market-driven environment, the key to profitability growth of the property management services is tenant's loyalty, which ultimately depends on their satisfaction. Thus, maintaining strong and close relationships with tenants in a way that adds value beyond the basic services provided is

Table 3: The Determinants of Retention (by Ranking)

1	The quality of property management
2	Property management knows the tenants needs
3	Property management is proactive
4	Tenants space helps the tenant to be profitable
5	Space meets business needs
6	Space has up to date technology infrastructure
7	Property management is trust worthy
8	Floor plan layout works for the tenant

Source: Workplace Performance, Buildings, Feb2002, Vol. 96 Issue 2, p12, 2/3p

critical to achieving long term tenant satisfaction, loyalty, and ultimately profitability (Javitch et al., 1995). Enhancing tenants' satisfaction and professionalism will be here to stay in property management services. Furthermore, this will enable firms to enhance their expertise in order to compete locally and globally.

Services are unique in the sense that they are intangible and thus, tenants must be assured of the trust before renewing their leases. Thus, the goal of leading real estate firms is to build customer and client loyalty through excellence and to secure new customers and clients due to the excellence of service (CEL & Associates, 1996). It has been noted that, good tenant relationships take years to build, but other professional property management strategies can be implemented for quick results (Dismukes, 2002).

REFERENCES

Anton and Perouhoff (2002) Customer Relationship Management, Prentice Hall.

Bell, A. H. (2000) Measuring customer satisfaction. Journal of Property Management, 65(4), 66-68.

Bell J (2001). A heavier load. National Real Estate Investor, (March).

BOMA (1998) Are your tenants happy?

BOMA (1999) State of the Industry Address.

BOMA, Are your tenants happy, 1998.

Lee C and Dean D (1998) Winning applause, Journal of Property Management, Volume 63 Issue 2, pp 42-45

C.Hurner, T.(2001) Retain Tenants by Providing More than They Expect. Properties Magazine (July).

CEL & Associates, Inc. The Search for Quality Service, Strategic Advantage (K7696): pp.13-14. 1996.

Christian Gronroos (2000). Service Management and Marketing: A customer relationship management approach, John Wiley & Sons Inc.

D Dean, C. L. (1998) Winning applause. Journal of Property Management, 63(2), 42-45.

Darrell Rigby (2001) Management Tools & techniques: A Survey, California Management Review, Vol. 43 No 2 p139-160.

Devine, A. (2000) Get to know your tenants before you lose them. Journal of Property Management, 65(5), 84-90.

Dismukes, J. (2002) In a recession, retention rules. Journal of Property Management, 45.

Gallahan, N. (1992) Building relationships with commercial tenants. Journal of Property Management, 57(6), 50-53.

Tschohl,(1996) Achieving excellence through customer service, Advantage Quest Publications.

Jacqueline C (1991) Communicating through surveys. Journal of Property Management, 56(3), 36.

Jim Dismukes (2002), In a recession, retention rules, Journal of Property Management, Jan/Feb 2002, Vol.67 Issue 1, p45.

John, G. (1992) How satisfied are your tenants? Journal of Property Management, 57(6), 48.

Kingsley Associates (2004), Serve & Retain, Journal of Property Management, Jul/Aug 2004, Vol.69 Issue 4, p40-43.

Klien, J. (1999) Struike it niche. Journal of Property Management, 64(2), 36-40.

Kusbit, C. S., Joe.(1991) Tenant Retention: Making it hard to leave. Journal of Property Management, 56(1), 18-20.

Madden, C. S. (1989) Keeping tenants satisfied. Journal of Property Management, 54(1), 52-53.

Mahanna, M. J. L. a. R. (2000) Red Carpet Treatment. Journal of Property Management, 36-38.

McKenna-Harmon, K. (2002) Thou Shalt Not... Now is the time. Journal of Property Management, 80.

Miriam Javitch, Allan H Church & W Warner Burke (1995) Enhancing professional service quality: feedback is the way to go, Managing Service Quality, Vol. 5 issue 3, pp.29-33.

Muhlebach, R. F. (1998) Tenant surveys benchmark success for management firms. National Real Estate Investor, 40(2), 159-160.

Nicolson, Kemp and Linnell, Does the rhetoric of customer service match the reality, Managing service quality, Volume 6 Number 3, pp 6-9, 1996.

RICS (2005), Tenant Satisfaction Index: Tune into tenants.

Schwenker, L.(1999) Measure twice, cut once. Journal of Property Management, 64(2), 78-83.

T Moormann (2000) Investing in Customer Satisfaction Improvements, Resource.

Tenants relations techniques, Buildings, May 1999, Vol. 93 Issues 5, p20.

Tom Peters (1988) Thriving on Chao: Handbook for Management Rovolutions, Harper.

Vischer, J. C. (1991) Communicating through surveys. Journal of Property Management, 36-39.

Wilson, A. D.(2002) Cha-Ching! Ancillary service programs add up to bottom-line value. Journal of Property Management (July/August), 30-31.

Workplace performance, Buildings, Feb 2002, Vol. 96 Issue 2, p12.

Z A Baharum et al, Service Quality and Gap Analysis, Paper presented at Brunei International Conference of Engineering and Technology, August 2005.

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GREEN TECHNOLOGY

BUILDING INDOOR ENVIRONMENTAL QUALITY

Green buildings or energy efficient buildings came into being as a result of the desire to create a healthy, functional, energy efficient, comfortable and economically sustainable environment to live and work in for now and for future generations. It is gradually accepted as the only way the world can save itself from the gloomy energy crises. The goal of the green buildings is to surpass conventional buildings in operational performance, environmental sensitivity, occupants' health, satisfaction and life cycle cost.

To be green, a building has to address the issues of site planning, building design, building materials, building construction, overall cost energy efficiency, air and water efficiency and quality of the indoor environment. The benefits of which include, reduced capital cost, reduced cost of operation, Improved building lifespan, increased user productivity, improved air and water quality, greater return on investment, increase land value and most importantly, saving the scarce resources for future generations.

The problems hindering the full acceptance and application of the Green Building phenomena are: the business and economic investment interest, low level of technology and attitudes among others. However, there are many governments and organisations that have accepted and developed standards for assessing their energy efficiency needs for comfort, health and posterity. Some of the bodies established are: BREAM of United Kingdom, LEEDS of USA, CASBEE of Japan, NAHORS of Australia, NH-BEAM of Hong Kong etc.

Recently, there is an increasing attention paid to the quality of indoor environment of buildings and its consequent effect on the health and comfort of the occupants.

The Malaysian Government on its part has announced, for the first time, in its 2010 Budget the Green Building initiatives through the MS1525:2007 code of practice on energy efficiency and use of renewable energy for non-residential buildings and the Malaysian building and construction industry. In line with this, many of the Green Building Index for Malaysian buildings were developed and brought to light. The MS1525 code outlined the requirement for energy efficiency usage in buildings to include, the air-conditioning and space heating, lighting, power, and other requirements such as occupants and management, indoor environmental quality, climate, building design and construction, and mechanical and electrical equipment.

Recently, there is an increasing attention paid to the quality of indoor environment of buildings and its consequent effect on the health and comfort of the occupants. This is due to the increasing awareness of their deleterious effects on health which is caused by such materials like asbestos, lead as well as water contaminants. Indoor environmental quality as a factor affecting energy use in buildings depends to a greater extent on air temperature, humidity and wind speed maintained in the building. In tropical countries like Malaysia, the average outdoor temperature is about four degree above the required comfort zone of 22-27°C. The relative humidity is also above the average of 50-70% and wind speed below the normal of between 0.15-2ms^{-1}. So the comfort level of a typical building interior is poor because it is hot and humid. Unless it is aided by either design, natural or artificial means of ventilations, the interior quality of the building is further worsened by the release of heat by the human body in form of enzymatic or muscular metabolism.

The above climatic elements, coupled with the thermal property of building materials and construction, affect the maximum efficiency of the building. Thus, constituting substantially to the unhealthy quality of the building indoor environment termed the *sick building syndrome*. This term describes the combination of causes that may trigger poor health in the users of buildings. This prevents the building from providing maximum comfort at minimum energy cost (efficient building) which invariably affects our comfort and health.

On the other hand, rapid population growth and urbanisation in Malaysia, coupled with building design failure, user ignorance and attitude among others, has led to a growing concern over the increase in building contaminants which affect comfort and health of the occupants. The common factors responsible for indoor contaminants that affect building indoor quality are: building population, ownership class, building types, construction characteristics, age and condition of building, occupants' behaviour, building operation and maintenance, external exposure to pollutants, and combustion generators (cooking stoves, gas, electric, carbon dioxide, irritants etc).

The building users, either due to ignorance, nonchalant attitude or both, are responsible for poor indoor building quality because they use energy anyhow and at will without recourse to the consequence and cost of their actions while cooling and heating. The building design failure can be attributed to poor or inadequate building site planning, orientation, roof systems, thermal properties of materials and components, shading devices, construction details, ventilation, illumination and functional relationship. External factors include microclimate, landscaping and solar radiation. In summary, building indoor environment quality can be improved by the following:

1. Appropriate selection of high energy efficient equipment for cooling and heating;
2. System integration and light control;
3. Adopting the use of most efficient equipment operation and maintenance for optimum efficiency;
4. Adopting good housekeeping maintenance practice by switching off appliances i.e. AC, television, computers, lights etc., when not needed or out of building, during sleeping hours and by not cooling/heating unused rooms;
5. Encouraging designs for maximum use of natural light to reduce artificial light consumption;
6. Proper building orientation to take advantage of local climate for optimal thermal comfort;
7. Specifying components with high thermal resistance;
8. Providing building designs with adequate detailing to reduce heat influx into the building interior;
9. Providing windows with adequate shading devices to cut off excess solar radiation;
10. Designing buildings with adequate cross ventilation to help reduce high humidity, discomfort as well as separating of pollutant-generating equipment in closed, well-ventilated areas; and
11. The Malaysian Government ministries are to ensure that they check all plans so as to comply with indoor environmental quality requirements, as set in the MS1525 code.

Indoor environmental quality as a factor affecting energy use in buildings depends to a greater extent on air temperature, humidity and wind speed maintained in the building.

The Institution of Surveyors, Malaysia

Educational Loan Awards for 2010/2011

The Institution of Surveyors, Malaysia invites application from Malaysia Citizens for Educational Loans to pursue full-time courses at local universities.

Universities

University of Malaya
University of Technology Malaysia
University of Technology MARA
University of Science Malaysia
International Islamic University of Malaysia
University Tun Hussein Onn Malaysia

Field of Study

Land Surveying
Quantity Surveying
Building Surveying
Property Management / Estate Management

Eligibility

- Candidates must have obtained an offer for admission for full time studies to any of the universities in any of the field specified above.
- Candidates must not have received any scholarship or financial assistance from the Government or any other organization.

Special Incentive

Candidates who obtained in their studies;
a. 1st Class Honours:- The whole of Educational Loan will automatically be awarded as scholarship.
b. 2nd Class Upper:– 50% of the Total Educational Loan may be considered to convert as scholarship upon reviewed by Committee.

Value of Loan

Degree: Up to RM7,000 per annum
Diploma: Up to RM5,000 per annum

Guarantors

Candidates shall obtain the consent of two acceptable guarantors who must provide personal guarantee for repayment of the loan.

Repayment of Loan

Loan amount must be repaid with a period of not less than 36 months after the recipient has graduated.

How to apply

The application form, may be obtained from the ISM Secretariat or downloaded from ISM website: http://www.ism.org.my.
(**Closing Date: 31 December 2010**)

All application must be sent to:
The Chairman
Scholarship and Education Fund Committee
The Institution of Surveyors, Malaysia
3rd Floor, Bangunan Juruukur, 64-66, Jalan 52/4, 46200 Petaling Jaya

The Institution of Surveyors, Malaysia

Educational Loan Awards 2010/2011 for Post Graduate Programme

The Institution of Surveyors, Malaysia invites application from Malaysia Citizens for Educational Loans to pursue full-time courses at local universities.

Universities

University of Malaya
University of Technology Malaysia
University of Technology MARA
University of Science Malaysia
International Islamic University of Malaysia
University Tun Hussein Onn Malaysia

Field of Study

Land Surveying
Quantity Surveying/Project Management/Construction Management
Building Surveying
Property Management / Estate Management

Eligibility

- Candidates must have obtained an offer for admission for full time studies to any of the universities in any of the field specified above.
- Candidates must not have received any scholarship or financial assistance from the Government or any other organization.
- Candidates must be at least a Graduate member of the Institution not less than 3 years at the time of application.
- Repayment of study loan within the period of 3 and 5 years for the Master Programme and the PhD programme respectively.
- Duration of Studies for:-

a) Master Program- must not exceed 2 years
b) PhD Program- must not exceed 5 years

Value of Loan

Master Program: Up to RM10,000.00 per annum
PhD Program: Up to RM20,000.00 per annum

Guarantors

Candidates shall obtain the consent of two acceptable guarantors who must provide personal guarantee for repayment of the loan.

Repayment of Loan

Loan amount must be repaid with a period of not less than 36 months after the recipient has graduated.

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EXISTING GREEN TECHNOLOGY INCENTIVE IN MALAYSIA

The Green Building Index is an environmental rating system for buildings developed by PAM (Pertubuhan Arkitek Malaysia / Malaysian Institute of Architects) and ACEM (the Association of Consulting Engineers Malaysia). The Green Building Index is Malaysia's first comprehensive rating system for evaluating the environmental design and performance of Malaysian buildings based on the six (6) main criteria: Energy Efficiency, Indoor Environment Quality, Sustainable Site Planning & Management, Materials & Resources, Water Efficiency, and Innovation. The Green Building Index is developed specifically for the Malaysian tropical weather, environmental and developmental context, cultural and social needs.

1.0 INTRODUCTION

In Malaysia, a new concept in construction and development, which is the Green Building Index (GBI), was launched in May 2009. It was initiated by building professionals with initial funding from the Pertubuhan Arkitek Malaysia (PAM) and in collaboration with the Association of Consulting Engineers Malaysia (ACEM). The GBI is now being funded by the Malaysia Investment Development Authority (MIDA). Greenbuildingindex Sdn Bhd was launched and incorporated in February 2009 as a wholly-owned subsidiary of PAM and ACEM to administer GBI accreditation and train GBI facilitator and suppliers. The Government's support for GBI is clearly seen from the incentives announced in the Budget 2010, as elaborated here.

2.0 THE ICENTIVE OF IMPLEMENTATION GREEN TECHNOLOGY

The Government of Malaysia has taken several steps to expand the use of Green Technology in the Malaysia context. Since green buildings will save utility costs and preserve the quality of the environment, the Government encourages all developers to participate and promote Green Technology. According to the Budget 2010, the Government announced and proposed several incentives to developers to implement Green Technolology, which are as follows:

a) Tax exemption for building owners

Owners of buildings which have been awarded the GBI certificate will be given tax exemption equivalent to 100% of the additional capital expenditure incurred to obtain the GBI certificate. The exemption is allowed to be set off against 100% of the statutory income for each year of assessment. The incentive is applicable for new buildings and upgrading existing buildings. For tax exemption purpose, the incentive is given only to the first GBI certificate issued in respect of the building. This is effective for buildings awarded with GBI certificates from 24 October 2009 until 31 December 2014.

b) Stamp duty exemption for buyers

The buyers of buildings and residential properties awarded with GBI certificates bought from real estate property developers are eligible for stamp duty exemption on instrument of transfer of ownership of such buildings. The amount of stamp duty exemption is on the additional cost incurred to obtain the GBI certificates. This incentive is given only once to the first owner of the building. This is effective for buildings awarded with GBI certificates from 24 October 2009 until 31 December 2014.

c) Establishing of fund

In order to promote Green Technology among developers, the Government of Malaysia established a fund amounting to RM1.5 billion. This fund will provide soft loans to companies that supply and utilise Green Technology. For suppliers, the maximum financing is RM50 million and for consumer companies RM10 million. The Government will bear 2% of the total interest rate. In addition, the Government will provide a guarantee of 60% on the financing amount, with the remaining 40% by banking institutions. Loan applications can be made through the National Green Technology Centre. This scheme will commence on 1 January 2010 and is expected to benefit 140 companies.

...the responsibility of adopting Green Technology does not rest solely with the Government. The public has a role to play as well and there is no room for public apathy if Malaysia wants to adopt Green Technology.

The Green Building Index is Malaysia's first comprehensive rating system for evaluating the environmental design and performance of Malaysian buildings based on the six main criteria...

d) Promotion towards green technology

With regards to further promotion of the development of Green Technology activities in Malaysia, the Government has taken several steps to ensure the Green Technology approach will be widely recognise in Malaysia. The Government will:

i. Restructure the Malaysia Energy Centre as the National Green Technology Centre tasked with formulating the Green Technology development action plan. This Centre will function as the focal point to set standards and promote Green Technology. To intensify green awareness activities and practise environment-friendly lifestyle, the Government will provide an allocation of RM20 million;

ii. Organise an international exhibition on Green Technology in April 2010. The aim of the exhibition is to attract internationally renowned companies and experts in Green Technology. By this approach, the Government hopes that the Green Technology concept will be enhanced and emphasised to Malaysians;

iii. Develop Putrajaya and Cyberjaya as pioneer townships in Green Technology, as a showcase for the development of other townships. Also as a Government Centre, it inspire developers and any parties involved in the implementation of Green Technology; and

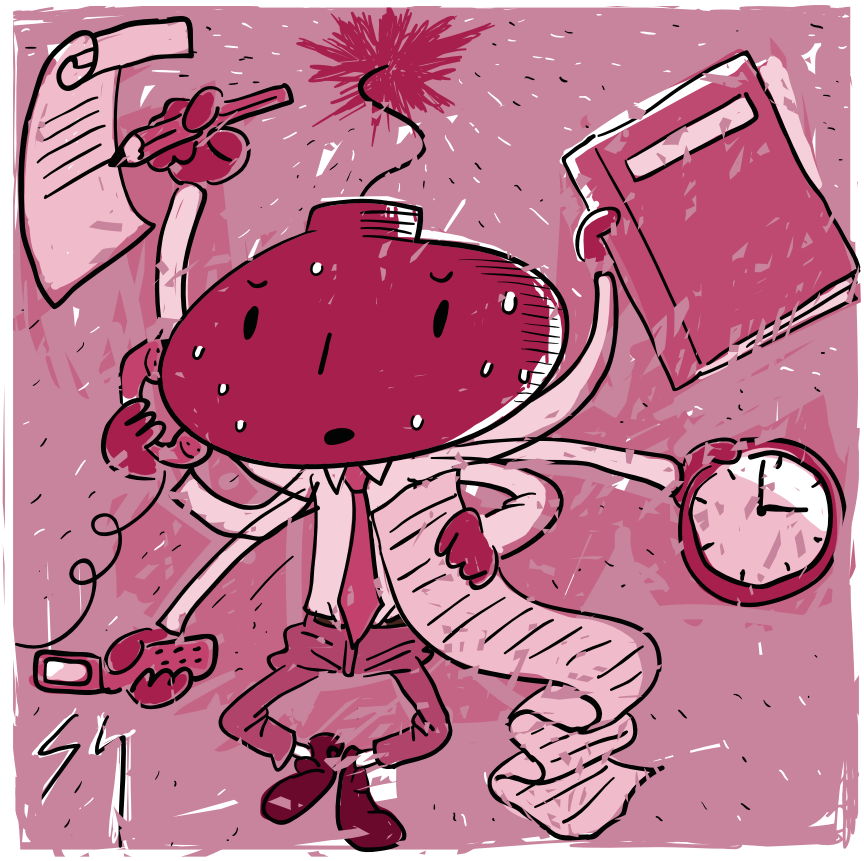
iv. Give priority to environment-friendly products and services that comply with Green Technology standards in Government procurement.

3.0 SUMMARY

The Government of Malaysia highly encourages Malaysians to participate in Green Technology. Clearly, the Government is serious in its long term commitment in promoting Green Technology. The Ministry of Energy, Green Technology and Water has also announced an initiative in the creation of a Green Technology Fund - an introduction to a "polluters will pay" - the concept will create more awareness. Furthermore, the responsibility of adopting Green Technology does not rest solely with the Government. The public has a role to play as well and there is no room for public apathy if Malaysia wants to adopt Green Technology. There is a need for effective promotion and public awareness as these are critical success factors for the successful development of Green Technology. The change of mindset of the public is important in order for the public and businesses to adopt green practices, before the green agenda can be achieved.

W.M.A. Wan Hussin
PhD, MBA, BSc(Hons), MAALS, FISM, CPUL, MSP, MAIMS

THE STRESS OF MULTITASKING



Many studies have reported that multitasking can reduce productivity by approximately 40 to 50 percent. This is because switching from one task to another makes it difficult to tune out distractions and can cause mental blocks that can slow down your progress. Multitasking is seen as a negative act that could bring more damage to the organisation than the positive point of completing a couple of tasks in a given time frame. There are times when multitasking is the only option but chunking is an even better choice as it involves less start-up.

Multitasking

In discussing the meaning of the term 'multitasking' with a group of middle-line managers, a confused situation arose. Not because of the way the term was elaborated and the confusion that goes with it, but due to the fact that multitasking has been seen as a positive connotation, or perhaps not so negative connotation, to be more precise. As a result of pressing demands at the workplace in terms of increasing productivity, meeting datelines and targets, to name a few, many workers practiced multitasking for the sake of survival, to a point that it has become a norm or a balancing act of some sort.

So, what does multitasking really mean? Multitasking can mean performing two or more tasks simultaneously. It can also involve switching back and forth from one task to

another, or performing a number of tasks in rapid succession. To many of us, multitasking is seen as a positive characteristic as switching tasks and get it completed in a given time need some form of balancing talent and skill.

In true management context, multitasking is always a negative act that could bring in more damage to the organisation than the positive point of completing a couple of tasks in a given time frame. In many studies on the impact of multitasking, the extent of damage caused is determined by measuring the time lost by switching tasks. It has also proved that many workers were slower when they had to switch tasks than when they repeated the same task. As tasks became increasingly complex, the amount of time lost is more significant when workers switched between multiple tasks.

Reality of Multitasking

The fact is multitasking is accepted as a way of modern life. We could be driving and at the same time discussing with a partner on a very important issue. When you are reading this article, chances are you are also doing several things at once; perhaps you are also listening to music, online talking to a friend, checking your email, or playing a computer game. As multitasking is seen as a norm, chances are many of us are 'heavy multitaskers', doing several different things at once, and think that we are fairly good at this balancing act. What is always forgotten is that we are probably not as effective at multitasking as we think we are.

In the past, many people believed that multitasking was a good way to increase productivity. What is lacking is the understanding of the fact that switching from one task to the next takes a serious toll on productivity. Multitaskers, especially the heavyweights, have more trouble tuning out distractions than people who focus on one task at a time. Doing so many different things at once can actually impair cognitive ability.

Strategic Multitasking

So, multitasking is seen as a negative characteristic that affects productivity. What if you have to do multitasking as that is the only choice available? Accepting negativity consciously needs talent. As multitasking can mean performing two or more tasks simultaneously, or switching back and forth from one thing to another, performing a number of tasks in rapid succession needs perseverance and persistence. If the strength of these two attributes is slacking, productivity will be impaired, more time is lost and above all, quality is questionable.

But a time must come when multitasking is the only option of the day. As a result, multitasking has to be handled

Multitaskers ... have more trouble tuning out distractions than people who focus on one task at a time. Doing so many different things at once can actually impair cognitive ability.

Multitasking can mean performing two or more tasks simultaneously. It can also involve switching back and forth from one task to another, or performing a number of tasks in rapid succession.

strategically so that the positives supersede the negatives. Multitasking is managed by what is known as mental executive functions which control and manage other cognitive processes and determine how, when and in what order certain tasks are performed. There are two stages to the executive control process: the first is known as 'goal shifting' which is deciding to do one thing instead of another, and the second is known as 'role activation', which changes the rules to perform the previous task to a set of new rules for the new task.

Although the time taken to switch performing goal shifting and role activation may take a few tenths of a second, the time to perform both tasks will add up, especially so if the two tasks are switched back and forth repeatedly. This might not be that big of a deal in some cases, such as when you are changing television channels and reading newspaper. It will only turn out to be significant in cases where safety, deadline or productivity are critical, such as when you are on the way to an important meeting and get caught in a heavy traffic, even small amounts of time can prove critical.

Productivity can be reduced by as much as 40 to 50 percent by the mental blocks created when people switch tasks. Realising the potential detrimental impact of multitasking and the associated constraints can actually make it work to decrease productivity and efficiency. Depending on the situation, the costs of switching tasks while talking to a friend and watching a movie at home probably is not going to cause any serious problems. However, that fraction of a second it takes to change tasks could mean life or death for someone driving down a busy highway while talking on the phone.

Assessing Multitasking

It is only good when multitasking can lead to increased productivity but how is this achieved?

Because multitasking and productivity are inter-complementary, assessing the whole situation before trying to accomplish the task is vital so that distractions and stress are eliminated. It is important to focus on one task at a time rather than cramming more in a quest to get more done for multitasking is not going to work, under most circumstances. Multitasking can only work when it involves trivial tasks. For example, as we lay in bed we think about the agenda for an important meeting tomorrow. Lying in bed doesn't take much of the brain's processing power, so thoughts about the meeting agenda is not affected even if it is shared with another task which is simply lying in bed.

The chunking concept involves breaking up the day into larger chunks instead of reacting to each 'emergency'. The more chunks of time you devote to specific tasks, the fewer start-up moments you will have.

On the other hand, two different tasks which require more of the brain's capacity may require more thought. You might be talking on the phone when you are in the midst of a busy morning rush. You may get both tasks accomplished, but you would not have thought of doing both tasks better and in less time if you had done one task after the other instead of doing both at the same time and end up being stressed.

Chunking Works Better Than Multitasking

'Chunking' describes how human memory utilisation works when doing several tasks simultaneously with less stress. Doing two tasks simultaneously (such as talking on the phone in the midst of a busy morning rush) actually means switching between them rather than doing both at the same time.

Your colleague walks into your office with some paperwork when you are on the phone. She asked for your advice on an important issue or a decision on an urgent matter. You stop listening to the person on the phone briefly, scan the paper in front of you, scribble a response and go back to the phone call. You did not do the two activities (phone call and conversation with your colleague) at the same time. Instead of doing two tasks, you actually did three tasks in sequence; started the phone call, had the conversation, and then resumed the phone call. Just as in the case of the early morning rush explained above, you could have done both tasks better, and in less total time, should you have done them one after the other instead of simultaneously. The reason is that as you begin each task (driving carefully during the morning rush) you have to focus on it and get started.

As in the case of the telephone conversation when you were interrupted by your colleague, you may have missed some important points. You may be at a point of making a decision with the other party on the line when you were interrupted. You may have to figure out what the colleague in front of you wanted from you in order to be able to give her a decision. You might even have to say to the other party on the line after the colleague left the room, "Oops, sorry, someone walked in. What were you saying? Where were we just now?"

Multitasking thus involves many starts and stops. Starting on a task actually involves non-productive time. The more start-ups you have as a result of doing many tasks simultaneously, the greater is the non-productive time. If you are preparing a report, the start-up time may take much longer time before the momentum is gained. Once interrupted, you may need more time to gain momentum and this requires the same length of time for each start-up. Such a report may take about 30 minutes without any interruptions. Most of the time, the nature of our work deals with unplanned tasks, this requires more start-ups before the momentum is gained. The culprit is not your colleague who interrupts unexpectedly because most of the time, work means dealing with people. But the real culprit is the time required for start-up moments i.e. each time you start on the report after an interruption.

Multitasking Versus Chunking

What if a choice has to be made between multitasking and chunking? When is chunking better than multitasking? The chunking concept involves breaking up the day into larger chunks instead of reacting to each 'emergency'. The more chunks of time you devote to specific tasks, the fewer start-up moments you will have. Since you won't be spending as much time in start-up moments, you will have more time and you will get more done. Since you are able to focus on the single task at hand, you will do it better with lesser start-ups. Chunking also means setting a specific time to do a specific job, say reading emails. Try reading emails during the first half hour of the morning and don't read any more emails until the last half hour before lunch break. Set aside a specific time to tackle a chunk of emails. With such discipline in place, more tasks are completed as lesser start-ups are involved.

So, Stop Multitasking

Multitasking actually wastes a lot of the limited time we have daily. Multitasking involves more start-ups thus interrupting work flow and progress. Learn to practice chunking as it teaches us to be more efficient and more productive. The most practical approach is therefore to set aside chunks of time for specific tasks and reduce the time spent in start-up moments. As we increase the number and size of chunks during the day and week, we are in fact pushing away interruptions to the best of our ability. The fact is, no matter how well we chunk, there will still be interruptions. You only make yourself more focussed and more productive as you chunk. So, just chunk as you go.

W.M.A. Wan Hussin is a Professor at the School of Civil Engineering, Universiti Sains Malaysia. He conducts several courses and training programmes on stress management and delivers public lectures and talks on management issues for various organisations. He is currently a Licensed Land Surveyor, Malaysian Speaking Professional (MSP) of the Malaysian Association of Professional Speakers, a Fellow of the Institution of Surveyors Malaysia and a Certified Professional Utility Locator and can be reached at wmabwh@gmail.com.

As we increase the number and size of chunks during the day and week, we are in fact pushing away interruptions to the best of our ability.

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A GUIDE TO PERFORMANCE MANAGEMENT

Improve your performance management system and you'll soon see an increase in productivity, streamlined procedures, increased accountability and more commitment from your employees.

One of the most important aspects of great management is to build a good relationship with your employees, be as honest as you can with your staff, if they feel they can talk to you openly and trust you then it's more likely you'll be told about any issues or problems in plenty of time to do something about it. Staff will feel comfortable about providing information and respect your decisions.

Staff morale and motivation is paramount, if you see someone working extra hard or achieving consistently good results then let them know you have noticed and congratulate them on their success. A pat on the back can work wonders to employees' sense of worth and motivation.

One of the most important aspects of great management is to build a good relationship with your employees...

You need to have an effective performance management system in place to really make it successful. It doesn't have to be anything too complicated but it is a process that will only work if it is organised and regularly carried out. Keep it nice and simple and your staff will appreciate the chance to be honest about the way they feel at work, and take any changes or moves much more readily. Overload them with complicated forms and multiple paperwork and you will only get grumbles. It can be effective whist still being friendly and informal.

Performance management is all about building up trusting relationships and motivating your staff. Focus on their strengths and positive aspects and don't spend too much time pointing out weaker issues, this will only lead to employees resenting or dreading these discussions and becoming disheartened and demotivated. Also try and keep any disciplinary issues separate.

Remember that this isn't only about what employees can give you, you also have to ensure they are happy in their current role, identify any issues that may be troubling them and consider any further training or qualifications that will benefit and raise their self esteem. This will strengthen the working relationship and ensure your staff feels loyal to the company.

Performance management reviews help employees have a better understanding of what is expected from them in terms of work load and performance. There are a lot of issues at work that are caused by misunderstanding or lack of communication, an effective performance management program can minimise these misunderstandings and enable things to run more smoothly.

They provide the perfect opportunity for your employees to bring up any problems or questions they have and haven't had the confidence to raise earlier. It can also be a time when employees ask about further training or qualifications they might be interested in, or other aspects they may feel could improve their performance.

Once the review is complete then do an evaluation of the review itself. Every company is different in the way it operates so structure your review to suit your company culture and style. Could the review have gone more smoothly? Can you identify anything that could have been done differently? There is always room for improvement and a positive performance will benefit both you and your employees.

A performance review is not only about the past year, it should also plan for the next and an effective review will make it clear to your employee how they fit into the team

Staff morale and motivation is paramount, if you see someone working extra hard or achieving consistently good results then let them know you have noticed and congratulate them...

and contribute to the company. Recognising achievements and giving them a pat on the back when it's due will encourage a good working relationship and ensure your staff are motivated and happy.

Generally, there is no standard package with an RPO service due to every company having different needs and requirements. Find out as much as you can about recruitment services online where there's lots of information and tips on how to find one to suit you. Every solution is modified to the individual situation, aims and needs of the clients. If you are looking for effective methods to make your organisation run more smoothly than ever then find out more about how recruitment services operate and how they can help you.

Kenexa® provides performance management and compensation management tools for businesses and organisations. Please look up http://www.kenexa.com/performance-management for more information.

Performance management is all about building up trusting relationships and motivating your staff.

LIST OF NEW MEMBERS September-October 2010

QUANTITY SURVEYING

FELLOW

Sr Selva Rajah Letchumanan
Asia Petroleum Hub (APH)

MEMBER

Sr Goh Meng Khiang
Hanafi Konsaltan, Negara Brunei Darussalam

Sr Khor Khim Leng
Robinson Low Francis LLP, London, UK

Sr Lau Chin Guan
Kuantibina S/B, Penang

Sr Tey Suk Luan
Econos Consultants S/B, KL

Sr Tey Suk Reei
Jurukur Bahan FPS S/B, KL

GRADUATE

Adlina bt Mohamad Ishak
Sistem Hospital Awasan Taraf S/B (SIHAT), KL

Ahmad Raushan b Suhaimi
AT Associates, KL

Ajnizar FAridz b Alias
Pembinaan BLT S/B, Putrajaya

Aliff Asyaraf b Ibrahim
Perunding Kos Putra S/B, KL

Amir Maarof b Abd Rahman
Perunding Kos Putra S/B, KL

Anita bt Ibrahim
Bhgn Kerja Keselamatan, CKUB, JKR HQ

Hanim Sufinaz bt Md Sidek
AT Associates, KL

Kum Phui Lai
Jurukur Bahan L&T, KL

Loh Woon Chuen
KPK QS (Semenanjung) S/B, KL

Mohd Idzuan b Abdul Hamid
Universiti Malaysia Kelantan, Kota Bharu

Muhamad Yusri b Yunus
Perunding Kos Putra S/B, KL

Nani Izzati bt Shamsuddin
Perunding Kos Putra S/B, KL

Nooradila bt Abd Wahab
Perunding Kos Putra S/B, KL

Nur Ezazura bt Abdul Razak
Perunding Kos Putra S/B, KL

Nur Nadiah bt Mat
Perunding AMZ, Penang

Nurul Harnani bt Abd Rahim
Perunding Kos Putra S/B, KL

Pang Yi Cong
Northcroft Lim Perunding S/B, Sel.

Rosmihairry b Rosman
Perunding Kos Putra S/B, KL

Sarajul Fikri b Mohamed
Universiti Teknologi Malaysia, JB

Siti Nor Diyana bt Mohd
Bhgn. Kerja Jalan & Jambatan, CKUB, JKR HQ

Siti Zubaidah bt Bahron
Perunding Kos Putra S/B, KL

Tang Joo Tuck
MQS Consultant, Sel.

Tarmizi b Hamad
Perunding Kos Putra S/B, KL

Ummu Fadhilah bt Nor Azmi
Perunding NFL S/B, KL

Vinitha Chia Nien
Kump. Sepakat Konsult, KL

Wan Faiz Fikry b Mohd Rusli
Perunding Kos Putra S/B, KL

Zain Azrai b Shamsuddin
Perunding Kos Putra S/B, KL

PROBATIONER

Chu Ming Yii
CKP Nizamuddin Jurukur Bahan Sdn,
Kota Kinabalu

Yao Way Chen
HKH Juruukur Bahan, Penang

STUDENT

Chia Yin Xian

Chung Ee Ling

Lee Zi Yuan

Lim Woan Teng

PROPERTY CONSULTANCY AND VALUATION SURVEYING

FELLOW

Sr Caroline Peter Sebangkit
VPC Alliance (Sabah) S/B

MEMBER

Sr Angelica Chee Keen Yun
JS Valuers (Sabah) S/B

Sr Ang Shiao Yee
CBRE, KL

Sr Chia Chin Phang
CBRE, KL

Sr Chin Swee Lee
Knight Frank (Ooi & Zaharin S/B), KL

Sr Chong Fui Mei
CH Williams Talhar & Wong (Sabah) S/B

Sr Elsie Gotisin Sudang
JS Valuers (Sabah) S/B

Sr Felix Kimsang
JS Valuers (Sabah) S/B

Sr Fong Yin Ket
Fung & Co. Property Consultants, Kota Kinabalu

Sr Hasmida bt Hassan
UiTM Shah Alam

Sr Gandakaran a/l V. Ponniah
Clement & Co., KL

Sr Geoffrey Ong Khang Nian
Metropolis Property Consultants S/B, Sel.

Sr Jamiri b Hj Sainan
Majlis Perbandaran Bentong, Pahang

Sr Lee Hooi San
CBRE, KL

Sr Lee Jun Liang
CH Williams Talhar & Wong S/B, KL

Sr Lee Wen Keat
CH Williams Talhar & Wong S/B, KL

Sr Lim Tze Her
Jone Lang Wootton, KL

Sr Lizawati bt Abdullah
UiTM Perak

Sr Madrah Duraisingam
JS Valuers (Sabah) S/B

Sr Maszuwita bt Abdul Wahab
UiTM Shah Alam

Sr Morni bt Kaspin
UiTM Shah Alam

Sr Noraini bt Johari
UiTM Shah Alam

Sr Noor Halil b Ismail
UiTM Shah Alam

Sr Phan Kah Vooi
CH Williams Talhar & Wong S/B, KL

Sr Raf'ee b Jaafar
JPPH Putrajaya

Sr Razzali b Mohd Ukong@Ilan
JS Valuers (Sabah) S/B

Sr Tan Boon Yeow
Rahim & Co., KL

LIST OF NEW MEMBERS September-October 2010

Sr Teh Hong Chua
CH William Talhar & Wong S/B, KL

Sr Tong Yun Chin
JS Valuers (Sabah) S/B

Sr Victor Hua
DTZ Nawawi Tie Leung Property Consultants S/B, KL

Sr Wong Wen Chet
CH William Talhar & Wong S/B, KL

Sr Yen Sie Fui
VPC Alliance (Sabah) S/B

GRADUATE
David Ng Wei Ming
Rahim & Co (Johor)

Haw Yin Han
Henry Butcher Malaysia (Muar) S/B, Johor

Kamini Panaly
Jone Lang Wootton, KL

Mitchell Lo Vui Liat
JS Valuers (Sabah) S/B

Mohd Sukri b Kamrzaman
JS Valuers (Sabah) S/B

Siti Norbaiti bt Sulaiman
Jab. Tanah dan Survei Sarawak

Tay Bee Chen
DTZ Nawawi Tie Leung Property Consultants S/B, KL

Vivien Chai Wan Joo
JS Valuers (Sabah) S/B

PROBATIONER
Aaren Kuan Wui
Fuji Film (M) S/B, Sel.

Chan Kang Chung
Hartamas Real Estate S/B, Sel.

Cheong Mee Yoke
Allied Group Property Services S/B, Penang

Chew Choon Kye
Rahim & Co. (Sel.) S/B

Henry Tan Chong Hean
Retired

Lee Yoke Sum
Edasu Hiromori S/B, Sel.

Liau Huoi Chin
Mohd Redhwan b Sultan Mydin
JB Jurunilai Bersekutu S/B, KL

Yeoh Kiong Nan
Henry Butcher Real Estate (Damansara) S/B, Sel.

GEOMATIC AND LAND SURVEYING

MEMBER
Sr Ashraf b Abdullah
UiTM Arau, Perlis

Sr Moha Azwan b Abbas
UiTM Arau, Perlis

Sr Mohd Ronizam b Romly
Geoinfo Services S/B, KL

Sr Nazli Najah b Sulong
Juruukur Integrasi Pahang

Sr Yip Chong Wai
Jurukur Century, KL

GRADUATE
Samsul Farhan b Samsuddin
Jurukur Perunding Serives S/B, Sel

Tan Teck Chai
Jurukur Perpaduan S/B, Sel

STUDENT
Adam Harith b Madzlan

Adam Hazeq b Mohamad Yusuf

Ahmad Bahiyuddin b Azmi

Amira Syahirah bt Amerudin

Athirah Nadiah bt Dolmat

Athirah Nurfatin bt Kayat

Atikah bt Zulkifli

Azwan b Ab Rashid

Faridzuan Nurikmal b Yahaya

Hana Eleanoor bt Mohd Noor

Hanisah bt Mohd Rosli

Ibtisam b Ab Majid

Jasmidar bt Jeffri

Jusmaeiza bt Mohd

Khairi Aswan b Mat

Khairul Hazrin b Ab Jabal

Khairul Zhafran b Khairul Anuar

Lau Jett Chen

Maisarah bt Abd Manaf

Mohamad Azizan b Othman

Mohamad Famezal b Mat Rizal

Mohamad Izwan b Ishak

Mohamad Shahiran b Mohd Roseli

Mohamad Shah Rizuan b Miskan

Mohamad Yusof b Norddin

Mohammad Azizul Hafizz b Abdullah

Mohammad Hezwan b Hamdan

Mohammad Norfaiz b Marsani

Mohammad Ridzuan b Hamidi

Mohd Alfi b Ameer

Mohd Faiz b Ahmad Murad

Mohd Hafizzudin b Ibrahim

Mohd Haniff b Hamdan

Mohd Izuddin b Ismail

Mohd Muhaimin b Mohd Rasid

Mohd Nadzif b Mohd Shokri

Mohd Rasid b Ahmad

Mohd Ridzuan b Hassan

Mohd Rusydi b Abd Rahim

Mohd Shah Izzat Amir b Saupiee

Muhamad Roslan b Ibrahim

Muhamad Shaifudin b Mat Daud

Muhammad b Haron

Muhammad Annas b Salehuddin

Muhammad Faisal b Mohd Hanafi

Muhammad Hafiz b Zulkiffly

Muhammad Izhar b Rosly

Muhammad Nazri b Shaikh Ibrahim

Muhammad Nazrul Nakhaie b Mohd Noor

Muhammad Syawalludin b Abdul Jalil

Muhammad Zul Fathilhaq b Mohd Fadil

Muhsinah bt Yacob

Nadzirah bt Ahmad

Nazlia bt Ghazali

Nik Aznie bt Rosli

Nor Fadhilah bt Shamsuri

Noraini bt Abdul Halim

Norasyikin bt Mehat

Noor Hashima bt Othaman

Noor Irna Hanis bt Abd Rahman

Noorfaizatulhazierah bt Sobri

Norfaizah bt Wirae

Nor Ameza bt Aziz

Nor Farahiah bt Ismail

Norhedayah bt Hamzah

Norshazwani bt Mohd Saidi

Nurasyikin bt Abdul Rahman

Nurhuda Asyura bt Jusoh

Nurlisa bt Salim

Nurliza bt Othaman

Nur Afiqah bt Hazali

Nur Aisyah Umairah bt Zulkepeli

Nur Aqilah bt Shafiee

Nur Athirah bt Bahrin

Nur Atiqah bt Sahak

Nur Atyqah bt Anua

Nur Rasyidah bt Jalaludin

Nur Syakirah bt Mohamed Rapidy

Nurul Akma b Mansor

Nurul Asiken bt Rifim

Nurul Farehah bt Mahzan

Nurul Farhanim bt Hassan

Nurul Faridah bt Mohamad Chuti

Nurul Hidayah bt Wahab

Saufe Iskandar b Ahmad

Shamryta bt Mahasan

Shamsul b Jalil

Sharifah Salwa bt Syed Saharudin

Siti Aisyah bt Ithnin

Siti Mariam bt Majid

Siti Nur'ain bt Abdullah

Siti Nurfitrah bt Ramdan

Siti Nur Nadia bt Mohd Omar

Siti Radhiah bt Kase

Siti Ummi Kalthom bt Derahman

Syadiqah bt Mohd Noh

Syirah bt Elias

Wan Izziatul Aima bt Wan Ahmad

BUILDING SURVEYING

GRADUATE
Ammar Hafiz b Ahmat Fathil
RE Consultant S/B, Sel

Badrul Hisham b Ismail
Sime Darby Property Bhd, Sel

Mohd Hashim b Mat Adam
Acmuda Resources S/B, Putrajaya

Muhamad Azri b Aini
RE Consultant S/B, Sel

Noorismawati bt Ishak
JUBM S/B, Sel.

STUDENT
Amirah Fatin bt Mohd Yusoff

Aniff Azhar b A Rahman

Faiz Muhaimi b Ramli

Farah Alwanie bt Mohd Asri

Hazimudin B Md Ariff

Irna Nursyafina bt Rosdi

Kartini bt Sabli

Khairul Ridhwan b Rozak

Mohamad Johari b Turijan

Mohamad Idham b Ismail

Mohd Fairuz Ashraf B Rosli

Mohd Hazwan b Ag. Rahim

Mohd Hairizam b Mohd Said

Mohd Khairul Izwan b Khairuddin

Mohd Shafiq b Abdul Rahman

Mohd Zulfahmi b Mahsim

Muhamad Abhar b Abdul Rahim

Muhamad Nur Azmi b Yusof

Muhamad Saufi Akmal b Che Rosslim

Muhammad Akram b Ismail

Muhammad Hafiz b Mohamad Yunos

Muhammad Izzat b Abdul Rahman

Nik Rosliza bt Yusof

Nirdayanti bt Mohd Lani

Noor Ashikin bt Mohamed

Noor Atikahbt Azahar

Noor Fathieha bt Bahador

Noor Fishah bt Razak

Nor Faezah bt Mansor

Nurfarhana bt Ramli

Nurhayati bt Mohd Noh

Nur Afifah bt Abu Othman

Nur Haidah bt Razali

Nurul Ashikin bt Sakiman

Raja Mohd Noor Aizad b Raja Ismail

Shahizam b Sabri

Siti Aishah bt Che Ismail

Siti Maisara bt Mohd Majid

Syae Fauziy Ahmad b Badrioko

Quantity **Surveyors**

Quantity Surveyors

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Sponsor & Exhibitor Package

A variety of sponsorship packages that should meet your brand, networking objective and marketing strategies is offered. An overview of the sponsorship packages are as shown below.

	Titanium POA	Platinum US$25,000	Gold US$17,000	Silver US$10,000	Sponsor US$7,000	Exhibitor US$2,500
A) Promotion / Marketing						
Opportunity to display company's logo on:						
- conference/exhibition related publications		✓	✓	✓	✓	✓
- conference banners / backdrops		✓	✓	✓	✓	
- conference publicity email flyer		✓	✓	✓	✓	
- email confirmation of registration to participants		✓	✓	✓	✓	
- gift to speakers		✓				
- floor plan at exhibition area		✓	✓	✓	✓	
- display boards at main lobby		✓	✓			
Pre-conference publicity:						
Email blast on Company's participation to participants		1				
Colour advertisement in conference program book		full page	full page	half page		
Corporate profile, logo and hyperlink in conference official website		200 words	150 words	100 words	100 words	
Corporate profile, logo, website and contact details in conference program book		200 words	150 words	100 words	100 words	
Exposure During Conference:						
Display of corporate banner at plenary sessions / break sessions		2	1			
Corporate item(s) in conference bag		2	1 (flyer only)			
Special mention in opening and closing sessions		✓	✓	✓		
Post-Conference Benefits:						
Use of SEASC & ISC 2011 logo for 6 months after event		✓	✓			
Email contact list of participants		✓	✓			
B) Conference Participation						
Full delegate registration for conference		5	3	2	1	
Invitation to conference dinner		5	3	2	1	
Invitation to networking lunch		3	2	1		
Exhibition space booth - standard booth of 3m x 3m or equivalent of 9 sq. m.		10	4	3	2	1
C) Content Moments						
Organisation of corporate session		✓	✓			

For further information please contact:

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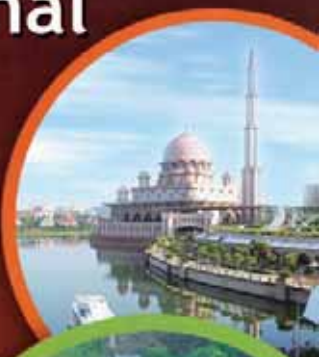
Email: secretariat@ism.org.my

Secretariat,
The Institution of Surveyors, Malaysia,
3rd Floor, Bangunan Juruukur, 64-66 Jln. 52/4, 46200 Petaling Jaya, Selangor.

11th South East Asian Survey Congress & 13th International Surveyors' Congress

in conjunction with ISM's 50th year celebration



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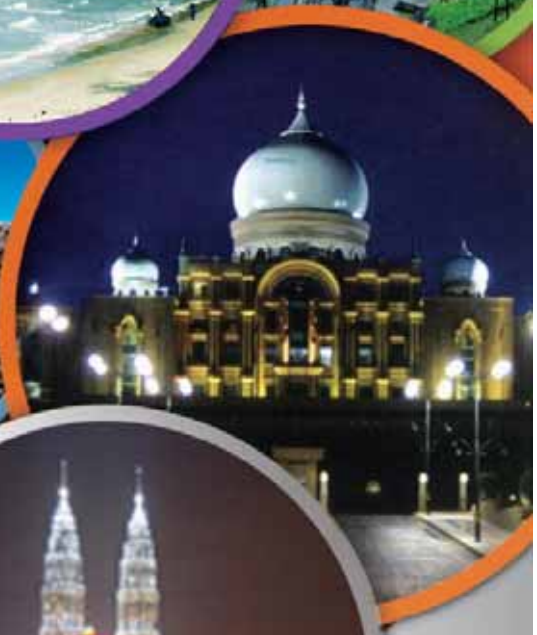
22 - 24 June 2011

SECOND ANNOUNCEMENT

CALL FOR ABSTRACTS



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