

## THE VALUE MANAGER



## The Hong Kong Institute of Value Management

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#### EDITORIAL:

This special issue is dedicated to our founding President, Mr. Tony Toy, for his commitment and outstanding contribution to the development of the Institute. You will see tributes from VM colleagues around the world to show their deep sorrow for his passing away. We also include the announcement of Tony Toy Memorial Award for your comments.

Minutes of the fourth Annual General Meeting hold in December 1999 and the newly elected office bearers were also included.

You may wish to read the article written by Davender Jain on a VM case study of electrical substation and sectioning huts upgrade project".

As the Chinese New Year of the Golden Dragon has just started, I would like to wish every one of you a healthy and prosperous New Year.

Yours sincerely,

Dr. Geoffrey Q.P. Shen



## **Tony Toy, An Appreciation**

Tony Wilson, Architectural Services Department

Whether you liked what Tony said or not, one had to appreciate his intelligence and his good intentions.

This opening statement requires an explanation. Those who worked closely with Tony over the years will understand, but those who only met him from time to time may have totally the wrong impression. These personal thoughts and observations may answer or clarify some common misconceptions.

It was with mixed feelings when I was advised in 1995 that I was to act in the Chief Architect Central Management Post of ArchSD. The immediate feeling was one of discomfort, as I did not fully understand what the group did. In taking up the challenge, attendance at a series of ongoing briefings revealed that Staff Resource data was used with Marketing and Customer Relations information in the preparation of outgoing reports. Inform data was used through complex Information Technology Systems integrated with our ISO

9001 Quality Management System, all of which this group was responsible for. Understanding these systems, how they interacted and why, was not easy. Of course, the simple way was to ask the responsible party for each to seek clarification, but they all turned out to be one person, Tony Toy!

This proved to be a testing ground on what to ask and when, and to his credit Tony was extremely patient in clarifying the systems, their intent and his vision of what they could do in future. I have learnt more about systems, business applications and all these subjects from Tony than anyone else in my career, and I have been extremely lucky that he was my mentor for a few years.

Tony as a boss, was a different matter altogether. He would expect things to be done quickly and explained that we had to get something out on time even though it was not perfect. This is entirely correct for most of our work as we can usually revise and update documents if required. Of course as an architect, this view is wrong as you can't put a building up wrong and then fix it, although sometimes we do change it a bit on the way up! It was quite normal to be urgently summoned to Tony's room with three or four colleagues to be briefed on a new task with a very short deadline for completion. On leaving his room we would get together to discuss what we understood our new task to be, only to find out that often we each had very different interpretations on the subject. Then we planned to have our draft ready on time but upon submission, often on a Monday morning, Tony would advise us that over the weekend he had also been thinking further about the subject and that there was an amended approach he wanted worked out. This was a little frustrating but what made it less so was that the final outcome was always, without fail, better than it had been before.

Sometimes we were put on the spot when it was felt we were not responding in the right way. This was uncomfortable for those who did not understand that this was just one of his enhanced learning techniques. He explained once that he couldn't wait for too long to get things moving but he wanted others to learn, contribute and be part owners not just scribes to write it up. His analogy to encourage people to keep up with the group and not be left behind was his use of the term "wagon train", similar to the early pioneering days in North America. Get left behind, you are exposed and can be lost. He also frequently used the term "white coat", for those who were not prepared to listen and did not want to get involved in tricky problems which might mess up their white coat. He

wanted people to be receptive and face up to problems in an open-minded way.

Tony was a gadget person. Presentations had to be done using the latest technology available, and he moved us onto using computer projections for several of our important meetings, thus saving much paper. He always tried out the latest technology on us before recommending that items be purchased for the Department. I remember on a visit to northern China that he spent the all his spare time on the first three days trying to get his mobile phone and lab top computer links working. Perhaps this was his way of feeling comfortable in being able to contact everyone quickly.

Sometimes Tony was incorrectly seen as being a troublemaker. This was because if something major was unclear or not thought out properly, he would spot it and bring it up for discussion. He also had such a clear understanding and vision that he was invariably always right, which naturally didn't help those who had to answer the questions. He often felt very frustrated that he was the one that had to do this and as a result he felt like the bad guy. To help, I used to remind him how important this was and that there were fewer cases than in the past as a result of his leadership. Thank goodness someone spoke up at the right time.

What was always surprising was that Tony preferred to be in the background. He appeared a little shy when talking or making presentations at major events, perhaps because he was still thinking about the topic from many different angles. He used his words sparingly and carefully, keeping what he wanted to say to the point. He was very knowledgeable but sometimes he had some difficulty in translating this into every day language that others could fully understand and appreciate.

It was clear that he really enjoyed his last few years in the office in a totally different way than before. He appeared more relaxed, really appreciated the challenges of the Science Park and the other major projects he looked after. He was less comfortable with the softer environmental issues and preferred to leave these to others. Tony was very interested in helping to improve our homepage and recognized the future of ecommerce. He took more time for leave and golf than before, which in turn contributed to his creative thinking input at work.

Tony and I used to talk quite a bit, but apart from the occasional lunch we didn't exchange as much "beer talk" another of his phrases, as we would have liked.

We appreciated the needs of our families and the shortage of time within a working week that we had to spend with them. Tony also knew after his first heart operation how much each day meant to him. I remember Tony telling me once that on all major issues he liked to have around six options thought out to choose from. Unfortunately the doctors couldn't provide Tony with so many reasonable options.

When Tony was informed that I was interested in Value Management, he was very supportive and suggested that there was a course in Australia in April for one week that would be best. This seemed fine, as at the time we were struggling through elementary Mandarin together on Saturday mornings, which was due to finish by early April. The course enrolment was sent off and the returned details advised that the first week of the two-week course was in January and that there were five assignments to complete before the second week in April! I think Tony probably had a good idea that this was the case and this illustrated his challenging sense of humor.

Value Management in Hong Kong is all down to Tony's leadership and the support he generated from a small group of followers. As the first President of the Hong Kong Institute of Value Management, he took this leadership role very seriously. He used to worry about his column in the magazine, as it had to be just right with a story and a touch of humour. Value Management is now beginning to take-off, as he saw that it would through his vision back in 1994. I recently reviewed a video of the 1994 seminar for Government that Tony had arranged and found it most interesting, informative and well before it's time. We all have to continue to do our part to keep the Value Management momentum going. One regret is that I did not have the opportunity to carry out a workshop with Tony.

In the past, when facing the unknown or a very difficult task, we came to rely on Tony having a solution. We now have to remember and imagine what he might have said through his clear and consistent thinking with flashes of creativity and innovation.

I give my deepest thanks to Tony for all the knowledge, support and encouragement given to my colleagues and myself. All his deeds and efforts live on to help others in their everyday life. I hope these simple words go a little way to understanding the very unique and special Tony that we all knew and will always remember, each in our own way.

### **Tributes to Mr. Tony Toy from HKIVM Office Bearers**

**Geoffrey Shen:** "I was deeply shocked to know Tony's pass away. It was early 1995 when I first met Tony and a few other VM enthusiasts to discuss the idea of establishing Hong Kong Institute of Value Management. Because of his vision and leadership, he was elected as the founding president of the Institute. His strong commitment to the Institute has never changed ever since and his contribution has been truly remarkable, which encourages us to continue the good course he has initiated. Tony, you will live in our hearts forever."

Ric Grosvenor: "Impressively-diligent, intelligent, humourous, compassionate - he's alive in my memory."

**Patrick Fong:** "I am very sorry to hear that Tony has passed away. I met Tony back in 1995 when we first came together to discuss about forming a VM society in Hong Kong. I was very much impressed with him and his demeanor. His commitment and dedication to VM and the VM activities in Hong Kong were unsurpassed. He was my teacher as I got so much to learn from him. He was truly an energetic supporter of VM and he has left behind a tremendous legacy which we must work hard to enrich further. My thought and prayer go to Tony and his family."





# The 4th Annual General Meeting The Hong Kong Institute of Value Management 16 December 1999, The Hong Kong Club

By Dr. Geoffrey Q.P. Shen, Secretary of HKIVM

The 4<sup>th</sup> AGM of the HKIVM was held on 16 December 1999 at the Hong Kong Club, attended by 17 members and distinguished guests of the Institute. The minutes of the AGM is as follows for members' information:

Item	Description
AGM99/M1	Call to Order Acting President Mr. Malcolm Pearson called the meeting to order at 12:00pm
AGM99/M2	Approval of the last minutes  The minutes of the last AGM, which is based on Mr. Tony Toy's president report, is approved by the AGM. (Since the Secretary did not attend the last AGM in Dec 1998, no formal minutes was taken.)

In his report, the acting president reviewed the achievements in the past 12 months since the last AGM, areas for further improvement and initiatives.

The acting president emphasized, in particular, the following achievements:

- VM Conference in May 1999
- HKIVM's regular publications
- Regular lunch programmes

President's Report & Approval

The acting president gave special thanks to the following persons for their contributions toward the success of these events and others:

Tony Wilson, Lindsay Pickles, Geoffrey Shen, Patrick Fong, Ric Grovesnor, and Joys Ma for her administrative support to the Institute.

There being no objections raised regarding to the report, the report was approved by attending members of the AGM.

#### AGM99/M4 Moment of silence to pay tribute to the late president

Following Dr. Geoffrey Shen's suggestion, members made a moment of silence to pay tribute to the late president Mr. Tony Toy.

#### AGM99/M5 Treasurer's Report & Approval

In his report, our Treasurer Mr. Ric Grosvenor reported the financial status of our Institute, which is in a very healthy situation, with modest surplus.

There being no objections raised regarding to the report, the report was approved by attending members of the AGM.

#### AGM99/M6 Secretary's Report

AGM99/M3

Our Secretary, Dr. Geoffrey Shen reported the overall development of the Institute and the Institute's publications in particular. The Institute has achieved the objectives in producing regular publications. Since the last AGM in December 1998, four issues of The Value Manager have been produced and distributed to members, interested parties, and around 300 civil servants at various government departments.

The Institute has maintained formal links with several leading VM societies to exchange publications and other information, including SAVE International, IVM (UK), IVMA (Australia), SJVE, and China Association for Value Engineering.

Although the local economy was sluggish, it is a successful year for VM applications. On top of the increased VM studies, members of the Institute have been invited to give presentations on VM to professional bodies such as APM (HK) and large organisations.

The secretary took the opportunity to urge members to write articles to the Value Manager to share views and experiences with others. As the only written communication among our members, the publication should be by the members, of the members, and for the members.

There being no objections raised regarding to the report, the report was approved by attending members of the AGM.

#### AGM99/M7 Membership Secretary's Report

The membership secretary Patrick Fong informed members that the current paid membership total is 63 and there are 15 VMF approved by the HKIVM. There are several applications waiting to be approved by the executive committee.

The membership secretary also proposes to keep the membership unchanged, which is approved by the AGM.

There being no objections raised regarding to the report, the report was approved by attending members of the AGM.

#### AGM99/M8 Election of Office Bearers

Mr. Evenlyn Kwok, the Returning Officer appointed by the Executive Committee sent in the result of the election of the Councillors for the coming year.

According to Mr. Kwok's Report of Election of Councillors for 1998, seven valid nominations for the positions vacant were received by the closing date of 4<sup>th</sup> November 1999. They are: A.R. Wilson, Tony Toy, Lindsay Pickles, Malcolm Pearson, Ric Grosvenor, Frederik Pretorius, Geoffrey Shen. Because of Tony Toy's death, the remaining six valid nominees are elected as councillors.

Proposed by Ric and seconded by Colin, the AGM approved the proposal to increase the number of councillors to Eight. Two more councillors Colin Jesse and Patrick Fong were elected during the meeting.

There being no objections raised on the election, the election result was approved by attending members of the AGM.

#### AGM99/M9 Any Other Business

One member raised the question on how the architectural education perceive VM. F. Pretorius of HKU will find out from his university.

#### AGM99/M10 **Meeting Close**

There has been no other business, the meeting adjourned at 1:15pm and the Christmas Lunch started to serve.

#### NEW MEMBERS OF THE EXECUTIVE COMMITTEE

#### Mr. Malcolm Pearson, President

Managing Director **Crow Maunsell Management Consultants** 606 World Commerce Centre Harbour City, 11 Canton Road Kowloon, Hong Kong Tel: 2317 5911, Fax: 2317 5901

Email: malcolm@crow-maunsell.com

#### Mr. Tony Wilson, Vice President

Chief Architect Architectural Services Department 35/F, Queensway Government Offices 66 Queensway, Hong Kong Tel: 2867 3798, Fax: 2877 0594 Email: wilsoar@archsd.gov.hk

#### Mr. Ric Grosvenor, Treasurer

**Executive Director** Leighton Contractors (Asia) Limited 49/F, Hopewell Centre 183 Queen's Road East, Hong Kong Tel: 2823 1134, Fax: 2528 9030 Email: ric.grosvenor@leightonasia.com

#### Mr. Patrick Fong, Membership Secretary

Assistant Professor Department of Building & Real Estate Hong Kong Polytechnic University Hung Hom, Kowloon, Hong Kong Tel: 2766 5801, Fax: 2764 5131 Email: bspafong@polyu.edu.hk

#### Dr Geoffrey Shen, Secretary & Editor

Associate Professor Department of Building & Real Estate Hong Kong Polytechnic University Hung Hom, Kowloon, Hong Kong

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#### Mr. Colin Jesse, Programme Director

Managing Director Lappord Company Ltd Room 801, 8/F, Inter-continental plaza 94 Granville Road. T.S.T east. Tel: 2722 0986, Fax: 2368 2312 Email: coljesse@navigator.com

#### Ms Lindsay Pickles, Conference Director

Director Pontex Limited DB Marina Club, Discoverty Bay Hong Kong Tel: 2987 2280, Fax: 2591 1730

Email: apickles@asiaonline.net

#### Mr. Frederik Pretorius, Technical Director

Assistant Professor Department of Real Estate and Construction The University of Hong Kong Pokfulam Rd Hong Kong Tel: 2859 2128, Fax: 2559 9457 Email: fredpre@hkucc.hku.hk

Soon after the AGM on 16 December 1999, an executive committee meeting was organized on 29 December 1999. During the meeting the following office bearers have been finalized:



## The office bearers of The Hong Kong Institute of Value Management wish you

## A Happy Lunar New Year of the Golden Dragon!

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## **Tony Toy Memorial Award**

The Tony Toy Memorial Award is established to acknowledge and remember the outstanding services and commitment of our founding president Mr. Tony Toy to this Institution. This shall be an annual award to students of any disciplines based on the quality of the dissertations relating to value management.

- 1. The award should be based on the quality of the dissertations submitted to the Award Assessment Committee.
- 2. Two separate sets of awards should be arranged for students from Hong Kong and from China Mainland.
- 3. A total of six prizes will be given each year for students in Hong Kong and Mainland China.

Hong Kong	China Mainland
1 <sup>st</sup> prize: 1 person @ HK\$5,000	1 <sup>st</sup> prize: 1 person @ HK\$5,000
2 <sup>nd</sup> prize: 1 person @ HK\$2,000	2 <sup>nd</sup> prize: 1 person @ HK\$2,000
3 <sup>rd</sup> prize: 1 person @ HK\$1,000	3 <sup>rd</sup> prize: 1 person @ HK\$1,000
•	•
Total: HK\$8,000	Total: HK\$8,000

- 3.1 In Hong Kong, the award will be co-ordinated by the HKIVM.
- 3.2 In Mainland China, the award will be co-ordinated through the Institute of Value Engineering of China Association for Higher Education, and approved by the HKIVM.
- 4. The 1<sup>st</sup> prize winner in both locations will be invited and sponsored (up to HK\$4,000 to cover travelling and registration expenses) to present their paper at the International VM Conference organised by HKIVM.
- 5. The submission of the paper to the HKIVM international conference and presentations must be in English and with full acknowledgement.
- 6. HKIVM reserve the right to review each year at the AGM and to agree on the level of the award for the following year.

All comments are welcome, please forward them to the Technical Director Mr. Frederik Pretorius.

## A VM CASE STUDY OF HORNSBY – GOSFORD (NSW) Electrical Substation and Sectioning Huts Upgrade Project

Davender Jain, Investment Appraisal Manager, Investment Appraisal Unit

#### 1. INFORMATION PHASE

#### 1.1 Project Background

In the early 1950's electrification of the Northern Rail corridor was undertaken. The project was progressively commissioned during the period between 1955 and 1957.

The substations (4) and sectioning huts (6) were constructed utilising identical equipment and the construction strategies suited the operational requirements of the era. Existing transmission lines which were built in the late 1930's were relocated where required to suit the "new" substations. At that time, they traversed areas of relatively low population.

Today, much of the original equipment is life expired. Some of the Direct Current Circuit Breakers (DCCB) have exceeded the manufacturer's design life of 2,000 operations by a factor of four (4). Spare parts can only be procured through special, high cost, limited production runs, or by "cannibalising" other equipment.

Because of the population growth that has taken place over the years, the route of the transmission line now traverses heavily populated area. The area is also prone to severe bush fires at approximately 10 year intervals.

The operational and protection methods of the high voltage transmission lines need immediate review in order to minimise the risk exposure, especially with reference to:

- 1) line fault starting a bush fire, and/or electrocuting members of the public, and
- 2) reclosing to sectionalise a fault on the line in heavily populated areas.

A Value Management Study was commissioned to seek a solution to these multifaceted problems.

#### 1.2 Value Study Methodology

Value management is a structured, systematic and analytical process the seeks to achieve one or more project objectives at the lowest total cost consistent with required levels of quality, timeliness and performance. Preparation work in advance of, and follow up actions after the workshop form part of the process and have a major bearing on the results achieved.

The Blue Mountains Power Supply Value Management Study report was used as one of the key source documents for this study. The differences in the two projects were identified and the "lessons learnt" from the "Blue Mountains" project were applied in this study. It was realised that many of the options considered in the Blue Mountains study were not relevant. Also in this case similar upgrading is required for all sectioning huts and substations (with some exceptions) as against the Blue Mountains where different equipment configurations were recommended for different locations.

A key element of the value management study (VMS) was a participatory workshop held on Thursday 13 March '97. The workshop was attended by key stakeholders with direct involvement and interest in the proposed work.

#### 1.3 Value Study Objectives

Definitive aims/objectives are required to maintain focus and direction during the workshop.

The group discussed the reasons for conducting the VMS and what the group wished to achieve at the conclusion of the workshops.

It was agreed that the objectives of the Value Management study were:

- \* To identify all equipment to be replaced.
- \* To identify approximate time scales for replacement.
- \* To identify options and related capital works, maintenance and life cycle costs.
- \* To identify relevant advantages and disadvantages.

\* To develop an action plan for actions to be carried out to complete the Economic and Financial Evaluation Study.

#### 1.4 Project Objectives

Following discussion it was agreed that the items listed below encapsulate the rationale behind the project and express the outcomes expected.

- \* To complete the works by the time line of 2003
- \* To ensure an adequate electricity supply to the traction system where adequate equates to reliable availability of power with sufficient capacity to meet existing traction needs.
- \* To minimise the risk of fallen conductors causing bush fires or electrocution to members of the public.
- \* To minimise the cost of ownership
- \* To ensure that all work is carried out in an environmentally acceptable manner

CityRail's on time running standards dictate that trains run within 3 minutes of the scheduled time 95% of the time. This translates to a 99.998% requirement for reliability from the electrical infrastructure of 58,824 hours mean time between failures.

#### 1.5 Project Assumptions

Inherent in every project are assumptions which must be made in the course of developing proposals. Some of the assumptions made by stakeholders are correct, whereas, others may require ratification or amendment. This session of the workshop sought to draw out the following assumptions.

- \* Pilot wire protection will be installed to protect the 66kV transmission line
- \* More modern equipment will reduce failures
- \* Failure rate of existing equipment will increase in frequency and severity
- \* Failure to bring the system to modern standards will increase the risk of causing bush fires and electrocuting members of the public
- \* RAC will retain ownership of transmission lines

#### 1.6 Related Projects

Following projects were identified as related to this project:

- \* Hornsby 3rd rectifier currently being implemented.
- Hornsby Bulk Supply point 1st phase being implemented.

#### 2. ANALYSIS PHASE

#### 2.1 Function Analysis

The analysis of function is at the core of value management and is what separates "needs" from "wants". It involves the identification of what functions must be performed by, or within a system to meet the project objectives.

The analysis of functions related to the various components of the Northern Electrical System resulted in the following:

- \* supply traction power.
- \* protect the line by sectionalising the faulty portion of the line.

#### 2.2 Issues and Concerns

The following were listed as the issues and concerns:

- \* safety in relation to protection of transmission lines, bushfire generation,
  - electrocution.
- \* present infrastructure has exceeded design life expectancy.
- uncertainty of failure.
- \* funding long term commitment required.
- \* timing of project elements.
- \* contractual arrangements (will RSA manage the project over the project life).
- \* minimise capital and life cycle costs.

#### 2.3 Project Risks

The group identified the following major risks in upgrading and maintenance of the electrical system.

#### **Bushfires**

\* bushfire caused by fallen conductors.

#### **Damage to Equipment**

- \* lightening strike.
- \* aged equipment.
- \* surges caused by supply interruptions.

#### **Loss of Supply to Traction System**

- \* stop trains.
- \* lose customers.

#### Community

- \* \$7.10 per hour delay cost per customer.
- \* political/media exposure.

#### **Protection Risk**

- \* fault on one part of system impacts in whole system.
- \* protection scheme does not meet current operating practice.
- \* current protection system requires too many reclosing to locate a fault level of risk is unacceptable.

From the analysis which had taken place to this point it was evident the following items will be crucial components in the strategy developed:

- 1. reduction of the operational sections to minimise disruption in the event of a fault or power supply interruption.
- 2. identification of the precise location and nature of fault quickly.
- 3. rectification of faults quickly.

#### Spares

- \* minimal number of spares available.
- \* equipment has ceased to be manufactured.
- \* general lack of availability of system spares.
- \* components are now manufactured as required to replace equipment cost and lead time.
- 4 to 5 CB failures per year.
- \* bulky equipment difficult to service.
- \* air blast air break switches spares not available (could be eliminated with pilot
- wire protection increasing failure rate (one per week).
- \* current configuration means that a loss of 11kV AC supply results in loss of traction power.

#### 3. CREATIVE PHASE

Following the Analysis Phase was the Creative and Judgement Phase. These phases provided the platform for the generation of ideas/options for improving project value.

The ideas generated resulted from asking the following question with respect to the areas under investigation. Can we?

- \* Simplify anything?
- \* Eliminate anything?
- \* Combine anything?
- \* Re-Locate anything?
- \* Change anything?
- \* Add anything?

The generation of ideas involved the participants being as wide ranging as possible in their thought processes, to ensure a full coverage of critical aspects of the project and to maximise the range of ideas.

An analysis of the proceedings thus far suggested the following headings under which to look at alternative ways of performing functions:

- A reduce size of electrical sections isolated during a fault.
- B detect and advise location of fault.
- D improve reliability of substation and sectioning hut equipment.
- E improving reliability of supply to trains.
- F reduce SRA risk exposure.
- G improve maintainability.

The list of ideas generated in the Blue Mountains project was reviewed, new ideas generated and non viable ideas deleted. A revised list is as below:

	CAN We?	IDEA
		RATING
1	Don't use delta I relays - Mitsubishi functioning OK	2
	Rail earthing and feeder link pairs will allow many possession requiring isolation to be	
2	affected without requiring mains staff to switch and earth (motorised)	2
3	Use Illawarra arrangement for AC switchgear	2
4	Reduced maintenance on equipment with new option Aux trans off rectifiers (new standard	
	agreement)	
5	Install DC bus bar fault detection to overcome no backup problem (DC frame leakage)	2
6	Install pilot wire protection	2
7	Prefabricated section hut and substation enclosures	2
8	Precast concrete sectioning hut and substation foundations of generic type	2
9	Use portable building/prefabricated Huts	2
10	Can Sectioning huts and substations be like mobile generators	2
11	Rebuild existing DCCB's	2
	Would existing outdoor area need replacing - can this be done easily and at what cost with	
12	need to maintain supply. Maybe if sufficient area available start from scratch ie complete	2
	new installation	
13	Are current substations at the correct load centres in relation to traction loads and section	2
	huts ie can we rebuild existing site?	
14	A further stage of refinement is commercially available. Fault recording microprocessor	
	relays can further pinpoint.	

#### 4. JUDGEMENT PHASE

Each idea/question was assessed and rated using the following scale:

\* Must do 1
\* Investigate Now 2
\* Investigate Long Term 3
\* Not Used 4

## 5. OPTIONS CONSIDERED AND THEIR EVALUATIONS

The study group addressed the various components of the power supply system to identify the most efficient and cost-effective manner of approaching the required upgrade.

#### **5.1 Sectioning Huts**

It was established that there are 6 sectioning huts affected by the proposal to upgrade. The following options were considered:

#### **5.1.1** Option

- 1 Base Case do nothing.
- 2 Repair existing hut + new equipment + brick cubicles between DCCB's
- 3 Repair existing hut + new equipment + sheeting between DCCB's
- 4 New Sectioning Huts + all new equipment

#### 5.1.2 Advantages & Disadvantages

The advantages/disadvantages of the various options were considered to be:

	Advantages	Applicable To Options
A	Life expired equipment replaced with new gear, good for 40 - 50 years	2, 3, 8 & 4
В	Building condition satisfactory	2, 3, & 4

С	Maximum protection between DCCB's	2 & 4
D	Simplest logistically	4
Е	Reduced switching time for future possessions	2, 3, & 4
F	Temporary Sectioning Hut not needed	3 & 4
	Disadvantages	
A	High Cost	4
В	Unavailiability of Sectioning Huts for weekends	3
С	Need Temporary Sectioning Huts	2
D	Least reliable fire proof DCCB's	3

#### 5.1.3 Recommendation

Options were preferred in the following order:

1 Option 4 (most preferred)

2 Option 2

3 Option 3 (least preferred)

It was agreed the preferred option would be finally selected on the basis of the Economic/Financial Evaluation, based on benefits as well as maintenance, capital and possession cost (\$180,000 for a week end possession). It was agreed that if cost difference is less than \$10,000 between any two options, the more

- 1. Option 1 (most preferred)
- 2. Option 2
- 3. Option 5
- 4. Option 6
- 5. Option 3
- 6. Option 4 (least preferred)

It was decided that is the cost of two options is within 10% of each other, then the more preferred option is to be chosen. The to do nothing option was ruled out.

#### 5.2.4 Staging of Work

It was decided that the installation of new equipment would be staged as follows:

#### Over the next 2 years

\* Replace the 66kV switchgear in the substations (Cowan, Hawkesbury River, Woy Woy and Gosford). Install pilot wire protection for the 66kV transmission lines and install link switch pairs in the substations and sectioning huts to reduce switching time.

#### **June 1998 to June 2000**

\* Replace DC Switchgear (for Substation and Sectioning Huts).

#### **July 2000 to June 2002**

\* Replace Transformers and Rectifiers.

#### 5.2.5 Equipment Life/Lead time for Procurement

For the purposes of Economic/Financial Evaluation it was agreed that the following could be taken as equipment life and lead time for procurement.

Equipment	Years left before must be replaced	Lead Time for Procurement months
Rectifier Transformers	10 years	9 months
Rectifier	30 years *	6 months
DCCB's	5 years	18 months
11kV CB's	30 years	12 months
66k CB'S	5 years	12 months
Airblast Air Break Switches	0 years	Will not be replaced - Outdated
Batteries	2 years	0 months

Hawksbury River No 2. Rectifier already experiencing failure.

#### 6. ACTION PLAN

The tasks included in the action plan resulted from items raised in the analysis phase and from discussions

within the study group. These are basically those required to prepare an Economic/Financial Evaluation report and are listed below.

#### **Action Plan**

NO	Action/Task	Responsible	Completion
	Sectioning Huts.		
1	Options to be costed and information supplied to	Santanu/Chris	27/3
	Davender Jain		
	Statistics on failure of 11kV live and other	Col Ussher	27/3
2	equipment.		
3	Cost of Staging.	Col Ussher	27/3
4	Economic Evaluation Report	Davender Jain	18/4
	Third Rectifier and Horns by Power Supply VMS		20/3
5	& EE reports to be sent to Davender Jain.	Chris Nesbitt	
	Report containing information on revenue loss by	Chris Nesbitt	20/3
6	Train delays - to be sent to Davender Jain		

### TRIBUTES TO MR. TONY TOY

#### The Value Times, Newsletter of Institute of Value Management Australia

Members of the Institute will have been deeply saddened following news of Tony Toy's recent sudden death. The following article by Roy Barton circulated around the world through the VEAMAC network.

I am deeply saddened after hearing the news that Tony Toy, President of the Hong Kong Institute of Value Management passed away last Saturday.

Tony was both a friend and colleague. I first met Tony when he came over to Australia to take our course in VM in 1994. Despite a very heavy workload at the Architectural Services Department, he applied himself wonderfully well to his studies in VM, achieving High Distinction grades, thus setting the standard for those who would follow him.

I remember well, one of the funniest nights of my life when Tony was the instigator of a plot to catch out all the other students in the course by offering a fictitious "test" the following morning. About six of us worked on the plan which was to create a number of absurd questions which we knew no one would be able to answer, yet giving the appearance of credibility. I would have the task of reading Out the questions whilst each of the other five would have the answers.

I can still see the bemused faces of the students as I read out the questions, one by one. Then, after all the questions had been asked, we went through them asking for answers to be called out. Each of the five involved in the plot had agreed beforehand which answer they would call out. We finally came to Tony's question which was to sketch (from memory) a rear elevation of the temperature control device found on page 16 of Miles' textbook "Techniques of Value Analysis and Value Engineering" . I can see now, Tony proudly swaggering out to the front and making the sketch on the white board to the astonishment of the other students. At this point, we could keep the secret no longer and the class broke into howls of laughter!

Tony was an exceptionally gifted person with a marvellous sense of humour. He was able to inspire others by example. He has made an outstanding contribution to the development of Value Management in Hong Kong. We had long talks about family and other matters and I know how much he loved his family and how they will miss him. I extend my deepest sympathy to his family in Hong Kong. Tony will be sadly missed by all of us.

### Letter from Institute of Value Management Australia Inc.

10 December 1999

Associate Professor Dr Geoffrey Shen Secretary, Hong Kong Institute of Value Management c/o Department of Building and Real Estate Hong Kong Polytechnic University Hung Horn, Kowloon HONG KONG

Dear Professor Shen,

#### The Late Tony Toy

On the Institute's behalf, may I extend to you and your fellow members our condolences and sympathy with the severe loss that you must all be feeling so deeply.

A number of members of our Institute had the privilege of knowing Tony personally and, I am advised, they have made appropriate personal responses to express their sorrow and sympathy to those Tony has left behind.

Because of this closeness of association, the Institute was able to include in its November issue of Value Times some tributes about Tony from some of those who knew him well. I have enclosed a copy of that issue for you and would be grateful if you circulated it amongst your colleagues.

At the time of Tony's death, we were in the process of preparing new membership certificates for all the Institute's members. Rather than destroying Tony's, I am forwarding it to you with this letter. When you consider the time is right, you may like to pass it onto Tony's widow together with the second enclosed copy of Value Times. Because you doubtless knew Tony and his family, I felt you would be better placed to judge when the time is right, because I did not have any personal contact with them.

Yours sincerely,

(Signature)

John Fullagar Hon Secretary and Hon Treasurer

#### Letter from Association Française pour l'Analyse de la Valeur

15 November 1999

Hong Kong Institute of Value Management 49<sup>th</sup> Floor, Hopewell 'Centre 183 Queen's Road East HONG KONG

Dear Friends,

It is with great sadness that we have heard of the passing of Tony Toy, President of the Hong Kong Institute of Value Management.

The French colleagues, members of AFAV, want to extend their very supporting thoughts to Tony's family. They join their sympathy to that of all the V Mpeople in Hong Kong in that difficult mement, having in mind the true commitment of President Tony Toy for the development of VM not only in Hong Kong, but also at the very wordwie level.

I performally want to add that I appreciated very much to meet Tony during the HKIVM Conference last May and to explore with him some possibilities for future cooperation between our two sistem associations.

AFAV will remember Tony Toy as a key figure of the broad VM family.

(Signature)

Jean MICHEL
President of AFAV

## **HKIVM NEWS**



- ♣ 13 October 1999, 12:00pm-2:00pm, HKIVM lunch meeting at Fraser Room, Hong Kong Club. Mr. Terri Mottershead, Associate Professor and Associate Dean of School of Law, City University, will present "Placing a value on participation consensus building or a sustainable Hong Kong".
- ♣ 25 January 2000, at 12:00pm, HKIVM organized a "Tony Toy Memorial Lunch" meeting at Hong Kong Room of the Hong Kong Club, attended by 20 members and distinguished guests. The "Tony Toy Memorial Award" was announced at the meeting. It was agreed that such meeting should be organized annually.

## FORTHCOMING EVENTS



- 1-2 May 2000, CSVA Annual Conference "International Summit Creating Value" will be held by Canadian Society of Value Analysis in Montreal, Canada. It will be followed by 3 days training workshops from 3-5 May 2000
- ♦ 18<sup>th</sup> June 2000, ASEE Value Engineering Workshop for university and college faculty will be held by the Miles Value Foundation in conjunction with the year 2000 ASEE Conference in St. Louis, Missouri Convention Center. All faculties interested in offering a course in Value Engineering Theory at their school are welcome to attend. For more information, please contact workshop organizer Dr. Ali Eydgahi by e-mail: aeydgahi@mail.umes.edu
- ◆ 25<sup>th</sup> June 2000, "Faculty Forum 2000 VM in engineering, architectural and business curricula" for university and college faculty will be held by the Miles Value Foundation in conjunction with the beginning of the next SAVE International conference in Reno, Nevada, USA. For more information, please contact Program Manager Mr. Al. Adelgren by e-mail: al.adelgren@doegjpo.com.
- ♦ 25-28 June 2000, SAVE International 40th Annual Conference "Energizing the Value Methodology" will be held at the Hilton Reno Resort in Reno, Nevada. It will be followed by the Annual Federal Conference.

## **Welcome New Members**

#### **Members:**

Mr. McDowell, Terence Patrick, Senior Consultant, WS Atkins Project Management,

Mr. Lyall, Richard Thomas, Associate Director, Atkins China Ltd.

Mr. Ashcroft, Brian A., Divisional Director, ELAN Atkins China Ltd.

Mr. Chow, Tak Tsun, Deputy Manager, Kiu Kwong Investment Corp. Ltd.

Mr. Palipana, Salinda S.B., Design Engineer, Dragages et Travaux Publics (HK) Ltd.,

#### **Associate Members:**

Mr. Tsang Hin Man, Graduate Engineer, China State Construction Engineering Corp.

Ms. Harvey, Emma C.B., Consultant, ELAN Atkins China Ltd.

Ir. Wong, Dillion Khen-Kong, Senior Design Engineer, Hong Kong Construction Holdings Ltd.

#### **CALL FOR ARTICLES**

THE VALUE MANAGER is the official publication of the Hong Kong Institute of Value Management. It intends to provide a lively forum and means of communications for HKIVM members and those who are interested in VM. To achieve this objective, we need your strong support by writing to us with your articles or comments. The following are some notes for contributors:

- (1) Articles submitted to HKIVM should fall in one of the following categories: New VA/VE/VM techniques or methodologies, Review of conference VM papers, VM case studies, VM research trends and directions, Reports of innovative practice.
- (2) Papers or letters should be submitted on a 3.5" or 5.25" disc for IBM PC and A4 hard copy. Discs will be returned to authors after editing. Figures, if any, should be sent separately, in their original and preferred sizes. The length of each paper should be around 1000-1500 words.
- (3) The preferred software for processing your article is MS Word for Windows V6, other packages such as Wordperfect 5.1 are also acceptable. If none of the above word processing packages is available, please find a computer with scanning capabilities, the typewritten copy can be transferred to a file as specified.
- (4) All articles and correspondences should be sent directly to The Editor of HKIVM, Dr Geoffrey Shen, Department of Building and Real Estate, The Hong Kong Polytechnic University, Hung Hom, Kowloon. Tel: 2766 5817, Fax: 2764 5131.

## **Application for Membership of the Hong Kong Institute of Value Management**

If you are interested in knowing or joining the HKIVM, please download the membership application form from the Institute's website - www.hkivm.com.hk. Alternatively, please fill in the reply slip below and return it to the membership secretary of HKIVM, Mr. Patrick Fong, c/o Department of Building and Real Estate, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong. Fax: 2764 5131.

Cut Here			
Please send an application form for membership to the undersigned:			
Full Name:		Company:	
Address:			
		Position:	
Tel:	Fax:	Signature:	