SUMMARY

INTRODUCTION

As at 1988, Singapore has over 10,000 hospital beds and it is expected that the number will increase by a further 2,000 by the turn of the next century. The number of new hospital facilities coming into the industry, including those existing hospitals (both from the public and the private sectors) points to the direction of a potential market for specialised hospital maintenance management system.

Hospital maintenance management is a complex operation as it involves the managing of diverse services, plants and equipment for the hospital so that the hospital can function efficiently. The standard of maintenance management must be high to ensure smooth functioning of critical services, plants and equipment so as to minimise inconveniences for patients, visitors, clinicians and administrative staff. The maintenance management of hospital facilities is therefore of utmost importance.

The objectives of this study are :-

1. to gauge the effectiveness of the current hospital maintenance management systems in the local industry, through a questionnaire survey.
2. to critically review the various aspects of planning, organizing, executing, controlling and budgetting of the hospital maintenance management functions for the essential services such as air-conditioning, electrical, mechanical, electronic, biomedical systems, civil engineering and building facilities.

3. to show [through a case study of National University Hospital (NUH) Maintenance Contract] that the theoretical findings in Chapter 3 can be implemented in practice.

Survey on Hospital Maintenance Management Systems

The questionnaire survey was carried out with 14 hospitals to establish the current state of hospital maintenance management in Singapore.

The survey results reinforced the hypothesis postulated and therefore recommends the adoption of the conceptual findings on hospital maintenance management system whereby hospitals should adopt a more comprehensive approach to hospital maintenance management so as to better handle and manage its maintenance problems and also to meet the current and future needs.

Concept of Hospital Maintenance Management System

The eight main areas as follows, which are vital service
areas contributing to the cost containment efforts, improved quality of services and reduction of downtime of essential services of the hospital maintenance management system are discussed :-

1. Maintenance Policy
2. Maintenance Standard
3. Planning
4. Organisation
5. Performance Evaluation
6. Material Control
7. Maintenance Feedback
8. Budgetting

These eight areas, if properly utilised, will enable the maintenance organisation to improve efficiency to the air-conditioning, electrical, mechanical, electronic, biomedical systems, civil engineering and building facilities of the hospital.

The emphasis of using an integrated computerised hospital maintenance management system encompassing the following are also discussed :

1. Maintenance Integrated Control System
2. Store Inventory Control System
3. Electronic Mailing System
4. Building Automation System
Case Study of National University Hospital (NUH) Maintenance Contract

The purpose of carrying out the case study of National University Hospital (NUH) Maintenance Contract is to illustrate the practical application of the hospital maintenance management system concept as advocated in Chapter 3, and also to highlight the benefits derived from such applications.

Arising out of the case study, the findings indicated are as follow:

1. The most economic and effective means of maintaining the hospital property is achieved by adopting the concept of hospital maintenance management system as advocated.

2. Indeco Engineers Pte Ltd (IEPL), the maintenance contractor, are well organised and professional in their approach. It is conscious of its goals and guided by it, when implementing their maintenance work programmes.

3. Procedures for planning and control by IEPL were reasonably adequate.

Conclusion and Recommendation

In conclusion, the findings arising out of this research indicate that the hospital maintenance management system as practised in the local hospital industry are generally
inadequate. There are still areas in which improvements could be made so as to fully explore and realise the potentials of the hospital. More studies are also recommended to be carried out for a more definitive insight into the current local practices in hospital maintenance management system.