SUMMARY

The MRT System, estimated to cost $5 billion, is the largest single, most complex and ambitious public works project in the history of Singapore. It is obvious that effective planning and control are needed to prevent serious delay in any section of the line and in reducing the amount of redundant operations.

The total planning activities can be divided into three levels: - Strategic planning, programming and budgeting. The three levels of planning are closely inter-related to one another, one level always leading to the next and each succeeding level being the implementation of the plans drawn up in the preceding level. A control system is required in the implementation of plans such that the outcome of performance is close to the expected outcome. Information about actual performance is collected and compared with the desired performance and action will be taken if there is significant difference between planning and control.

Many techniques are available to improve project performance through proper design of a planning and control system.

The MRT System is implemented in two phases with two parts in each phase. In order to ensure proper implementation of a large number of contracts at various locations, a number of project control techniques are employed, namely (a) critical path method (b) railway diagram, and (c) timescale barchart. In addition, three levels of programmes have been adopted for effective
project monitoring and reporting - they are (a) overall project
programme (b) contract programme, and (c) site monitoring
programmes.

In public organizations, such as MRTC, financial techniques used
are budgetary control, cost accounting, programming,
responsibility accounting, standard costing and break-even
analysis. Additionally, the systems also require qualitative
and behavioural as well as non-financial quantitative measures.

All senior and middle line managers are concerned with project
management: the application of project planning and control in
meeting the Corporations' objectives, such as a) Quality b)
financial control c) programme d) Safety. For a successful
planning and control system, it is essential that the senior
management give complete support and continuous involvement in
the process. In addition, there should be a clear definition of
objectives and a sound system of standards and tools for planning
and tracking the project effort.

In MRTC the site units are organized in matrix form, while the
other departments are in the pyramidal, hierarchical form. The
matrix organization has the advantage of not only getting the best
from its strong project approach and strong functional approach,
but also complements these by a strong unity of command at the
senior level.

For successful implementation of the MRT system, project planning
and control should be made an integral part of the
construction programme and efficiently co-ordinated at all levels. The role of the Planning and Programming Department should be extended to cover evaluation of the effectiveness of the organization structure and procedures, reporting and interpreting the results of operations to all levels of management.