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## **Facilities Performance Profile Tools**

**REFERENCE:** Cyros, Kreon L., "Facilities Performance Profile Tools", ASTM STP 1029, Performance of Buildings and Serviceability of Facilities, Gerald Davis and Francis T. Ventre, eds., American Society for Testing and Materials, Philadelphia, 1990.

**KEY WORDS:** decision support system, computer-aided engineering, Industrial Dynamics, INSITE, INSITE-CAD

A company's business strategies provide the basis for effective long range facilities planning and should be reflected by its physical facilities. Facilities decisions have direct and long-term effect on corporate financial resources. Paradoxically, the computer technology with the greatest influence on even the most complex facilities plans and projects is the least known and rarely used software - the decision support system. To a lesser extent, computer-aided engineering systems also fall into this category.

Thus far, then, the systems with the highest potential impact on a company's effectiveness and profitability continue to receive the least corporate attention. Instead, we are influenced by a marketplace that emphasizes computer-aided design, word processing, management information systems project management systems and computer-aided engineering and decision support systems, in that order.

Decision support systems, best known for their use in the mathematical modeling of scenarios for financial planning, can be used in facilities management for deriving solutions and alternative solutions to a series of complex decisions. A well-known decision support system in economics is Industrial Dynamics, developed by MIT Professor Jay W. Forrester. This is an analytical model that calculates and displays the interactions of different business and economic scenarios with various strategic plans.

MIT's approach to computer-aided facilities management rests upon the internal development of two unique facilities management systems, begun when senior management became concerned that performance measures were not backed up by hard data.

The first and largest development effort, INSITE, (INstitutional Space Inventory TEchniques) was begun twenty years ago as a mainframe management information system. The Second, INSITE-CAD, is a microcomputer-based window to the INSITE database.

INSITE was designed for storing, manipulating, analyzing and reporting on vast quantities of facilities data. INSITE-CAD allows scaled floor plans to be digitized, stored, updated and displayed on a personal computer. These floor plans may be used to highlight certain areas, floor by floor, that fulfill user-defined criteria.

Together, the two systems are the decision support tools that provide MIT management with the information used to profile overall building performance.

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