

# MANUFACTURING APPLICATION SYSTEMS HP 3000

## Introduction

Hewlett-Packard's Manufacturing Productivity Division (MPD) is responsible for the development and marketing of application software designed to meet the requirements of industrial companies. As overall program coordinator for HP's Manufacturer's Productivity Network (MPN), the division's market focus is on companies engaged in discrete and/or continuous manufacturing, including selected "specialty" markets such as integrated circuit manufacturing. MPD's product focus centers on modular application software for planning, scheduling, monitoring, and controlling materials, machines, processes, people, and physical facilities. In short, products to increase manufacturing productivity with an emphasis on complete functionality, ease of use and customizable but supportable software.

The Manufacturing Productivity Division's current product lines include application software for operational planning and control, and semiconductor information systems. In turn, these applications for managing manufacturing resources are also functionally integrated through HP's MPN with the financial management and marketing management applications provided by other operations within HP's Business Development Group.

## Market

Hewlett-Packard's manufacturing application products offer broad functionality based on innovative software technology. This technology places HP in a unique position in the applications marketplace and clearly differentiates HP from other application vendors. Our investment in application software solutions is founded on these five major objectives:

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|-----------------------|---|
| Target Market:        | Primarily medium to large industrial companies.   |
| Target Customer:      | Operating managers, professionals, and end users.   |
| Target Environment:   | Distributed processing; decentralized decision making.  |
| Target Functionality: | Complete broad functionality for manufacturing companies, integrating business, technical and instrumentation systems as well as personal computers and workstations. |

Target Implementation: Customizable but supportable software.  
Personalized implementation training,  
consulting, and on-going support.

## Operational Planning and Control

HP's Materials Management/3000 and Production Management/3000 maintain complete inventory and shop floor status as well as current material acquisition and production plans. Using the techniques of Material Requirements Planning (MRP) and Capacity Requirements Planning (CRP), they can help improve inventory utilization and production efficiency by maintaining realistic and coordinated production priorities.

HP Maintenance Management is a powerful tool to help manage your Maintenance Department. The costs of maintenance are increasing 10-15% per year. HP Maintenance Management is an application solution that will help you:

- \* Increase machine uptime
- \* Reduce spare part inventories
- \* Increase labor productivity

HP MATERIALS MANAGEMENT/3000 is a user-customizable, interactive system for managing the materials planning and control function of a manufacturing operation. Materials Management/3000 provides ten fundamental functions:

- \* Master Production Scheduling
- \* Rough Cut Resource Planning
- \* Parts and Bills of Material
- \* Routings and Workcenters
- \* Materials Issues and Receipts
- \* Inventory Balance Management
- \* Factory Order Entry
- \* Work Order Control
- \* Purchase Order Tracking
- \* Material Requirements Planning
- \* Standard Product Costing

For manufacturers using controlled substances or materials HP offers Lot Control and Traceability as a functional addition to Materials Management/3000. This option allows tracking and reporting of inventory at the lot or batch level in order to not only satisfy government standards and regulations, but also to meet the quality tracking requirements of many industries.

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HP PRODUCTION MANAGEMENT/3000 is a user-customizable, interactive system for managing the production planning and control function of a manufacturing operation. Production Management/3000 provides six major functions:

- \* Routings and Workcenters
- \* Work-In-Process Control
- \* Work Order Scheduling
- \* Shop Floor Dispatching
- \* Work Order Tracking
- \* Capacity Requirements Planning



Production Management/3000 also provides for the integration of HP data capture terminals for on-line updating of manufacturing information right on the factory floor.

HP Maintenance Management is a user-customizable, interactive system for managing the facilities and equipment maintenance function.

HP Maintenance Management consists of three application software modules:

- \* Work Order Control
- \* Parts Catalog
- \* Inventory Control and Purchase Order Tracking

HP JIT is a customizable, interactive application for managing the planning and control functions of Just-In-Time manufacturers. HP JIT consists of seven application software modules grouped in three categories:

Manufacturing Specifications

- \* Parts and Bills of Materials
- \* Stock Areas and Deduct List

Materials Planning

- \* Rate based MPS
- \* JIT MRP

Manufacturing Control

- \* Production Reporting and Post-Deduct
- \* Inventory Management
- \* Material Costs Reporting

HP JIT is ideally suited to discrete, repetitive assembly environments which are practicing the Just-In-Time philosophy. However, repetitive manufacturers can take advantage of this solution for their environments.

## Full On-Line Capabilities

A major feature of HP Materials Management Production Management and Maintenance Management Applications is their on-line and interactive operation. All transactions that create or modify status information are done on-line and reflected in the data base as soon as they are completed. Information maintained by these applications can be reviewed on-line. The user can also obtain printed copies of all on-line retrievals simply by pressing a function key on the terminal. All modules of each application are designed to interact with each other and share the same friendly, easy-to-use orientation.

## Integration

HP provides functional integration of Manufacturing Management Applications with Financial Management and Marketing Management Applications provided by other operations. Additionally, these applications products can be relatively easily integrated with user supplied applications, so that they appropriately phased into an existing operation.

## Customization Without Programming

HP Materials Management/3000, HP Production Management/3000, and HP Maintenance Management are products for which Hewlett-Packard offers full software support while providing flexibility for users to tailor individual modules to unique specifications. Users may customize menu, data-entry and retrieval screens, hard-copy reports and IMAGE/3000 data bases using a menu-driven system administrator terminal. In combination with the ad-hoc reporting of QUERY/3000, this capability provides an extremely comprehensive set of user customizing features. HP Materials Management/3000, HP Production Management/3000, and HP Maintenance Management provide the the capability to satisfy most requirements for:

- \* Adding special reports and retrievals or modifying the standard reports and retrievals
- \* Rearranging the data entry screens or the sequence of the screens
- \* Modifying the length or edit specifications of items on data entry screens
- \* Adding or deleting items in the data base and assuring that there is a mechanism for entering the data, updating that data base, and reporting/retrieving the new items
- \* Defining relationships between new items and existing items on the data base

All of these capabilities are possible without programming and include full support and future enhancements from HP.

## Documentation

In addition to the complete set of manuals that support the HP 3000 itself, a comprehensive set of manuals is available for HP Materials Management/3000, HP Production Management/3000, and HP Maintenance Management. These manuals address specific user functions by grouping logical system functions together.

Additionally, System Reference Manuals (SRMs) are available containing transaction narrative for most on-line transactions in HP Materials Management/3000, HP Production Management/3000, and HP Maintenance Management. Glossaries of data items are also included which provide greater detail than found in the standard user manuals. These manuals are excellent sources of technical information relating to these HP Application Products, and are useful in specifying the appropriate interfaces with other non-HP application software.

## Training

Hewlett-Packard offers comprehensive classroom and on-site training in the administration and use of HP Materials Management/3000, HP Production Management/3000, and HP Maintenance Management. This training is intended for System Administrator/User Trainers, but can also provide benefits to Project Managers and other selected supervisors. The training is designed to provide students with the skills to:

- \* Teach product functions, on-line terminal interaction, and general product use.
- \* Customize HP Materials Management/3000, HP Production Management/3000, or HP Maintenance Management for space environments.
- \* Operate the system on a day-to-day basis.

## Questions and Answers

- Q. Do we expect customers to buy both HP Production Management/3000 and HP Materials Management/3000?
- A. No. HP Materials Management/3000 and HP Production Management/3000 were designed to work with one another, stand-alone or be added to an existing system. Whether or not customers buy both products depends on the scope of their immediate problems, their implementation resources, their existing system, and whether their business requires both production and materials management solutions.
- Q. What factors have proven to be essential in successful application installations?
- A. Several factors have been consistently pointed out in successful manufacturing application installations:
- \* Well defined system requirements
  - \* Commitment from top management
  - \* A detailed and realistic implementation plan
  - \* End user ownership of the application system
  - \* Sufficient consulting to keep the project moving and smooth the "rough spots" in system implementation
- HP provides implementation consulting, called MPN-ASSIST to ensure that customers have a high probability of success in implementation.
- Q. How does HP customization work?
- A. There are two key elements in HP customization, Application Code, and the Application Dictionary. The Application Dictionary contains the definition of all customizable information on the system. The Application Code accesses the Application Dictionary in order to provide the user with a customized interface and then performs the required processing. The Application Code and the Application Dictionary work together to provide users full flexibility without programming.
- Q. Are HP Materials Management/3000 and HP Production Management/3000 supported outside North America?
- A. Yes. These HP Applications are available in 14 languages including German, French, Italian, Spanish and Katakana character set for Japan. They are supported from MPD in California, while local application software centers in 10 major international markets provide local translation and implementation assistance.