

## Computerized Maintenance Management System

Was designed by certified professional-engineers, who understand the complexities of plant, facilities, and equipment maintenance. The Cedar system supports activities of management and control of maintenance and spare parts, and plant productivity to fit the need of wide range of industries, facilities, and fleets maintenance. Cedar provides access to information for decision making that enable users to reduce and control LOSS and COST and improve overall equipment effectiveness (OEE). The main function of Cedar is as below;

### Productive Unit and Equipment System

- ❖ Can be defined in parent / child relation (Hierarchical structure) up to 9 levels.
- ❖ Each productive unit, able to add unlimited equipment.
- ❖ Purchase information such as vendor, purchase date, purchase price, warranty expire date, installation date , and cost, etc.
- ❖ soft files such as Drawing, MS Excel, MS Word or other file types can be unlimited attached.
- ❖ Detail of maintenance contract.
- ❖ Link to work order backlog and history.
- ❖ Link to PM task list and PM history.
- ❖ Failure Mode history
- ❖ Spare part list and usage history.
- ❖ Technical Data.

### Preventive Maintenance System

- ❖ Allows multiple PM activities for each piece of equipment
- ❖ Each PM task can be input the mode of failure to be protected
- ❖ Job Plan describes work to be completed as well as necessary materials and labors.
- ❖ Forecast system for PM work orders, resource requirement plan, spare parts requirement plan, and PM budget.
- ❖ Meter records/meter reading history
- ❖ Scheduled PM's by several bases: Due (days), Done (since last PM), meter (miles, hours, cycles), calendar (days, weeks, etc.) or on demand basis.

### Work Control System

- ❖ Work order can be directly created or generated from approved work request.
- ❖ All work requests are kept in WR history after approved to work order or cancellation.
- ❖ Authorization scheme allows authorized person to issue, approve and generate work order.
- ❖ Backlog management and control for all types of work orders, preventive maintenance, corrective, break down, modification or any type of work orders that user can be defined, start from work initiate, planning, scheduling, executing, complete and report.
- ❖ Records plan and actual of work procedure, resource used and costs (crafts, spare parts, tools and others).
- ❖ Relate Work Orders to projects for cost tracking
- ❖ Free-form text and code for grouping of Failure Mode , and Cause
- ❖ Automatic status updated.
- ❖ Keep maintenance cost both planned and actual.

## Spare Part Management System

- ❖ Record part catalog for stock items.
- ❖ Multi-store rooms
- ❖ Average cost for different between store rooms.
- ❖ Issues, returns, Receipt, Adjust, purchase Requisition and Purchase order for stock, non-stock and service items. Transfer, Reserve and Borrow transactions.
- ❖ Definable Parts technical data.
- ❖ Interchangeable spare parts record.
- ❖ Parts/Vendor Cross Reference
- ❖ Where used list.
- ❖ Parts transaction history records.
- ❖ Fully integrated with maintenance system.

## Production Loss Tracking/OEE

- ❖ Records production of shift, batch of each product-process.
- ❖ Production loss records include quality, Planned and Unplanned down time loss.
- ❖ Calculates OEE-Over all Equipment Effectiveness and others KPI (Key Performance Indices).

## Report

- ❖ Report for controlling and improving maintenance can be grouped into,
  - ❖ Asset performance (for OEE function)
  - ❖ Loss tracking and Control (for OEE Function)
  - ❖ Work performance & planning
  - ❖ Cost performance
  - ❖ Spare part performance
- ❖ More than 150 effective standard reports for control, improvement of maintenance and spare part management. For example, High Cost Area, High Problem Area, High Down Time Area, Backlog Control, Maintenance History, Failure Mode tracking, High Usage Spare Parts, etc.
- ❖ Modifiable and design of new report by Crystal report writer (option license of 3rd party) and add in to menu of Cedar.

## System Access Control

- ❖ Security of system can be managed effectively by individual or grouping. Access control can be assigned to group per display basis on display edit, add, delete or process can be defined.

## Technical Specification

Standard Database : Microsoft SQL Express 2005  
Language Support : Standard – Thai, English  
Can be customized for Multi-Language  
Number of Users : Single user or Multi-Users

### Work Station

CPU : 1 GHz  
Memory : 4 GB  
System : Windows XP, Windows 7

### Server

CPU : 1 GHz  
Memory : 8 GB  
System : Windows 2003 Server, Windows 2008 Server



**Productivity Associates Company Limited**

91/10 Moo 1, Bangkruey-Sainoi Road, Bangkruey, Bangkruey, Nonthaburi 11130, Thailand  
Tel: +66 (0) 2879 4833-5 Fax: +66 (0) 2879 4582 Email: sales@productivityware.com