

# PBMS™

## Prescription Based Maintenance Management System



*PBMS will reduce overall operational and support costs of your complex systems*

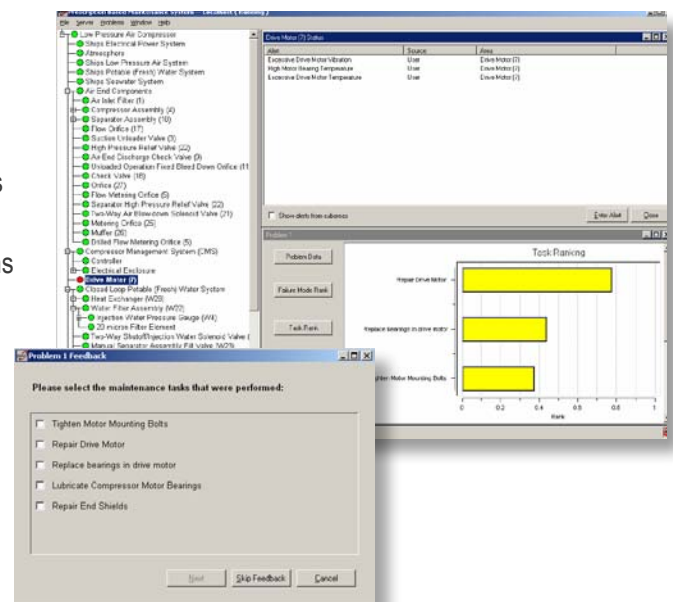
When a critical system has a fault or failure condition, maintenance managers need to quickly recognize the necessary tasks to repair the condition and identify the associated resource (parts, tools, personnel) availability for a given set of tasks. Minimizing the time to determine tasking, as well as having automated access to information regarding an appropriate work package will serve to increase maintenance efficiencies and reduce support costs.

Impact Technologies has developed a maintenance decision support system that features intelligent reasoning tools to prescribe recommended maintenance actions based on automated sensory input from Prognostic and Health Management (PHM) Systems. This Prescription Based Maintenance Management System (PBMS) has the capability to link with existing Asset Management systems to determine whether the parts, tools and other resources are available to complete a given maintenance action.

### Functions:

- Intelligently reason through PHM evidence to determine probable failure modes and corresponding corrective maintenance tasks.
- Rank failure modes based on the likelihood of occurrence
- Rank maintenance actions based on the likelihood of success and weighted by such constraints as cost and downtime
- Enhance decision support by identifying if parts, tools, other resources are available and flagging tasks that are lacking necessary resources
- Adaptive learning from the result of the completed maintenance actions through a feedback loop to continually improve the intelligent reasoning engine.

PBMS will reduce overall operational and support costs of complex systems, and enable future transition of CBM and PHM information systems to automated maintenance management systems.



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## System integrators and commercial manufacturers will benefit from this technology

### Benefits:

- Improve maintenance decision making by giving the user a ranked list of maintenance tasks
- Supports optimal manning through reduction in manual maintenance troubleshooting
- Utilizes open architecture that is flexible to changes with regard to new or existing interfaces
- Automated look at logistics supply relating to each maintenance task – ID missing parts, tools, resources
- Uses maintainer feedback and learning algorithms to continually evolve maintenance prescriptions

*“System integrators and commercial manufacturers will benefit from this technology by being able to offer value and decision support capabilities to existing or planned condition monitoring and prognostics systems.”*

### Applications:

- Navy ship systems
- Military aircraft and ground vehicles
- Industrial Machinery
- Commercial vehicle fleets (ground, sea, and air)