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Mapping Extensible Mark-up Language (XML) Documents into Rational DataBase Management System (RDBMS) for Condition Monitoring (CM)

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ABSTRACT

Condition based maintenance is to implement plant overall based on the information sources including condition monitoring, plant production productivity, machine design characteristics and machine failure history data sets. However, because of high diversity of these information sources it makes difficult to unify different data in for optimal maintenance decision making. In addition, the rapid growth in amount of such information sources also create more problems in applying conventional data processing method for condition monitoring

This project will investigate a unified data integration framework to collect, manage and storage different data bases for optimal maintenance actions. It will use the latest information technologies such as Extensible Mark-up Language (XML) Documents, Rational DataBase Management System (RDBMS) Documents, data mining methods to fuse different data sources and develop an automated system for CM and maintenance actions. In particular, the project will be developed based on a specific plant such as wind turbines to develop automated data collection (design documents, operating parameters, failure diagnose notes, research report), data conversion and data analysis and decision making.

Keywords Extensible Mark-up Language, Rational DataBase Management System, Condition Monitoring, Maintenance