

Maintenance Effectiveness and Target Observation System and its ERP Interface

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1. Introduction

Maintenance effectiveness and target observation system (MENTOS) is a maintenance rule (MR) implementation software for plant personnel to collect, edit, store, and analyze all information required for the MR implementation [4]. Potential users and the developers of MENTOS have decided that MENTOS is implemented in the ERP system of KHNP. This article describes MENTOS briefly and introduces the ERP interface of MENTOS.

2. MENTOS

Figure 1 shows the overall concept of MENTOS. Major MR processes are function scoping, significance determination, performance criteria determination, failure analysis, and performance monitoring [1] [2]. For the success of MR implementation, integrated database and analysis tools based on networking ability are required.

MENTOS is being developed to meet the software requirement as a MR implementation tool and MENTOS has the feature of failure mechanism analysis and performance trending as a MR analysis tool [3]. MENTOS is developed as a JAVA[®] and ORACLE[®]-based client-server application. MENTOS has function scoping module, significance determination module, performance criteria determination module, failure analysis module, performance monitoring module and (a)(1)/(a)(2) status tracking module. MENTOS has all features required as a MR implementation supporting software.

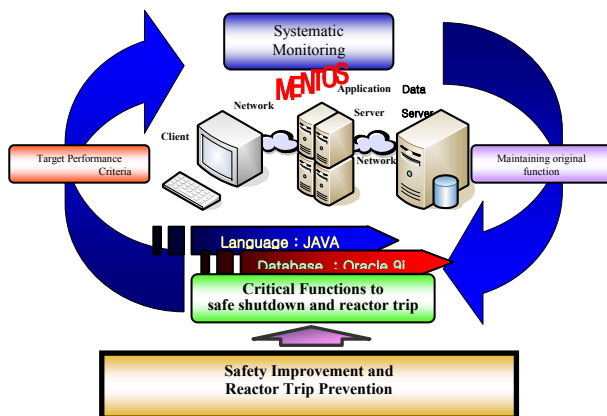


Figure 1. Concept of MENTOS

3. MENTOS to ERP Interface

3.1 Approach

As mentioned, MENTOS has function scoping module, significance determination module, performance criteria determination module, failure analysis module, performance monitoring module and (a)(1)/(a)(2) status tracking module. Among these modules, failure analysis module and performance monitoring module can have the interface with the ERP system of KHNP. Figure 2 shows this fact conceptually.

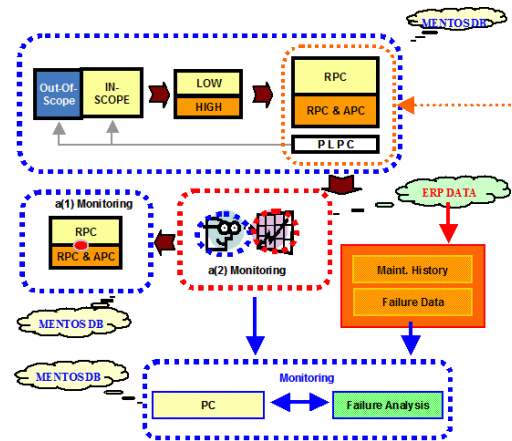


Figure 2. MENTOS Interface with ERP

As shown from Figure 2, the performance monitoring module and the failure analysis module utilize maintenance history data and failure data which are in the ERP system. This means that the interface is data interface in which the database of the ERP system shall be shared. Thus we develop all the MENTOS modules as ERP components, and this is described in the following section.

3.2 Interface Development

As mentioned in the previous section, the ERP interface of MENTOS is the MENTOS module themselves in the ERP system. Thus authorized users of the ERP system can access MENTOS directly. In addition, the users of MENTOS who use it in a client mode are able to download and/or upload certain data using the data download/upload capability of the ERP system.

The ERP system has all the graphic user interfaces of MENTOS. With these GUI, users can monitor the MR situations. However, they cannot update data through the GUI. This is because the consistency of the ERP

database must be kept during the MR process. In order to update the MR database in the ERP system, the person who is in charge of MR updates it through the MR support tools.

4. Conclusions

MENTOS is developed as an integrated database and analysis support tools for MR implementation. Considering that MR process should be implemented as an engineering activity of a utility company, the authors have determined that MENTOS should have the interface with the ERP system of KHNP.

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