

INTELLIGENT ALARMS DETECTION FOR THE ANALYSIS OF SYSTEM FAULT IMPACT ON BUSINESS

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The tools for fault impact analysis are important for the deployment of critical mission systems. These tools can be also used as a development phase aid. We introduce several concepts related to "business alarms". Business alarms are an approximation to the company's business conceptual scheme driven by the business rules from systems conceptual schemes. In order to specify them we propose the utilization of Knowledge Engineering typical techniques.

The object of alarm detection for impact analysis of fault business systems is to reduce the breach between business controls and typical control system.

For it, furthermore specifying an alarm visualization system for the direction responsible of the systems, we are going to specificity the alarm transmission to a center with following purpose:

- Development support
- Help desk with an end user problems and resolution expert database
- Contingency maneuvers coordination

The rush in the projects makes that most of the time the errors are not taken into account into the development phase, and a transactional structure for handling them is added later. Sometimes this structure is not completely implemented and the error handling is left to the database engines and operating systems mechanisms.

The fact of the existence of a development support center can facilitate and allow the adding of code chunks with the purpose of centralized debugging. The support center support will have a rule based main kernel that will do a nexus between development and help desk to final users. This kernel will allow: give a greater quality help to final users relate user faults with systems faults in the development manager format.

Moreover, the own nature of the objectives, this eases the acceptance of the knowledge engineer in the organization (one of the primary steps to make possible knowledge acquisition). It's going to be a company's direction responsibility to present him as the developer of this center and help desk for development and final users.

The role of the knowledge engineer covers a wide spectrum in a critical mission environment, from the support of the original design to the startup and tuning of the end user's help desk.

Due to the strong relationship between time and alarms, we verified the importance of having and unique time for all the company's computer systems, or provide the necessary mechanism in order to adjust the time registry of each separate system.

The formalization of rules and knowledge in the area of critical mission systems allows the company to make predictions of the dimensioning and correct forecasting of the systems taking into account their critical nature.

As results of the processes of systematization and formalization of knowledge we have:

- Rules for the platform specification in order to forecast a scheme of high availability and contingency.
- We documented the need of the creation of a software alarms and a development support center based in this alarms
- The cost issues related to the startup of an end user help desk were verified.

At last, a prototype program with demonstration purpose was build in order to show the exposed concepts.