

Elastic Tile Display : A Method for Visualizing and Navigating Tiled Alarm Information In A Complex Process Control Plant

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ABSTRACT

In a complex process control plant like NPP(nuclear power plant), a great number of alarms are produced especially under plant upset conditions. As its conventional control room evolves into an advanced one, the annunciator-based tile display for alarm information is required to be removed and replaced by a computer-based tile display. When this happens, it becomes an important task for plant operators to navigate alarm information on VDU-based user interface, because it places an additional burden on them. In this paper, a display method, Elastic Tile Display, was proposed, which can be used to visualize and navigate effectively many tiled alarm information. We expect this method to help operators acknowledge alarms with little cognitive efforts and find out what's really going on the plant.

Keywords : alarm display, computer-based alarm display, cognitive efforts