

# IMPLEMENTATION OF A DIRECT PERCEPTION INTERFACE “THE MASS TREND DISPLAY”

*RANIA MAALEJ, SLIM TRIKI, ANAS KAMOUN*

Automatic Control Unit of National Engineering School of Sfax (Tunisia)  
*rania.maalej@yahoo.fr, slim.triki@issatkr.rnu.tn, anas.kanoun@enis.rnu.tn*

**Abstract:** Despite the multitude of supervision's software, operators encounter a difficulty to follow the evolution of the industrial system. This paper presents the development of tools for better understanding the dynamics of the process and its condition. In particular, the trend's views allow the supervisor to build online reasoning, to verify a hypothesis, make predictions and to support an automatic diagnostic tool for explanations. In this regard, the conception of original trend displays called Mass Trend Display is proposed. The MTD is based on trend symbols obtained through the transfer from measures to information. In this paper we present, at first, the specific processing based on the segmentation, the classification and the symbols display synchronization. In a second step we discuss technical problems and we try to provide the tools (hardware and software) needed to design the MTD. Finally, we present a decision making help tool exploiting the symbol used in the MTD.

**Key-words:** monitoring, supervision, man-machine interfaces, man-machine cooperation, decision support.