



Saved by the Bell - BBBB (Buy)

The Alarm Management Handbook by Bill Hollifield and Eddie Habibi
Reviewed by Nick Sands

Alarm Management continues to be a hot topic and a gap in the body of knowledge for automation professionals. Kudos to Bill Hollifield and Eddie Habibi of PAS for filling that gap by self-publishing *The Alarm Management Handbook*. Habibi, who holds an engineering degree and an MBA, is founder and CEO of PAS, with previous experience at Schlumberger and Honeywell. Hollifield, who has a BS in Mechanical Engineering from Louisiana Tech and an MBA from the University of Houston, has significant alarm management experience, including part of his 27 years with Union Carbide and Dow, and his last 4 years or so with PAS. For much of that time, Hollifield has been a significant contributor on the SP18 committee working on an alarm management standard, along with this reviewer.

The handbook begins with a quick summary of how to develop an effective alarm system in seven steps, which summarizes many of the practices discussed later in the book. This is one of a few places in the book where the privilege of self-publishing becomes self-evident. There is a chapter on the history of alarm systems and how the problems of today developed with the advent of microprocessor based control systems. Hollifield also tries to address the justification for improving alarm system performance, which relies mostly on the correlation and conviction that improving the alarm system improves safety and operation. There is no magic bullet solution to justification.

The authors highlight the chapter on what is an alarm as the most important in the book. The working definition for alarm is given as a mechanism for informing an operator of an abnormal process condition for which an operator action is required. As stressed throughout this chapter and the book, alarms are not for things that are nice to know, but things the operator needs to know. The alarm philosophy takes the definition of alarm and builds structure around it; the practices to set, configure, and display alarms and measure performance. The topics of the alarm philosophy are further explored in the later chapters, starting with the display of alarms and issues of priorities, colors and tones.

One key step in alarm management is benchmarking, or assessing the performance of the alarm system. There are several metrics that can be used, including alarms per day, alarms by frequency, number of alarm floods and many more. These metrics should be used to monitor the performance of the alarm system. To improve performance, a key technique is rationalization of the alarms. Rationalization is a review of each potential alarm against the definition of alarm and typically a set of grids, to develop a well documented, consistently prioritized alarm. PAS claims ownership of a focused method for this process discussed in a separate chapter.

The final chapter addresses the more specific topics of real time alarm management including alarm shelving and state based alarming. Hollifield shares his view on the classic lightbox alarm panel as well as several specific alarm types, including gas detections and safety systems. Common problems, like nuisance alarms and duplicate alarms are addressed. There is a brief section on management of change and a discussion of the future of alarm systems. As a bonus there is an outline of an alarm philosophy in an appendix.

Hollifield and Habbi have performed a service to the automation industry by publishing the first book in many years to address the area of alarm management, and the most complete work on the subject to date. As with any self-published book, the reader must be cautious to separate the facts from the authors' opinions, which at times are so strong that reading some sections is like being yelled at by a drill instructor. Still this book brings together most of the best approaches published in many articles over the last two decades, reinforced by the authors' own experiences. I recommend it to every automation professional as a buy (BBBB). Though you may have trouble finding a copy for now, it is available from Amazon.com for \$69.