

ABSTRACT

EVENT CORRELATION

Simultaneous events reported to an equipment management system are compared with historical data in order to establish whether there is a relationship between the events. Historical data is used to determine the statistical probability of the events occurring independently simultaneously. If this probability is below a predetermined threshold this will suggest that the events are not independent, but are related. Such relationships are alerted to an operator, for example by highlighting or grouping on a screen display, assisting the operator in identification of related events, without the need for prior knowledge of the relationships in the system.

The events may be alarms generated by faults in a network. The identification of related faults at different points in the network assists identification of their common cause. The historical database may be updated by further event occurrences as they are reported to the equipment management system, thereby enlarging the database to make the results more statistically accurate.

Events may be reported to the system automatically or by human agency. To allow for systematic delays in event reporting, alarms from one source may be compared with alarms from another source occurring a fixed time later or earlier (Figure 4a).