

Robotics, Automation and Control

Systems, Methods and Apparatus for Autonomic Safety Devices

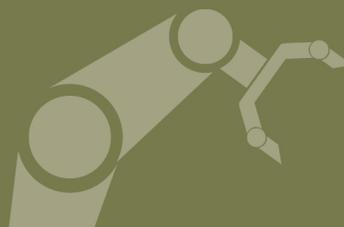
[A safety device with a quiesce component](#)

Conventional smoke detectors are helpful in alerting people to fire danger and thus saving lives and property. One function of conventional smoke detectors is detecting a weak battery source, or other weak power source. Commonly, smoke detectors emit an intermittent high-pitched beep to alert people to the unreliability of the smoke detector and the need to replace the batteries. Alerting people to the low battery may provide only the most primitive of status reporting and indication. Most unfortunately, the beeping can be performed only while sufficient power remains in the battery. At some point in time, as the battery power continues to weaken, without refreshed batteries, or connection to an A/C power source, the smoke detector will not receive sufficient power from the batteries.

BENEFITS

- The medium efficiently discovers and reports fault or failure of the smoke detector and reduces the possibility of damage developed by the smoke detectors to the safety device
- The medium facilitates the smoke detectors to be functionally extracted from an environment based on the occurrence of a predetermined condition e.g. potential security breach

technology solution



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THE TECHNOLOGY

In some instances, the operation of a particular smoke detector can be either detrimental to the smoke detector itself or to the facility in which the smoke detector is located. For example, a smoke detector itself might cause a fire in the facility when the electronics in the smoke detector malfunction. However, conventional systems are largely ineffective at preventing such a problem.

The present invention is an autonomic environmental safety device that may be quiesced. In at least one embodiment, a method for managing an autonomic safety device, such as a smoke detector, based on functioning state and operating status of the autonomic safety device includes processing received signals from the autonomic safety device to obtain an analysis of the condition of the autonomic safety device, generating one or more stay-awake signals based on the functioning status and the operating state of the autonomic safety device, transmitting the stay-awake signal, transmitting self health/urgency data, and transmitting environment health/urgency data. A quiesce component of an autonomic safety device can render the autonomic safety device inactive for a specific amount of time or until a challenging situation has passed.

APPLICATIONS

The technology has several potential applications:

- Smoke Detectors
- Alarm Systems

PUBLICATIONS

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National Aeronautics and Space Administration

Innovative Technology Partnerships Office

Goddard Space Flight Center

Code 504
Greenbelt, MD 20771
301.286.5810
techtransfer@gsfc.nasa.gov

<http://technology.nasa.gov/>

www.nasa.gov

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