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### **Presenter Details**

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### **Abstract**

#### **Enabling Data Security with COTS Solid-State Flash Disks**

Securing confidential data in emergency situations is essential for mission-critical applications. The damage that can result if top-secret information falls into unauthorized or enemy hands can be devastating. Although sanitizing mechanical disks and magnetic tapes can irretrievably delete confidential data, the process is long and arduous, requiring special degaussers, stable power conditions through its duration, and adequate time – all of which is often lacking in emergency conditions. The incident in which the U.S. Navy surveillance plane (EP-3E ARIES II) was forced to land in China on April 1, 2001 serves as a chilling reminder of current day needs for a media that can guarantee data security in emergencies.

Solid-state flash disks are being used as drop-in replacements for mechanical disks in military and aerospace mission-critical applications. Flash disk are rugged and operate under the harshest environmental extremes. Flash disk manufacturers have incorporated several features to enhance data security in emergencies. These include Fast Secure Erase and Sanitize that sanitize the disk in seconds with unstable power conditions, and Security Erase that operates with no power at all.

This presentation will review the levels established by security agencies – such as the U.S. DoD, NSA, U.S. Army, Navy and Air Force – for “erasing” sensitive data for various types of storage media including tapes, magnetic mechanical disks, optical disks and semiconductor memories. It will discuss current options for achieving the required data security levels in emergencies, the pros and cons of the most popular methods, and present selected case studies within the military and aerospace.