



Information Technology and Software

Otoacoustic Protection In Biologically-Inspired Systems

An autonomic method capable of counteracting a potentially harmful data signal

The field of autonomic computing (also known in other parlance as organic computing, biologically inspired computing, self managing systems, etc...) has emerged as a promising means of ensuring reliability, dependability, and survivability in computer based systems, in particular in systems where autonomy is important.

Scientists at NASA Goddard Space Flight Center have been looking at various mechanisms inspired by nature, and the human body, to improve dependability and security in such systems. Otoaural emission is used by the mammalian ear to protect from exceptionally loud noises; tailoring it to autonomic systems would enable the system to be protected by spurious signals or signals from rogue agents.

BENEFITS

- Improved data
- Greatly improves the autonomy while simultaneously mitigating complexity and reducing total cost of ownership of a data system

technology solution



THE TECHNOLOGY

This innovation is an autonomic method capable of transmitting a neutralizing data signal to counteract a potentially harmful signal. This otoacoustic component of an autonomic unit can render a potentially harmful incoming signal inert. For selfmanaging systems, the technology can offer a selfdefense capability that brings new levels of automation and dependability to systems.

APPLICATIONS

The technology has several potential applications:

- Autonomic Computing
- Artificial Intelligence
- Sensor networks

PUBLICATIONS

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