

May 10, 2002

MEMORANDUM TO: Charles A. Casto, Acting Director  
Division of Engineering  
Office of Nuclear Reactor Regulation

Robert C. Pierson, Director  
Division of Fuel Cycle Safety and Safeguards  
Office of Nuclear Material Safety and Safeguards

FROM: Michael E. Mayfield, Director/*RA*/  
Division of Engineering Technology  
Office of Nuclear Regulatory Research

SUBJECT: EMERGING TECHNOLOGY REPORT

As part of the Office of Nuclear Regulatory Research's (RES's) anticipatory research program on advanced instrumentation and control (I&C), as outlined in section 3.5 of the NRC Research Plan for Digital Instrumentation and Control (SECY-01-0155), the Division of Engineering Technology periodically reviews new technologies to understand how advances may effect the nuclear industry and to determine when new areas should be identified for research. The attached report presents the result of a survey of emerging technologies in the field of Instrumentation and Control (I&C). It gives an overview of the state-of-the-art of selected technical focus areas relevant to nuclear applications of digital I&C. RES will use this report, along with other information from program office input through the I&C Technical Advisory Group, in revising and updating the NRC research program for the instrumentation and control area.

This report is provided for your information. It is intended as the first in a series of reports documenting emerging technology in this area, and providing insight as to what changes in this dynamic field may have an impact on the nuclear industry. Questions or comments regarding this report should be directed to Steve Arndt (SAA@nrc.gov) (415-6502) and Christina Antonescu (cea1@nrc.gov) (415-6792) of my staff.

Attachment: As stated

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