



# NDIA ATC Board-Level Test Project

June 24, 2009



## AUTOMATIC TEST SYSTEMS EXECUTIVE DIRECTORATE

NAVAIRSYSCOM PMA-260  
47123 Buse Rd, #IPT  
Patuxent River, MD 20670-1547  
(301) 757-6899

9 February 2009

From: DoD ATS Executive Directorate

To: Chairman, National Defense Industrial Association Automatic Testing Committee

Subj: Request for Study and Recommendations Relative to Board-Level Test

1. Many different approaches to board-level test are currently in use in both government and industry. These include shorts test, analog nodal signature analysis, analog in-circuit test, digital in-circuit test, analog functional test, digital functional test, boundary scan, use of flying probers, optical test, x-ray test, vibration, and thermal imaging. Effective board test may require a combination of these approaches.
2. It is requested that the NDIA ATC conduct a study of the various approaches to board-level test and provide a recommendation to the DoD ATS Executive Directorate relative to the need for additional standards to better facilitate design-to-test, to ease transport of test programs across test systems, and to leverage data across different board test techniques. The study should review standards and specifications currently applicable to board-level test at all levels of maintenance from factory through intermediate level. If it is determined that additional standards are needed, request provide an overview of the applicability of each of the recommended standards, and a recommendation for the working group or organization which should undertake development and publication of the standard. Consider the impact on TPS development cost, TPS transportability, UUT testability and the availability of design data. Any recommended new standard should maximize the use of commercial specifications and technology, be enforceable, be easy to use and be generally acceptable to TPS developers.
3. Please direct questions to the undersigned at (301) 757-6907 (e-mail [william.ross@navy.mil](mailto:william.ross@navy.mil)).

W. A. ROSS  
Assistant Director

# Board-Level Test Project Overview

- Applicable to all levels of maintenance
- Evaluate the need for additional standards to better facilitate
  - Design-to-test
  - Ease transport of test programs across test systems
  - Leverage data across different board test techniques
- Consider
  - TPS development cost
  - TPS transportability
  - UUT testability
  - Availability of design data
- If additional standards are needed
  - Provide an overview of the recommended standards
  - Provide recommendations for development and publication
- New standards should
  - Maximize the use of commercial specifications and technology
  - Be enforceable
  - Be easy to use
  - Be acceptable to TPS developers

*Do we have Standards in place to support Board-Level Test?*

# Project Volunteers

- Volunteers

Volunteer	Company
Bill Birurakis	Pioneering Decisive Solutions, Inc. (PIDESO)
Bill Byrnes	Teradyne
Bill Curry	Huntron
Bob Allman	DRS
Bob Augustine	Navy
Bruce Scott	Lockheed Martin
Dave Droste	DRS
Eric Haltiner	Market Access Group Inc.
Lou Salzano	DME
Mike Dewey	Geotest – Marvin Test Systems Inc.
Mike Frey	Geotest – Marvin Test Systems Inc.
Phil Freeze	DRS
Scott Brown - Project Lead	Boeing
Steve Karlovic	CDI
Tim Webb	Diagnosys Systems, Inc.

- To volunteer contact Scott Brown @
  - gerald.s.brown@boeing.com

# Project Activities

- Current Activities
  - Project planning is in work
    - Currently defining activities and associated products
  - Anticipate the project will run thru December 2009
- Upcoming Activities
  - Scheduling a Project Webex/Conference Call for July 16th
    - Plan to discuss
      - Project goals
      - Anticipated activities
      - Project schedule
      - Will be requesting volunteers for the initial activities