

# FOCUS ON END USERS OF ATE EQUIPMENT

It's Not Just Picoseconds and  
Millivolts

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# WHO,WHAT,WHY

- Feedback From Over 20 Companies
- Personal Observations – IBM/Consulting
- User/Supplier Relationships
- Future Business Needs
- Direction Of Test Industry
- Independent Interviewer

# Top Ten User Requirements From ATE Suppliers

1. A Configurable Modular Tester (CMT)
2. Tester Options / Roadmap
3. Total Support From Single Source
4. Minimize Switching Costs
5. Standardize Software & Interfaces

# Top Ten User Requirements Continued

6. Ability To Scale Down Capital Cost
7. Very Responsive ATE Suppliers
8. Reduce Number Of Suppliers On Floor
9. Migrate Tester Modules
10. ATE Help With Legacy Systems

# 1. A Configurable Modular Tester

- Scalability / Extendibility
- Configure For Effective Cost
- Easily Replace / Upgrade Modules
- Broad Product Range

## 2. Tester Options / Roadmap

- Breadth / Delivery Time Are Differentiators
- Judgment On Future Capabilities / Success
- Is Supplier Over Extended?
- OA Advantage – Leverage 3<sup>rd</sup> Parties
- Reality

# 3. Total Support From Single Source

- Most Users Demand It
- Resolve 3<sup>rd</sup> Party Issues
- Hardware/Software/Support
- Reduction In User Resources
- ATE Suppliers Have Similar Concerns

# 4. Minimize Switching Costs

- Influence All Tester Decisions
- Resources, Learning Time, PNP Development Time, Infrastructure, Retooling
- Select Less Than Optimal Solution
- Tester Differences / Value Add?

# 5. Standardize Software & Interfaces

- Prime Opportunity To Reduce Costs
- Hardware – Prober/Handler/Load Boards
- Software – Lots Of Opportunities ?
- How To Get There?
- Definition And Details Later

# 6. Ability To Scale Capital Down

- All Top Ten In Cost Equation
- Unique Needs On Very Low End
- Trade Offs With Flexibility / Scalability
- User Expectations

# 7. Very Responsive ATE Suppliers

- Building Relationships
- After Sale Support
- Conflicts

# 8. Reduce Number Of Suppliers On Floor

- Support Cost
- Roadmap / Future Direction
- Assure A Competitive Solution

# 9. Migrate Tester Modules

- Product Mix / SOC
- Utilization / Cost
- Across Models / Across Testers
- OA Slots

# 10. Suppliers Help With Legacy Systems

- Huge Installed Base
- Technical / Economic Life
- Incremental Investment / ROI
- OA / Standardization Advantages

# Net Of Users Top Ten List

CMT, Timely, Single Support, Low Switching Cost, Standardization, Low Capital Cost, Quick Response, Few Suppliers, Portability, Extendibility.

In The Middle, But Applicable Up & Down The Top 10

**STANDARDIZATION**

# Standards Definition

- Specifications That Guide Common Designs
- Not A SEMI Type Standard
- Standardization Not A Standard
- Clearer After Objectives Discussion

# Standardization - Hardware

- Started Being Addressed
- Universal Slots & Interfaces
- STC – Tester Interfaces
- User Doesn't Expect All To Be The Same
- Product Capabilities, Perf. Levels, Price
- Hybrid Approach – Some Standard Slots

NEED BROADER PARTICIPATION

# Standardization - Software

- Need To Take Redundant Cost Out Of Industry
- What & How ?
- Not An Existing Package
- Users Drive With ATE Participation
- Participate Or Be Left Out

# Standardization With STIL

- Favored Path Starts With STIL
- Need Realistic Assessment – What & How
- Create Roadmap For Standardization
- Identify Modules, Direction, Steps
- Will Consortia Work ?

# Software Standardization Driven By STC

- STC Has A Solid Core Of Motivated People
- Need More ATE And Users
- Positive Impact On Industry
- Maintain Focus On Top Ten User Desires

# Semiconductor Universe

- Users Are At The Center
- Force #1 – Cost Reduction
- Force #2 – Time To Market
- Test Engineering Orgs Need To React To Both.

# Standardization Not Easy, But Needed

- All Levels Need Standardization
- Plug & Play – Modules, Test Cells, Factory Automation
- Making Changes To Testers Is Disruptive To Business
- Can't Afford Non Value Add Differences

# Why Standardize?

- Users Can't Back Off On Top Ten List
- Product Life Cycles Shorter, ASPs Lower
- Believe Tester Cost Too Much, Yet ATE Lose Money
- ATE Can't Save/Consolidate Their Way To Profitability
- ATE Can't Afford Needed R&D
- Standardization Takes Redundant \$ Out

# Standardization Isn't A Silver Bullet

But It Does Go A Long Way In Addressing User Requirements.

Needed To Get The Industry Healthy