MITRE: Proposal to Formalize Test and Evaluation Activities Within the Forensic and Law Enforcement Communities

By

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Formalizing Forensic Test & Evaluation Activities

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Topics

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- Discuss rationale for conducting T&E
- Describe DCCI T&E process and procedures
- Discuss findings
- Provide rationale for creating a centralized repository of T&E results

Testing : User Perspective

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- Support ASCLD accreditation
- Provide guidelines on the use of products
- Identify anomalies
- Support product selection process
- Lend credence to testimony
- Provide an independent assessment

ASCLD = American Society of Crime Laboratory Directors

Reduce the risk of surprises!

Testing: Developer Perspective

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- If product does well
  - Provides marketing support
  - Influences customer decisions
- If product fails to meet expectations
  - Identifies areas needing improvement
  - Provides feedback on customer requirements

Customers may require it!

DCCI Test Procedures

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Customer Requests

- Obtain product from customer
- Become familiar with product
- Identify verification hardware and software to use in testing
- Send test plan to customer
- Conduct tests
- Document results
- Allow vendor to review/comment on test results if necessary
- Add vendor comments as appropriate
- Sign report and add to DCCI catalog

Vendor Requests*

- Obtain product from vendor
- Become familiar with product
- Identify verification hardware and software to use in testing
- *Send test plan to vendor*
- ***Allow vendor to run tests and if necessary develop new version of product***
- ***Have vendor sign Product Test Agreement (send new version to DCCI if necessary)***
- Conduct tests
- Document results
- Allow vendor to review/comment on test results
- Add vendor comments as appropriate
- Sign report and add to DCCI catalog

**** = Approach currently being evaluated***

Conduct Tests: General Process/Procedures

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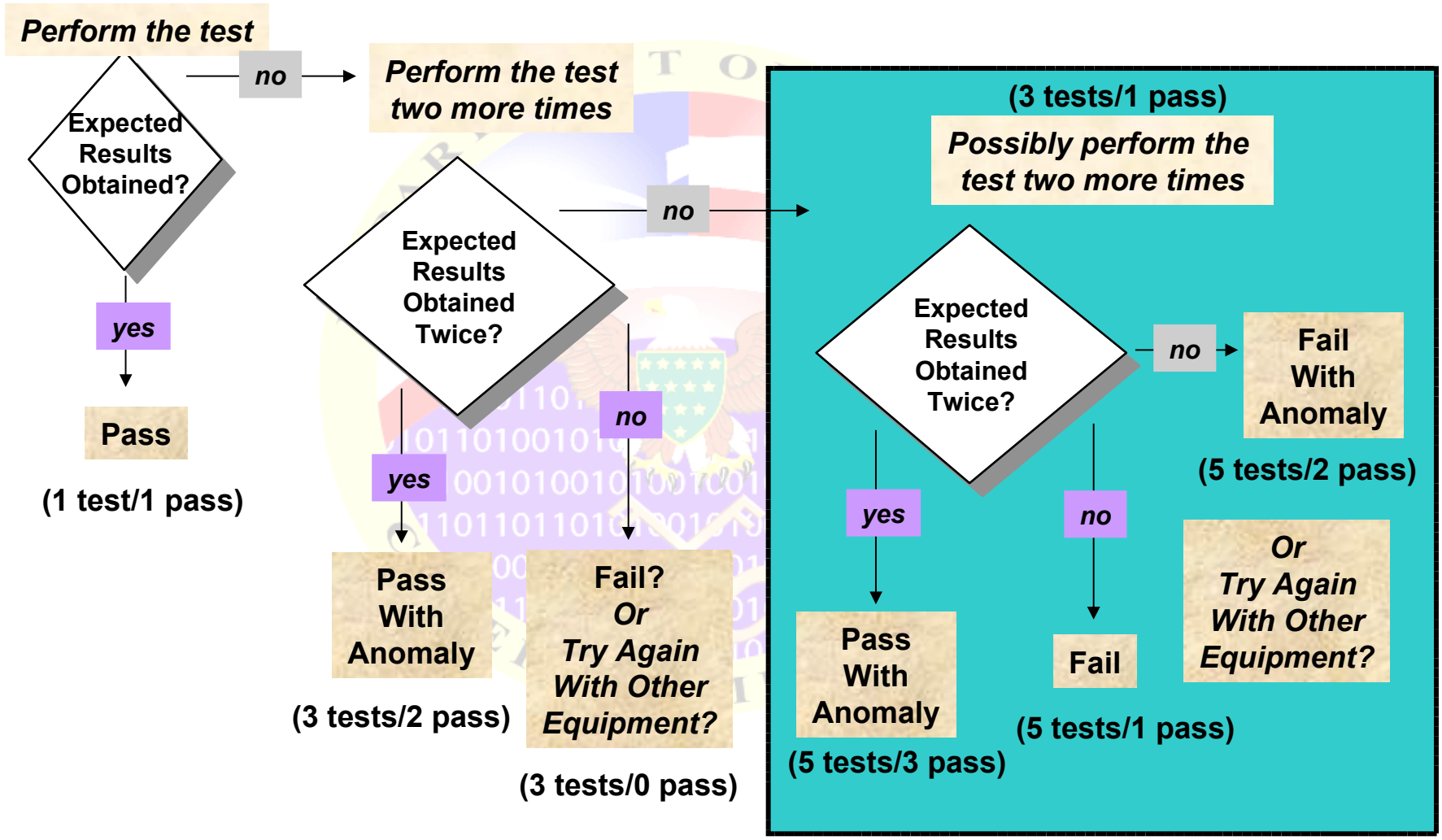

Sample Findings

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- Some products perform as advertised
- Sometimes advertised features/capabilities do not work as expected
- Platform dependencies
  - Product works on some platforms, not on others
- Hard drive dependencies
  - Some products cannot access very large drives
  - Some products have problems reading from/writing to relatively small drives

Word of Advice: Use Products That Provide Sector Counts!

T&E Limitations

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- Testing does not guarantee a product will work
  - Cannot always exercise all features and capabilities
  - Cannot test on all platforms
  - Can only test with equipment that is available
- Testing performed on particular product version / release

Does not tell you whether you should or should not use a product!

Current State

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- Many products / few testers
  - Need more test organizations
  - Formal testing done at NIST, DCCI, AFRL, FBI – *others?*
  - Informal testing done by some
    - Processes/procedures uneven, inconsistent, and fragmented
- No central repository for test reports
  - Users do not have ready access to all reports
  - Reports not developed to meet minimum standard
    - Repeatable
    - Understandable
    - Easy to interpret
- No message board for community discussion of test results

Next Steps

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- Contact DCCI if interested in performing formal testing
- Share test procedures
- Investigate whether DCCI Web site could serve as a repository for test reports (with links to other sites)
  - Currently DCCI Web site contains product descriptions
  - DCCI is looking into providing access to reports using login vice using email to request the report
- Investigate feasibility of message board
  - Facilitate discussion of reports
  - Login to restrict access

Contact Information

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DoD Cyber Crime Center

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QUESTIONS ?