Collaborative Expedition

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Workshop

OPEN Technology Development

Transparent Acquisition Marketplace for Increased Agility with OTD

DEPARTMENT OF DEFENSE · UNITED STATES OF AMERICA

OPEN SOURCE SOFTWARE INSTITUTE

12 Dec 2006
NSF - DC

Playing by the Rules:

Acquisition and Implementation of Open Source Programs in Government IT Environments

program example:

Securing FIPS 140-2 Validation for OpenSSL

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Program Objective:

- **Enable usage of OpenSSL within DoD environment**
- **OpenSSL - *"secure socket layer"***
- ***(STANDARD) The OpenSSL software is the basis of many, perhaps the majority, of all validated software cryptographic products,..***
- ***(VENDOR PARTICIPATION) We know from the high level of vendor interest that the validated OpenSSL library will rapidly be incorporated into a wide range of both commercial and open source software, greatly expanding the availability of suitable validated products.***
- ***(ECONOMICS) Since each FIPS 140-2 validation can take many months and $50,000-$150,000 in external fees alone, the savings in both time and money will be substantial. Even where acquisition costs are not a concern the availability of suitable validated cryptographic products has been a problem.***

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Acquisition Policy Issue:

- **NSTISSP No. 11**
  - National Security Telecommunications and Information Systems Security Policy No. 11
    - *(7) Effective 1 July 2002...acquisition of all COTS IA and IA-enabled products...shall be limited only to those which have been evaluated and validated...(Common Criteria, NIAP, FIPS 140-2)*
    - *policy mandate, defines business practices*

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Players:

- **Government**
  - DoD/DMLSS (END USER)
  - Crypto Management Validation Program (CMVP)
    - NIST/CSE (CERTIFICATION BODY)
- **Vendors/Suppliers**
  - HP, Secure Computing, OSSI (DEVELOPERS)
    - OpenSSL Group
  - "unnamed vendor(s)" (OPPOSITION)

July 1, 2002
NSTISSP

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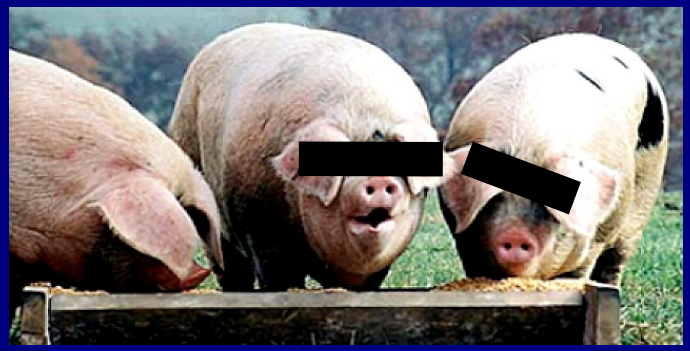
What's at Stake?

- Only validated products are allowed for acquisition
- Validation is managed by CMVP
- Conducted by 12 certified labs
- Paid for by vendor
- *Closed review system*



What could possibly go wrong?

July 1, 2002
NSTISSP

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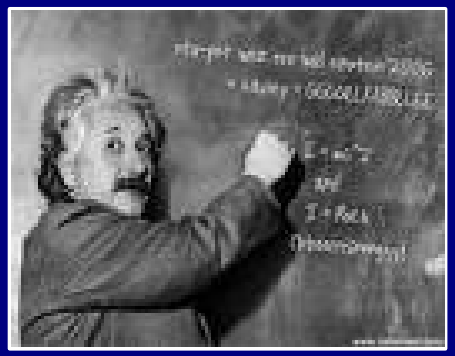
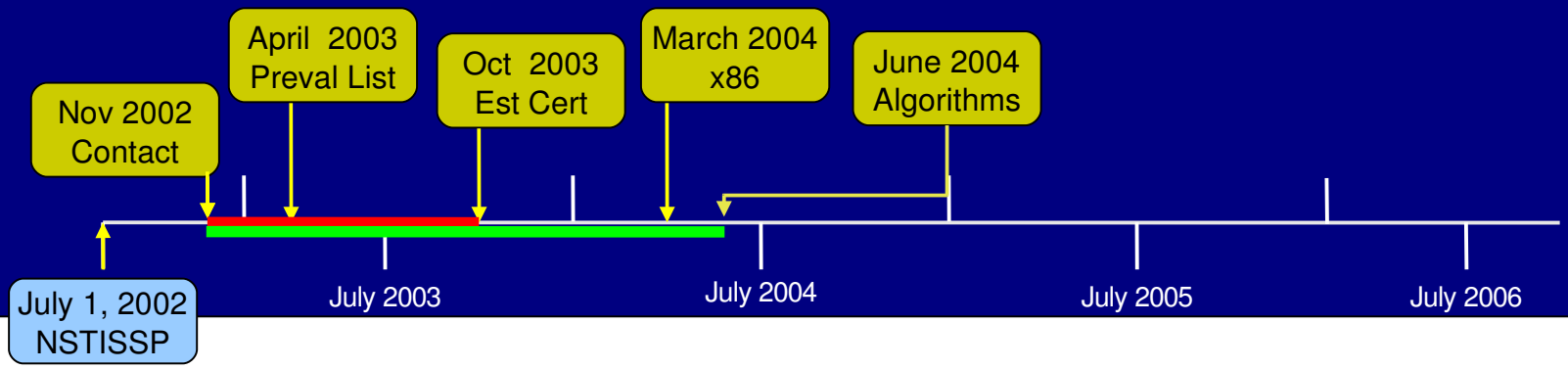
How it's supposed to work:

- **Original Program Timeline**
  - Initial contact by DMLSS (Nov 2002)
  - Contract with OSSI (Feb 2003)
  - Engage Lab (April 2003)
  - On CMVP preval list (April 2003)
  - public announcement (April 2003)
  - Estimated Completion Date (Oct 2003)
  - Expand scope to include x86 (March 2004)
  - Algorithm certificates awarded (June 2004)





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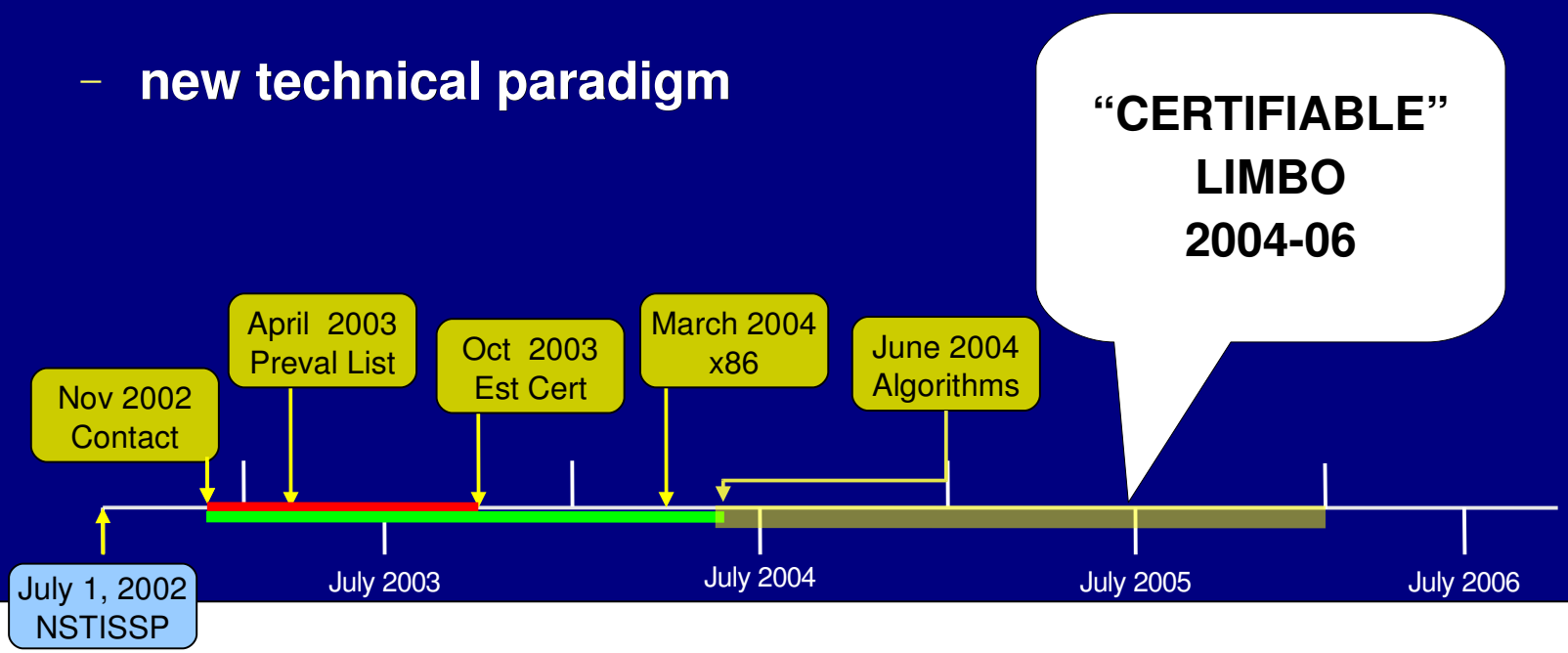
Upsetting the Applecart:

- You can't do that...!
- Open Source Dev Model
  - Pro's: open & transparent
  - Con's: open & transparent
- Technical/Certification Status Quo
  - new technical paradigm



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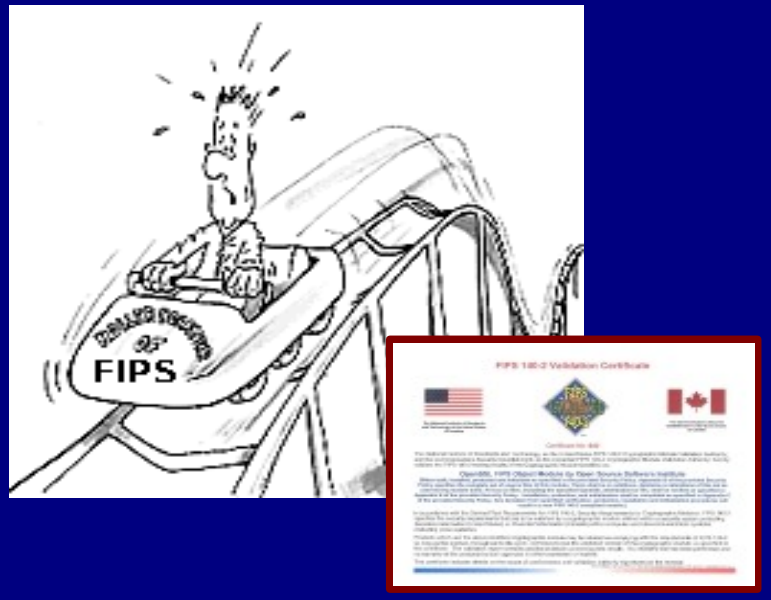
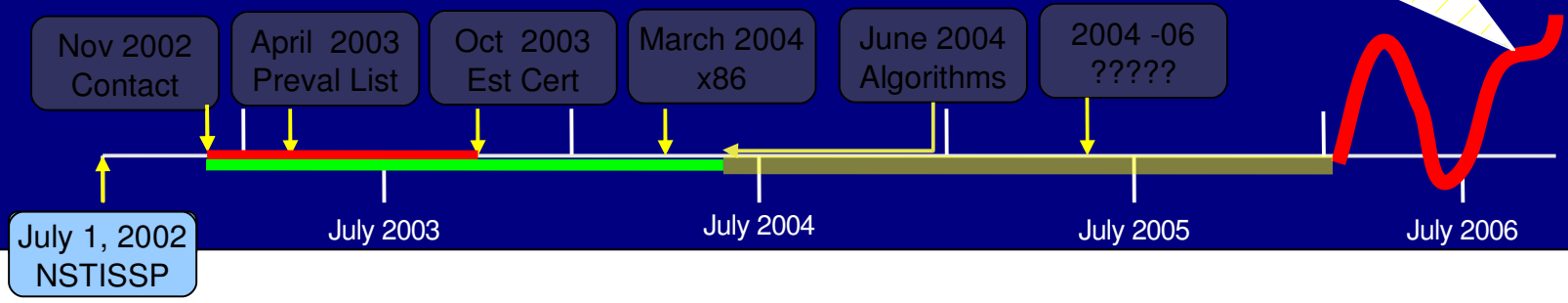
PROGRESS: *of sorts*

- **January 2006**
  - Validation Awarded
  - Rejected
- **MARCH 2006**
  - VALIDATION AWARDED
  - Certification 642
- **June 2006**
  - Revoked (oops, mistake...)
  - Re-instated, but "NOT AVAILBLE"



CURRENT STATUS
resubmitted to CMVP



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Status – Lessons Learned

- Process Should be OPEN and TRANPARENT!
- Open Technology Development (OTD)
  - strategic roadmap
  - U.S. Navy open Architecture & OSS Policy (pending)
  - OS Joint Task Force (OSJTF)
  - OTD Working Group
    - govt
    - industry
    - system integrators

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Additional Info

www.oss-institute.org

OpenSSL Validation Update List