Information Security Standards

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Agenda

- Background and Philosophy
- The ISO/IEC 15408 (Common Criteria) Standard
- The ISO/IEC 17799 and BS 7799-2 Standards
- Conclusions

Background & Philosophy

Background

- US Orange Book (1985) → secure OS
- European ITSEC (1991) → any secure product
- Common Criteria (1998)
- Various codes of practice for IT systems (1987-date, e.g. German Baseline, COBIT, NIST Handbook and BS7799)
- 7799 successful because it tackles information, not just IT, and deals with *security management*

Philosophy

- Product Certification:
  - *Products that can enforce security*
  - *Demonstrate product complies with specification and no obvious vulnerabilities*
  - *Rules for distribution and start-up*
- System Accreditation:
  - *People are non-deterministic*
  - *Need to be able to detect events*
  - *Dynamic Risk Management – business risks*

The ISO/IEC 15408 (Common Criteria) Standard

ISO/IEC 15408

- **Part 1 - Philosophy**
- **Part 2 – Catalogue of generic IT *security functionality***
- **Part 3 – Catalogue of IT *developmental assurance* components**
- **CCRA Evaluation and certification scheme**

Common Criteria Approach

Protection Profile (PP)

What the users want, e.g. for Visa, MasterCard etc, it is the SCSUG Protection Profile

Security Target (ST)

The vendor's claims

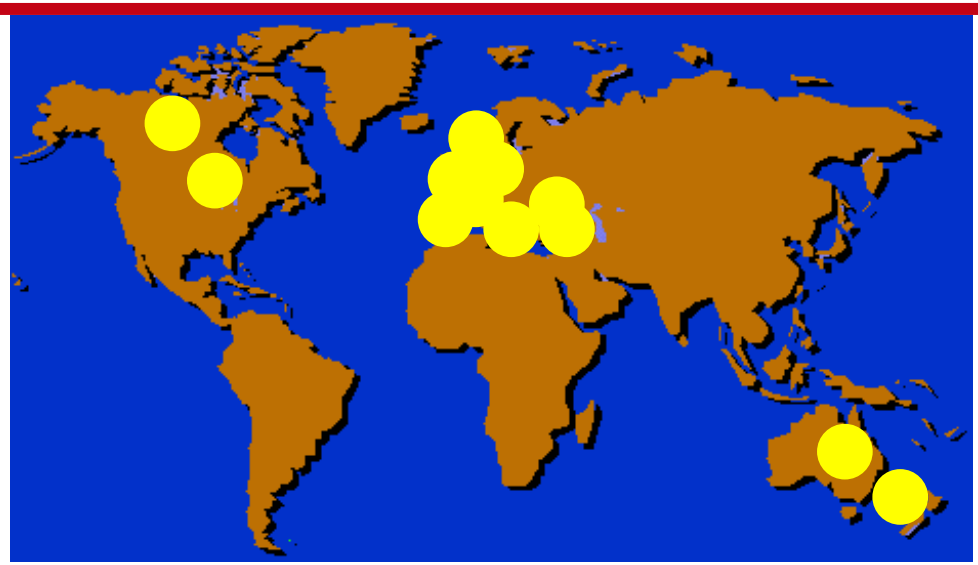
Evaluation (using the Common Evaluation Methodology)

Design documents

Target of Evaluation (TOE)

The product itself

CCRA Participants



- Australia & New Zealand
- Austria
- Canada
- Finland
- France
- Germany
- Greece
- Hungary
- Israel
- Italy
- Netherlands
- Norway
- Spain
- Sweden
- Turkey
- UK
- USA

Assurance

- 7 levels of confidence that TOE claims are correct and cannot be bypassed, deactivated, corrupted or otherwise circumvented, EAL0-7
- Another factor is strength of function, B, M, H
- Evaluation says what it was on the day
- Assurance maintenance is hard:
  - *Do you want an old version that is certified?*
  - *Do you want the latest version, but it isn't certified?*

Application to “systems”

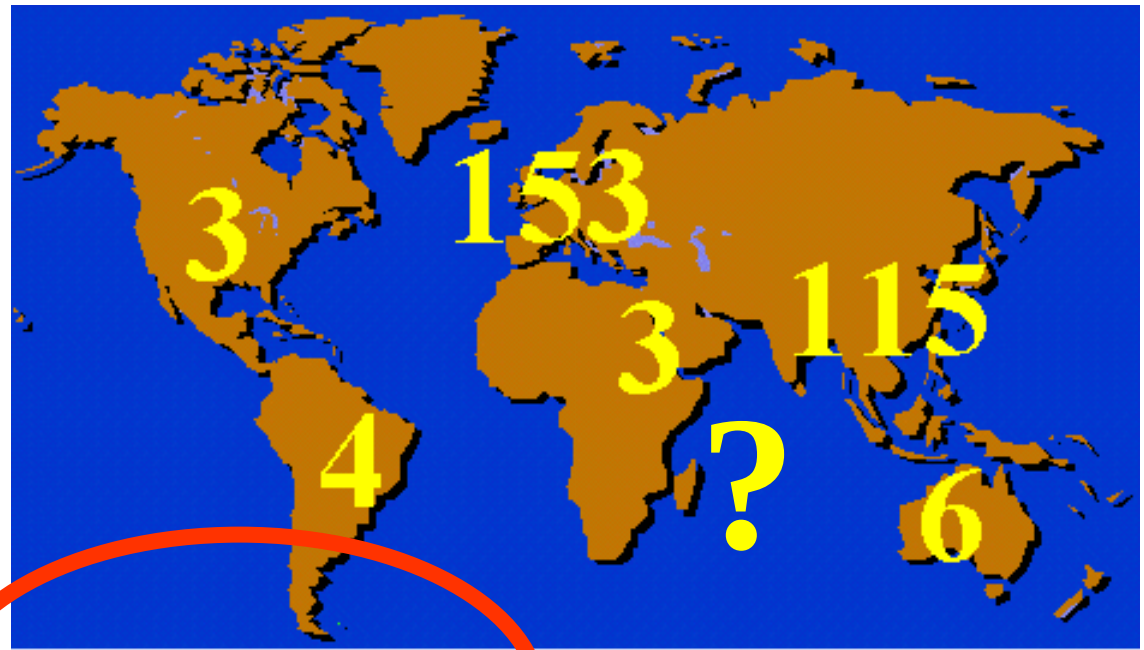
- Debated in Track E, ICCC4 in Sweden 9/03
- What is a system? (Willie List)
- CC dependent on product development methodology – might not work well with applications
- Overall conclusion: keep product certification separate from system accreditation

The ISO/IEC 17799 and BS 7799-2 Standards

ISO/IEC 17799 and BS7799-2

- **IS 17799 is a *supermarket of good things to do***
- **BS 7799 Part 2 is a *methodology of how to use IS17799 – e.g. let's party.* Part 2 creates an ISMS**
- **Certification is against Part 2 – *is the party OK?***

Worldwide uptake

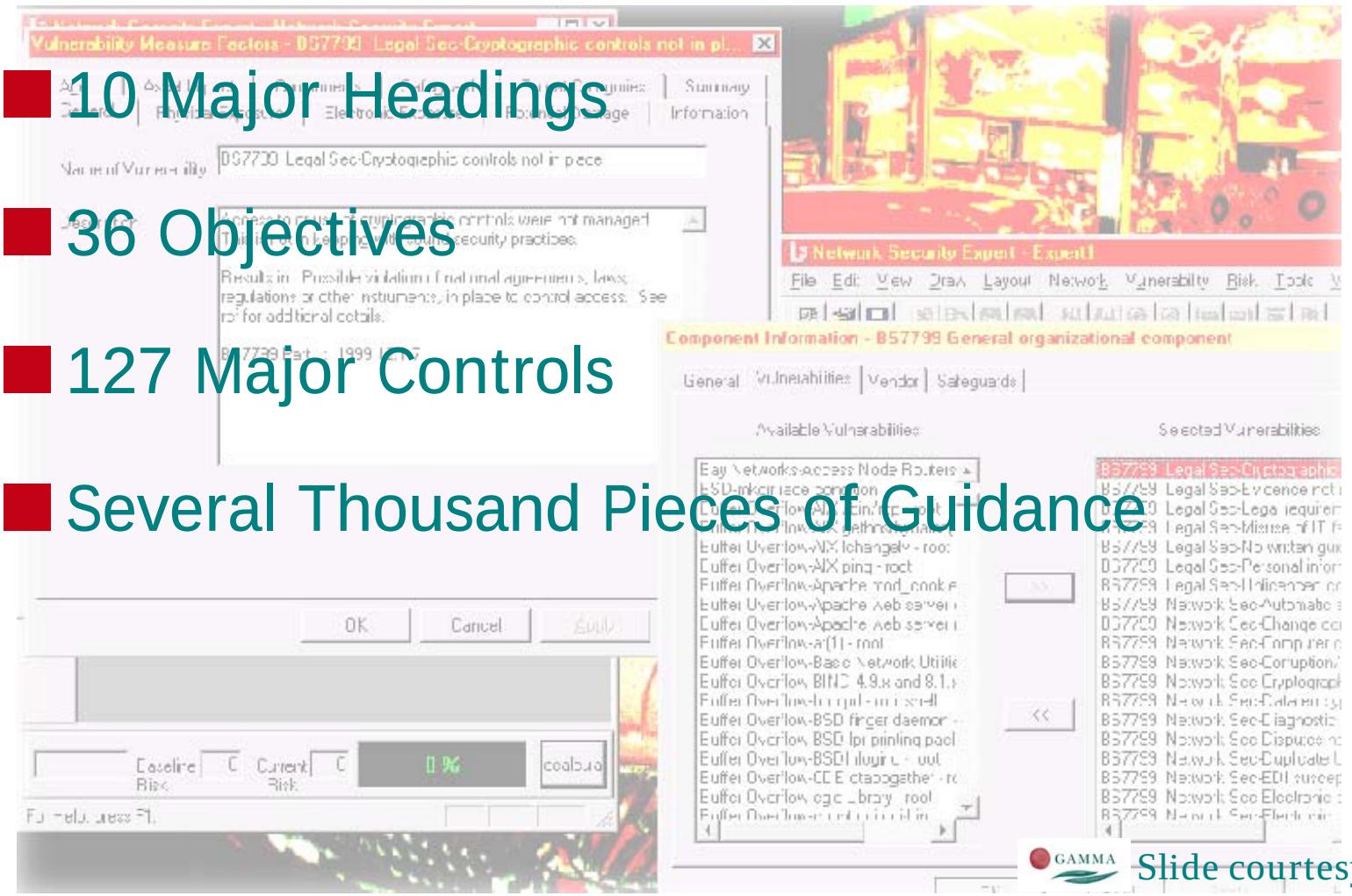


BS 7799-2 Registrations by Continent

(Click the picture for details)

ISO/IEC 17799:2000

- 10 Major Headings
- 36 Objectives
- 127 Major Controls
- Several Thousand Pieces of Guidance



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The 10 Major Headings

- Security Policy
- Security Organisation
- Asset Classification and Control
- Personnel Security
- Physical and Environmental Security
- Comms and Operational Management
- Access Control
- Systems Development and Maintenance
- Business Continuity Management
- Compliance

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Security Objectives

- Security Policy
- Security Organisatio
- Asset Classification
- Personnel Security
- Physical and Enviro
- Comms and O
- Access Control
- Systems Development and Maintenance
- Business Continuity Management
- Compliance

- Secure Areas
- Equipment Security
- General Controls

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Security Controls

- Security P
- Security C
- Asset Clas
- Personn
- Physical a
- Comms and Operation
- Access Control
- Systems Development and
- Business Continuity Manag
- Compliance

- Secure Areas
- Equipment S

- Siting
- Power Supplies
- Cabling
- Maintenance
- Off-premises
- Disposal/reuse

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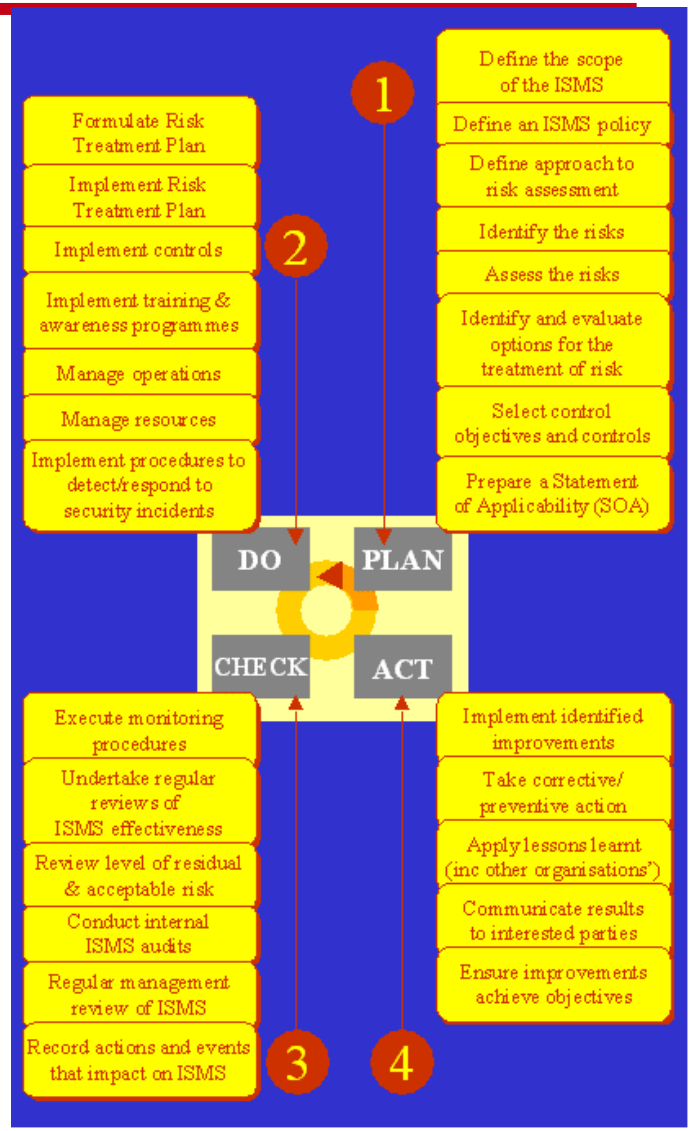
BS 7799-2:2002

- MS Standard - Explains how to apply ISO/ IEC 17799
  - *Build an ISMS:*
    - ✓*Management Structure*
    - ✓*Define Scope & ISMS Policy*
    - ✓*Risk Assessment*
    - ✓*Risk Treatment & selection of controls (SOA)*
  - *Deploy, monitor, maintain and improve the ISMS*
- Certification is against Part 2

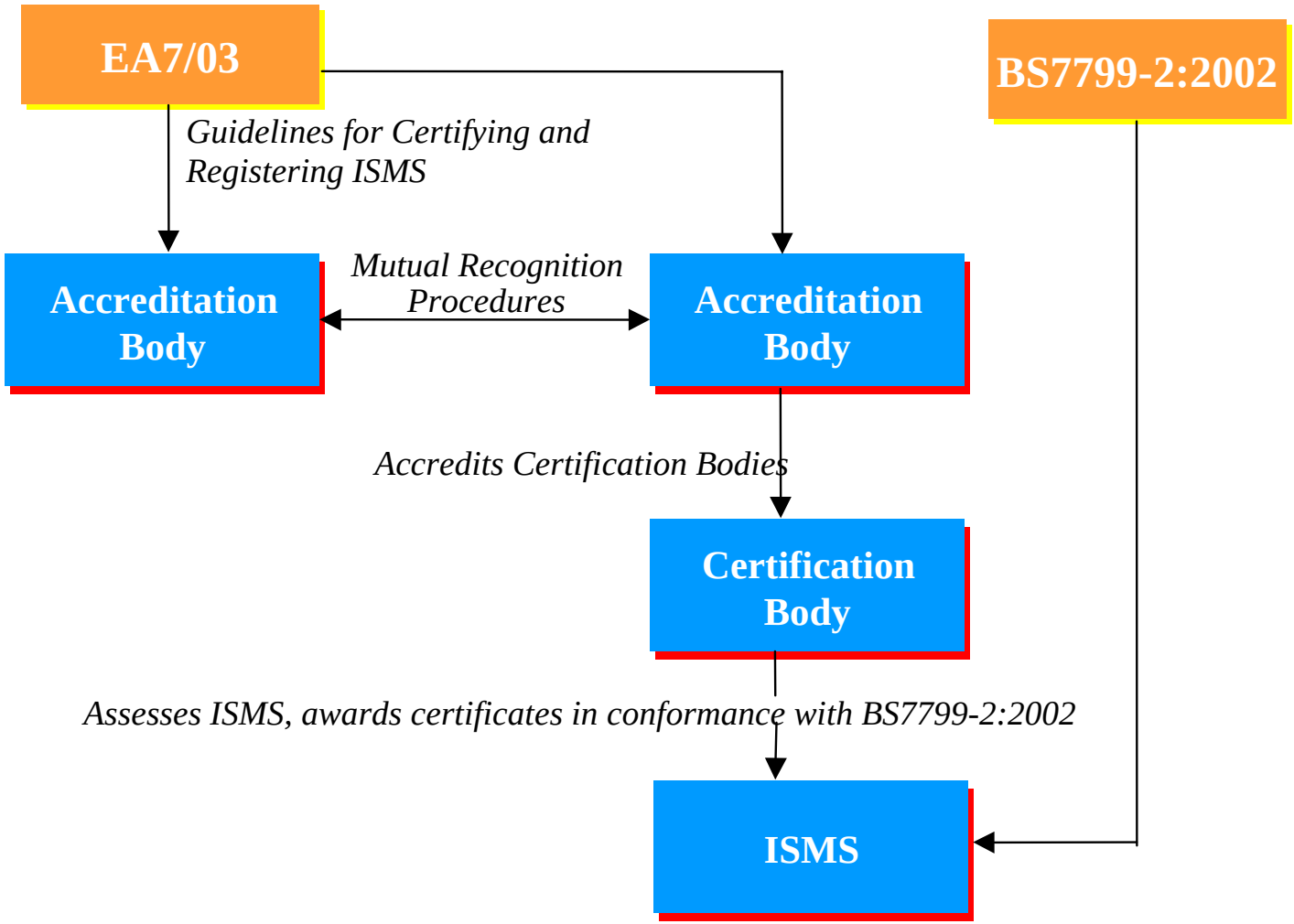


The Power of the ISMS

- Not just PLAN and DO, but CHECK and ACT
  - *Routine Checking*
  - *Self Policing Procedures*
  - *Learning from Others*
  - *Intrusion Detection*
  - *Incident Response*
  - *Internal ISMS Audit*
  - *Management Review*
  - *Certification Audit*

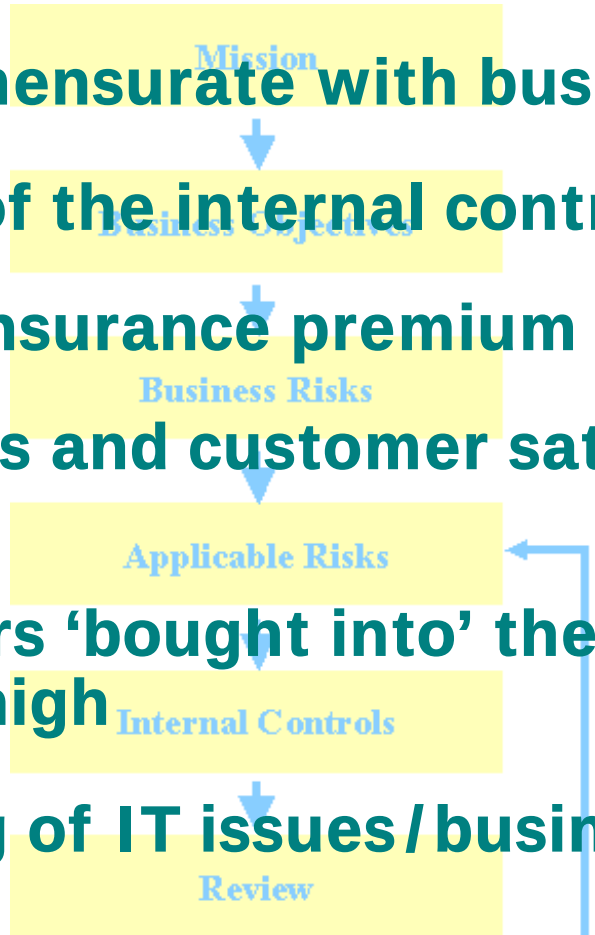
Continually checking the effectiveness of the ISMS

Certification



The Real Benefits

- Security commensurate with business needs
- Integral part of the internal control system
- Reduction in insurance premium paid for project
- New customers and customer satisfaction has improved
- Senior directors ‘bought into’ the ISMS; Staff awareness is high
- Understanding of IT issues/business risks has improved
- Security has improved; the business has improved



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Conclusion

Conclusion

- All business's need an effective internal control system that is commensurate with business needs
  - *An ISMS (BS7799-2:2002) is part of the ICS and does its job very well*
- Product certification is a secondary issue
  - *No point in having a certified product if you cannot detect when it has failed or is misused!*
- Best therefore to deploy 7799 first and then use CC, if there is risk that an evaluated product helps mitigate.

Thank you for listening