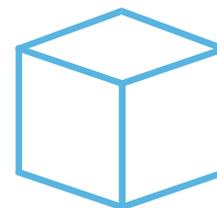


New Approach to eGovernment Security

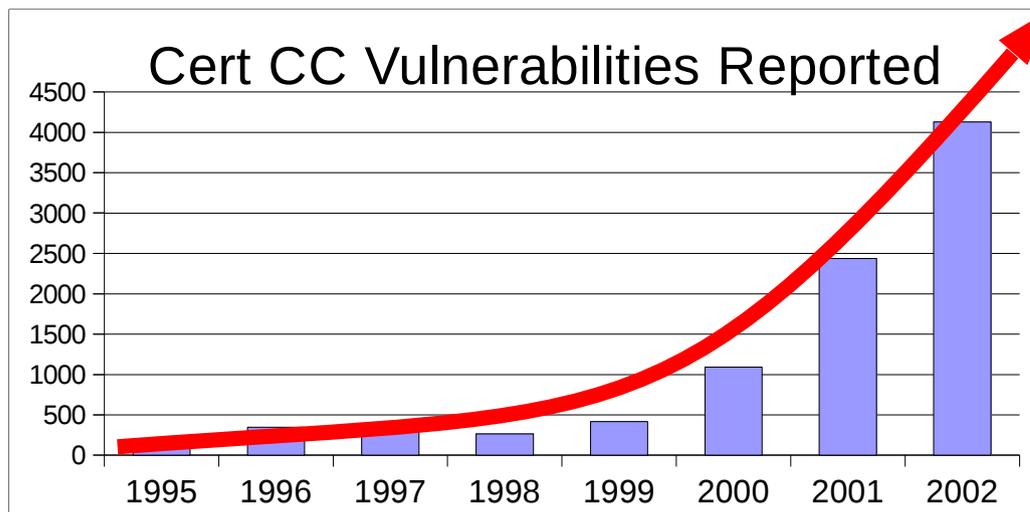
Radovan Semančík



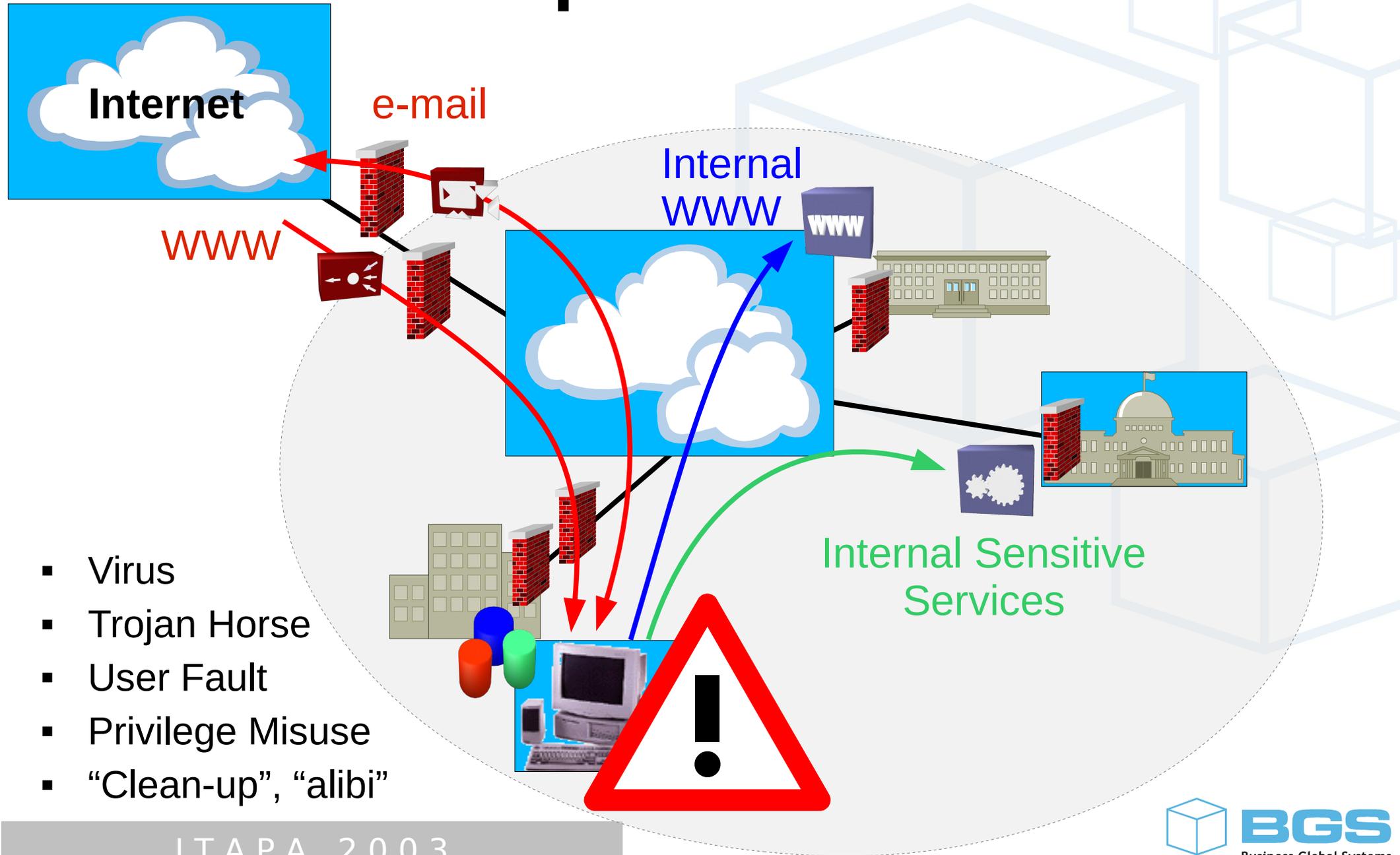
BGS
Business Global Systems

(In)security

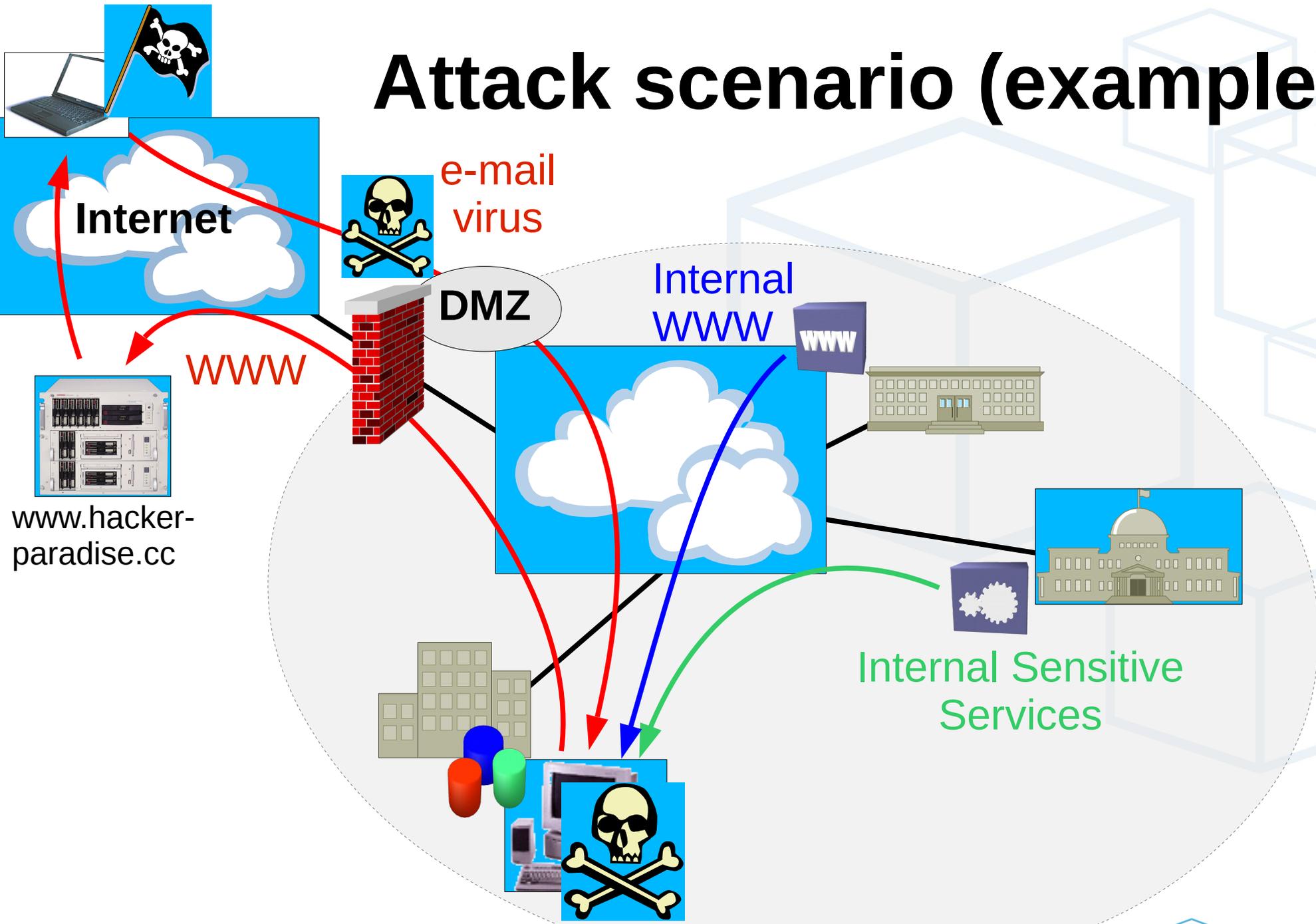
- K. Brunnstein: About Inherent Insecurity of Contemporary ICT Systems, ...
- Computerworld: Windows Update Patch Process Faulty, Expert Says
- B. Schneier: "This shows that the notion of patching doesn't work"



Example: User PCs



Attack scenario (example)



www.hacker-paradise.cc

WWW

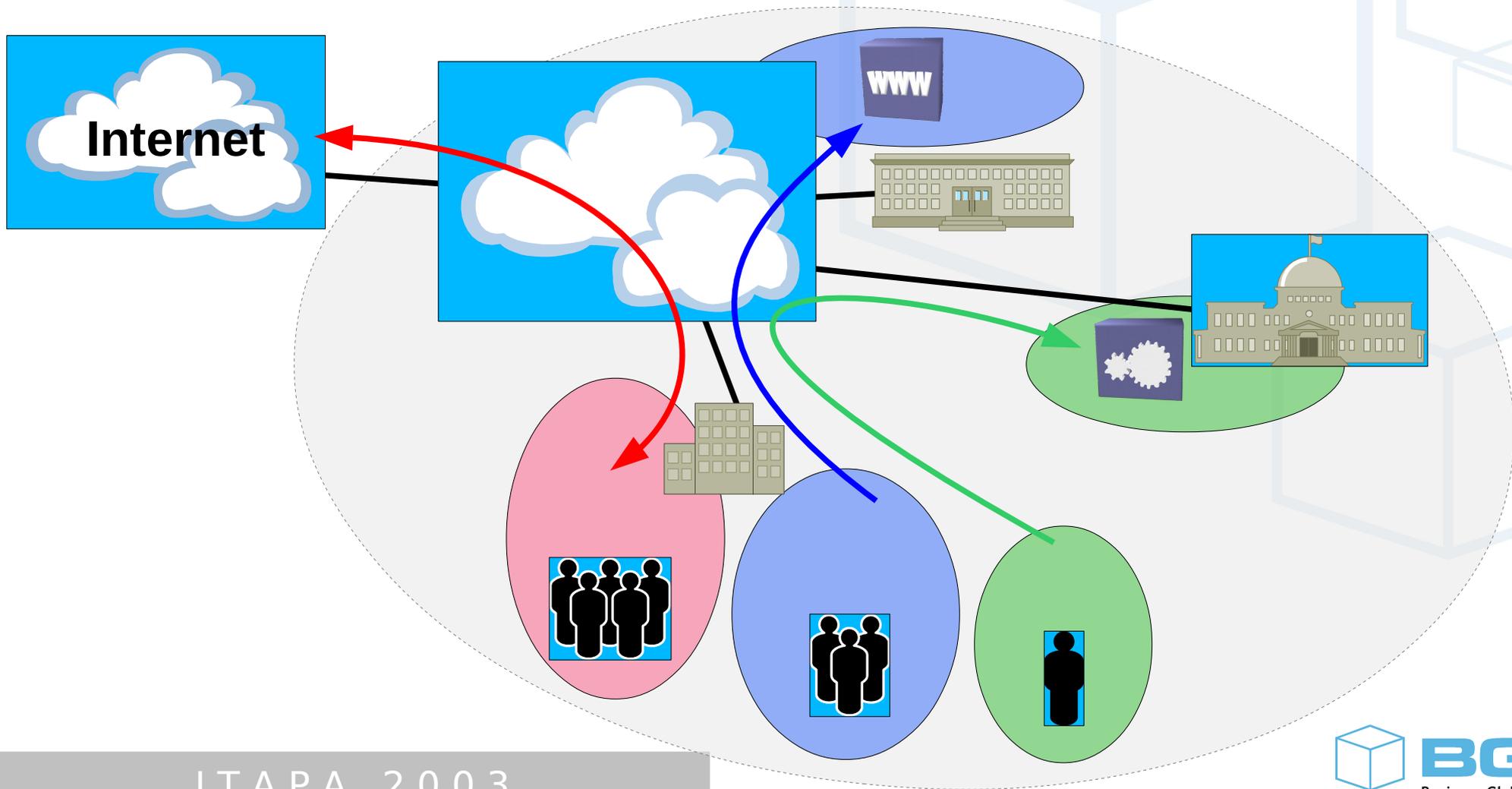
DMZ

Internal WWW

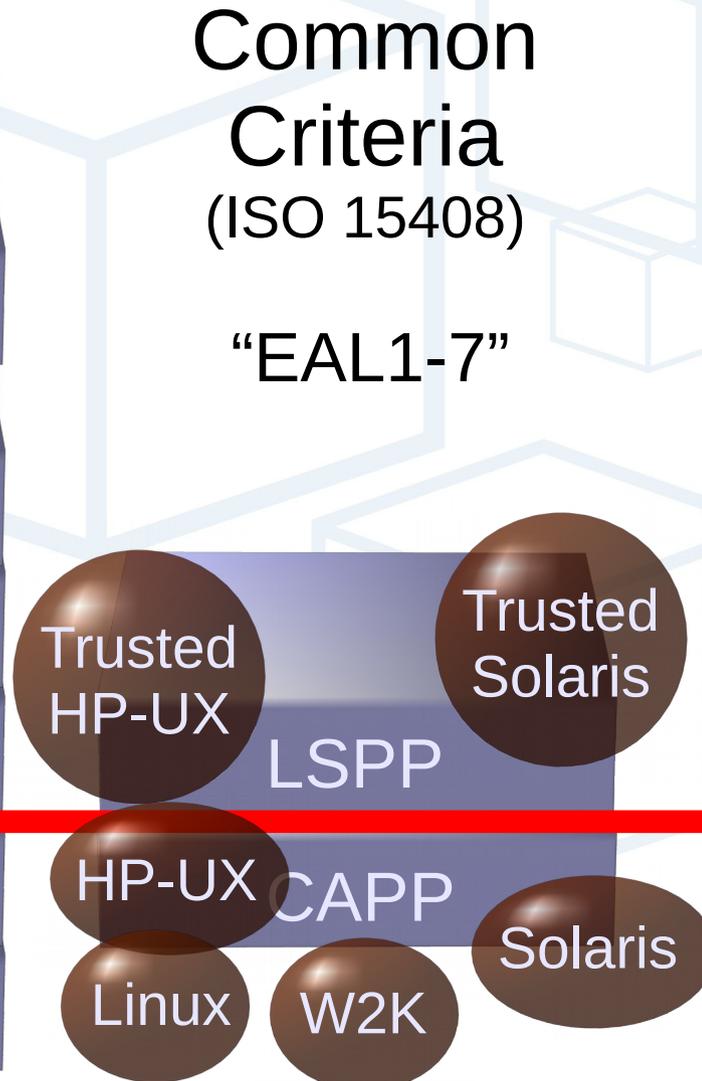
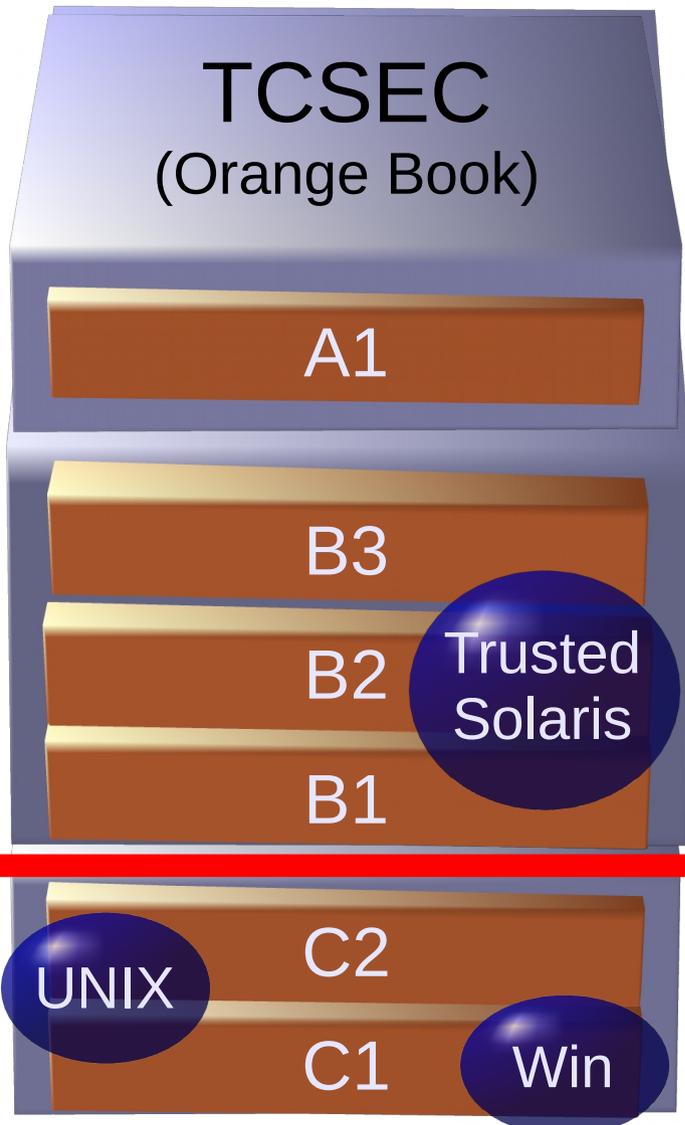
Internal Sensitive Services

“Divide and Conquer” Solution

Total network and user separation



Common Criteria (ISO 15408)

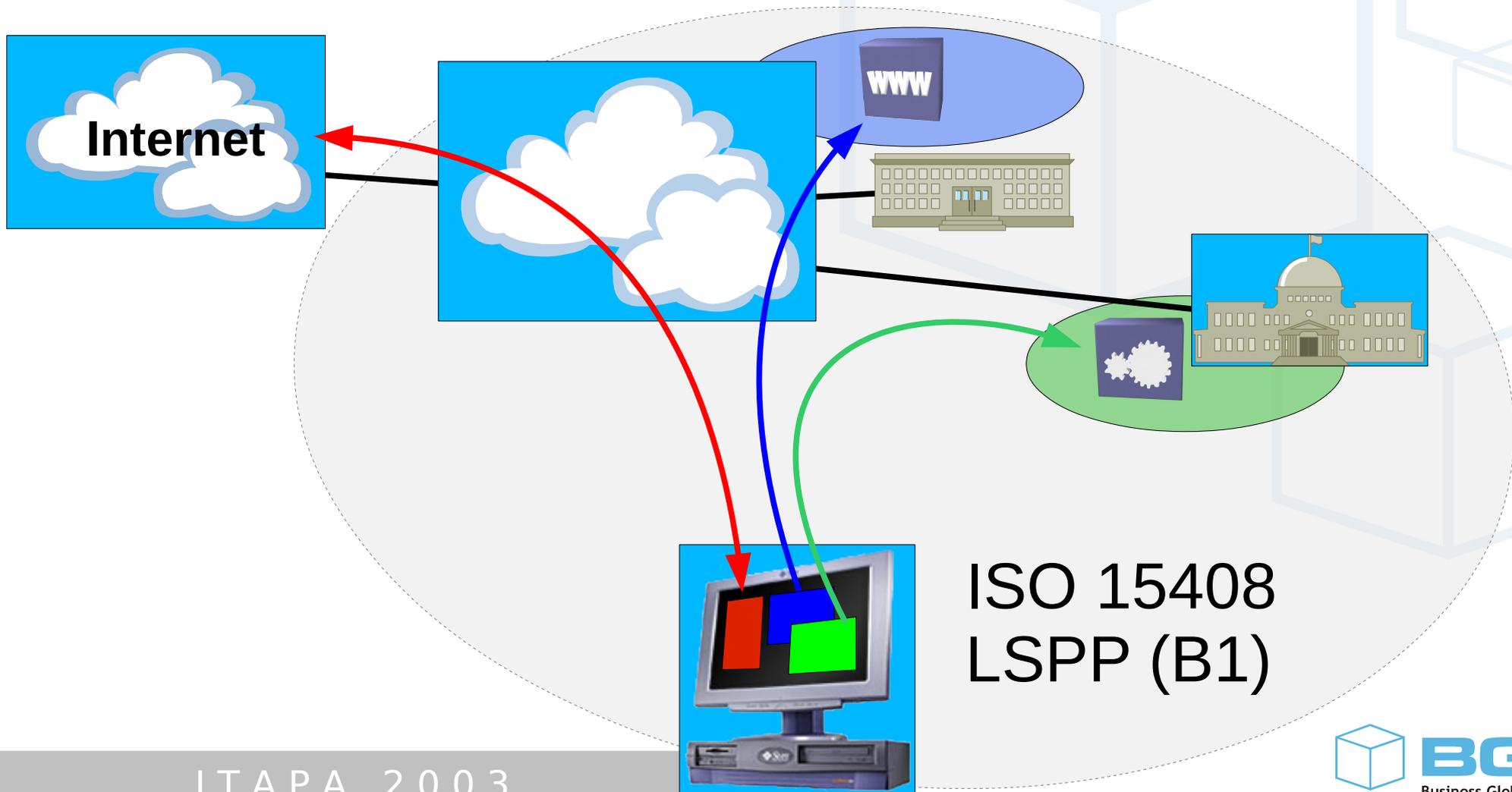


MAC

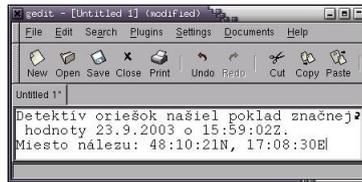
DAC

“MLS” Solution

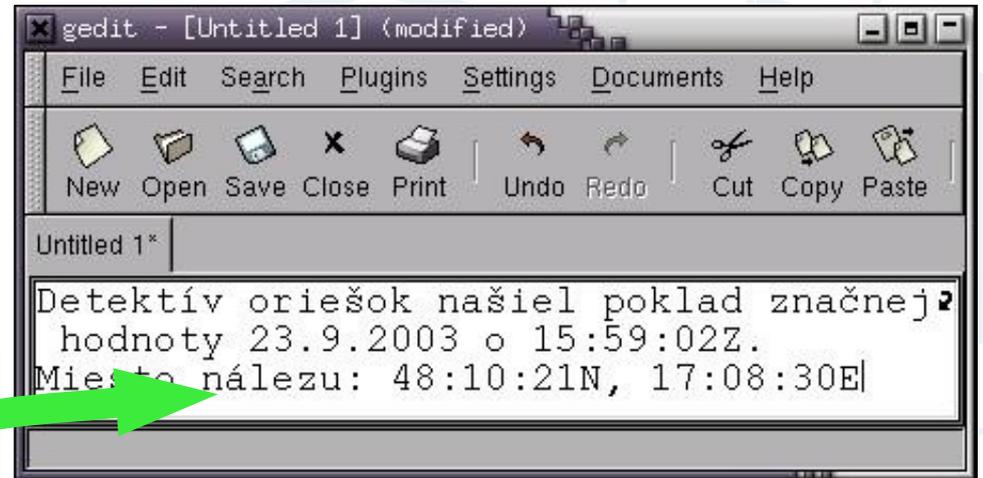
Multi-Level Secure Operating Systems



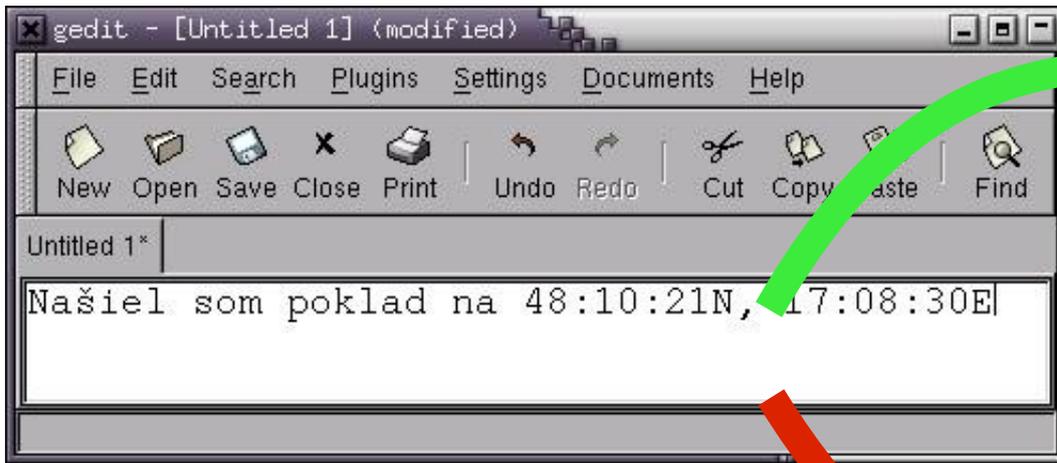
Multi Level Security: GUI



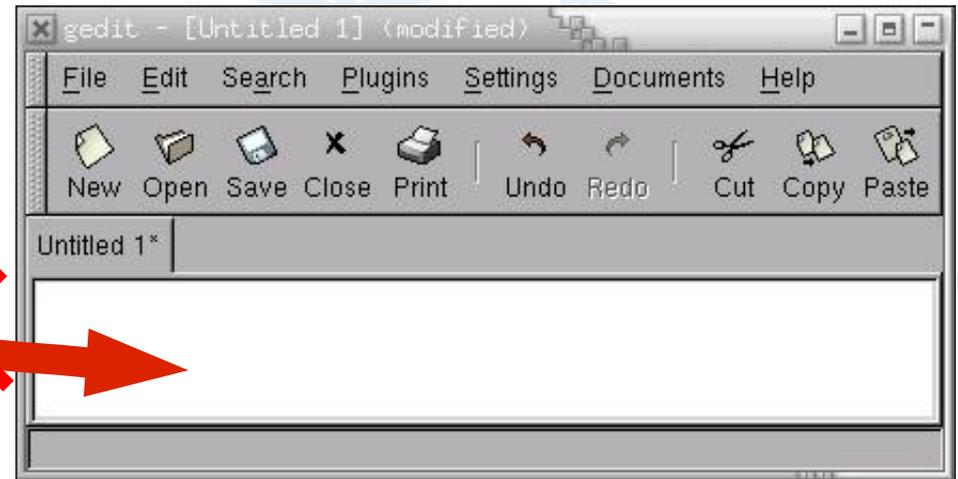
Top Secret [Alpha]



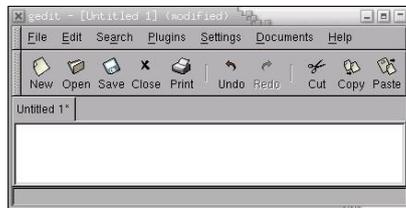
Secret [Alpha, Bravo]



Confidential [Alpha]

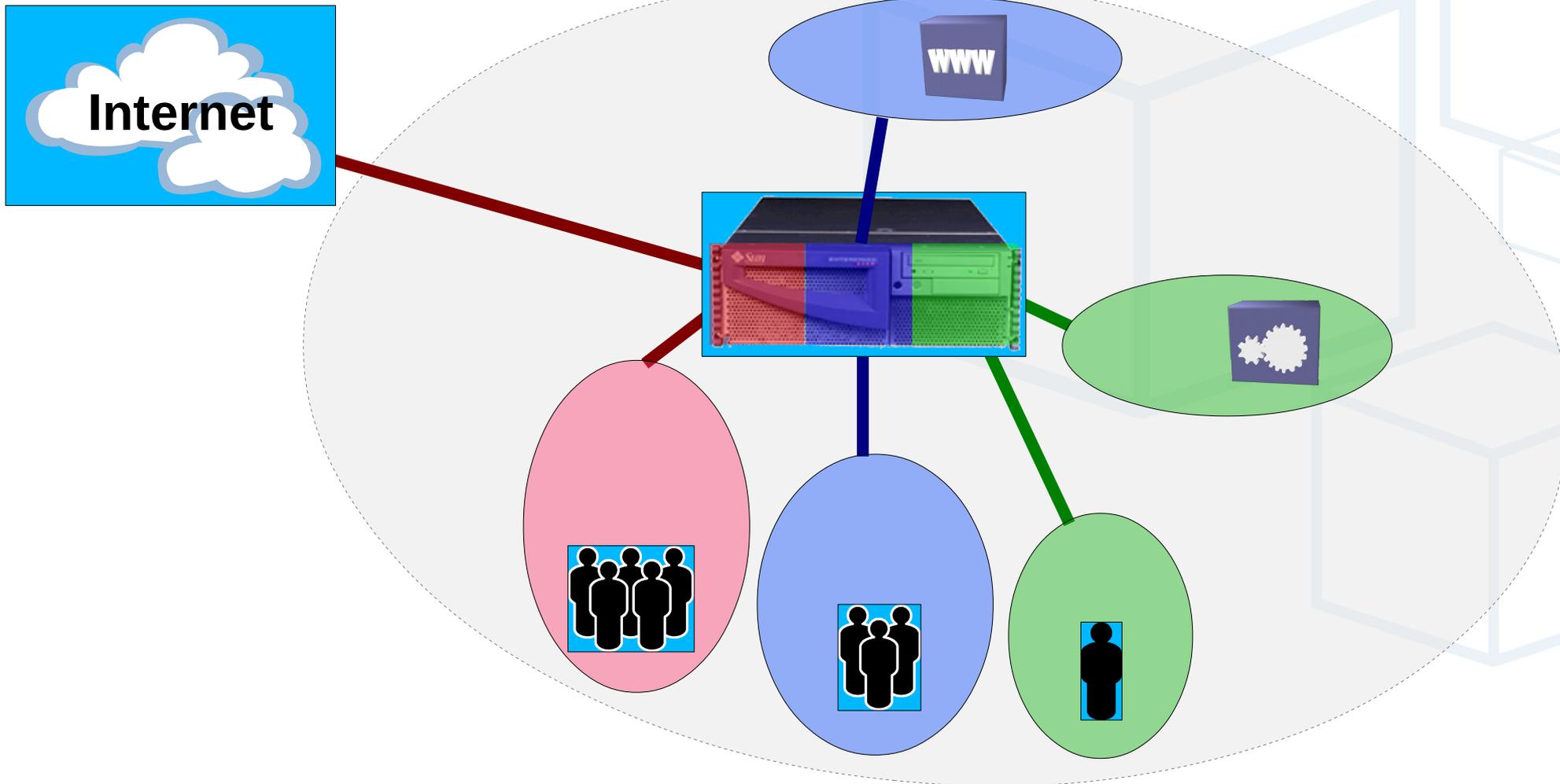


Unclassified [Alpha]



Confidential [Bravo]

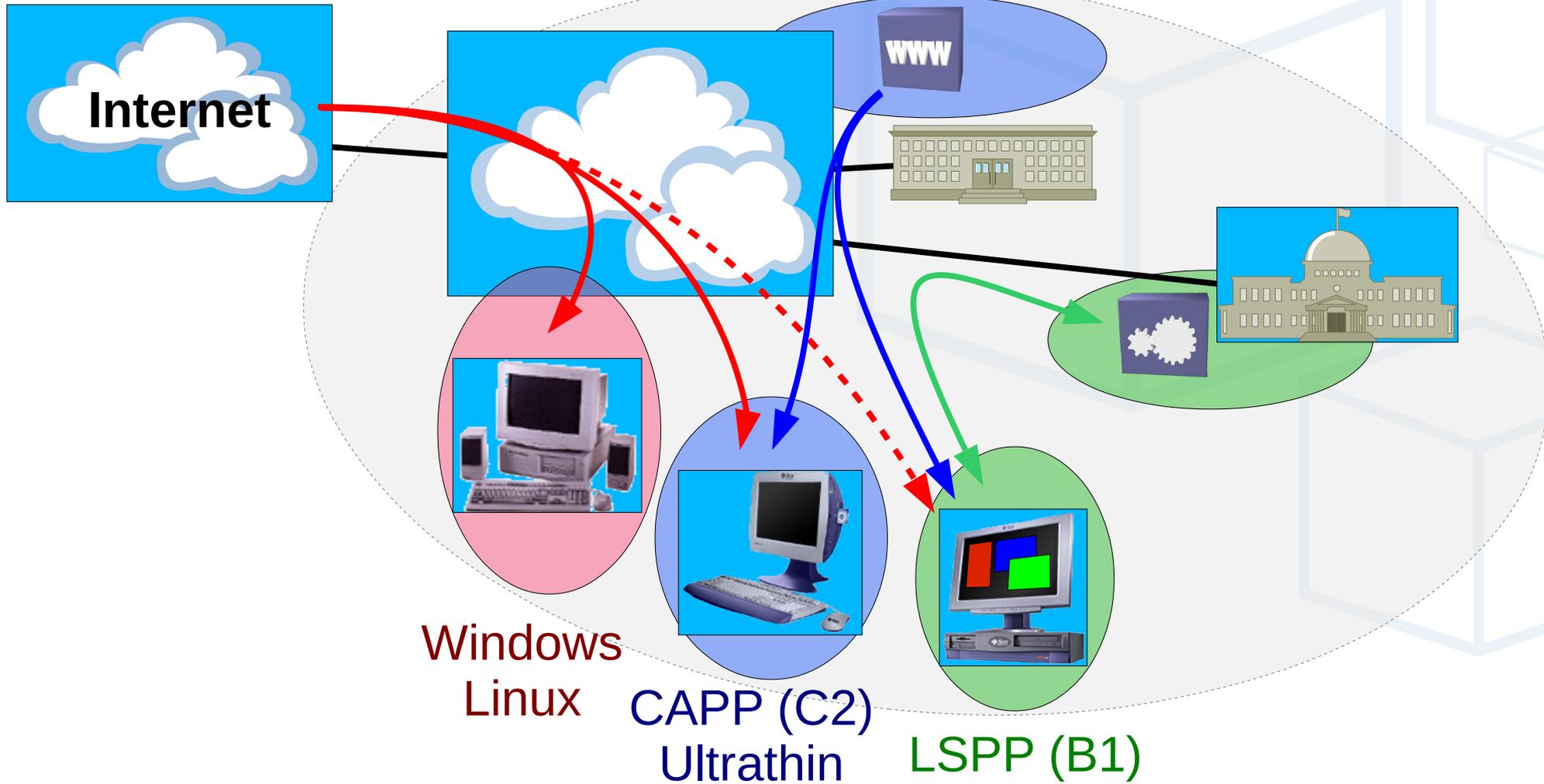
Multi Level Security: Network



Trusted Solaris

- ISO 15408 (CC) Certification, LSPP/EAL4 level
- Multi Level Security at the OS Level
- Information Flow Control model (Bell-LaPadula)
- Security Levels
 - Restricted, Confidential, Secret, Top Secret
- Compartments
 - OPS, INTELI, ENG, ... Alpha, Bravo, Charlie, ...
- Secure Desktop Environment
 - Copy&Paste, Trusted Path, ...

“Ultrathin” Hybrid Solution



Ultrathin Clients

- Client: display only, no process execution
- Hot desking, mobility
- Client keeps no data, no hard drive
- No need to manually upgrade clients
- Centralized management
- Security: no viruses, controlled software



Sun Ray Family

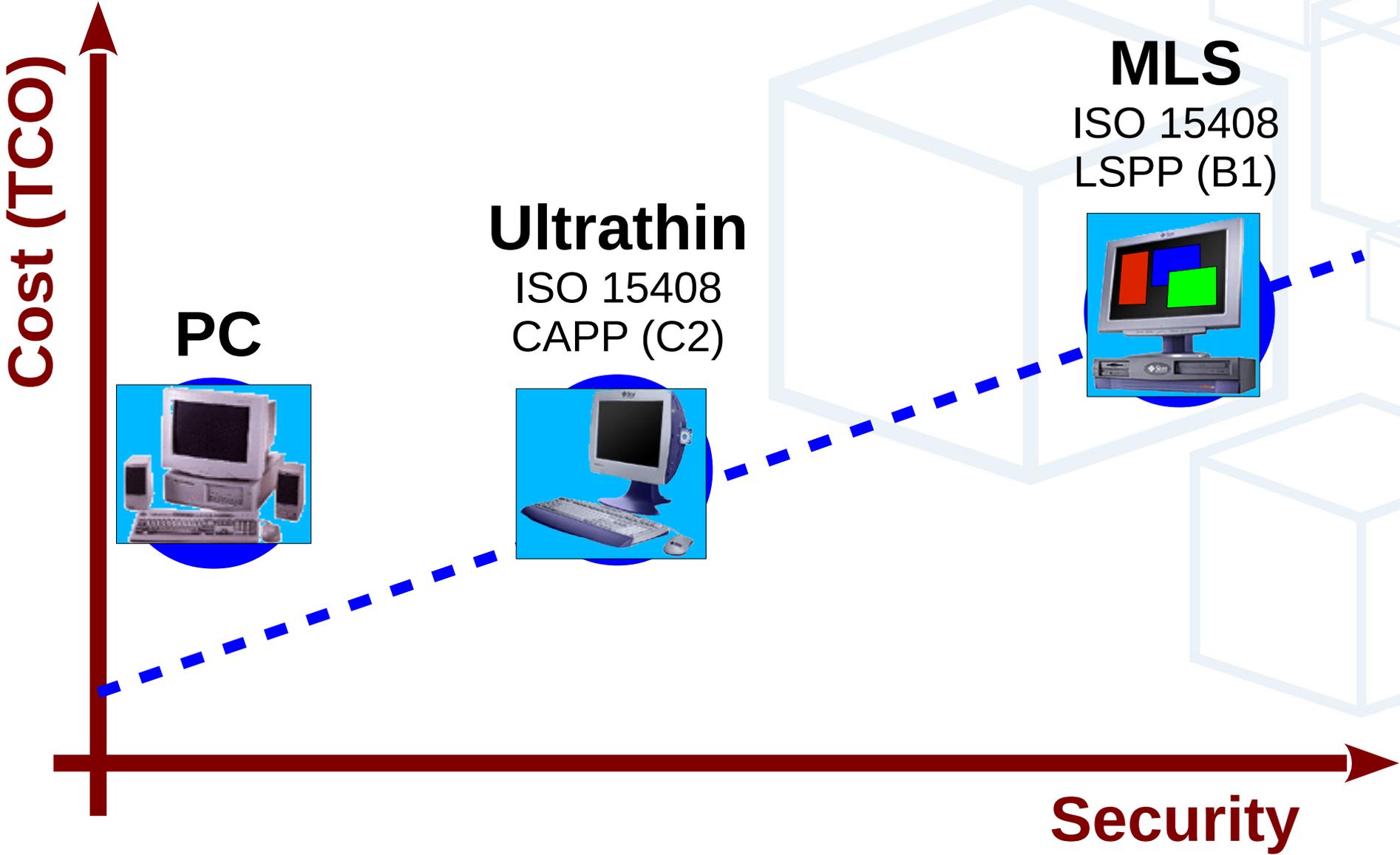


Sun Ray 150

Sun Ray 1

Sun Ray 100

Rough Security Assessment



Conclusion

- Common Users
 - Public Information
 - Ordinary PC + Windows/Linux
- “Power” Users
 - Protected Information
 - Ultrathin Client + Secure CAPP OS (e.g. Sun R)
- Special Users
 - Sensitive/Confidential Information
 - “Trusted” LSPP OS (e.g. Trusted Solaris)



Questions



Thank you

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