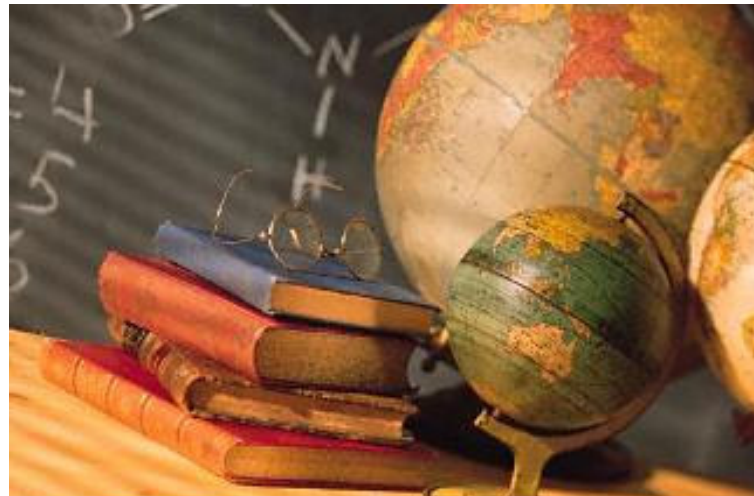




SAM Standards: A Review of ISO 19770-1 and 2



David Déry



Agenda

- **SAM problems**
- **Looking for guidance**
- **ISO: the organization**
- **ISO: the SAM initiative**
- **ISO: The outcome: ISO/IEC 19770-1 and 19770-2**
- **Conclusion**
- **References**



SAM problems

- **Getting an invoice for a software license:**
 - **Is the software still in use?**
- **Several versions of a database on the same server:**
 - **Which ones are lawful and which ones are not?**
- **Two organizations are merging:**
 - **Which inventory management systems to keep?**

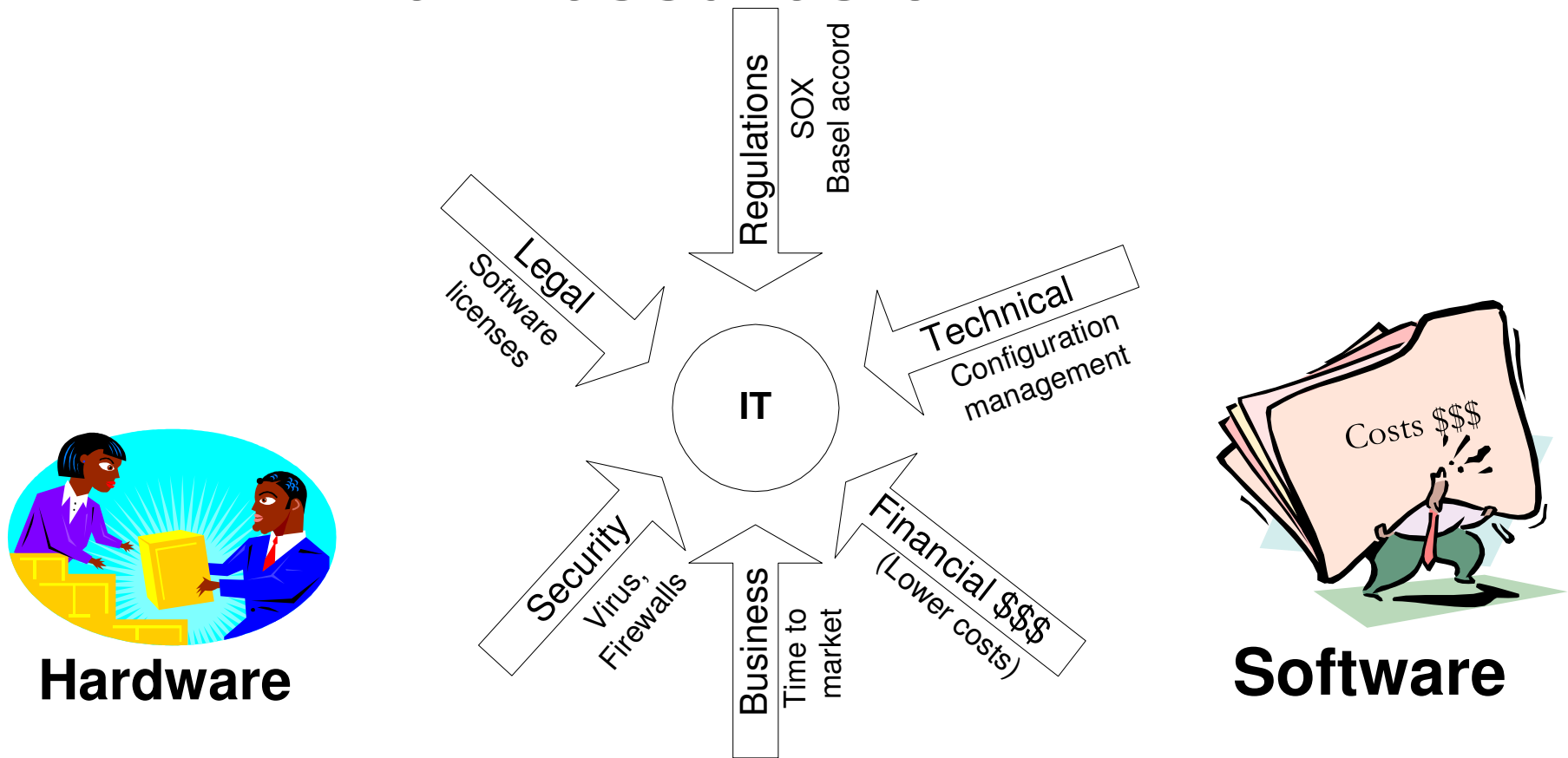


SAM problems

- **A software is purchased in a country and used in another one:**
 - **Which licence restrictions apply?**
- **An outsourcer manages the hardware and software :**
 - **Are the licences transferred to the outsourcer?**
- **Looking for a software vendor for SAM ?:**
 - **So many vendors & so few standards!**



The Pressures on IT





Looking for guidance

- **Market surveys**
 - **IDC study: Industry forecasts**
 - **ECP: SAM Survey Report (November 2005)**
 - **Gartner: research notes (2001-2003);**
 - **Opinions, key words; Repository tools, inventory/discovery tools, configuration management tools**
 - **Meta group (2000-2001): opinions and observations.**
- **Numbers provided without context**
- **Vocabulary varies in use and meaning**



Looking for guidance

- **Tool vendors**
 - **BSA : Asset Management Resources :**
<http://www.bsa.org/usa/antipiracy/Asset-Management-Resources.cfm>
 - **Microsoft best practices**
<http://www.microsoft.com/resources/sam/default.aspx>
- **Several functionalities:**
 - **Inventory, Software usage monitoring, Software License Management, Contract (Lease) Management, Automate maintenance tasks, Asset Management Repository, Auto discovery/discovery, Configuration Management, Repair History, Migration, Software compatibility, PC replacement ...**



Looking for guidance

- **Few books on this topic**
 - **SAM (IT Infrastructure Library Services)**
- **Some books provide some guidelines but most discuss tools**
- **Papers: mostly on source code**



Looking for guidance

- **ITIL – service development: 5 processes:**
 - **Service level management, Financial management for IT services, Capacity management, IT service Continuity management and Availability management**
- **ITIL – service support: 5 processes and 1 service:**
 - **Configuration management, Change management, Incident management, Problem management, Release management and the Service desk**



Looking for guidance

- **ITIL brings a common vocabulary to service development and service support**
- **ITIL certifies individuals but not enterprises**
- **In ITIL, Asset Management is a “recognised accountancy process”**
- **The SAM book from ITIL does not bring the same standardization level as service support and service development**

- **Can there be a standard on SAM to obtain a common vocabulary and understanding?**
- **Can certification be done at the enterprise level?**



What Is ISO?

- **ISO: International Standardization Organization.**
- **Identifies international standards for business, government and society and works in partnership with that sector**
- **The sector can include:**
 - **Agriculture and construction**
 - **Mechanical engineering**
 - **Manufacturing and distribution**
 - **Information and communication technologies**



ISO and Software and System Engineering

- For Software and System Engineering, a specific committee:
JTC1 /SC7
- JTC1/SC7 has the following mandate, or terms of reference, from ISO and IEC:
 - Standardization of processes, supporting tools and supporting technologies for the engineering of software products and systems
- All strategic decisions are referred to the ISO members, who meet for an annual general assembly

Note: IEC : International Electrotechnical Commission was established in 1906

<http://www.jtc1-sc7.org/>



ISO and Software and System Engineering

☞ **Member bodies:**

- **Australia (SA) - Standards Australia**
<http://www.standards.org.au/>
- **Canada (SCC) - Standards Council of Canada**
<http://www.scc.ca>
- **Sweden (SIS) - Swedish Standards Institute** <http://www.sis.se>.
- **USA (ANSI) - American National Standards Institute**
<http://www.ansi.org>
- **United kingdom(BSI)-British Standards Institution**
<http://www.bsi-global.com>

<http://www.iso.org/iso/en/aboutiso/isomembers/MemberList.MemberSummary?MEMBERCODE=10>



ISO/SC7 History

- **1987 - formation of JTC1/ SC7**
- **1991 - publication of ISO/IEC 9126**
 - **Software engineering – product quality**
- **1995 - publication of ISO/IEC 12207**
 - **Information technology – software life cycle processes**
- **2000 - name changed to Software and System Engineering**
- **In 2004: 79 published standards**



Guidelines of the ISO SAM group (WG21):

- **Governance:**
 - **Policies, processes and procedures**
 - **Upper management buy-in**
 - **Roles and responsibilities of SAM manager must be formally defined**
 - **Budget assigned**
- **Formalize the process or it will be neglected**
 - **Just another file in the pile**



WG21 Approach : SAM Motivation

- **Define SAM**
- **Consider international constraints**
- **Produce a list of checklists for which compliance can be verified**
- **Help define the role of a SAM manager**
- **Outline interactions with other functions**



WG21 Approach : SAM Motivation

- **TAG would help the reconciliation process between licence and software**
- **Without process, interpreting data is awkward**
- **SAM process ensures we know why we collect data: it comes first**



WG21 Approach : 19770-1 and 19770-2

- **ISO/IEC 19770-1 software asset management processes**
 - **Is well on its way to becoming a published standard**
- **ISO/IEC 19770-2 software asset management tag**
 - **The purpose is to define an industry-wide IT standard for the data needed to identify and manage software assets**



WG21 Approach : 19770-1 SAM Processes

- **ISO/IEC 19770-1 SAM processes:**
 - **Control environment for SAM**
 - (e.g. Corporate governance, roles and responsibilities)
 - **Planning and implementation processes for SAM**
 - (e.g. Planning, monitoring and improving SAM)
 - **Inventory processes for SAM**
 - (e.g. asset identification and control)



WG21 Approach : 19770-1 SAM Processes

- **Verification and compliance processes for SAM**
 - (e.g. Asset records, Licensing compliance, Conformance verification)
- **Operations management processes and interfaces for SAM**
 - (e.g. Relationship and Contract management, SLA, Security Management)
- **Life cycle process interfaces for SAM**
 - (e.g. Acquisition, Incident Management, Problem Management, Retirement Process)



WG21 Approach : 19770-1 SAM Processes

Organizational Management Processes for SAM			
4.2 Control Environment for SAM			
Corporate Governance Process for SAM	Roles and Responsibilities for SAM	Policies, Processes and Procedures for SAM	Competence in SAM
4.3 Planning and Implementation Processes for SAM			
Planning for SAM	Implementation of SAM	Monitoring and Review of SAM	Continual Improvement of SAM
Core SAM Processes			
4.4 Inventory Processes for SAM			
Software Asset Identification	Software Asset Inventory Management	Software Asset Control	
4.5 Verification and Compliance Processes for SAM			
Software Asset Record Verification	Software Licensing Compliance	Software Asset Security Compliance	Conformance Verification for SAM
4.6 Operations Management Processes and Interfaces for SAM			
Relationship and Contract Management for SAM	Financial Management for SAM	Service Level Management for SAM	Security Management for SAM
Primary Process Interfaces for SAM			
4.7 Life Cycle Process Interfaces for SAM			
Change Management Process	Software Development Process	Software Deployment Process	Problem Management Process
Acquisition Process	Software Release Management Process	Incident Management Process	Retirement Process

Note:

Names of categories are subject to change.



WG21 Approach : 19770-2 SAM TAG

- **ISO/IEC 19770-2 SAM TAG purpose:**
 - **To define an IT-industry-wide standard for the data needed to identify and manage software assets (e.g. Planning, monitoring and improving SAM)**
 - **Possible data model:**
 - **Application Manifest**
 - **Asset Management Tag**
 - **Application Rights**



WG21 Approach : 19770-2 SAM TAG

- **ISO/IEC 19770-2 SAM TAG:**
 - **Better inventory management**
 - **To provide more accurate inventory of the software applications in all environments**
 - **Increased security**
 - **To prevent unauthorized execution of applications**
 - **Intelligent servicing**
 - **E.g. trial applications may not be patched, or only select patches that increase the security of the computing platform may be patched**



WG21 Approach : 19770-2 SAM TAG

- ***ISO/IEC 19770-2 SAM TAG:***
 - **Improved administrative controls**
 - **certain software assets may not run, or may not run beyond a certain threshold or certain time period**



WG21 Approach : 19770-2 SAM TAG

- **Scope questions:**
 - Should **file header** information of software assets be standardized? (Asset Management Tag fields)
 - Can “**non-run-time**” **licensed assets** such as fonts and graphics be part of the same scheme but have different characteristics?
 - What about **legacy software**?
 - Should the standard specify only a **logical data structure**, or should it specify functionality in the form of an API?

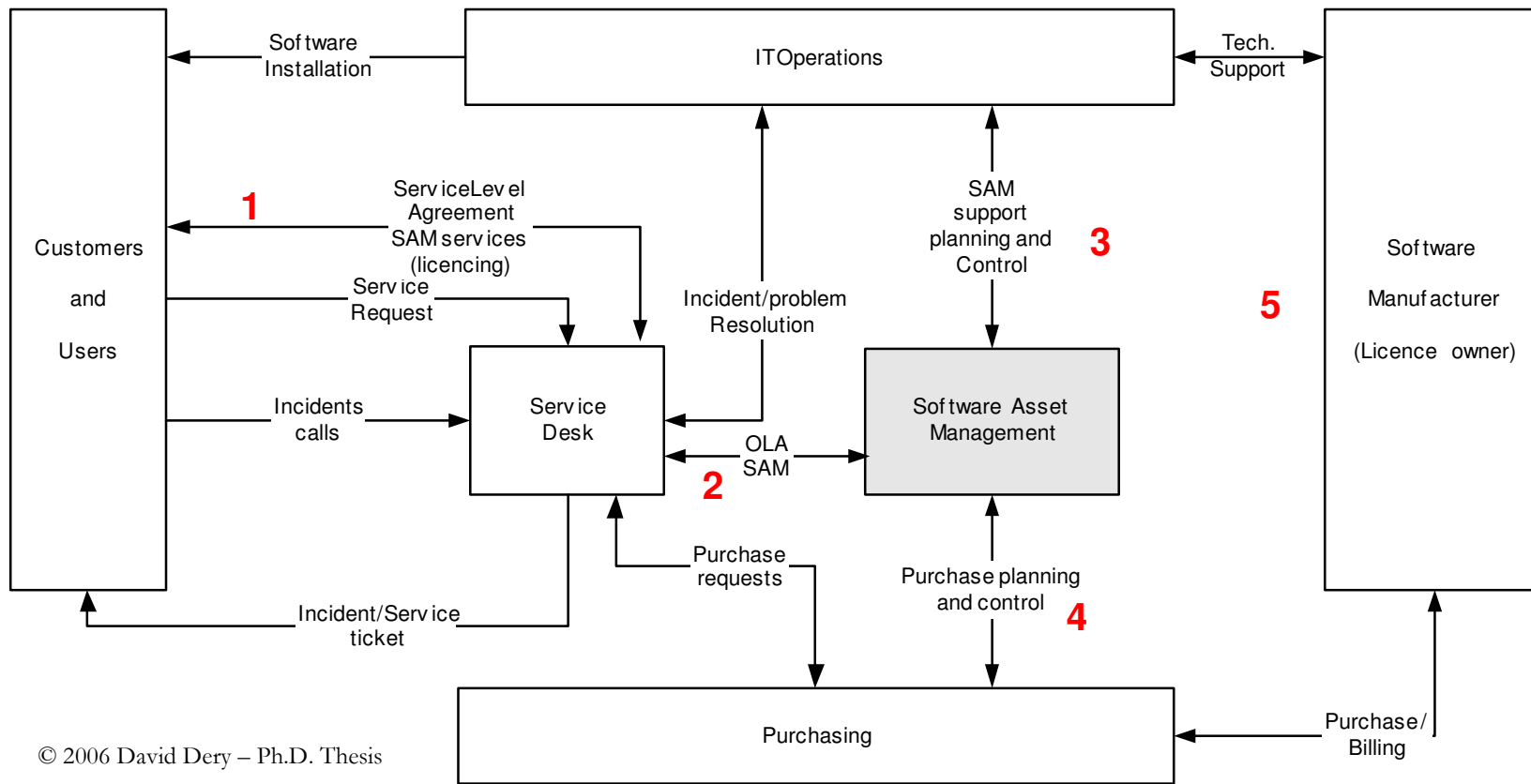


What It Means for You? –Benefits

- **Risk management: SAM should facilitate the management of business risks**
 - (I.E. Legal and regulatory exposure)
- **Cost control: SAM should facilitate cost control**
 - (I.E. Such as by negotiating better pricing through improved use of volume contracting arrangements)
- **Competitive advantage: SAM should help the organization gain competitive through the better quality decision**



SAM in perspective – *thesis of David Dery*



Conclusion

- All organizations need to manage the goods they purchase:
 - From their acquisition through their disposal
- However, managing intangible goods such as software assets poses some specific inventory problems:
 - It is not only sufficient to determine how many copies of a specific software exist within the enterprise, it also includes knowing how many of them have valid licences and determining what to do about the others



Conclusion

- The cost and the risk of not managing adequately software asset management has grown in importance and it has gained international recognition within ISO:
 - A standard with two subparts will be published in the near future:
 - ISO/IEC 19770-1: SAM processes
 - ISO/IEC 19770-2: SAM tag
 - ISO provides a definition of SAM: “effective management, control and protection of software assets within an organization”
 - Implementing ISO/IEC 19770-1 could lead to the certification of the enterprise



References: To learn more

- About ISO/IEC 19770 –1 and ISO/IEC 19770 –2
 - www.iso.ch and www.iso19770.com
- About ISO's Software and system engineering activities:
 - www.jtc1-sc7.org
- About research in Software and System Engineering:
 - www.gelog.etsmtl.ca/publications.html
- About purchasing standards: through the national body:
 - in the USA : <http://webstore.ansi.org/ansidocstore/default.asp>



Questions ?



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