ISO: intégration Web et gestion documentaire

Alexander Samarin
samarin@iso.ch

ISO Central Secretariat,
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EXTENT OF ISO SYSTEM

ISO CENTRAL SECRETARIAT

11,300 ISO Standards

128 Member bodies

184 Technical Committees

587 SubCommittees

2,020 Working Groups

Around 7000 active projects (~200,000 participants)

771 secretariats hosted by 35 countries
The Central Secretariat in Geneva

- Monitors development of International Standards, clarifies technical points with technical bodies, coordinates the document flow and the planning of meetings

- Edits and submits draft International Standards for voting, supervises balloting and publishes the resulting International Standards

- Supports and promotes the complete ISO system
Between 1990 and 1996: we were using a DMS in our office environment

1994: we started looking for a DMS for our production (publishing)

Since 1994: we attended all Documation conferences in search of a solution
Great idea … difficult users

- After Documation’96 we initiated the project “Feasibility study of a DMS for the ISO/CS”

- The main point: all functionality should be available from the Internet (to make available the same services to both internal and external users)

- ISO/CS internal users (about 150) were to select a system for many external users (> 10 000)
System requirements for the DMS

- The business requirements
  - DMS should facilitate distributed business processes

- The user requirements
  - The users do not know what they want until they “use it”

- The IT requirements
  - DMS must work in the current and future IT environments
The most important features for the DMS

- Integration with the main production tools
- Openness and connectivity with other IT tools
- Intranet / Internet capability and availability
- Support of SGML and compound documents
- Enable workflow and collaboration
The major dream of the IT department

- New DMS must be a tool for the users, an open system which can be maintained without a programmer’s assistance

- The users shall be able to carry out administration, some customisation and maintenance tasks by themselves

- The users should feel ownership on the DMS
General approach for a feasibility study

- Do not trust what you read or hear (from glossy magazines and consultants)

- Believe only half of what you see (in demonstrations)

- Accept only what you can experienced (i.e. try it for yourself)

- Test vendors responsiveness in practice
Project milestones

- Definition of the system requirements for the DMS
- Selection of two vendors for further investigation
- Implementation of prototypes for selected ISO/CS applications
- Drafting of a recommendation for the final choice before the end of 1996
Interfaces for the ISO/CS

ISO policy development

General Assembly, Council, etc.

Technical groups

ISO/CS

Member bodies

General public

Standards development

Standards delivery
IT architectural principles

- Functional (or business process-based) decomposition of the system services to loosely connected components (e.g. DMS servers)

- Establishment of well-defined interfaces between these components, other IT services and external resources

- Use of workflow as the glue between the components of the system or within a component
Architecture of IT system at the ISO/CS

ISOPROD

ISO/CS

ISODOC

ISOCS

SGML-based production chain

ISOTC

ISO/STD

ISO Online

PMDB

TWDB

Sales
Advantages of using of many DMS servers

- Better fit to the real business processes
- Increase manageability
- Quicker deliverables — business agility
- Many users are more comfortable with their “own” DMS server
- Creates pressure to improve the IT infrastructure
Challenges of using of many DMS servers

- Need for consistency, i.e. determine and implement coherent decisions and solutions

- Parts of the system (DMS, database, OS, desktop, etc.) have to be systematically migrated to be compliant with a vendor-certified configuration

- Maintenance of the user community outside DMS

- Develop inter-DMS integration (exchange?) tools
LiveLink Intranet (LLI) servers:  
**name, # users, volume in gB**

- **ISOSTD**  
  100  
  53  
  Role: Published Standards store  
  LLI parts: Library, LAPI

- **ISODOC**  
  2000  
  0.8  
  Role: Policy development collaborative tool  
  LLI parts: Library, discussion, workflow

- **ISOCS**  
  150  
  5.5  
  Role: Internal storage and ISO/CS quality system  
  LLI parts: Library, LAPI, workflow
<table>
<thead>
<tr>
<th>Name</th>
<th># Users</th>
<th>Volume in GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOTC</td>
<td>9,000</td>
<td>16</td>
</tr>
<tr>
<td>Role: Hosting of “intranets” for ISO workgroups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LLI parts: Library, discussion, project, LAPI</td>
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<td></td>
</tr>
<tr>
<td>ISOPROD</td>
<td>200</td>
<td>2</td>
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<tr>
<td>Role: Production storage and automation engine</td>
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<td></td>
</tr>
<tr>
<td>LLI parts: Library, LAPI, workflow</td>
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<td></td>
</tr>
<tr>
<td>ISOPORTAL</td>
<td>10</td>
<td>0.5</td>
</tr>
<tr>
<td>Role: Official web-site infrastructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LLI parts: Library, another (XML-based) interface</td>
<td></td>
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</tbody>
</table>
Ladder of collaboration

- Standardization process is a collaboration between people, applications and business systems

- The DMS provides a collaborative environment for distributed groups which have different needs

- There are several different patterns in the current configurations — the “steps” of the ladder

- Functionality may be added to respond to needs evolution
The “steps” of the ladder

- Classic web-site
- Project web-site
- Team dream-web-site
- Internet-based business system
Principles which could help to climb the ladder (1)

- Full administration and control by a group nominee
- Use of structural (user allocation) and functional (granting permissions) groups
- Connection to the Internet and an Internet Browser are the only prerequisites
- API is the preferable way to add extra functionality
Principles which could help to climb the ladder (2)

- Differentiate content between a known user, a self-registered user and a user from the Internet.

- Implement for the Internet traditional (for OS) maintenance procedures such as:
  - service announcement,
  - urgent shutdown,
  - message that the service is not available, etc.

- Consider using a BSP (business service provider) model.
No longer any serious technical problems

- First: design carefully the architecture of the system ("where" and "how" to use "which" technology or tool)

- Second: adapt the business processes to permit automation

- Third: move common information and tasks to the infrastructure, e.g. (re)design your corporate LDAP
Classic web-site

- One writer / manager and many readers
- Simple library with read-only access
- Possibly use of notifications
- Example: ISODOC
Project web-site

- One manager and many writers / readers
- Library with protected documents/folders to keep project-related information and documentation
- Task assignment (for advanced projects)
- Discussion (depends on group culture)
- Example: some internal projects at ISO/CS
Role-dependant functions and permissions

Document management is good for ISO 9000 certification

Typical business procedures (e.g. voting) are formalized and executed as workflows

Some automation
Internet-based business system

- DMS is an interface to the business system
- Workflow is the business process integration tool
- Access to centralized restricted information
- Integration with the existing applications
Business process automation architecture

Workflows

Applications

Business objects

Data repositories
Lessons learnt (1)

- Build user ownership of the DMS
- Accept user requirements — some of them may disappear later
- Deploy for top management first
- Check that your infrastructure is ready for the Web
Lessons learnt (2)

- Necessary to migrate systematically all parts of your IT system, but not everything at the same time

- Add general-purpose functionality to the system and convince the vendor to add it to the standard configuration

- Add customer-specific functionality to the system only using APIs
Lessons learnt (3)

- Automation requires a high quality of service from the IT infrastructure and other services — each recovery is too costly.

- Automation reduces the cost of business practices (old and new). Exceptions complicate (and sometimes preclude) automation, and increase cost of automation.