

Poli.ADA (Politecnico di Milano Digital Archives) Project



Project for a Web-based information system of images and archival contexts, compliant with ISAD archival standard, will provide access to more than 67.000 digitized documents from Politecnico di Milano (Italy) historical architecture and design archives.

Politecnico di Milano project partners

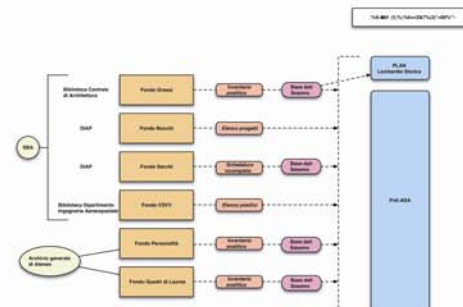
- Acceleratore d'Impresa (AI)** (www.ai.polimi.it/) : supporting companies start-up, development of new services for entrepreneurs and technological transfer from university to companies
- Area Sistema Bibliotecario di Ateneo (SBA)** (www.biblio.polimi.it/) : Library Service Development created to innovate and support library services and organization within Politecnico di Milano
- Dipartimento di Architettura e Pianificazione (DIAP)** (www.diap.polimi.it/) : research department in the field of architecture, urban planning and environment

System architecture

Digitized documents (following MINERVA best practices) will be managed and accessible online with an integrated approach, enriched by contextual information according to ISAD archival standard. Description of documents can be achieved both importing from Italian archival SESAMO database and generating autonomous descriptions.

The system allows to associate images to archival units and dialogue with systems created by other archival projects, such as Lombardia Storica and specifically PLAIN (Progetto Lombardo Archivi in Internet, <http://plain.lombardiatorica.it>).

Poli.ADA system has been implemented and customized using the E-library module of MOAI modular framework.



MOAI E-library

MOAI is a modular framework to support design and implementation of complex applications, developed and implemented by a team of Acceleratore d'Impresa, Politecnico di Milano. It's been tested for European Union projects and it's currently used by Politecnico organizations and private companies. Development is based on an agile version of the Rational Unified Process: more than 270.000 lines of code, 2500 classes, 620 packages.

MOAI main characteristics

- Applications built composing highly specialized, highly optimized and reusable "building blocks"
- Extensions of functionalities is obtained by modifying existing modules or implementing new ones (high maintainability and expandability + interfaces and rules clearly defined for the implementation of new modules)
- Native support for internationalization (unlimited supported languages, both static and dynamic content, support of a default language)
- Framework enables creation of complete applications (definition of front office and back office areas)
- Native support to construction of hierarchical/federated portals

Security & Access Control

- Role-based, highly secure mechanism for access control has been implemented
- Right management at runtime (Web interface), E-commerce enabled portal
- Support for a fine grained, centralized and "at runtime" control of the access rights to all the parts of the portal



User Interface

- Skin based (easy to maintain, no programming skills to change the look & feel)
- Compliant with WAI 1.0 and Section 508 specification, and with Italian law on Website accessibility ("Legge Stanca")
- Portal Based Administration (contents managed by means of a CMS, no programming skills required to edit, in each portal it is possible to insert/remove modules offering different services)
- Integrated Tools: Workflow Engine to support BPM (e.g. revision of contents), Scheduler enabled to support one-time and periodic actions, Reporting Tool

E-Library module

- Repository of catalogued documents, great flexibility with different types of managed documents, simple and powerful user interface
- Stored documents can be navigated in different ways (browsing, complex query, direct links)
- Advanced features: Advanced Search Engine (possibility to find documents by means of iterative filtering, multilanguage full-text indexing support); independence from the adopted metadata schema (MARC, Dublin Core, MPEG-7, custom, ...); schema can be modified at runtime; support for multi-value and composed attributes; automatic title generation based on attribute values; contents categorized in taxonomies (possibility to control the access to the content of some branches or leaves, possibility for the end-user if enabled to propose new branches); support for content validation rules by means of Regular Expressions; support for multipart documents

DWARF (Distributed Web-based reliable Repository of Files)

- Files are physically stored not only on Web server disk but distributed on multiple nodes
- Nodes can be independent or mirrors of other nodes
- Mechanism totally transparent to the end user
- Load balancing of high performance, scalability at low costs, increased reliability due to replication

Timeline & Activities

3-years project started in 2005, received funding for the first year of activities by Fondazione Cariplo "Valorizzare gli archivi storici, 2004".

Activities and outputs to now

- Survey and selection of archival materials held by Politecnico di Milano historical archives
- Digitization of more than 25.000 documents (MINERVA best practices)
- Parametrization and customization of data formats, mapping with SESAMO database, enabling association of images to archival units
- User interface design and functionalities
- Implementation and testing of version beta of Poli.ADA prototype
- Dissemination of outputs and results within national and international events

Future activities and outputs

- Completing digitization and description of more than 42.000 documents
- Storage increment and system monitoring
- Restoration of historical films and digitization
- Release of Poli.ADA version 1.0
- Further implementation of E-library (scalability, performance and customization)
- Dissemination of outputs and results in national and international events
- Eventual involvement of Italian cultural organizations in order to create a large multimedia integrated system of architectural and design archives