

THEMATIC WEB PORTALS GENERAL CHARACTERISTIC

- The Italian law from October 16, 2003, n. 291 provided the creation both of the unified Information System of the State Archives and Archival Superintendence (SAN) and of the National Archives Portal.
- The purpose to support a wider knowledge of the Italian cultural heritage through Archives, suggested to **create inside National Archive Portal** a set of **thematic Portals**, selecting **seven thematic areas of potential interest** also for not specialist users.
- **The Thematic Portals were presented National Meeting on Archives settled in Pescara on 17. 12. 2011**
- **Enterprise Archives , Fashion Archives, Music Archives, Archives to not Forget, Ancestors, Multimedia Historical Archives of the Mediterranean Sea, Territory archives.**
- In order to encourage a more friendly approach of cultural heritage by way of the network, all the thematic portals make accessible sizeable digital resources, such as photos, audios, videos, graphic materials, record concerning the respective topics, chosen in order to illustrate their contents.

THEMATIC WEB PORTALS General characteristics

TERRITORY PORTAL

- Among the Thematic Portals related to the **National Archives Portal** has been conceived the Territory portal expressly dedicated to **Territory and Cartography**.
- **SAN Territory (*www.territori.san.beniculturali.it*)** is a web portal launched in December 2011 by General Direction of State Archives.
- The target of the project was oriented in these directions:
 - ✓ allowing the public to search seamlessly geographic data kept by four among Italy's foremost national archives: **State Archives of Genoa, State Archives of Milano, State Archives of Trieste, and State Archives of Venice**.
 - ✓ proposing Territory portal like the web publication environment also for digital resources created by digitization projects promoted by other Italian state Archives
 - ✓ proposing portal Territory like a hub for other existing Portals or web site aimed at publishing cartography, promoted by other Italy's foremost State archives.

TERRITORY PORTAL: The reasons for its development

- State Archives keep cadastral records and maps made by pre-unity Italian regional states and those of post-unity Italian cadastre, realized by both central and local offices, responsible for the surveying and conservation.
- A **cognitive survey** promoted in 2008 by **General Directorate for Archives** revealed **forty-five digitization projects concerning cadastral maps and cartographic materials** promoted by State Archives using own resources or jointly with universities, local or provincial administrations and other stake-holders.
- Some of those projects were also founded by bank foundations grants.
- Among these, **forty projects** were oriented to **old cadastral maps** and only **sixteen** aimed at **cartographic materials reproduction**.
- Only a **limited part (nineteen)** over all the surveyed projects produced also **archival descriptions of digital records and technical metadata** standard compliant.
- Based on the data gathered by the information systems of the State Archives, the estimated number of **cadastral maps available** amounts **to over 500.000 units**.

TERRITORY PORTAL:

The reasons for its development

- A strong motivation to built inside National Archive System the **Territory** portal has been the **presence of portals and Web sites** aimed at publishing **cadastral maps series and cartographic collections** kept and previously digitized **by some Archives (Cagliari, Genoa, Milan, Rome, Torino, Venice, Siena, Trieste, Tuscan archives.**
- Those relevant projects have been developed in last years along **specific guidelines originated by different operational contexts.** Some of those portal and Web sites have been realized by the Archives in partnerships with local universities (Siena) or regional administrations: **(Castore project - Regional Cartography of Tuscany Region; Cartsos project – Hystorical Cartography of Sardinia)** tuo projects

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TERRITORY PORTAL:

The reasons for its development

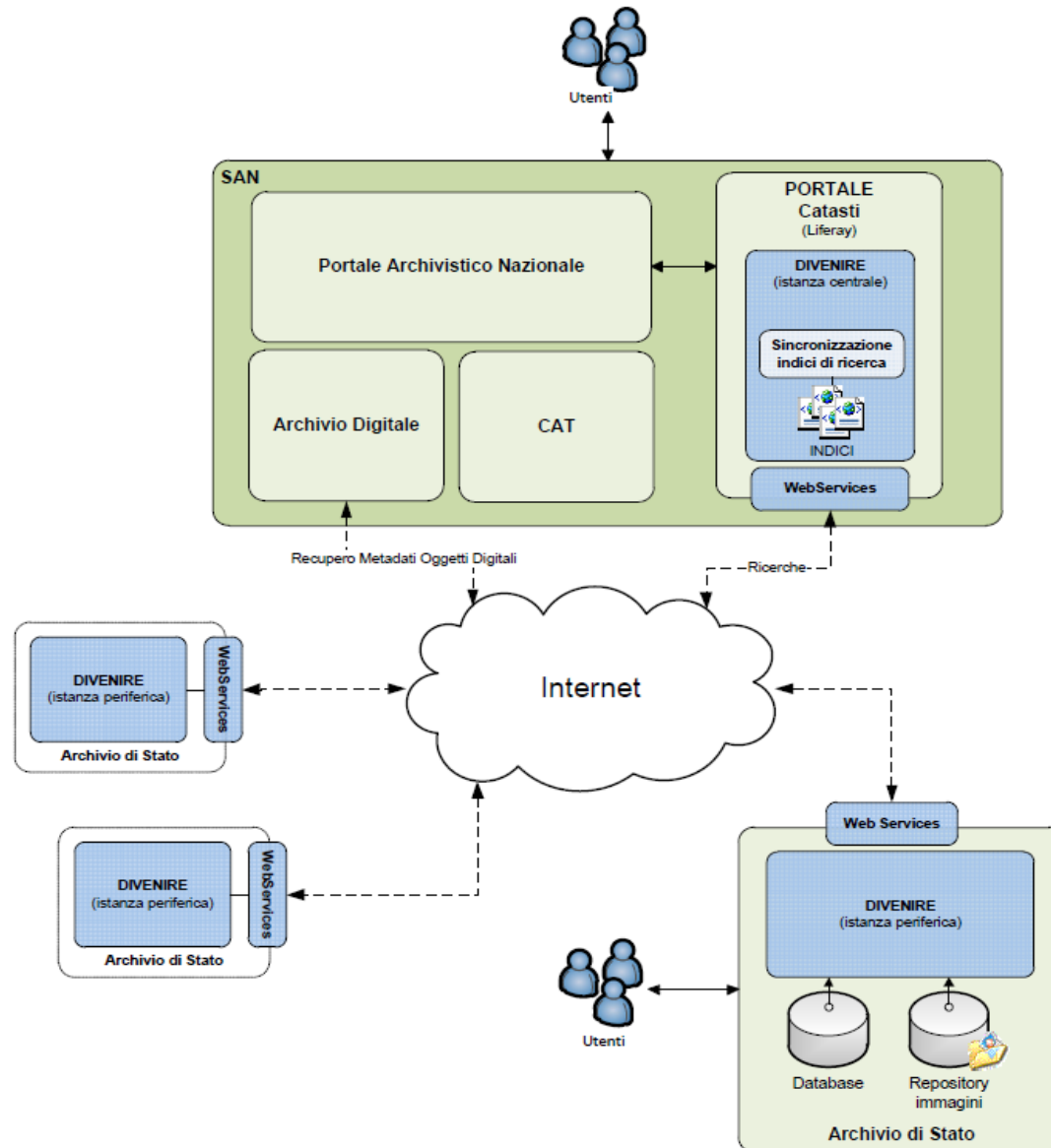
- Presently Territory Portal publish these archival series, making them accessible by a page named «Sources»:
- *State Archive Milan*: Theresian Cadastre of Austrian Lombardy ; Stabile Cadastre of Lombard-Venetian Kingdom, New Cadastre of Austro-Italian territories in Lombardy ; Urban cadastre maps (1875), Land cadastre of post-unity Kingdom of Italy (1897-1902)
- *State Archive of Trieste* Franciscan cadastre - Maps of municipalities , land register records of municipalities, Archive of plans.
- *State Archive of Venice* ; Stabile Stabile Cadastre of Lombard-Venetian Kingdom maps (1830-1841) , Napoleonic cadastre of the Kingdom of Italy survey maps (1807-1817) , Austro-Italian cadastre maps (1846-1900),
- *State Archive of Genoa* Cartographic collection of Map and plans , Napoleonic cadastre, Military topographic maps.
- It is to notice the presence of the same cadastral fonds kept by distinct archives for the respective regional area

TERRITORY PORTAL TECHNOLOGICAL ASPECTS: Federative architecture system

- Territory portal is based on a **federative architecture**, which allows **users to query simultaneously via the Web several remote data-bases** held by single archives as if they were a unitary data base system.
- Each state Archive, which publish his collections on Territory Portal, put itself in condition **to share descriptions** of own collections with other Archives.
- Archives may have their digital resources in diversified storage, the central system data base creates and updates the index queried by users
- At the same time **each Institute keeps copyright on own images**, can be the collector of royalties and fees, and remains the only one owner of data-bases.
- Users can browse and access to map collections items images and descriptions by diversified research tools accessible inside the Territory web pages content.

TERRITORY PORTAL TECHNOLOGICAL ASPECTS:

Communication structure



TERRITORY PORTAL: key advantages

- One of the key advantages of the **Territory portal** was **its ability to offer multiple and user-friendly methods of geographic searching** for records and maps.
- A second, important advantage was **its ability to bring together disparate collections and record types into one searchable dataset**, thereby **uniting collections held in physically separate institutions and made available digitally on separate websites**.
- **From a user perspective**, therefore, **SAN Territory offers a single portal offering easy geographic searching for cartographic material**, including historic maps, held by separate institutions.
- A third major advantage was the **ability to share infrastructure, website development and services across institutions**, to pool resources and collaborate – a useful end in itself, but also **a policy that other state archives in Italy are specifically encouraged to follow**.

TERRITORY PORTAL

The reasons for its development: authority file

- Cartographic materials held by archives were produced primarily for **public interest purpose**: land measuring, soil exploitation, urban development and road planning, defensive fortification and boundaries delineation, hydrographic, geological and mining surveying.
- Many fonds and collections held by State archives include also **printed maps and town plans made in publishing context** and gathered for collecting purpose by public authorities and other creators, or even by the same archivists, who created often artificial collections.
- Cartographic materials were achieved by **authors** with technical or also artistic roles involved in their production: surveyors, architects, civil or military engineer corps, topographers, cartographers, map makers, engravers, delineators, printmakers.
- The section **Authors** of Territory portal presents a set of biographic information concerning **authors**, aimed at building **authority file** concerning all kind of roles involved in map making.

TERRITORY PORTAL TECHNOLOGICAL ASPECTS:

Characteristics of data and digital resources

- Semantic richness of cadastral and topographical maps **requires high resolution digitization process** and viewer image system able to ensure the best accuracy.
- The **digitization process has been conducted both outside and inside the Archives**. All Institutes have been **adopted standard image formats**, both for the storage and for image compression and distribution over the Internet, **founded on 2007 "Guidelines for digitization projects"** issued by **Central Institute for Archives**.
- The digital resources created by Archives published on Territory portal are **Tiff images** with **resolution range from 300 to 400 dpi**.
- Tiff images have been **compressed and pyramized for easy parsing of the images** through standard web browser such as Internet Explorer, Firefox Mozilla or Chrome.

TERRITORY PORTAL TECHNOLOGICAL ASPECTS:

Image viewing system

- Territory portal uses the **image server system IIPImage®** ideal for web-based streamed viewing and zooming of ultra high-resolution images, such as maps images.
- **IIP Image server system is designed to be fast and bandwidth-efficient** with low processor and memory requirements on the local machines.
- **The system can** comfortably **handle gigapixel size images** as well as advanced image features such as both 8, 16 and 32 bit color depths, CIELAB colorimetric images and scientific imagery such as multispectral images.
- Streaming is tile-based, making it possible to view, navigate and zoom in real-time around giga pixel size images that would be impossible to download and manipulate on the local machine.
- **Optimization of image viewing allows to visualize finest details** scarcely readable to the naked eye on the originals.

TERRITORY PORTAL: Archival descriptions

- The Territory Web Portal **enables access to archival information data-sets and digital reproductions** of map series and cartographical collections items, created by the single projects involving or promoted directly by the Institutes.
- Cartographic materials and maps need also **very granular descriptions detailed until single document level**. Single maps or even sheets of cadastral maps are unit of description, representing the bases for single descriptive form.
- The **technical solution** chosen by General Directorate of State Archives (DGA) for the Territory portal involves **Divenire** and **Arianna Web** applications.

TERRITORY PORTAL: Archival descriptions

- **Divenire can publish the single documents** in a simply sequential way showing them by a gallery of thumbnail images, rapidly and easily researchable and consultable by the users.
- **Arianna Web can publish archival descriptions using the classical tree structure representation** as a navigation way through the archival fonds, series and units.
- **Arianna Web** enables:
 - ✓ **Full-text search engine** allowing both generic and contextual searches
 - ✓ **Visualizing high resolution digital reproductions efficiently** and so managing virtual reading room for historical archives
- The **integration between these two software applications** allows to obtain a **single system**, that enable the user **to navigate in the whole archival context standard compliant starting from the single document**.

TERRITORY PORTAL: Research tools

- Territory portal presents resources and datasets by mean of a page structure similar to those of other thematic portals: **archive search, creators biography, sources, timeline, geographical access, research, paths, partners, chronology, protagonists, library (bibliographic information)**
- Like other thematic portals dedicated to cartographic resources, Territory hosts **Geographic Access**, a path specifically created for allowing the user to search for online digitized historical maps across numerous different collections via a geographical search.
- The feature required **the integration in the system of a gazetteer**, based on the **geographical database of Italian municipalities** in CSV and shape file formats **created and periodically updated** by **Italian Central Statistics Institute (ISTAT)**.

TERRITORY PORTAL: Research tools

- Territory makes available an important **feature** to the state archives which now publish cartographic resources on Territory portal.
- **An online geo-referencing tool** allows to **localize geographically historical place names indicated** in old map's descriptions, **matching them with the corresponding present names**.
- **The tool allows to point out on a interactive map the position of all the corresponding present geo-names**, so to have an **overall vision of geographical distribution of territorial areas covered by old map items**.
- Geo-referencing process can be operated **using both automatic tools**, like bounding box on Google Maps, MapQuest, OpenStreetMap, and a **spacialized tool which allows to control exactly the correct matching** between historical and current geo-names.