Esempi di progetto

Lezione 18: 4 Maggio 2011
The Cenobium Project
Cenobium Project

- A joint action of:
  - Kunsthistoritsche, Max Plank, Florence
  - ISTI-CNR, Pisa
  - Soprintendenza di Pisa e Livorno

- Goal:
  - Build up an extendable data base of Romanic sculpture
  - Integrated use of images, 3D models (shape and color), metadata/texts
  - Working locally & on internet
  - Planned extension: to became an instrument to support study and research (cooperative instrument)
Why the Romantic Cloister

- Hundreds of capitals
- Different workshops composed by artists from various Mediterranean countries
- Possibility to “tell the story”
- Extendable to a virtual museum/catalog: other similar monastic complexes in Europe
Monreale cloister

3D models:
- Scanned 20 capitals (Minolta VI910)
- 120-200 scan per capital
- 3D Models: 4-6 M triangles
- With color images mapped on the 3D model

Photos:
- all capitals
- 8 shots (16M pixel)

Demo 3D...
Aosta cloister

3D models:
- Scanned 17 capitals (Menci)
- 8 scan per capital
- 3D Models: 3-5 M triangles
- With color images mapped on the 3D model

Photos:
- all capitals
- 1 to 8 shots (16M pixel)
Cefalù cloister

3D models:
- Scanned 12 capitals (Minolta Vivid 910)
- 40 to 90 scan per capital
- 3D Models: 3-5 M triangles
- With color images mapped on the 3D model

Photos:
- all capitals
- 4 to 8 shots (16M pixel)
Romanesque cloister capitals in the Mediterranean and the Cloister in Monreale as the culmination of different artistic currents

Shortly before the turn of the twelfth century a type of capital emerged in Romanesque sculpture that profoundly influenced the overall character of sacred spaces and monastic cloisters and became a primary element of medieval sculptural decoration of architecture. Previously, capital decoration had confined itself mainly to ornamental, vegetative, zoomorphic, or anthropomorphous forms. Now, however, it broadened its spectrum to include narrative cycles, thus taking on the added function of depicting stories from the Old and New Testaments, historical events, exempla, satirical scenes, and allegories.

As an integral architectural component, the Romanesque capital incorporated this new narrative element into its particular physical character. Its three-dimensional aspect lent itself particularly to cloisters, where free-standing columns could be viewed from all sides. Thus, they provided the possibility of telling stories through a series of relief compositions, while facilitating a dialogue among and between capitals and other decorative elements of the cloister. Of additional importance is the spatial interrelation between the capital and the functional design of the cloister complex. The arrangement of themes and motifs on the capitals permits, in some cases, an aesthetic and functional interaction on the part of the viewer and gives us an idea about the liturgical role and ritual practices associated with the cloister. The three most important centers of Romanesque capital sculpture are found in Languedoc-Roussillon, northern Spain, and Sicily. The first phase of this project will concentrate research and digital visualizations on the cloister in Monreale (derived from Mons Regalis: King’s mountain) in Sicily. Originally part of a monastic complex built under the royal patronage of the Norman king William II, this cloister constitutes a significant example of Romanesque artistic production not only in Italy but throughout the entire Mediterranean. It is one of the largest, most complex and, in terms of composition, one of the finest twelfth-century cloisters, and it distinguishes itself by the richness and variety of its details as well as by its comparatively excellent state of preservation. It combines a wide variety of contemporary currents in Romanesque decorative sculpture within an architecturally unified cloister. Between 1174 and 1189, at least five different highly-skilled workshops were assembled from different artistic traditions and distinct geographic regions in France, Italy, and Spain.
W8Sh82 - Dedication Capital

The principal thematic organization of this double capital revolves around the presentation, by King William II, of the cathedral to the Virgin. Portrayed on the long side of the capital and accompanied by the carved inscription, \textit{FREG CVNTA REGIS SCLAVI DATA SYRCEPE REGIS}, on the impost block, King William II stands spiritually out and presents his gift to the Virgin. Supported by a flying angel, this model precisely depicts the characteristic features of the basilica, bell tower, transept, and apses.

The three other sides of the capital contain single figures with flanking angels. Crowned and dressed in antique robes, these central figures carry specific attributes and are also identified individually by inscriptions. Between the virtues \textit{Spes} and \textit{Fides}, the Lamb of God is represented with a crosier and cross, above which is the inscription: \textit{+IC DNS MAGNVS LEO CREYSTICK CERNITVR AGNVS}.

The narrow sides are conceived in the same manner and bear the inscriptions, \textit{+JUSTITIA DOMINI}, and \textit{+DEUS EST CARITAS}, referring therefore to Justice and Charity. The four figures are to be interpreted as personifications of the virtues \textit{Faith}, \textit{Charity}, \textit{Hope}, and \textit{Justice} by both the inscriptions and their respective attributes: crown, sceptre, orb and sword, as well as the royal insignia they hold. As a result, they are symbolically linked to the scene depicting the dedication of the cathedral to the Virgin while at the same time they also give praise to the virtues of William II himself.
The Great Buddha of Bamiyan
The Great Buddha project

- A work from:
  - ETH, Zurich
  - Year 2004

- Goal:
  - Reconstruct a virtual model of the Giant Buddhas of Bamiyan, destroyed by Talibans in 2001
  - The model should help the physical reconstruction from fragments.
  - Only historical images can be used
The Great Buddha project
The Great Buddha project

- Using a set of (4-5) metric images taken in 1970, the geometry was reconstructed
The Great Buddha project
The Zamani project
The Zamani project

☐ A work from:
  ■ Funded by “The Andrew W. Mellon Foundation”
  ■ University of Cape Town

☐ Goal:
  ■ “The project attempts to capture the spatial domain of heritage, with a current focus on African heritage, by accurately recording its physical and architectural nature and dimensions”
The Zamani project

- For each scanning campaign, heterogeneous data are acquired:
  - 3D scanning
  - Photogrammetric data
  - Panoramas
  - Images
  - GIS layouts

- Then, multimedia material is prepared from them

- [http://www.zamani-project.org/index.php](http://www.zamani-project.org/index.php)
The Zamani project
Visito Tuscany
The Visito project

- A regional project:
  - ISTI-CNR
  - IIT-CNR
  - Alinari, Hyperborea, 3Logic

- Goal:
  - “The Purpose of the project "VISITO Tuscany" is to investigate and realize technologies able to offer an interactive and customized advanced tour guide service to visit the cities of art in Tuscany”

http://www.visitotuscany.it
The basic idea (1)

Pre-visit

Before the tour, the user can plan its tour by using the data bank and the experiences of other users.

During the visit

During the tour, the user can obtain information by taking pictures of the aspects of interest.

After the visit

After the tour, the user can access the caught pictures, displayed in advanced 3D mode, again and share them with others.
The basic idea (2)

During the visit:

- **Automatic localization** of the user and user interest
  - Pictures taken by the user are analyzed using image recognition techniques
- Relevant personalized touristic information is sent to the user
  - Web pages, phone calls, ...

Pre-visit and post-visit:

- Virtual visit to interesting places using images and 3D models
- Possibility of obtaining information to plan the real visit
The basic idea (3)

Post-visit:

- Pictures taken by users are stored in the system and placed on top of a high-resolution 3D model of the subject to support the virtual visit.

- Users can:
  - virtually review the visit
  - Create photo albums, also using material contained in the system
  - Publish and share their pictures, comments, experiences, with other users
Some people already volunteered for a personalized acquisition, not bad. Here’s a preliminary list of places in:

- Chiesa di S. Matteo (2 people)
- Palazzo Mediceo (2 people)
- Piazza Mazzini north side
- Piazza Mazzini east side
- Piazza Mazzini monument
- Piazza Cairoli north side
- Piazza Cairoli west side
- Piazza Cairoli east side
- Piazza Cairoli monument
Off topic: exam projects

- Some people already volunteered for a personalized acquisition, not bad. Here’s a preliminary list of places in
  - Chiesa of S. Caterina
  - Palazzo Blu
  - Cittadella (2 people?)

- The mechanism is “first come, first served” ("chi prima arriva, meglio alloggia")
Next in line...

Next lesson:

- Non lo so mica

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