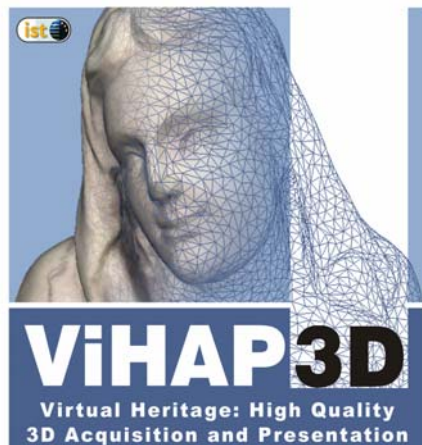


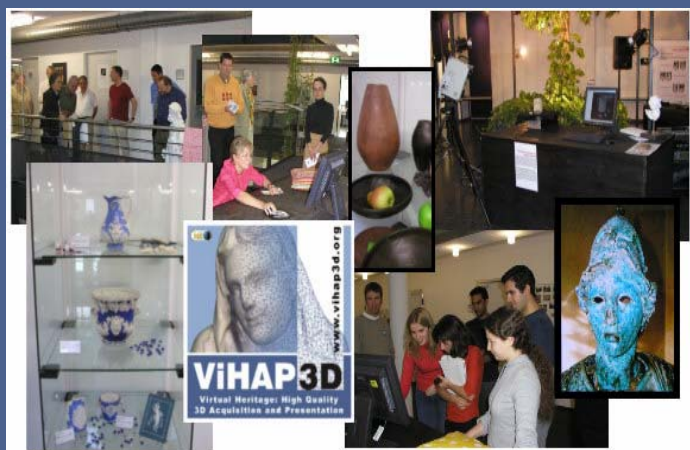
ViHAP3D NEWSLETTER

01/04



We distribute this Newsletter to inform people of the dissemination activities we have been doing in these years to promote the ViHAP3D project.

The ViHAP3D is a European project that has had as a goal the creation of a collection of tools that permit the disclosure and presentation of the European cultural heritage by means of elements of virtual reality. With this purpose have been studied and the necessary steps have been carried out to create virtual museums.



What this cultural project tries to achieve is to share and to emphasize, to European scale, the common cultural heritage of European importance and to promote the utilization of correct practices of conservation and protection of that patrimony.

Dissemination Activities until September 2004

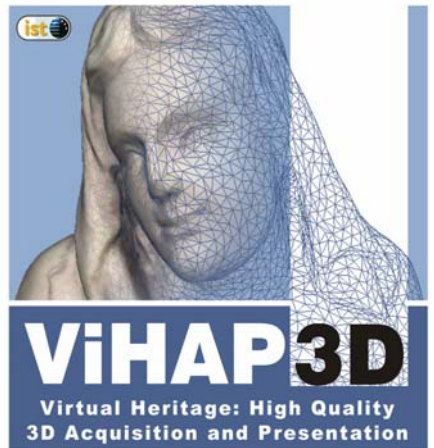
The first activity of dissemination, to show the public the ViHAP3D project, has been the elaboration of a web site, carried out by the MPI.

<http://www.vihap3d.org>

Another of the many activities that have been carried out has been the contacts and meetings with museums and educational institutions that have been held to inform them of the start up of the project and the goals.

To bring the project to light PowerPoint presentations were also shown, delivered initially by MPI in English, which has been translated to Spanish and Catalan by gedas and used as a dissemination tool for potential customers.

TUTORIALS



•“Framework for the Acquisition, Processing and Interactive Display of High Quality 3D Models” at the ACM Solid Modeling 2002 Conference, on June 17th, where it was explained that the ViHAP3D is a European integrating project which aims at preserving, presenting, accessing and promoting cultural heritage by means of interactive, high-quality 3D graphics.

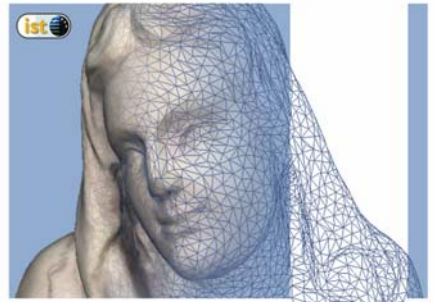
•“High Fidelity Graphics and Virtual Reality for Archeological Site Reconstruction” .UPC and Gedas, with the support of CIRIT, invited Dr. Alan Chalmers from the Department of Computer Science of the University Of Bristol (UK) to give a talk at the Virtual Reality Center (UPC-Gedas) in Barcelona (Spain).

•“3D Data Acquisition” at the Eurographics Conference 2002, which took place in Saarbrücken from September 2nd to September 6th, with speakers from CNR, MPI and UPC. In this conference R. Scopigno presented an invited speech on “3D Scanning Technology: Capabilities and Issues”.

•“Local e Governance” by Clara Baracchini in the framework of the European Master in on Experiences and Proposals and Communication Project: the 3D Model of the Piazza del Duomo in Pisa.

•“The ViHAP3D Project: Virtual Heritage High Quality 3D Acquisition and Presentation”, and “Using 3D data in the restoration of Michelangelo’s David” by R. Scopigno at the Web 3D Conference, in St. Malo (France) in March 9th 2003.

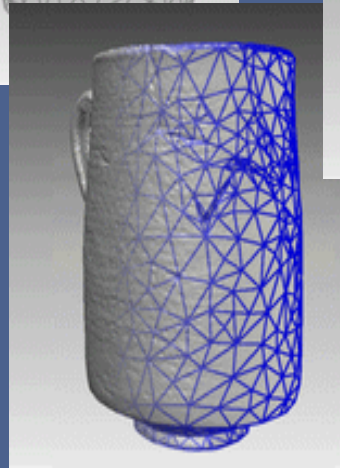
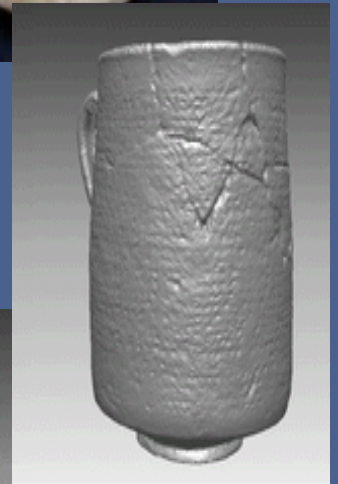
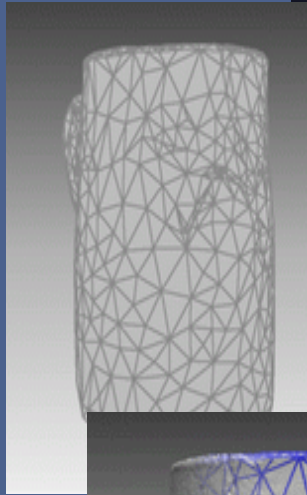
EXHIBITIONS



ViHAP 3D
Virtual Heritage: High Quality
3D Acquisition and Presentation

Real and Virtual World in Dialogue 2000 Years of Ceramics in the Saar Region

This international model exhibition exemplifies the use of novel 3D digitizing technology in cultural heritage. The exhibition presents a collection of real ceramic artifacts of the last 2000 years found as relicts in the Saar Region of the Celtic and Roman time or produced by the factories of the company Villeroy und Boch (Mettlach, Germany) and the "Fayencerie" in Sarreguemines (Lorraine, France).



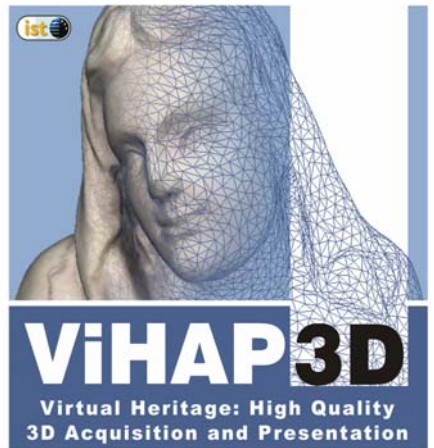
AR&PA:

**”Restauración de
Arte y
Patrimonio”**

CNR and SBAAAS took part at the fair in Valladolid (Spain), from November 5th to November 10th 2002, where the first results of the project were shown.



EXHIBITIONS



Ferrara Restauero (March 25-28, 2004)

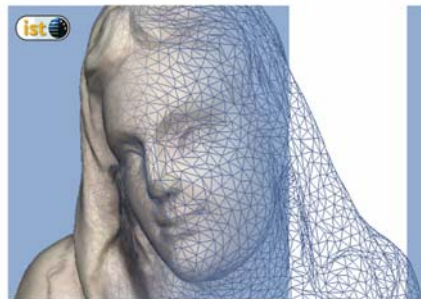
This event was the perfect showcase to present the results of the ViHAP project to a large audience of people working in the restauration field.

- Participation at the stand of the Regione Toscana
 - Four days on stage, presenting ViHAP3D results/tools to the fair visitors
 - Many contacts with CH institutions/experts
- Organization of a Symposium on 3D technologies & CH applications
 - Very good attendance, positive feedback from people attending
- Participation at an exposition organized by the Architecture Faculty of Ferrara
 - Scanned 3D models acquired at Pompei (the forum and a portion of a wall with graffiti) processed with ViHAP3D scanning tools
 - 3D models visualized using Virtual Inspector

Ferrara Restauero (April 3-6, 2003)

CNR participated at this international exposition, where R. Scopigno presented an invited speech about the use of 3D models in cultural heritage restauration

WORKSHOPS

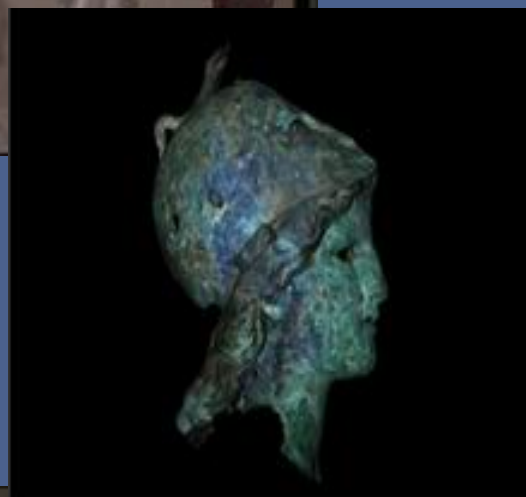


ViHAP 3D

Virtual Heritage: High Quality
3D Acquisition and Presentation

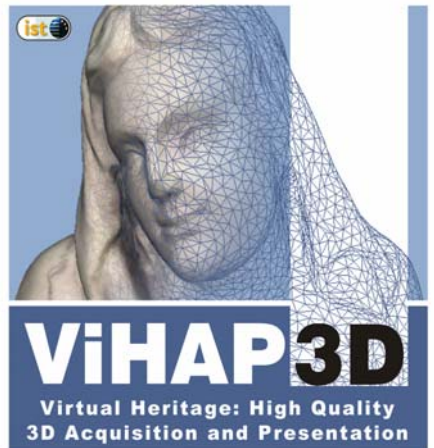
During these years that the project has lasted many activities have been carried out to diffuse the project, among them are the workshops.

“L’Alta Tecnologia Nella Gestione Di Piazza Dei Miracoli” took place in the Museo Opera Primaziale Pisana, in Pisa on September 26th 2003. R. Scopigno presented a talk on: “Un modello per un restauro: il rilievo integrato tridimensionale della testata absidale della Cattedrale di Pisa” (Modeling for restoration: the 3D digital relief of the apse of the cathedral of Pisa). And C. Baracchini presented talks on: “La facciata del Duomo e il suo modello digitale” (The cathedral facade and its digital model) and “Storia del restauro nel modello 3D navigabile del Camposanto Monumentale di Pisa” (The conservation history of the Camposanto in its interactive 3D model).



At the 8th Conference of Italian Association for artificial intelligence, a workshop was organized on: “Intelligenza Artificiale per i Beni Culturale” in Pisa on September 23rd 2003. C. Baracchini presented a talk on “A web-based 2D/3D GIS for the documentation of restauration analysis and intervention”.

PUBLICATIONS



To improve the access and the participation to the culture for the majority of citizens of the European Union the previous activities were complemented with a series of articles in scientific magazines:

.In La Rivista del Restauro, de Nardini Editori, publication 49 (edition that goes from January from March) pages 45-49, it was published “Il modello digitale 3D del David ed il uso nel progetto di restauro” written by M. Callieri, P. Cignoni, F. Ganovelli, C. Montani, P. Pingi, R. Scopigno.

.Andrea Fasano, Marco Callieri, Paolo Cignoni, Roberto Scopigno wrote “Exploiting Mirrors for Laser Stripe 3D Scanning” that was presented in the 4th International Conference on 3D Digital Imaging and Modeling (3DIM 2003), it took place in Banff (Canada), from October 6th to 10th 2003.

.R. Scopigno, P. Cignoni, M. Callieri, F. Ganovelli, G. Impoco, P. Pingi, F. Ponchio wrote “Using optically scanned 3D data in the restauration of Michelangelo’s David” for the (SPIE) International Symposium on Optical Metrology took place in Munich, Germany, from June 23rd to 26th 2003.

.Hendrik P. A. Lensch, Katja Daubert and Hans-Peter Seidel. Interactive Semi-Transparent Volumetric Textures . In Proceedings of Vision, Modeling and Visualization, Erlangen, Germany, November 20-22, 2002, pages 505-512.

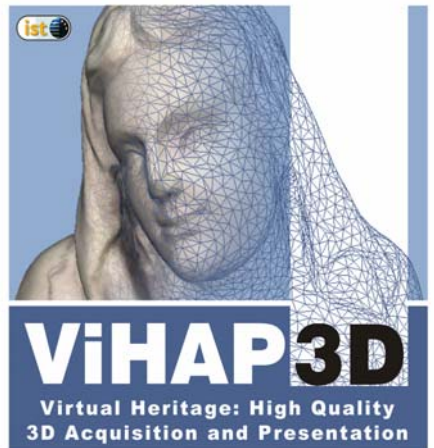
.Hendrik P. A. Lensch, Michael Goesele, Philippe Bekaert, Jan Kautz, Marcus A. Magnor, Jochen Lang and Hans-Peter Seidel. Interactive Rendering of Translucent Objects . In Proceedings of Pacific Graphics 2002, Beijing, China, October, pages 214-224.

.M. Tarini, P. Cignoni, R. Scopigno wrote “Visibility based methods and assessment for detail-recovery” that was exhibited at the “IEEE Visualization 2003”, in Seattle, Washington, from October 19th to 24th 2003.

· M. Goesele, C. Fuchs and H.P. Seidel wrote: “Accuracy of 3D range scanners by measurement of the slanted edge modulation transfer function”. In: 4th Int. Conf. on 3-D Digital Imaging and Modeling. IEEE Computer Society, Los Alamitos 2003, to appear.

.H.P.A. Lensch, J. Kautz, M. Goesele, W. Heidrich and H.P. Seidel: “Image-based reconstruction of spatial appearance and geometric detail” ACM Transactions on Graphics 22, 234-257 (2003).

PUBLICATIONS



.H.P.A. Lensch, J. Lang, A.M. Sá and H.P. Seidel: Planned sampling of spatially varying BRDFs. In: Eurographics, (Eds.) P. Brunet, D. Fellner. Eurographics Association and Blackwell, 2003.

.Clara Baracchini “Dal restauro alla valorizzazione: il progetto piazzadeimiracoli, una piattaforma digitale per la piazza del Duomo di Pisa”, April 3-6, 2003 Catalogue of the exposition, Ferrara 2003.

.C. Rocchini, P. Cignoni, C. Montani and R. Scopigno wrote “The Marching Intersections Algorithm for Merging Range Images” for The Visual Computer, Springer International, Vol 20, 2004, pp. 149-164.

.M. Callieri, P. Cignoni, F. Ganovelli, G. Impoco, C. Montani, P. Pinci, F. Ponchio, R. Scopigno wrote “Visualization and 3D data processing in David’s restoration” for the IEEE Computer Graphics & Applications, IEEE Comp. Soc., 24, March/April 2004, pp.16-21.

.P. Cignoni, F. Ganovelli, E. Gobbetti, F. Marton, F. Ponchio, R. Scopigno wrote “Adaptive TetraPuzzles: Efficient Out-of-Core Construction and Visualization of Gigantic Multiresolution Polygonal Models” for the ACM Trans. on Graphics, vol. 23, 2004.

.D. Koller, M. Turitzin, M. Levoy, M. Tarini, G. Croccia, P. Cignoni, R. Scopigno wrote “Protected Interactive 3D Graphics Via Remote Rendering” for the ACM Trans. on Graphics, vol. 23, 2004.

.P. Cignoni, G. Impoco, and R. Scopigno wrote “Closing Gaps by Clustering Unseen Directions”. In Shape Modeling International (SMI) 2004 Conf. Proc., June 2004, pp.307-317.

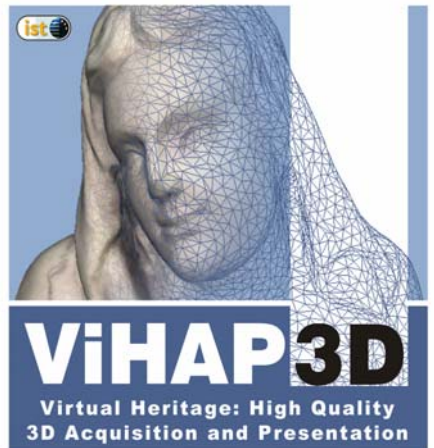
.M. Callieri, A. Fasano, G. Impoco, P. Cignoni, R. Scopigno, G. Parrini, G. Biagini “RoboScan: an automatic system for accurate unattended 3D scanning” for the 2nd Int. Symp. on 3DPVT (3D Data Processing, Visualization, and Transmission), Thessaloniki, Greece, Sept. 6-9 2004.

.Carlos Andújar, Pere Vázquez, Marta Fairén, Way-Finder: guided tours through complex walkthrough models Computer Graphics Forum, vol. 23, núm. 3, 2004.

.Carlos Andújar, Pere Brunet, Antoni Chica, Isabel Navazo, Jarek Rossignac, Alvar Vinacua Computing Maximal Tiles and Application to Impostor-Based Simplification Computer Graphics Forum, vol. 23, núm. 3, 2004.

.C. Andújar, P. Brunet, A. Chica, I. Navazo, J. Rossignac and A. Vinacua Optimizing the Topological and Combinatorial Complexity of Isosurfaces Computer-Aided Design.

PUBLICATIONS



Keynote Talks

R. Scopigno presented invited keynote talks (presenting the project results) at the following events:

-ACM Solid Modeling Symp. (Genova, June 11th, 2004). Talk title: "Efficient Processing of 3D Scanned Models".

-CEIG 2004 Conference (Sevilla, July 2nd, 2004). Talk title: "3D Scanned Models: a practical resource for Cultural Heritage applications?"

Future

One of the last activities has been to show the efficacy of this project is an Acquisition of all 15 statues of the mausoleum of Arrigo VII, this exposition will be inaugurated at the Cathedral Museum, in Pisa on September 2004. On permanent show since then.

With this newsletter we wanted to present the activities that we have been carrying out in these years in different geographic places so that people know the project and thus to be able to see their acceptance.

Contact

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