The Bellini Museum's Gallery: From Tradition to Present Time Using Digital Documentation

FRANCESCA SOLINAS and LUCA ALBERGONI, University of Florence, Italy

The Bellini family has been one of the most prestigious Florentine antique collectors since the 17th century to the present time. Their gallery is aimed to preserving the collections in the wake of the great Florentine Case Gallerie antiquarie (galleries and auction houses) that arose between the 19th and the 20th centuries and therefore witnesses the Florentine historical legacy. Located in Lungarno Soderini the museum overlooks Ponte alla Carraia. In modern times it has undergone various reworkings before adopting the current configuration through the work of the architect Adolfo Coppedé. The analysis of the building moves from a historical and cartographic research on archive sources and it relies on bibliographies. It has been articulated in two survey campaigns which involved the use of the photogrammetry and 3D Lasers Scanner. Following a specific request by Prof. Bellini, a subsequent campaign was furthermore carried out using a 360 degrees panoramic video-photography of the galleries on the two levels of the building. At a later stage, the collected data have been processed to obtain a three-dimensional texturized reconstruction of the main elevation and the point cloud of the entire building. This has been followed by the restitution of the high-resolution orthophoto of the façade and of the geometric survey of the structure, with the identification of its material characteristics and critical situations. In the final phase of the project hypotheses of intervention are proposed to respond to regulatory requirements, maintaining and enhancing the two current functions of the building: the contemporary art gallery and the antique gallery.

Key words:
Florence, Bellini Museum's Gallery, 3D Laser Scanner, Photogrammetry, Virtual Tour 360°.

CHNT Reference:
Francesca Solinas and Luca Albergoni. 2018. The Bellini Museum's Gallery: From Tradition to Present Time Using Digital Documentation.

INTRODUCTION

The Bellini Family is carrying on with the Galleria the memory of a special moment in time for antique trading and for the cultural aspect of the city of Florence. The Bellini's name is amongst some of the great names that between the 18th and 19th century represented the golden era of Italian antique trading. They projected their activity into the new millennium unlike other more renowned antique dealers. With the idea of perpetuate this operation the work of the thesis, from which this paper comes, is divided into two main paths: on one hand getting to know the fascinating building hosting the Galleria, and on the other one updating the educational and commercial activities by conjoining them with the opportunities offered by new technologies.

HISTORICAL BACKGROUND OF THE MUSEO GALLERIA BELLINI[1]

The Palazzina Bellini (Fig. 1), whose architecture is a key element of the Lungarno Soderini in Florence, owes its current appearance to the Bellini's, an important family well known for dealing antiques since the second half of the18th century [Bellini 1947; 1961; Bargellini 1981] who bought the building in the 1920s and turned it into a private gallery in order to preserve and exhibit their own collection.

Author's addresses: Francesca Solinas, Dipartimento di Architettura, University of Florence, Piazza Ghiberti, 21, 50121, Florence (FI) Italy; email: francesca_solinas@yahoo.it; Luca Albergoni, Dipartimento di Architettura, University Of Florence, Piazza Ghiberti, 21, 50121, Florence (FI); email: luca.albergoni@gmail.com.

[1] Homepage of Bellini Museum's Gallery. https://www.galleriabellini.com/ (Visited on 16/02/2018)

Fig.1. Main front of the Galleria Bellini, toward Arno River

The few sources regarding the building's history available today are not enough to pinpoint either an approximate date of the construction of the building or the author of the decorative and architectural aspect it resembles today. The documents discovered in various archives show the presence in the building of Augusto Burchi's studio (Florence 1853–1919) [Galardelli 1909], whose name appeared also on a few permits[2] given by the City of Florence in 1902 regarding construction works in the Gallery.

At the time, Augusto Burchi was one of the most important decorators in Florence. He was active in works of restoration and mural decoration, especially from the end of the 1880s until the first decade of the 1900s [Branca and Caputo 2017]. In 1901 Anita, daughter of Augusto Burchi, married Aldolfo Coppedè (Florence 1871–1951), third son of Mariano Coppedé, founder in 1885 of "La Casa Artistica di Mariano e figli Coppedè", a lab for the production of sculptures and wooden furniture, which had great success at the time. Adolfo, after having some experience as a painter, approached architecture [Bossaglia and Cozzi 1982; Cozzi 1996] and became an important exponent of Florentine and Italian post-eclecticism.

Even though there is no definite information regarding the Palazzina of Lungarno Soderini, it is possible to state that it was a focal point for important figures in the city's artistic culture at the beginning of the 1900s. It is therefore quite plausible that Augusto Burchi participated in the decoration of the façade and that Adolfo Coppedè contributed to design the façade and the rearrangement of the Palazzina Bellini.

Such intervention is datable around a period that goes from 1912 to 1920: even if we have Mauro Cozzi's testimony [Bossaglia and Cozzi 1982, p. 265] that the work took place in 1912, in the land register map from 1913-1920[3] the building looks unchanged in its form and only in the chart of 1968[4] it appears in its current state.

The lack of intermediate maps prevents for more precise dating.

ANTIQUE TRADE IN ITALY AND THE BIRTH OF GALLERY-HOUSES BETWEEN THE 1800s AND 1900s

The 19th century, the golden era of antique trading, represents a period of exceptional development which brought the eminent antique collectors' names, in particular the ones from Florence, an international recognition.

[2] "con richiesta, il 23 maggio 1902, da parte del decoratore del permesso di costruire un terrazzino in aggetto allo stabile n. 1 di Lungarno Soderini". Coll. CF7973, fasc. 14 m. ins. 90 m. The Historical Archive of the City of Florence preserves the documents produced and received by the city administration since 1781. http://wwwext.comune.fi.it/archiviostorico/index.html?pa=eventi_2013.html

[3] The Historical Archive of the City of Florence

[4] The Historical Archive of the City of Florence

The causes of this boom are to be found in a blend of heterogeneous factors, social-economic, artistic and religious ones. From the second half of the 1800s in particular, Florence was the destination of a cultured international tourism, originating from the interest of the intellectual European and American elites towards Italian art – the Renaissance one in specifically – and by a contemporary regain of the *"gusto dei primitivi"*. Following this "new" attention towards Italy and its art, a prestigious economical and cultural antique trade blossomed, aiming to satisfy amateurs and collectors from the wealthiest backgrounds and meet the growing demand for antique goods. Under these circumstances, a few Florentine antique dealers emerged as important figures – Luigi Bellini among them – that managed to act as mediators between an excessive offer produced by Italian public auctions and as a big growing demand from rich intellectuals and museums (both private and public, European and American).

People as Stefano Bardini, even though of humble origin, became in a short time a relevant figure in the market, creating a meeting point between Italy and the rest of the world. Their gallery-houses were a crossroad for intellectuals, artists and enthusiasts, places of debates, discussions and trading.

To them, we owe a unique example of the organization of these structures based on a new model of "home-museum-shop", with their settings becoming a model to other important museums in Europe and outside of Europe as well [Mannini 2011; Teodori and Celani 2017; Ferrazza 2017].

THE HISTORICAL EVOLUTION OF THE BUILDING

With the aim to date the building, one of the first phases of this work has been the search for maps and documents.

The research took place primarily at the State Archive and in the Historical Archive of the City of Florence[5]. Other than the historical cartography, the goal was to recover material which documented the creation and the development of the building at hand.

Taking as "moment zero" the construction of Palazzo Soderini (15th Century)[6] which overlooks Via Della Carraia – today Via Borgo San Frediano – the lot was occupied by it and, in the pertinent rear area, by its garden. The first construction of the side facing the Palazzina of Lungarno is attested by the Leopoldino Cadastre from 1833[7] (Fig. 2a) where a building, similar to the current one, appears for the first time even though of smaller size. From this first phase the building appears without variation both in the cadastral map from 1884[8] (Fig. 2b), and the one from 1913–20 (Fig. 2c) till the chart from 1968 (Fig. 3a) where it is finally attested in its current size.

a *b* *c*

Fig. 2. Historical cartography, details: a) Map of the Leopoldino Cadastre (1833); b) Cadastral Map of 1884; c) Cadastral Map of 1913-20

[5] The State Archive of the City of Florence conserves archives and original documents of historical interest (sec. VIII-XX) and ensures its consultation for study and research purposes. http://www.archiviodistato.firenze.it/asfi/index.php?id=2 (Visited on 16/02/2018).
[6] Il Repertorio Delle Architetture Civili di Firenze is a project whose objective is the census of the civil buildings present within the area inscribed by UNESCO on the World Heritage List. http://www.palazzospinelli.org/architetture/
[7] The Historical Archive of the City of Florence
[8] The Historical Archive of the City of Florence

From both the map and documentation research combined it could be affirmed the possibility that the building had at least two phases of extension.

This hypothesis is supported both by online research, through the system of the Historical Regional Cadastre (Ca.Sto.Re)[9] of the Tuscan region, and by the analysis of the decoration of the building itself.

a *b*

Fig. 3. a) Cadastral Map of 1968, detail; b) Image taken from Ca.Sto.Re System

Ca.Sto.Re allowed a first confirmation regarding the growth in size of the building, from how it appears the first time in the map from 1833, to the current state (Fig. 3b). In the system the two charts, the one from 1868 and the current one, are shown overlapping, highlighting an enlargement of the building, downsizing the internal courtyard. In the lack of further documentation, it is possible to consider another element of hypothesis for the building's growth: the analysis of the decorations brought on both for the internal and for the external.

One of the first noticeable things inside the Bellini museum-gallery is an evident coexistence of at least three different types of decorations, divided into three well recognizable styles.

a *b*

Fig. 4. a) The entrance corridor on the ground floor, an example of neoclassicism Poggiano style; b) Decoration's detail of the main façade: allegories of Painting and Architecture.

[9] Promoted by the Tuscany Region, the CA.STO.RE project involved the digital reproduction of over 12,000 nineteenth-century cadastral maps freely consulted online. http://www502.regione.toscana.it/geoscopio/castore.html (Visited on 16/02/2018).

They indeed divide the ground floor of the building in three parts apparently belonging to three different worlds, three diachronically different eras: the neo-classical era, typical of a "poggiano" context as the one of Florence (Fig. 4), a medieval-like area and one where neo-romanesque and neo-gothic elements alternate each other. From this analysis a "decorative scheme" was defined, it suggests that there were at least two phases of development in the building.

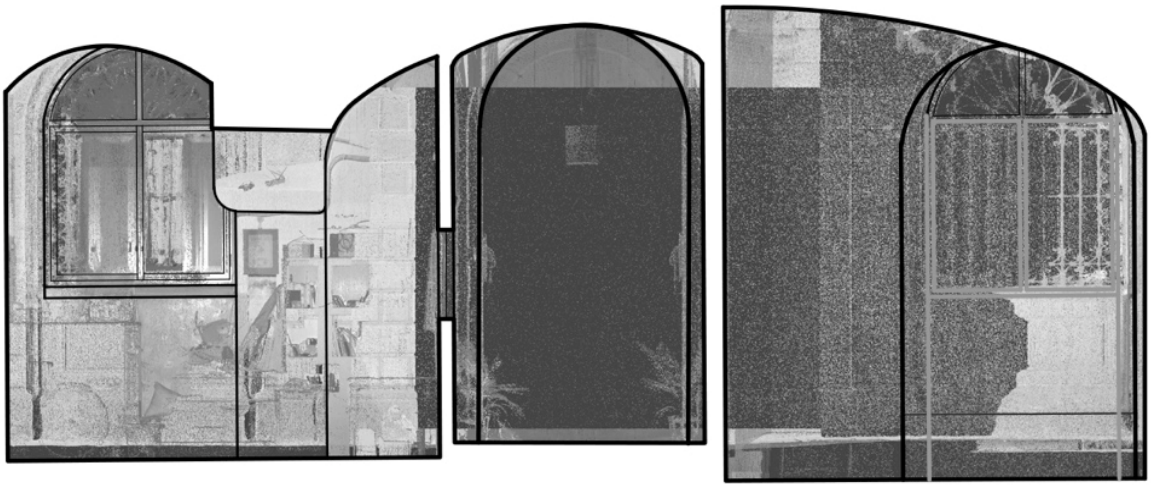


Fig. 5. Detail of the section obtained through a 3D Laser scanner that confirms the presence of an original vault, divided and partly covered by subsequent interventions

Fig. 6. The campaign carried out with 3D Laser Scanner on the Gallery's first floor

A first phase that can be described as “revival historicism” sees the decorative apparatuses, the ones in the "medieval style" together with a variation of neo-romanesque and neo-gothic elements. Through the direct observation and the mapping with the 3D Laser scanner it is possible to deduce that the central space on the Lungarno Soderini had a uniform purpose and was covered by a flattened barrel vault, later divided in interventions (Fig. 5). This suggests that the two rooms adjacent to this space were the accesses respectively to the private area and the commercial one of the rest of the building. A second phase sees the final renovation – presumably the work of A. Coppedè – and can be summarized in two macro-interventions: the shifting of the constituent axis and the renovation of the façade.

THE MAPPING CAMPAIGN

The mapping campaign of Palazzetto Bellini was carried out with 3D Laser Scanner and with photogrammetry. This double methodological choice is justified by the geometrical richness of the building and aims to its precise portrayal through a 3D digital model with high-resolution textures.

The use of the 3D Laser Scanner (Fig. 6) generates a digital three-dimensional object, very detailed in its geometry. To this day, this is the best technology available to render a model with the least amount of differences possible in relation to the real geometry of the object. The overall result of the campaign consists of 183 scans acquired in three days between February and June 2017.

Due to the presence of a centennial wisteria alongside the balcony – which during its blossoming would have increased the occlusion of the balcony – the first scans have been taken from the façade towards Lungarno Soderini. The stations inside the house Gallery were done in two times and only concerned the ground and first floor, leaving out the private area of the building.

The equipment used, a 3D Laser Scanner model CAM/2 FARO 3D Focus and a second model Z+F imager 5006H, were provided by the DIDALABS System of the Dipartimento di Architettura of Florence University [Mandelli 2007, Bertocci and Bini 2012].

Aside from what already reported, there was a photographic campaign limited to the façade – using digital reflex photo-cameras with a tripod – in order to integrate the data recovered with the 3D Laser Scanner and create high-definition textures which could render the material and the decoration of the front in an efficient manner.

The shots were then processed with the *Agisoft Photoscan*[10] program to achieve photomaps. To facilitate the software calculation and minimize the next step, all the pictures were shot in a manner that would ease the editing process of the image once in the software. The photos were taken with a clouded sky and indirect light, minimizing the presence of shadows and therefore obtaining the most uniform lighting possible; the pictures were also taken following a linear path parallel to the façade, with superimpositions of around 1/3 images, guaranteeing a total coverage of the object and avoiding empty spaces.

To capture the details of the decorations on the tympanum, the use of a telephoto lens was necessary and therefore the camera shooting point was very far from the object. The equipment used in this phase was a Sony camera DSC–HX400V, a Nikon D5300 with telephoto lens Tamron F2.8\200 mm and a Nikkor F4 with 24\120mm zoom. All the equipment was provided by the “Architecture Photo Lab” (LFA) of the System DIDALABS, Department of Architecture. To collect further documentation, a campaign was launched with a Ricoh Theta S camera, which creates 360-degree panoramic videos and photos in high-resolution. The spherical pictures are obtained with a "folded optic" technology, with the ultra-compact and ultra-wide-angle lenses, projected and optimized specifically for this type of photographs *(theta360)*[11].

The panoramas were taken using a camera with a double wide-angle ultra-compact lens – with an angle of 180 degrees greater than a fisheye lens – and distributed to the two-prism sensors at 90 degrees. The visualization of the images goes through the specific app, available on the Ricoh website, both for the main OS and in mobile versions. All the pictures were taken minding not to include the operators inside the camera field. The camera was set on a tripod at the center of the space that was supposed to be photographed, in order to get the best visual angle possible. By using the specific function of the camera – which can be managed by support devices such as tablets and smartphones – the operators were able to distance themselves and take the pictures without being included. To film

[10] http://www.agisoft.com/ (Visited on 16/02/2018).
[11] https://theta360.com (Visited on 16/02/2018)

the videos, the device was set on a pole, managed by hand: increasing the distance between the camera and the operator, their presence in the video was limited.

Fig. 7. Example of equirectangular projection of a room on the gallery's first floor

This technique got the attention of Prof. Luigi Bellini, current owner and manager of the gallery, who manifested a fair interest towards the possibilities offered by interactive and multimedia technologies to enable the viewing of the pieces inside the expositions even at a distance, both through 360-degree panoramic pictures and with 360-degree video series (Fig. 7).

DATA PROCESSING

Point cloud processing with Autodesk Recap

The phase of connecting the several 3D Laser Scans of the point cloud processing was carried out with Recap Pro, a program by *Autodesk*[12].

The purpose of the software is to acquire and process .ZFS files from the Laser Scanner and converting them into editable three-dimensional data. The process has three phases: the importing of the single scans, their registration, and the indexing (unifying the scans into a single point cloud).

The data provided by the point cloud currently represents the closest information to reality, but it is also extremely distant from the traditional forms of representation (Fig.8). It is necessary to translate the three-dimensional data in bi-dimensional codified forms such as maps, perspective drawing, and sections.

To achieve this further step has been used a software by Bentley, *Pointools VI*[13], that allowed to optimize and edit the point clouds and to export screenshots of the model. Initially, the files have been converted by the use of Autodesk Recap into a format compatible with Pointools VI. The file obtained by the conversion is not composed by a group of scans but by a single cloud which provides a better management of the file itself (“not gripped”). Furthermore, the advantage reached by the use of this software is the possibility to identify section-plans geometrically defined by a triad of Cartesian axes (x, y, z) and by an axis rotating on z.

[12] https://www.autodesk.com/products/recap/overview (Visited on 16/02/2018)
[13] Homepage of Bentley Pointools, a software used to visualize, manipulate, animate, and edit point clouds. https://www.bentley.com/en/products/product-line/reality-modeling-software/bentley-pointools (Visited on 16/02/2018)

All of this allows to obtaining the desired sections with a geometrically precise result and data characterised by a high level of accuracy (Fig. 9).

Fig. 8. The final result: the total point cloud in Autodesk Recap

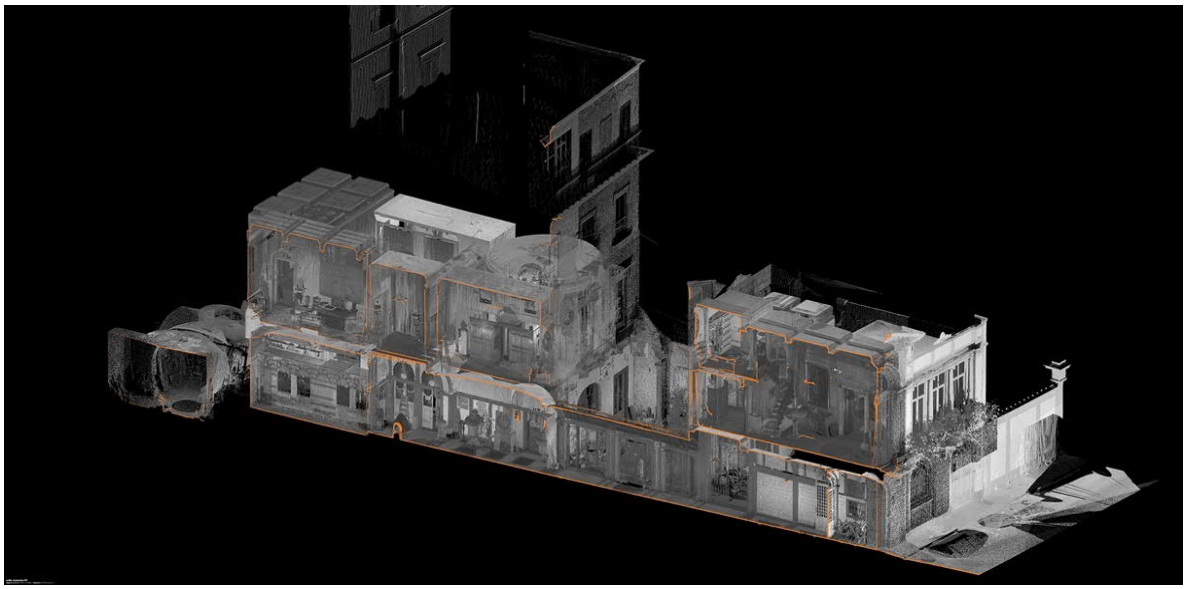
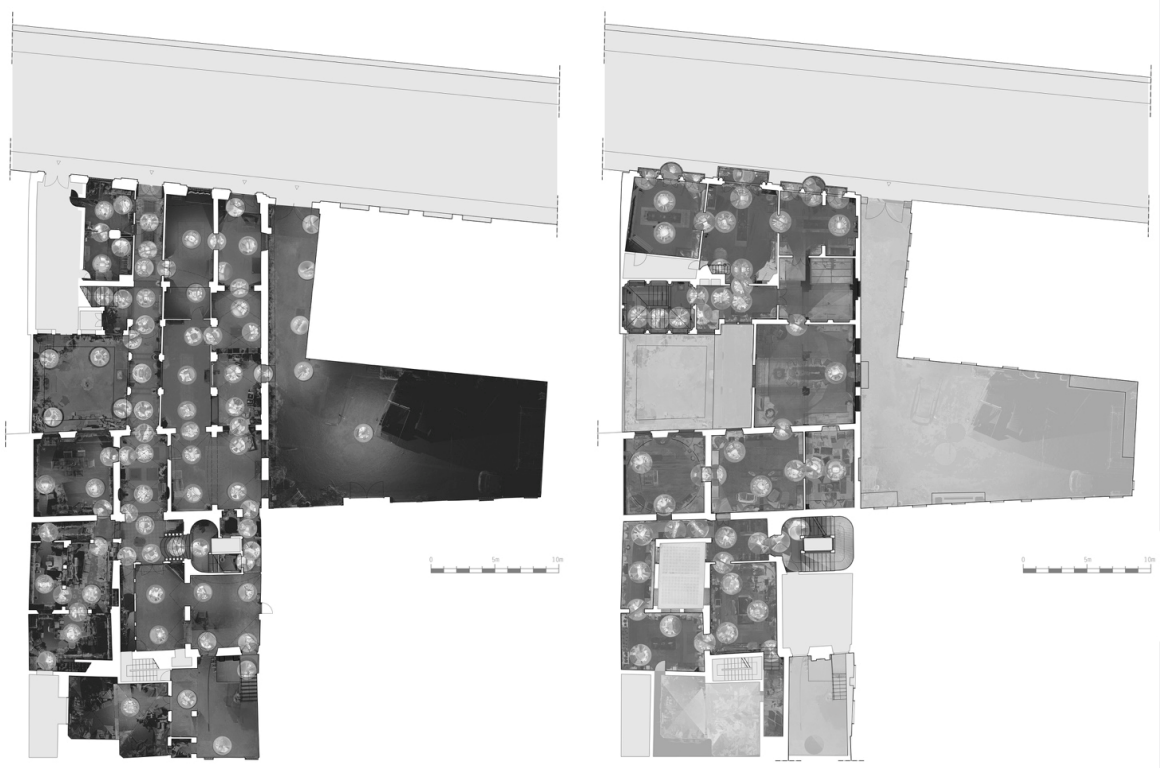


Fig. 9. The 3d model, cut with a vertical section-plane

Once the section plan is defined and the orthogonal view is oriented to the object to be rendered, it is possible to save the viewer window and export a screenshot of the model, defining the image size, the shot area, the format of the exported file, and its quality.



a *b*

Fig. 10. maps of the two levels of the Palazzina Bellini: a) the ground floor; b) the first floor

Fig. 11. longitudinal section

Once the image of the section was created the next step was to set the raster in an *AutoCAD*[14] file and start the following operation of review, thus obtaining maps, perspective drawings and sections of the object studied (Figs. 10-11).

Photomaps processing

In order to process the photomaps and a textured three-dimensional model, was used the Agisoft Photoscan software, version 1.3.

Fig. 12. Photomap of the main elevation.

The photogrammetry survey was limited to the façade of the building toward Lungarno Soderini and it was implemented with the purpose of providing evidence of its decorative and material richness. The data processing was complicated because the main front has many interference factors that prevented the software from easily recognizing the various elements. The first of the problems was the presence of a large wisteria plant alongside the whole façade, which wraps itself around the wrought iron balconies; an additional complication was represented by the size of the glass windows of the first floor and the reflections they produce.

The software has troubles recognizing and processing data coming from images in which there are at the same time both elements in motion blur – in this case, the movement of the wisteria branches – and reflecting surfaces of such size.

To fill in the gaps in the balcony area, we calculated a second model, achieved through distance shooting with a telephoto lens. In this case also, however, the model processing was not satisfactory, and the use of these images moved to the post-production phase and, with the use of Adobe Photoshop, the gaps of the first model were filled. (Fig. 12).

[14] https://www.autodesk.com/products/autocad/overview (Visited on 16/02/2018)

HYPOTHESIS OF INTERVENTION

The current situation

The building presents rich historical layers, which are evident from the variety of the areas and the heterogeneity of the decorations. Nonetheless, a series of individual interventions without an organic project was carried out during the years, altering the structure, degenerating its character, dividing its volumes improperly through false partitions, and obstructing its openings. In addition, there are the usual problems related to the lack of routine maintenance, with inevitable repercussions on the general health of the spaces and the preservation of the artwork.

Repair, maintenance, and upgrading of the spaces

The purpose of the project is to protect the charm of the spaces, improving the usability while respecting the double function of the building, the museum, and the commercial one. Restoring the health of the spaces also contributes to this aim, both for the users and for the artwork inside.

The procedures identified for the fulfilment of these goals can be divided into two types of interventions: one with a focus on the distributive upgrading through the removal of the several improper interventions of divisions, hollow walls and false ceilings; the other one consists of updating the systems to fit the current standards, respecting the charm and the historical character of the building.

Digitalization of the Galleria

The survey is an essential cognitive tool, a requirement for the consecutive analyses and a foundation for an efficient project proposal related to the issues of the building and its correct restoration (fig. 13). The use of 3D Laser Scanner technology ensured the quick elaboration of an extremely detailed digital model of the building's geometry and the current setting of the several rooms. The employment of panoramic 360-degree pictures offers a chance to create virtual reality tours, other than the rendering of colors, which is not completely accurate through the point cloud. These virtual tours can be taken through web platforms or applications, specifically developed in order to implement the usual advertising and information techniques, with a double effect of expanding the possible audience both of the museum and the antique artwork gallery. The possibility of creating virtual tours was welcomed by Prof. Bellini, who sensed the potential and the benefits of releasing the exposition from its physical place by connecting the traditional advertising methods of museums with modern multimedia technology.

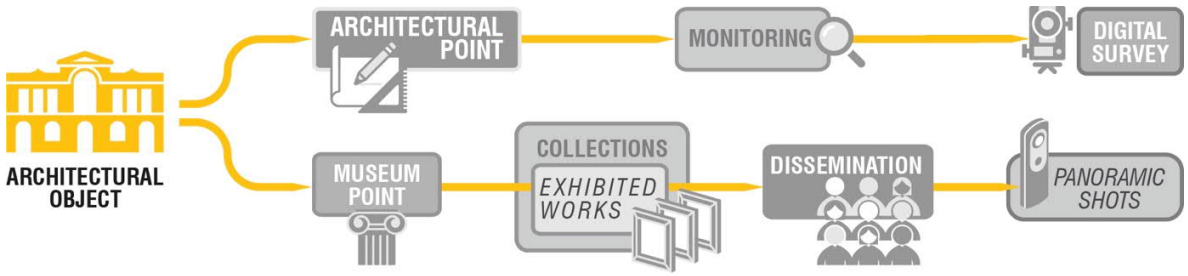


Fig. 13. Digitization process diagram

The number of museums and galleries that update and enrich the offer of their expositions, thanks to new technologies and the spreading of portable devices, is constantly growing, and the development of the various methodological approaches to the digitalization of their collections is even faster. The most popular trends can be summarized in two processes: one would be virtual tours which digitally recreate the architecture and setting of the galleries, and therefore put the artwork in a more or less immersive but fully virtual scenario. The other method would be to create actual catalogues of the collections, in which the artwork is rendered with the highest details, both bi and three-dimensional. This is the direction of platforms such as Sketchfab, which enables the viewing and fruition of three-dimensional models, with the possibility of being consulted remotely [Verdiani 2016]. In this

platform are included organizations such as the British Museum[15] or the Museum d'Arqueologia de Catalunya[16] that made part of their collections available to the website users.

The goal of the project is to connect the two examples in a single panoramic tour, based on 360-degree pictures, with the chance for the users to improve their knowledge of the artwork accessible through links to a virtual catalogue describing their characteristics in detail. Such method allows users to explore in only one tool both the gallery and the museum, and it is easily accessible from any available device, such as mobile phones, tablets or others (Fig. 14). For the realization of this project, a digitalization campaign was carried out using more than sixty photos and videos of the galleries on the two floors of the building.

After the post-production editing, the video material was uploaded to the web platform Vimeo, which accepts 360-degree videos and guarantees private viewing only to the users with a specific access code. The several 360-degree photos of the antique artwork Galleria on the first floor were assembled in a single tour that follows the sequence of the rooms through the *Panotour 2.5* software[17]; such a program enriches the value of the tour providing links to the pieces in the exhibition, leading to interactive elements. High-resolution images, animated GIFs, link to web pages, text documents and audio-visual elements can be uploaded to the package of files generated by the software. It is possible therefore to realize didactic cards with the characteristics of the pieces and connect detailed renderings of the painted areas or small turntable videos of the sculptures to the pieces themselves.

The tour can be downloaded directly on the visitor's smartphone and launched through the free *Panotour player*, or opened as an HTML app on a browser, accessible via a QR code.

Fig. 14. Interactivity and navigability of the panoramic virtual tour

[15] A page contains photogrammetric reproductions of works belonging to British Museum Collection. https://sketchfab.com/macb3d (Visited on 16/02/2018)
[16] A page contains photogrammetric reproductions of works belonging to the Museo d'Arqueologia de Catalunya. https://sketchfab.com/macb3d (Visited on 16/02/2018)
[17] http://www.kolor.com/2018/06/21/virtual-tour-software-panotour-panotour-pro-2-5-12-minor-update/ (Visited on 16/02/2018)

CONCLUSIONS

In conclusion the 3D laser scanner is a new technology implementing and improving traditional cognitive tools in regards to a building. In the case of the survey of Palazzina Bellini, the data obtained in the digitalization helped to reconstructing the historical evolution of the building, which was complex with such scarce documentation material. The scan highlighted the fact that the space on the ground floor toward the Lungarno was initially covered by a vault, that it had a uniform purpose and that the inside divisions and the false ceiling were the results of later interventions. After all the multimedia technologies allow to reach a new concept of a museum that goes beyond its walls and makes the fruition of the exposition and the immersion in places rich with history and culture available to a much wider audience.

Recently the video tour was used, for example, during the preparation for the exhibition “Miracle: the Bellini Family and the Renaissance” at the Himalayas Museum in Shanghai. On this occasion, the panoramic tour and the relative 360-degree picture were used as a tool for the training of the tour guides that accompanied the visitors of the exhibition. Through the multimedia reproductions, it was possible to let the guides experience the atmosphere of the Florence Galleria, in order to best render the charm of the artwork in their architectural context.

ACKNOWLEDGEMENTS

The author thanks Prof. Arch. Giorgio Verdiani and the DIDALABS System of the Dipartimento di Architettura of Florence University for the support provided to the project's development.

I thank Prof. Bellini for the opportunity provided, and his staff for their availability.

Finally I thank Dr. Mirella Branca and Prof. Arch. Gian Luigi Maffei for the support given in the reconstruction of the building's historical events.

REFERENCES

Simone Bargellini. 1981. Antiquari di ieri, Firenze: Bonechi Editore.

Luigi Bellini. 1947. Nel mondo degli antiquari, disegni di Giorgio De Chirico, Firenze: Arnaud .

Luigi Bellini. 1961. Il fascino dell’antiquariato, Firenze: Vallecchi.

Stefano Bertocci e Marco Bini. 2012. Manuale di rilievo architettonico e urbano. Novara: CittàStudi.

Rosana Bossaglia and Mauro Cozzi. 1982. I Coppedè, Genova: Sagep Editrice.

Mirella Branca and Annarita Caputo. 2017. Dai modelli decorativi tardo ottocenteschi alla cultura modernista e al mito eroico nella pittura murale: Augusto Burchi, Galileo Chini, Adolfo De Carolis. In Sandro Bellesi. Accademia di Belle Arti di Firenze. Pittura 1784–1915. Firenze: Mandragora, pp. 207–224.

Mauro Cozzi. 1996. Firenze e l’arte nuova. In Maria Adriana Giusti. Le età del Liberty in Toscana, atti del convegno (Viareggio 29–30 settembre 1995). Firenze: OCTAVO Franco Cantini Editore, pp. 90–98.

Roberta Ferrazza. 2017. Il Museo della Casa Fiorentina Antica, le aste del 1916 e del 1917 a New York e la diffusione dello ‘stile Davanzati’ nel mondo. In Brunella Teodori and Jennifer Celani. 1916–1956–2016 . Dall’asta al Museo. Elia Volpi e Palazzo Davanzati nel collezionismo pubblico e privato del Novecento, atti della giornata di studi (Firenze, Palazzo Davanzati, 21 novembre 2016). Firenze: Polistampa, pp. 15– 31.

G. Galardelli. 1909. Catalogo dei quadri, bozzetti, disegni e stampe esistenti nello studio di pittura del Cav. Prof. Augusto Burchi, Firenze: Galardelli e Mazzoni.

Emma Mandelli. 2007. Dati, informazione, conoscenza. Metodi e tecniche integrate di rilevamento. I modelli tridimensionali, la costruzione e trasmissione dei dati. Firenze: Alinea.

Lucia Mannini. 2011. Le stanze dei tesori. Collezionisti e antiquari a Firenze tra Ottocento e Novecento, catalogo della mostra (Firenze, Palazzo Medici Riccardi, 29 settembre 2011–25 aprile 2012). Firenze: Polistampa.

Antonella Nesi. 2017. Stefano Bardini ed Elia Volpi: due stili a confronto. In Brunella Teodori and Jennifer Celani. 1916–1956–2016 . Dall’asta al Museo. Elia Volpi e Palazzo Davanzati nel collezionismo pubblico e privato del Novecento, atti della giornata di studi (Firenze, Palazzo Davanzati, 21 novembre 2016). Firenze: Polistampa, pp. 249– 265.

Giorgio Verdiani. 2016. Ricostruire nel virtuale e nel reale, esperienze tra musei e divulgazione. In Anna Margherita Jasink and Giulia Dionisio. MUSINT 2, Nuove esperienze di ricerca e didattica nella museologia interattiva. Firenze: University Press.

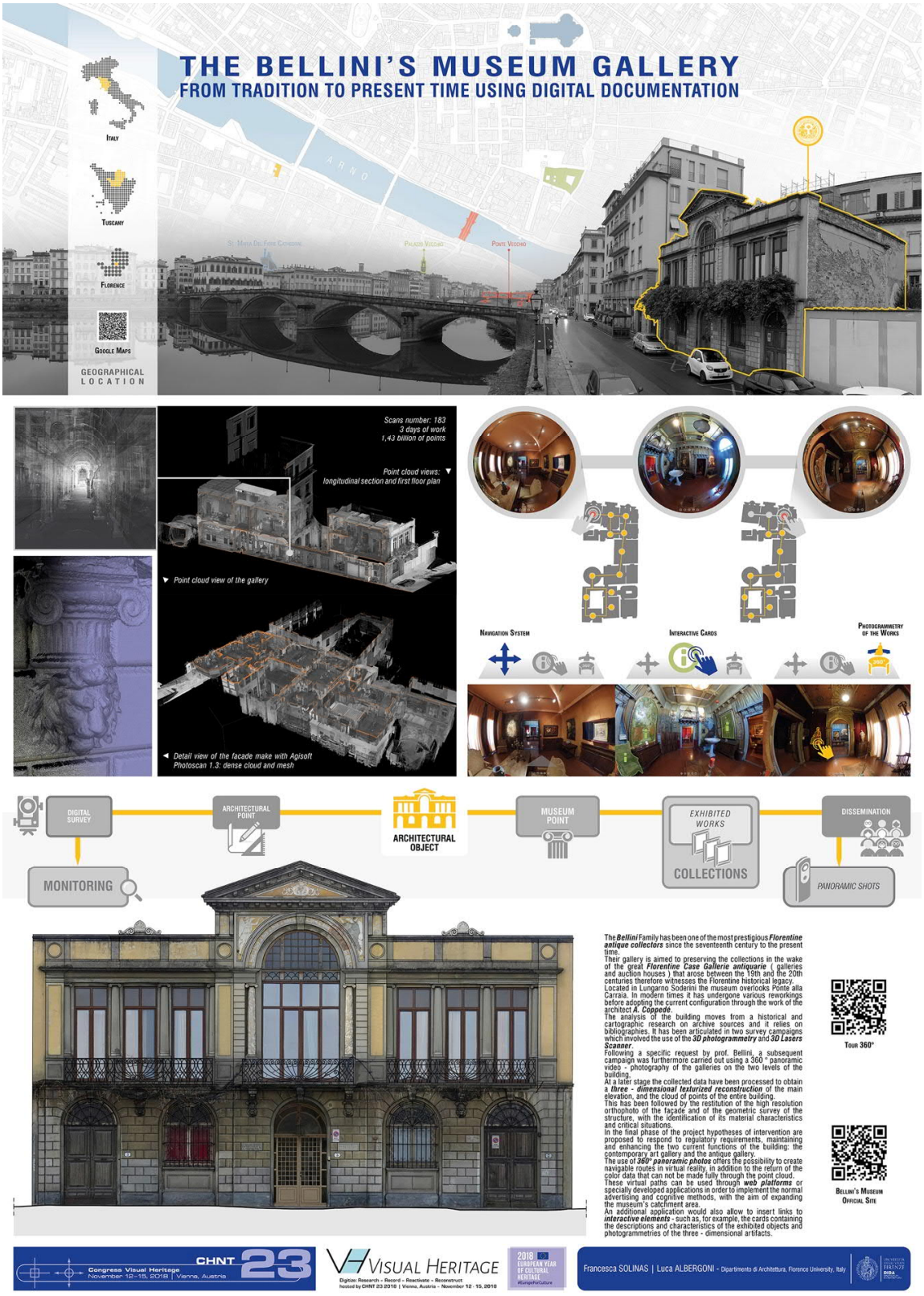


Fig. 15. The poster presented at CHNT

Imprint:
Proceedings of the 23rd International Conference on Cultural Heritage and New Technologies 2018.
CHNT 23, 2018 (Vienna 2019). http://www.chnt.at/proceedings-chnt-23/
ISBN 978-3-200-06576-5

Editor/Publisher: Museen der Stadt Wien – Stadtarchäologie
Editorial Team: Wolfgang Börner, Susanne Uhlirz