

# VERSPERA

## Digitisation and computer modelling of the plans of Versailles during the Ancien Régime

### Press release

Monday 11 December

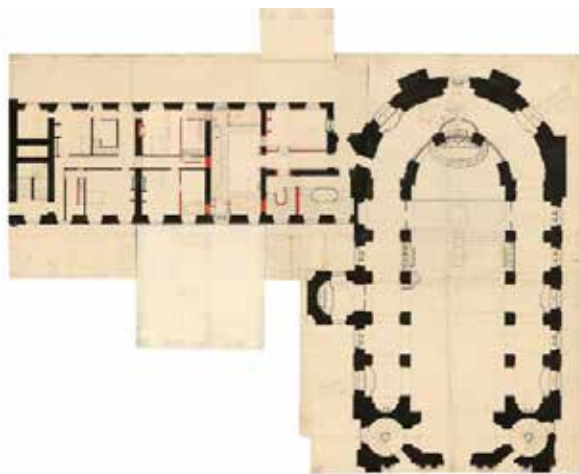
The VERSPERA research project is an ambitious undertaking to digitise and model the plans of the Palace of Versailles as it was during the Ancien Régime. From 11 December 2017, the public will be able to view 16,000 digital images from what is an extraordinarily diverse collection. The aim of the project is to preserve a unique and fragile resource that, up to now, has been difficult to access. It also enables some of the 'lost' areas of the former royal residence to be digitally reconstructed.

#### ♦ An ambitious digitisation project

Since 2013, the Centre de Recherche du Château de Versailles (Palace of Versailles Research Centre) has been conducting a unique, large-scale project.

The programme was launched in partnership with the French National Archives, the French National Library and the ETIS laboratory (Équipes Traitement de l'Information et Systèmes, UMR8051 at the University of Cergy-Pontoise/ENSEA Cergy/CNRS), with the financial support of the Foundation for Cultural Heritage Sciences/LabEx Patrima and the Ministry of Culture.

It involves a huge effort to digitise almost 9000 graphic documents relating to Versailles (palaces, gardens, park, estate and town) dating from the late 1660s up to the early 19th century. Most of the plans are from the National Archives but there are also some from the National Library and the Public Institution of the Palace, Museum and National Estate of Versailles. They are free to view on the respective websites of the various partners.



Plan of the chapel and sacristy of the Palace of Versailles 1705-1708. 2 amendments noted. Photo : DR



Set-up for very large-format shots, using prototype equipment. Photo : DR.

#### ♦ An exceptional collection

This corpus of documents, comprising general plans, cutaways, elevations and architectural or decorative details, is exceptional in terms of its history and volume. It is primarily the result of work by the king's principal architects. All of them – from Louis Le Vau to Richard Mique, by way of Jules Hardouin-Mansart, Robert de Cotte or Ange-Jacques Gabriel – exemplify the excellent standard of French architecture in the 17th and 18th centuries. The collection constitutes one of the greatest public architecture resources, on a par with the Tessin-Cronstedt-Härleman collections held by the Swedish National Museum of Art and Design in Stockholm. It also represents the largest body of documents on French classical palatial architecture of the 17th and 18th centuries.

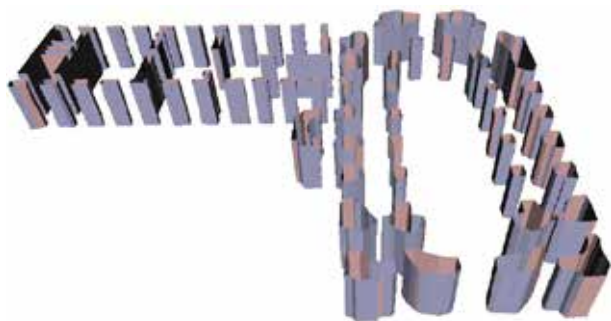
Reproducing these images in digital high-resolution format involved a significant effort to restore 750 fragile and valuable documents, and the use of innovative procedures to meet the myriad technical challenges – due, mainly, to the dimensions of some very large-format documents (up to 3m x 4m in size) and the existence of numerous and complex amendments.

## ◆ Modelling software

Using these digitised plans, the ETIS laboratory developed a new 3D modelling programme. The sheer size of the body of documents now available will allow comparisons to be made that, up to now, were difficult or even impossible. This will give a better idea of the layout of the various spaces, of their purpose and how they were used, relative to the topography of the royal residence. In fact, since the 17th century, the Palace of Versailles has gone through several architectural evolutions that have been amalgamated with or subsumed into the buildings (the hunting lodge, residences for pleasure, official residences of the court and the royal power, historical galleries, national palace). These different features make it impossible, today, to create a linear interpretation of the various stages of construction and planning that went on at Versailles.

While 3D modelling of architectural plans may now be common, it is particularly challenging when the plans to be digitally processed are extremely old, owing to the specific nature of such documents (absence of standard symbols, lack of straight lines, etc.) and the digitisation process itself (fold marks, sometimes watermarks).

The resulting 3D models are saved in a standard format, so they can be accessed using any viewing application. The viewer can manipulate, 'circle around' and even 'go inside' the models. The VERSPERA software also features a 3D route-setting function, via which a 'subjective', or 'first-person' video is created in the model based on a route through the plan determined by the user. The software is free to share.



The geometry of the 3D models is calculated by extruding the walls to an initial arbitrarily fixed height. The Royal Chapel is shown here. Photo : DR

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## ◆ Explore further with virtual reconstructions

For some of the more historically interesting areas of the palace, a series of realistic virtual tours of very high technical and aesthetic quality has been produced by students from the University of Cergy-Pontoise vocational degree course in 'multimedia: digital art and 3D modelling'.



Reconstruction of Mignard's small gallery – taken from the film produced by students on the 'multimedia: digital art and 3D modelling' vocational degree course at the University of Cergy-Pontoise, under the supervision of Nicolas Prinotakis and Michel Jordan.

### VERSPERA in figures

- ◆ **7500 drawings** of the King's Buildings during the Ancien Régime from the National Archives
- ◆ **1000 drawings** from the Robert de Cotte collection at the French National Library
- ◆ **200 drawings** from the Palace of Versailles collections

### VERSPERA at the National Archives

An exhibition about the project is currently open to the public at the National Archives site in Paris, where visitors can view a short documentary on the making of the project. They will also be able to see an example of a lost space reconstructed thanks to VERSPERA – Mignard's small gallery – by donning a pair of 3D glasses and downloading a mobile app.

From 22 December to 31 March,  
Monday to Friday, 10 am to 5.30 pm;  
Saturday and Sunday, 2 pm to 7 pm,  
National Archives Paris site  
60, rue des Francs-Bourgeois 75003 Paris

### Discover VERSPERA at

#### VERSPERA Research Log

[www.verspera.hypotheses.org](http://www.verspera.hypotheses.org)

#### Image library of the Palace of Versailles Research Centre

[www.banqueimages.chateauversailles-recherche.fr](http://www.banqueimages.chateauversailles-recherche.fr)