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19 December 2024

WOMEN'S CREATIVITY SINCE THE MODERN MOVEMENT

AN EUROPEAN CULTURAL HERITAGE

Caterina Franchini and Emilia Garda

MOMOWO

WOMEN'S CREATIVITY SINCE THE MODERN MOVEMENT

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Co-funded by the
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On behalf of the partnership, we are deeply grateful to the Creative Europe Programme of the European Union.

Emilia Garda and Caterina Franchini
MoMoWo international coordinators

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An European Cultural Heritage

Caterina Franchini and Emilia Garda

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An Open Source 'Approach' for the MoMoWo GIS Database

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Knowledge can be a powerful tool to improve our 'stream of consciousness' about social, economic and environmental issues but needs to be supported by sharing and exchange of an increasingly complex system of data and information. Maps are part of our daily life, assembling and displaying a variety of scenarios from real-time traffic information to weather. It seems that without maps not only a place but even a fact, or an experience do not longer exist.

Since the MoMoWo project inception following an in-depth resource process, the MoMoWo scientific team has collected and organised in a database a variety of data concerning biographies, works and archives of women architects, civil engineers and designers. One of the primary goals of this database is improving accessibility to knowledge.

After devising a database model, during the construction phase, taking into account the different technical possibilities available to us, we have set ourselves the following questions. Is it most suitable to use a Proprietary Software (PS), a Libre Software (LS) and/or an Open Source Software (OSS) to organise and share the data? In the last years, Free Software (FS), LS and OSS merged into a unique FLOSS paradigm. Since the Polytechnic of Turin (Polito) can use both, PS and FLOSS, which of these two may be the best? As it is known, the former requires the user or developer to acquire (and pay for) a license, while the latter is free and the user or developer can use and re-use, according to the license terms and conditions, the code without any fee.

When a user pays for a license, he/she has access to time-limited help-desk support and some additional benefits. When a user chooses FLOSS, he/she becomes part of a life-long community that shares knowledge free of charge. Users can participate by donating money, offering their own time (e.g. translating a part of a guide or some menu of the Graphic User Interface - GUI) or, last but not least, by creating a software module, a plugin, and releasing it under a 'free license' (e.g. CC-0 or CC-BY).

As a result of the considerations mentioned above, it was clear that to provide

extended visibility for the MoMoWo database we had to use a FS, as this paradigm epitomises the 'user four freedoms' (FSFE, "Free Software's Four Freedoms"), namely:
- The freedom to run the program as you wish, for any purpose (freedom 0);
- The freedom to study how the program works and change it (freedom 1). Access to the source code is a precondition for this;
- The freedom to redistribute copies so you can help your neighbour (freedom 2);
- The freedom to distribute copies of your modified versions to others (freedom 3). By doing this, you can give the whole community a chance to benefit from your changes, and access to the source code is a precondition for the purpose.

Starting from the concept that 'Open source does not just mean access to the source code,' the Open Source Initiative released the Open Source Definition (OSD) to improve the previous concept. The OSD added, among other things, the freedoms and rights listed below: 'No Discrimination Against Persons or Groups'; 'No Discrimination Against Fields of Endeavor'; 'License Must Not Be Specific to a Product'; 'License Must Not Restrict Other Software'; 'License Must Be Technology-Neutral' (OSI, "The Open Source Definition"). In other words, 'bridges' are better than 'walls' and knowledge rejects barriers.

By sharing these values of freedom, the MoMoWo database used FLOSS to manage and publish the results on the web: LibreOffice package for word processing and the Free and Open Source Quantum Geographic Information System – QGIS for building maps and graphic representations (QGIS, "Web Mapping with QGIS2Web").

The Polito's MoMoWo team have tried to change its working procedures to develop and share a new concept of (free) co-operation and has released a WEB GIS database system, based on free and open source software, to break down knowledge barriers. We started to collect and organise data and information using LibreOffice, saving points about women designers and their works using OpenStreetMap as a basemap a free and collaborative mapping system (OSMF, "OpenStreetMap"). Our goal was achieved using a QGIS with an excellent plugin (Github, qgis2web, "A QGIS plugin") to export data to an OpenLayers/Leaflet web-map, a service ready to use and navigate (OpenLayers, "A high-performance"). Users can search for a place, browse the map, ask for information and freely get access to text and images, downloadable if desired.

According to the international community, Geographic Resources Analysis Support System - GRASS (OSGeo Project, "GRASS GIS") and QGIS today represent the most used GIS OSS for the desktop. The core software allows the user to perform a variety of actions with an extreme control of the results. The possibility to read, modify, share the source code and execute algorithms enable the user to control the complete process (input/output) with a maximum level of awareness avoiding 'closed formulas' or 'hidden procedures'. The entire code leaves a 'clear' status ready to be investigated and changed whenever necessary.

A desktop-GIS client cannot help us to publish our maps and services on the WEB, which is what led to the creation of the extraordinary plugin qgis2web that can

convert all kind of layers loaded into a QGIS project –just as they are displayed in the Table of Contents (TOC)– into a WEB package. So, the MoMoWo archives, designers and works will be tagged respectively with blue, red and green dots on the WEB also. Each point is linked to its record in the database containing such information as the name of the designer, her picture and a photo of one of her works and so on. Following the HTML syntax, the attribute table of the layer of a point has been populated with the required texts and formatting tag to create a dynamic hyperlink between the point geometry and the database. For example, when a user clicks on a point, for a pop-up photo to appear, the connected database column must contain a specific string.

After the creation of the data structure, all the point features are related to a database and the project can be 'moved' easily into a WEB page. To perform this operation, the user can download and set up the 'qgis2web' plugin from the QGIS repository and load it into the software. This add-on displays all the layers loaded into the QGIS project and the related options **(Fig. 1)**.

The dialogue allows the user to set up tools and parameters such as column visibility, the label to display, the search engine tool, the table of contents and so on. The user can also add a specific 'background', such as OpenStreetMap (OSMF, "OpenStreetMap"), Stamen (City Tracking, Knight Foundation, "Stamen") or others base maps. Last but not least, it is possible to choose between OpenLayers and LeafletsJS javascript libraries (Agafonkin, 2017). In our project, we used LeafletsJS.

The Export button **(Fig. 1)**, on completion of certain operations, creates a standalone package made by files and folders. Browsing the folder structure, we observe that Cascading Style Sheets (CSS) may contain the 'styles'; *Data* shows data in JS (JSON) format; *Images* stores the pictures; JS holds the javascript modules; *Legend* stores the icons and *Markers* the symbols. Each folder contains all those files necessary to manage a WEBGIS. In the root folder, also, the user can find a HyperText Markup Language file, which includes a collection of functions and links. This index can manage all user requests.

Once the package is created, it is possible to use it immediately by working on the localhost (the same PC that you are using) or publishing it on a WEB server in a minute. In order to perform this operation, it is sufficient to connect and paste all the files and the folder just created onto a WEB server. For lading an HTML file, a WEB browser is required to display a map or just a text editor to investigate and even modify the source code.

The final output of the map may appear like the one below **(Fig. 2)**. In the top left corner of the map area, it is possible to find a zoom tool or the mouse wheel and a magnifying instrument that allows the user to search for an Architect (for example Hadid); on the right, a tool to measure distances and a *Search* for finding places. The Table of Contents button displays a small legend that disappears when the cursor is pulled away. To move the map, to perform a pan operation, left click on the mouse and drag the area. For a short guide to qgis2web, it is possible to find a clear tutorial in the GitHub repository or into one of the QGIS tips pages.

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Captions

Fig. 1. MoMoWo Database. The 'qgis2web' dialogue realised by the Polito's MoMoWo team.

Fig. 2. The MoMoWo WebGIS realised by the Polito's MoMoWo team.

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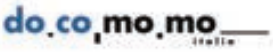

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Caterina Franchini, MoMoWo international coordinator since 2014, is a researcher in History of Architecture at the Inter-university Department of Regional & Urban Studies and Planning (DIST) of the Politecnico di Torino. In 2017, she received the qualification of associate professor in Design and Building Technology in Architectural Design. She holds a PhD in History and Criticism of Architectural and Environmental Assets. Her thesis investigates the specificities of contemporary architecture through the policies and strategies for the protection and enhancement of architectural assets in the European Union (2002). She holds a Master's in Advanced Studies in Conservation of Historic Towns and Buildings (Raymond Lemaire International Centre for Conservation - KUL, Leuven). She has been teaching History of Visual Communication and Design since 2011. Her research interests include the twentieth-century history of architecture, urban planning and design, architectural and design heritage of the Modern Movement, and gender studies in architecture and design. She is a member of the Steering Committee of DoCoMoMo Italia. She has been a speaker at many international conferences and is the author of numerous publications.

The European Cultural-Cooperation Project MoMoWo

MoMoWo is a four-year project devoted to women –architects, civil engineers and designers– active in the world of construction, a crucial sector where the female gender –traditionally invisible– has found it more difficult to assert itself. The project aims to value the experience of women who have worked in the past to create a bridge between generations. As such, this is why in the project title there is a reference to the Modern Movement, a historical stage in which professional women have known their first emancipation from the point of view of work in the world of design and construction.
The different actions –project management, cultural, creative, communication and support activities– have been jointly planned and targeted, not only to reach the highest possible number of participants but also to create a platform for sharing skills and knowledge for the continuation of activities beyond the time limits of the project. To guarantee greater access to documentation and knowledge, free and open-access modes have been privileged.
The primary tool of communication is the website, appropriately recalled and amplified through the use of social networks. The different actions of the project have been closely linked to each other, starting with the International Design Competition for the MoMoWo's visual identity and promotional objects, in which we wanted to create the identity of MoMoWo through a bottom-up approach, involving young designers. To continue with the database which is the subject of this book, an essential cultural moment of research and information gathering was conducted, comprising the organisation of three workshops and public interviews with women professionals held in Leiden, Ljubljana and Oviedo. These were crucial stages of involvement and cultural comparison culminating in the international symposium at the Polytechnic of Turin (June 2018). All these initiatives reverberated through countless public presentations. The Open Day of women's professional studios in partner countries has taken place every 8th March in three years, a media event par excellence that, through the contemporary opening to the general public of professional studios run by women, allowed the involvement of the younger generations, thus going far beyond the theme of gender. The International Photo-Competition for reportage on women designer's own homes has aimed at highlighting the difficult conciliation between home and work. The Travelling Exhibition, with its stops in several cities of Europe, spread the visibility of women's creativity.
Finally, the travelling exhibition book, the guidebook of architecture and design itineraries, the open-access publications on the results of workshops, the e-book on the symposium results, and this book represent the main outputs of the project.

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