

HfG-Archiv Ulm Online. From Exclusive Reality to Inclusive Virtuality.

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Abstract | The Archive of the Ulm School of Design (HfG-Archiv Ulm) began operating in 1987. It was created as a joint effort between the city council and a group of alumni that saw the necessity of preserving the institution's memory and legacy after its closure. The first version of a website for the Archive was envisioned in 1999. Its goal was to present information on the HfG Ulm, display the Archive collection, and communicate related events to a massive audience. The HfG-Archiv Ulm website maintained the same structure and interface for almost 20 years. With the years of existence, it became an archive on its own. The virtual components acted as extensions of the tangible and intangible objects stored in the physical archive. Over the years of its existence, the website accomplished the mission of collecting and storing the Archive's material and activities. At the same time, it was an instrument for research, education, and exposure for the Ulm School of Design. The project served as a communication tool for the Archive and became an archive of activities, events, publications and updates. The WWW was not conceived as a medium to preserve information, but it could work as such. In addition, the universal access of a website grants the possibility of reaching a physical place in Germany, achieving Winograd's locomotion metaphor. We speak of navigating from one site to another, touching and following links – all metaphors of spatial locomotion that engage people opening new ways of thinking, learning, and doing. As technology changes, future work could amplify the experience of visiting the Archive by creating a contemporary virtual model, enhancing the opportunity to expand knowledge and spaces of interaction.

Keywords: design archive, virtual archive, design legacy, HfG Ulm, Ulm School of Design

This article proposes to document the creation of the website for the HfG-Archiv Ulm (Archive of the Ulm School of Design). The project was initiated in 1999 to provide visibility to the Archive employing the WWW, an open and democratic massive communication platform. The challenge consisted of developing a hub with easy navigation and maintenance, which would eventually grow and evolve. At that moment in time, having a web parable to the concept of *homesteading* as proposed by Rheingold (1993). That is to say, owning a website for the sake of staking a claim on the part of cyberspacerecence was comp was more important than owning one because you actually needed it. In the described case of the Archive, the idea was to use the virtual real state of the WWW as a cognitive tool – the interaction with a virtual reality helps us acquire new knowledge and understand the real reality (Maldonado 1992) – to expose its existence and activities and equally provide information on the former Hochschule für Gestaltung Ulm (HfG Ulm).

There was a massive interest for a website when the project's planning started, as information related to the HfG Ulm – which envisioned a critical path in the education of designers – was scarce on the Internet. All the material and the Archive's legacy could only be appreciated when physically visiting the place in the city of Ulm. In 2000, only a small percentage of material on the HfG Ulm was available through publications. Due to editorial distribution or to language constraints – few English translations (HfG-Archiv Ulm 2011), the accessibility was limited to some countries. The Ulm School was nearly unknown even for students educated under the *Ulm Model* around the world.

Presenting the Archive on the web was giving it telepresence as Tomás Maldonado (1992) describes it in *Reale e Virtuale*:

'It is evident that entering a virtual reality is not the same as entering a real reality. But in there, nothing stops us from accepting that our interaction with the first one helps us acquire new knowledge on the second one. Thus, even if there are many discontinuities, one must, in fact, admit that between both realities, there is no lack of equally important continuities.' (Maldonado 1992)

Strangely enough, professionals from Germany, Colombia and Argentina integrated the team that created the website, an excellent example of the international character the Ulm School of Design possessed. Marcela Quijano, curator of the HfG Archive, Carolina Short and Tomás García Ferrari, were fellows at the Akademie Schloss Solitude (a German public-law foundation that offers a transdisciplinary and global fellowship program for artists and scientists in Stuttgart), selected by Gui Bonsiepe, juror for the academy in the design field in 1997-1998. This coincidence of being chosen by Bonsiepe – ex HfG student and teacher – opened the possibility of establishing an international team to develop this project. Dagmar Rinker, also HfG Archive curator at that time, was a member of the team all along. The work was done between Ulm and Buenos Aires, and Ulm and New Zealand, bringing the web's possibilities to life and emphasising that computers '...are not tools for individual practice, but rather social instruments that open new ways of collaboration' (Bonsiepe 1997).

At the end of the '90s, the Internet was already a powerful medium that allowed for fluent bidirectional contact. Bonsiepe expressed optimism towards the idea of a digital world that could open new spaces for communication and participation using the web. First, however, he pointed out that designers need to introduce the technology and make it usable in people's daily lives (Cambariere 2005).

Terry Winograd (1997) uses a locomotion metaphor to explain how computers were transforming into a means of transport to move and visit different places as the Internet became popular and the World Wide Web gained momentum. He suggests three primary ways to interact with the world: conversation, manipulation and locomotion.

In the first stage, computers were designed according to a conversational model, followed by a second stage, which included the desktop metaphor, the manipulative model. Finally, the third stage – with the WWW – is considered the locomotion

model, where users can move from one site to another. For the Archive's website, the main idea was to enable the public to attend the Archive from any location in the world (Moggridge 2007).

2. WWW context at the project's beginning

The city of Ulm opened the HfG Archive in 1987, an endeavour by an initiative of former HfG members and part of the Museum Ulm since 1993. The purpose of the Archive is to collect, maintain, research and communicate; to document a comprehensive history of the School and present the collections that keep growing, as the Archive receives bequests from former teachers and students (Rinker, Quijano, and Wachsmann 2009). Since November 2011, the HfG Archive resides within the Ulm School of Design original building. Permanent and temporary exhibitions, symposia and publications that help spread the knowledge about the School and its members are current activities organised by the Archive.

It is essential to describe the context in which the HfG Archive website would be put in. The importance of having an Internet presence was its worldwide reach, particularly in Europe and the US at that time, even when the influence of the Internet in other world regions was 7% or lower. Another benefit was the ability to enable reciprocal communication at a small cost. The democratisation of the publication process started in 1990 with the WWW. The worldwide economic system was also changing, and e-commerce websites were beginning to bloom, but there was much more to come shortly. And in fact, it did, a change of paradigm that can be compared with Gutenberg's printing press 500 years back in time. The Archive's website was to be long-lasting, intending to endure (*verba volant scripta manent*), unlike a printed piece that has a printing date and, at times, a due date.

When the website was conceptualised in 1999, many of the daily web services we use today didn't exist or were only starting. At the end of that year, the web had approximately 250 million users, equivalent to 4.1% of the world's population. In March 2021, there have been 5,17 billion active Internet users – 65,6% of the world population ('Internet Growth Statistics' n.d.).



Figure 1. Historical screens for main platforms launched around the same time as the HfG-Archiv website: Google 1998, Wikipedia 2001, LinkedIn 2004, YouTube 2005 (Source: webdesignmuseum.org)

We put together this Internet technology timeline to frame the Archive's project, showing the start of essential milestones with products such as Google (search engine), Wikipedia, YouTube, among others.



Figure 2. Internet technology timeline: main milestones on the evolution of internet connections and WWW products proposed to frame the Archive's project stages – in orange (Source: Authors' original graph)

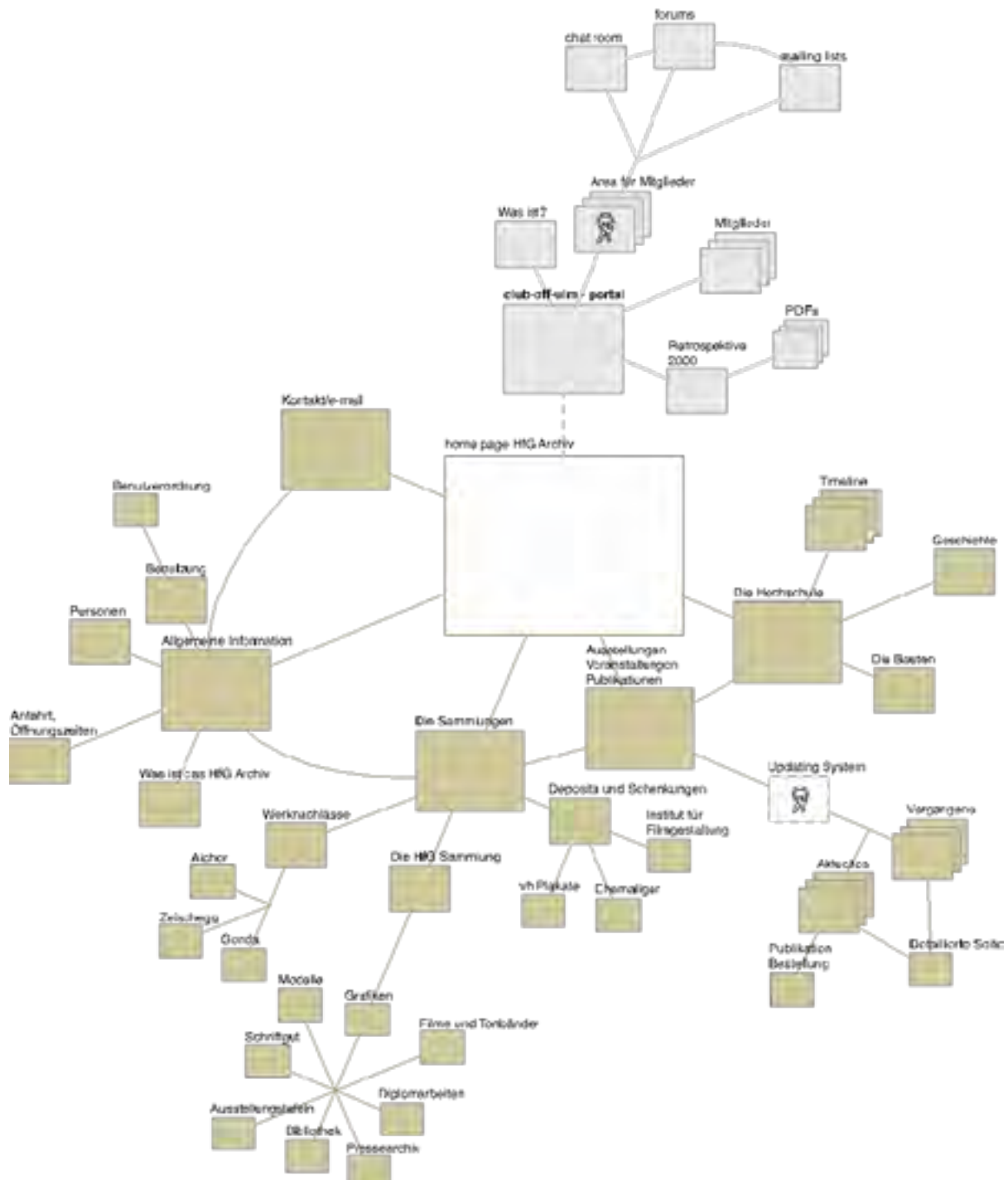


Figure 3. HfG-Archiv Ulm Online original sitemap (1999), which included a content management system – called ‘updating system’ at the time – and an entire updatable section for the events as well as a web portal for the club-off-ulm, with a password-protected virtual space for the members. These features were not implemented in the final version, and some of the other regular sections changed their labels. (Source: Authors’ original graph)

The development of a web project can be understood according to the different technological schemes used. Driscoll (2011) describes three ages of the web:

1. HTML age: 1991-1999

Websites consisted of a network of static hard-coded HTML files, created once and filed in servers from where they could be retrieved.

2. LAMP age: between 2000 & 2009

The use of databases became more popular. Documents are created in servers

3. JavaScript Age: around 2010

The websites are conceived as a flux of events.

From this perspective, the Archive's website was designed within the first age, as a network of static HTML documents interconnected.

With the years of existence, the HfG-Archiv website transformed into an archive as well, and the virtual components acted as extensions of the objects – tangibles and intangibles – stored in it. After being a communication tool, it ended up as a registry of activities, events, publications and updates, becoming a compelling log that recorded the ongoing activities of the institution. Wolfgang Ernst (2013) speaks about the Internet as an archive in *Digital Memory and the Archive*. From this perspective, the Archive's website was an instrument for research, education and exposure of the Ulm School of Design until 2019.

3.1. 2003: hfg-archiv.ulm.de

Nicholas Negroponte (1995) defined that objects – like books, photographs or CDs – are made up of atoms that are tangible and digital information is made up of bits, the minimal unit of data used for computers. In *Being Digital*, he envisioned that all categories of atomic or physical information would eventually be converted to bits, something that has indeed happened during the last decades. In our case and according to the project concept, there was not only a need to select the contents for the website but to digitalise the material. The 'atoms' were physical objects, models, graphics, paper photographs, and films kept in the Archive. As there were no digital versions of texts or images at that time, this process was laborious.

The contents were organised in different sections according to the type of data and the communication needs:

Institutional information

How to visit the place, persons in charge of it

The Archive's collection

Details of the diverse objects the Archive keeps and information related to them

Exhibitions

Organised by the Archive, and others related to the HfG Ulm

Events

Organised by the Archive, and others related to the HfG Ulm

Publications

Upcoming, past publications, external, bibliography related to the HfG Ulm

The HfG Ulm

Information related to the School itself: history, building details, timeline



Figure 4. Some screens from the first version as seen in Internet Explorer 5 Macintosh Edition OS9 (Source: Authors' screenshots from the original website)

The Archive itself had no customary visual identity or a consistent visual language in use as the project started. There was some guidance from the Ulm Communal CI, but no graphic standards, nothing applicable for the website. So, it had to be developed from scratch.

Both the homepage and section openings presented general aspects of each section and anticipated the contents that would populate the second level. The latter contained specific information on each topic and, in some cases, had a third level with even more detailed information. From the homepage, there was also access to specific highlighted pages.

For the navigation, contextual menus unfolded as the user moved through the items, and on each page, breadcrumbs indicated the section the person was visiting. For the collections, photo thumbnails were zooming on rollover.

The use would determine the access to the different layers of information: learn the address and how to get there, find historical facts about the School, or specific information related to the collections, publications, etc. More up-to-date parts such as Exhibitions or Events provided fresh details on current activities related to the Archive or the HfG history. The idea of showing the real archive was so detailed that even a list of the donations from former students was available, acknowledging their contributions. As every sketch or object bestowed made valuable information for researchers, the Archive wanted to put the names behind those donations.

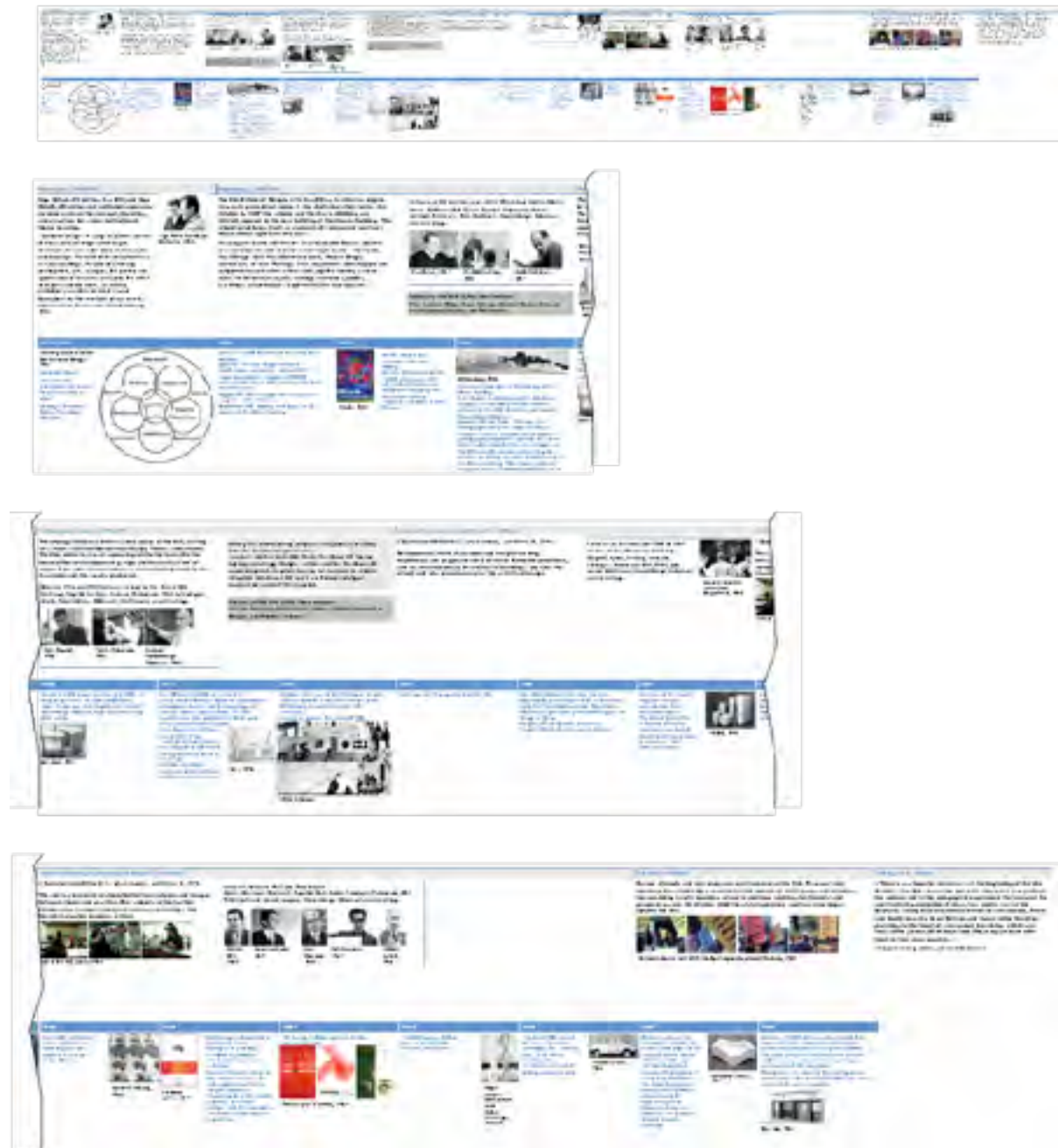


Figure 5. HfG Ulm Timeline as designed for the website (Source: Authors' screenshots from the original website)

The Timeline was part of the HfG Ulm section; it was inspired by the HfG Synopse created in 1982 by Hans (Nick) Roericht and his team (roericht.net, n.d.). The horizontal scroll selected for this section was crucial for displaying the chronological events and making the presentation of information layers possible. At the top, it showed historical facts, names of principal teachers and visitors, and indicated the different phases the School went through during its existence; at the bottom were the teaching outcomes, curriculum changes, special events, design icons, and so forth.



Figure 6. Presenting the pre-project to the club-off-ulm. Bill Haus, Zürich 2001 (Source: Authors' screenshots from the original presentation).

The visual concept for the project focused on the functionality and consistency of the material. The website's principal aim was to emphasise the content itself; thus, the visual interface had to be as neutral as possible, simple and easy to use. The size of the images was a key issue, as the loading time for a webpage was a constraint. The layout was defined using six sections that organised the material; a six-column modular grid served as a base to accommodate diverse data, from texts and images to lists and descriptions. The colour scheme was designed using a hue for the sections as an identity role. Each section would open with a coloured background and a poster from the Archive collection as a visual cue. Only the top banner, the menu, and some small text such as the captions would use the section's colour to help identify. The photos and graphics would also provide a chromatic note to the website.

The website navigation had different options and was redundant, so the same data could be reached from various starting points, allowing distinctive pathways. Both banner and menu were fixed for the whole website. The menu was contextual, it granted the navigation from any page to any other page, and its design saved space as it only took one row from the whole layout. The upper banner also had a link to the homepage from any page. The website's homepage was linked to the City of Ulm website, extending this institutional connection. In addition, the whole website had breadcrumb navigation as an orientation tool, and it was an element that worked as a map. In places where the material was more photographic or visual, the navigation function featured rollover thumbnails to anticipate what could be seen in detail. In some pages that involved long texts (The HfG Ulm › History), there was an internal page numbering to foresee the amount of content.

The typeface selected was Verdana, designed especially for on-screen use, with optimal legibility and adequately represented the School's spirit, which used mainly sans serif typography like Helvetica or Akzidenz Grotesk. Verdana was designed in 1996 by Matthew Carter for Microsoft and became very popular for website design (García Ferrari 1997). Typography is a central element of language and should not be considered an accessory decision but a domain that makes text recognisable. If language makes reality visible and understandable, the typography makes language (thus, texts) visible and understandable (Bonsiepe 1997). Hence, the type selection is vital to its readability. In any screen's interface, typography is the leading player. It has a far-reaching impact on many elements, from user experience, perception, readability, and mood. Therefore, it is fundamental to the delivery of what a website needs to communicate.

An anecdote related to the typeface selection – that happened during the project's presentation to the club-off-ulm (foundation run by HfG Alumni, who supported the design and development of the HfG Archive website) in which former students and teachers of the HfG were participating – is worth mentioning. In a first draft, the website had a sans serif (Akzidenz Grotesk) for headlines and a serif one for the texts, as the use of a grotesque type was limited and could not be employed for the whole website's content. This proposal had a firm rejection from the audience, which considered an identity and ideological statement that only sans serif type was used at the HfG Ulm. Some evidence of this style can be found in posters, the *ulm journal*, and other printed material from the School. Among the participants were some of the ex-students that worked for the Visual Communication Department at the School, and explained that the truth was that they used sans serif because those were the fonts available at the School's typography workshop (movable type printer). The typefaces they had were not only Berthold Akzidenz Grotesk, a sans serif older than Helvetica, but some other Haas Helvetica fonts (diverse sizes and weights). This is why the most common style identified with the HfG was a single sans serif approach. For this reason, the myth of a conceptual type selection at Ulm became relative.

The Archive's website was initially published in German. In 2006 an updated bilingual German-English version was released. In 2009, with the emergence of weblogs, the 'hfg-archiv blog' was launched. There was a particular need of creating a platform to communicate about current events and changes concerning the Archive, such as special events around the international venues from the travelling exhibition 'ulmer modelle – modelle nach ulm' or the decision making surrounding the plan of moving to the original HfG building in the Kuhberg. The blog had opened comments for the public. The posts were created by the Archive and other external participants collaborating with the building renovation and moving initiative. It was in use until 2012, and the posts were only in German (HfG-Archiv Ulm 2014). After this year, the Archive started using social media as a channel to establish more fluid contact with the public.

The website's design and development process lasted 36 months. The work was performed by two graphic designers with web experience as an external team and an internal team from the Archive.

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Editing: Dr. Martin Mäntele and Dr. Dagmar Rinker

Web Design: (bi)gital» / Carolina Short and Tomás García Ferrari

Contributors: Michaela Gleinser, María Victoria Pérez Arias.

4. Conclusion

The original website was working for almost 20 years without significant framework updates. In 2019 it was transferred under the Museum Ulm website, adapting to its interface design and changing the structure. Before 2019 there were initiatives to move it to a newer design, keep the autonomy, adapt it to a responsive design, and use a content management system (CMS), but not materialised. Even if the website seemed frozen in time from a design functionality perspective, it has served as a communicational tool for the Archive over the years. From the beginning, this project followed the idea of providing information for the lack of material about the HfG. Together with the HfG-Archiv website, we can mention 'frauen an der hfg' (Women at the HfG), created in 2003 as an exclusive publication on female presence at the School (Müller-Krauspe, Wenzel, and Kellner 2003). The idea came after a 1989 exhibition in Stuttgart about women in design ('Frauen im Design') where work on female designers from nine European countries was exhibited. The website had an off-line version that was part of the touring exhibition 'ulmer modelle – modelle nach ulm'. It was conceived in search of 'detecting empty spaces in the history [...] – those aspects that have hitherto remained unknown, hidden,

neglected, or intentionally suppressed' (Bischler et al. 2021) aiming at having worldwide accessibility. As said before, the HfG-Archiv website grew to become an archive in itself, a virtual representation of the real place that reached millions of users searching for information on the School, the people related to it and the design projects developed during its existence.

It is paramount to count on good resources when maintaining and improving a web project because updating content and communicational value is a full-time job. In the digital realm, where changes are fast, a website that is not updated looks dated after some years. Furthermore, the web is a dynamic medium, and the devices used to access the contents change every year; thus, regular upgrades are necessary. In this particular project, we were lucky that it survived several software and hardware updates, browser versions and devices.

The WWW was certainly not conceived as a medium to preserve information but ends up working as such. In addition, the universal access of the website grants the possibility of reaching this physical place in Ulm, Germany, achieving Winograd's locomotion metaphor. With the emergence of the Internet and its applications, the computer ceased being a machine made to accomplish one specific task and became a machine that communicates all kinds of data from diverse media, with different layers and interactions. We speak of navigating from one site to another, touching and following links. These are metaphors of spatial locomotion that engage people and open new ways of thinking, learning, and doing.

Maldonado (1992) proposed that virtual modelling was turning into an excellent knowledge tool almost thirty years ago. Following this theory, a website could be defined as an informatics model, an efficient device of observing simulation that gives the chance of a more complete and articulated observation. The author was speaking mainly of experimental scientific research, but this could be applied to software. He explains the informatic models offer possibilities that were not available in the past. Both time and space are significantly reduced instead of following a lengthy trial and error path.

To summarise, we can conclude that the website contributed to enhancing the Archive's tasks which are to collect, maintain, research and communicate. And somehow, the ideas behind this project are represented today with movements such as Open GLAM and some other online non-profit cultural initiatives. The development of new technology has created a catalyst for escalating amounts of integrative practice between cultural institutions. For over a decade, the Open GLAM movement has advocated open access to cultural heritage held in memory institutions to promote the exchange of ideas and enable knowledge equity. Open access has been embraced by a growing number of museums and libraries worldwide, from New Zealand to Norway. More than 550 institutions from around the world were listed in 2019.

Other non-profit initiatives such as Google Arts & culture ('Google Arts & Culture' n.d.) aim to bring the world's cultural outcomes online for everyone. Using the latest technologies, they propose to experience art and culture in new ways, meeting the people, visiting the places, and learning about the events that continue to shape our world.

A projection of the HfG-Archiv website could be to amplify what has been published and to use actual technological possibilities to improve the quality of the digitised material, as it was done many years ago when the limited bandwidth and computing power/screen size was reduced. VR could even expand the experience of visiting the Archive by recreating spaces and objects, enhancing the opportunity to develop knowledge and areas for new kinds of interactions. Nowadays, as most people carry a screen in their pockets, the experience of acquiring knowledge and experiencing places has expanded our possibilities.

During the COVID-19 pandemic, we had to relearn how to continue our lives, work, and entertainment using the Internet and computers in novel ways. We adapted our work, our learning, and our ways of communicating and staying connected with the world around us. We can certainly learn from this experience and think of new devices that bring experiences, knowledge, and understanding to life.

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