

# COSE on show!

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## *An exhibition as test ground for model building in interdisciplinary art history research*

*Our research groups Browser Art (2019–2023) and Coded Secrets (COSE, 2022–2027) set out to study programmed online art. We started off with artistic web browsers. Commercial internet browsers are highly standardized, having the effect that the rendered website looks similar. When looking at artistic browsers, the spectrum is much more diverse. Each web browser renders websites slightly differently. To discover how these applications work, we needed to dive deep into coded functionalities and their interplay with the graphical user interface (GUI) and runtime performance (process of execution). As a result, we developed methods for detailed qualitative and quantitative analyses and prototyped epistemic formats for communicating the combination of all that insight in a condensed form. In other words, innovation happened on the analytical and the communicative level. A senior fellowship at Collegium Helveticum at ETH in Zurich (September 2023–February 2024) gave Inge Hinterwaldner and us all the unique opportunity to present the results of our research to the public. The audi-*

A Exhibition Docu & Demo: Archiving Programmed Media Art, Gallery, Collegium Helveticum at ETH Zurich, February 15-29, 2024.

B Announcing the exhibition in the Collegium Helveticum building

C Guided tour in the exhibition space.

D View into the Gallery of Collegium Helveticum.

February 15–29  
2024



Exhibition

# Docu & Demo

Archiving Programmed Media Art

## Accompanying events:

February 20  
KEYNOTE  
Collegium Helveticum

February 21  
WORKSHOP  
Collegium Helveticum



ence visiting the show were mostly academics from different fields, educators, artists, and museum staff.

COSE had its first exhibition ↘<sub>AB</sub>. We not only curated the show but presented our analytical findings rooted in three different methodological experiments. These experiments, built upon one another, resulted in a variety of knowledge formats. We regarded this exhibition as a testing ground for our trajectory. How would the public respond to the epistemic models we have built? To find out, each visitor was provided with individual guided tours during the exhibition ↘<sub>C</sub>, following the spirit of show & tell. Our phrase docu & demo is a contraction of document and demonstrate. For the MIT Media Lab, in their slogan demo or die the demonstration aspect played a crucial role. This demonstration served as a proof of concept, so at least some of the functionality developed by the scholars needed to be up and running. The context was one of work in progress, and this was also true for the exhibition Docu & Demo: Archiving Programmed Media Art, which took place at the Gallery of Collegium Helveticum at ETH Zurich on February 15–29, 2024 ↘<sub>D</sub>.

The show presented six exhibits: three artworks and three model complexes, representing the academic output of our research originating from the groups Browser Art and Coded Secrets. Each model centers on one of the three artworks. However, this relation plays out differently in each case. The featured artworks are born-digital networked pieces existing on the internet. They are interlinked into the different strata of the World Wide Web and belong to the genre of net art that often refers to its socio-technical environment.

The entire initiative revolves around born-digital cultural heritage and the question of how to deal with it, how to document, analyze, critically discuss and transmit it to future generations or to other media. With each software update, programmed artworks are in peril. This concern is even amplified when it comes to internet art that has its tendrils in various strata of the net, bases some mechanisms on certain services, and relies on settings of platforms at a

*specific moment in time. All these things tend to change. Software patches close security gaps and, with every software update, the fine-tuned connections of these art pieces are placed at risk. Frequently, they deteriorate or exist as semi-functional remnants. This was also true for all three net art pieces we presented in Docu & Demo. They broke while (not because of) we were doing our research on them. The implications are clear: We must establish a secure foundation regarding the object of study, or our work becomes untenable. And this means documentation! During this exhibition, visitors could still compare the approximate original experience of the artworks with our models. But what if only the surrogates remained? How would they represent the artworks? What epistemic role do and will they play – and how would they fulfill that role?*

*The selection of artworks reveals an organic evolution in our research process. We will first narrate the genesis of these inquiries, delineating their scope, and finally reflect on how they connect and react to previous outcomes.*

#### Model 1: *Navigation*, 2022 (book)

*Although not entirely unexpected, in December 2020, our research group, Browser Art: Navigating with Style, was taken aback when we learned of Adobe's decision to retire their program Flash (multimedia tool) by the end of the year. Instead of relaxing into the winter break, we decided to re-view all the artistic browsers and frantically document all Flash-based artworks in our list as well and as completely as possible. Initially, we assumed that our procedure and results would be quite similar. How many best-of-documentations could there be? However, when we convened in January 2021, we discovered that the differences between our procedures and outcomes were considerable. The divergences already began due to the computers we used: some overlooked the impact of hardware (monitor size) while others realized late that their operating system would influence the outcome of the artwork (i.e. sound or no sound). This realization prompted us to formalize our findings and invite an additional six scholars from different backgrounds to join us in*

*a blind experiment. Each scholar was assigned the same artistic browser — namely .co.kr by the renowned net art duo JODI (Joan Heemskerk and Dirk Paesmans), dated 2001–2005* <sub>↘H</sub>.

*The browsers are functional web browsers. Users enter a URL and the program retrieves the corresponding website. .co.kr refers to the domain name. By the end of the 1990s, the artists, and with them many others, conceived themselves as net citizens. The emergence of domain names like .co.kr seemed to impose national boundaries on the web. This felt weird to them. In response, JODI produced a series of at least eleven browsers to persiflage this development. For a while, whenever they had the opportunity to exhibit their work, they would develop the corresponding browser. By default, these browsers would only return results with the denominative domain name like .co.kr representing the national top-level domain for South Korea. This browser was not Flash-based because, by the time of the experiment, this service had already expired.*

*The scholars who accepted our challenge came from the fields of cognitive science, information science, game studies, game development/art, anthropology, and history of technology. They were asked to a) document the browser in the best way possible, b) configure that documentation comprehensively, so that outsiders could understand it and c) reflect on their approach. The book Navigation (2022) was the result of that experiment on methodology* <sub>↘EFG</sub>. *This time it was unsurprising that, once again the solutions differed greatly. They did so for a variety of reasons: Firstly, the first task was subject to differing interpretations: document this browser — or all possible browsers — in the best way. Secondly, approaches to dealing with .co.kr depended on how the scholars would (implicitly) conceptualize the object of study: as a game, software, an art piece,*

E F G Exhibition corner with  
Navigation book.

H JODI: .co.kr, 2001–2005.  
Screenshot.





*a user interface, a riddle, or something nerve-wracking. Despite these differences, one commonality became apparent: Each participant envisioned a procedure beforehand and had to readjust their method because it would — for different reasons — fail. As a group, we decided to publish the self-reflecting part of the commission only, leaving the other aspects separate and presenting them paratactically. Even best-ofs are profoundly influenced by intention, interest, and education. This experiment did not directly show a path toward standardization.*

*Beyond the astonishing variety, at least two lessons became evident: For art historians, it seemed somewhat unusual that we would commission ten persons to closely examine an artwork, yet focus solely on the scholars' approaches in our published outcome. We did not publish any analysis of the art piece itself. Moreover, the second part of the commission, the documentation for communication, could end up being a 40-page image-text hybrid, meticulously describing the elements and events. Perhaps only conservationists tasked with reviving such an artwork would find pleasure in reading such a detailed text devoid of narrative, but rich in internal cross-references that readers must comprehend and reconstruct mentally.*

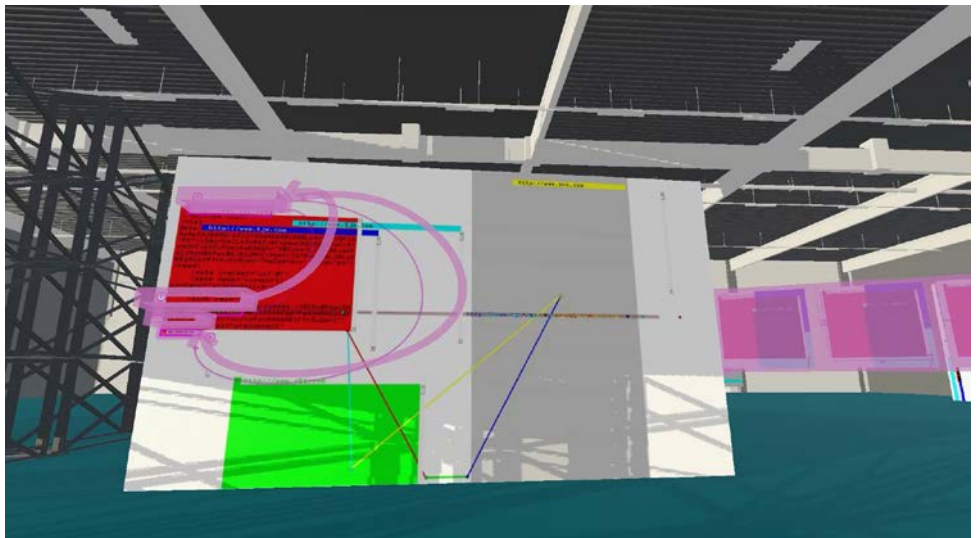
*Model 2: In Depth: Roaming Around the Conceptual Space of JODI's .com Browser, 2024-in progress  
(game/walk-through article)*

*These two construction sites led to the second inquiry. At this point, another research group was about to form: Coded Secrets. In the first internal kick-off workshop of COSE in January 2023, the team members explored JODI's*

I JODI: .com, 2001–2005. Screenshot.

J COSE: In Depth: Roaming Around the Conceptual Space of JODI's .com Browser, 2024.

K Exhibition view with JODI's .com and our walk-through article.





.com, a web browser of the same %WRONG Browser series ↘ I. Mayte Gómez-Molina is a 3D VR artist and poet, Daniela Hönigsberg, Inge Hinterwaldner, Christina Dürr and Michael Rottmann are art historians, Jiawen Yao is a media designer, Emma Dickson a data analyst and conservationist, and Yannick Westphal is a specialist in forensics and IT security. Again, based on their own expertise, background, and interests, the aim was to analyze and this time also to write directly about the artwork. One major objective of the workshop was to explore how we could work together. Thus, one potential approach was to bridge the gap between the humanistic and technical aspects and see whether we could come up with an analysis that initially focuses on qualitative traits before exploring software-based analysis techniques. Could we squeeze our findings into a software visualization tool like SEE (by Rainer Koschke and his team from the University of Bremen)? This project evolved and, over the ensuing months, the focus shifted.

Consequently, at one point we decided to publish two variants of our findings: a text-based journal article (of the length of a short book) supplemented with pictures, and a multimodality-based walk-through article that took on the form of an interactive 3D game developed on Unity, with bits and pieces of text included ↘ JK. We essentially flipped the base. The argumentations of our chapters and the take-home messages are basically the same in the text-based and gamified versions. While we were familiar with text production, the gamified article challenged us. Naturally, adjustments were necessary. We had to render the pictures in 3D, possibly in an animated and interactive format, we needed to shorten the text and distribute it in digestible portions. We needed to think about placement and choreography.

With this version, our primary aim was to reach out, grab the audience's attention and raise their interest in the phenomena. Secondly, we sought to modularize the information and use classic mnemonic techniques to localize it. By engaging users in embodied experiences through virtual movement and anchoring the narrated phenomena within recognizable models, we wanted to help people to remember

*where they encountered a piece of specific information and enable them to eventually return to this conceptual space within the artwork. Each chapter or argumentation has its own room and inventory and is depicted as a path. Tunnels between the rooms, however, afford access to another argumentation at points where similar elements or observations are addressed. The four rooms cover the following topics: elements of the user interface and its user-friendliness; source code and the question of where uniform rhythms or random functions were located; the runtime performance leading to a dissonance value describing disorientating deviations often observed by users; executable and metadata that can reveal information about the history of the development of the browser. One hope was that placing the argument directly next to its location within the phenomena would spare us from having to provide lengthy descriptions and references. An arrow can directly indicate the reference point.*

*As the walk-through article relies on a platform, its fate will likely mirror that of the studied artwork itself. It will become dysfunctional rather sooner than later. A potential method of conservation could lie in making recordings and using it as opportunity for screenshots (photo op). Therefore, the walk-through article needs to be relatively screenshot-friendly, allowing views to meaningfully and comprehensively condense information.*

Model 3: *Second order Visitor's Guide to London, 2024* (poster, physical layer construction, dynamical map)

*In response to the misery of the all-too-short technical half-life of these pieces, the next project involves models that operate platform-independently, at least to some extent. The third artwork, Visitor's Guide to London (1995) by Heath Bunting shows a personal psycho-geographic view of London. The users click through black and white low-resolution photographs. They will eventually and unsuspectingly go down a rabbit hole and meet text messages or chalk drawings. It is a guided stroll through the city during which the user gets to know about the passions and interests of the*

artist. At some point in the summer of 2023, our conventional browsers started to interpret the map files of that artwork as text and not as operative instructions. This is why in the show, we relied on a Hypercard simulator (<https://hcsimulator.com/>). The HyperCard environment was also the first ecosystem in which the work existed in 1994. Visitor's Guide to London is a seminal piece of net art as it made it into the fine selection that was shown at documenta X (1997) in Kassel.

As a highly networked artwork, it was never quite clear whether we had explored all of the artwork or whether we missed some parts. Also, we could not take for granted that the impressions of London we saw were indeed representations of the city. It might have been other sites as well. Three approaches were pursued. The first was a retrieval of the photographed sites in London 30 years later, in April 2023. Water damage in the archive of London's Psychogeographic Society was serious enough to turn our research trip from an archival endeavor into one of reenactment. We decided to trace the sites using all means we could get our hands on: a printed map, a list of the photographs and their file names, a map the artist created, a mobile navigation system, and Google Streetview; finally, we needed to find locals for further information about historic sites. Getting to know a city through the eyes of another person comes close to what can be understood as a situationist way of

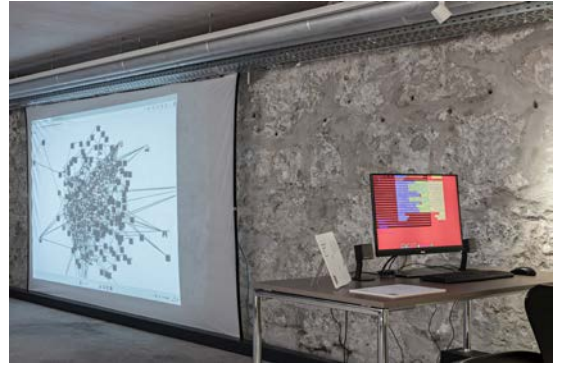
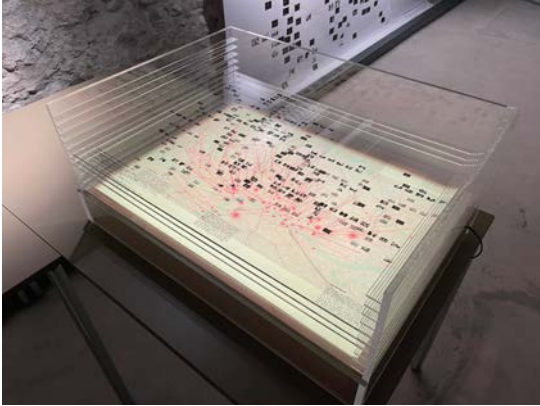
L Heath Bunting: *Visitor's Guide to London*, 1995. Detail: accident.

M Visitors interacting with *Second order Visitor's Guide to London*, 2024.

N Detail of layer construction model.

O COSE: Dynamical mapping of Bunting's networked images.

P Exhibition view with Heath Bunting's *Visitor's Guide to London*, 1995 and COSE's mapping in poster format.

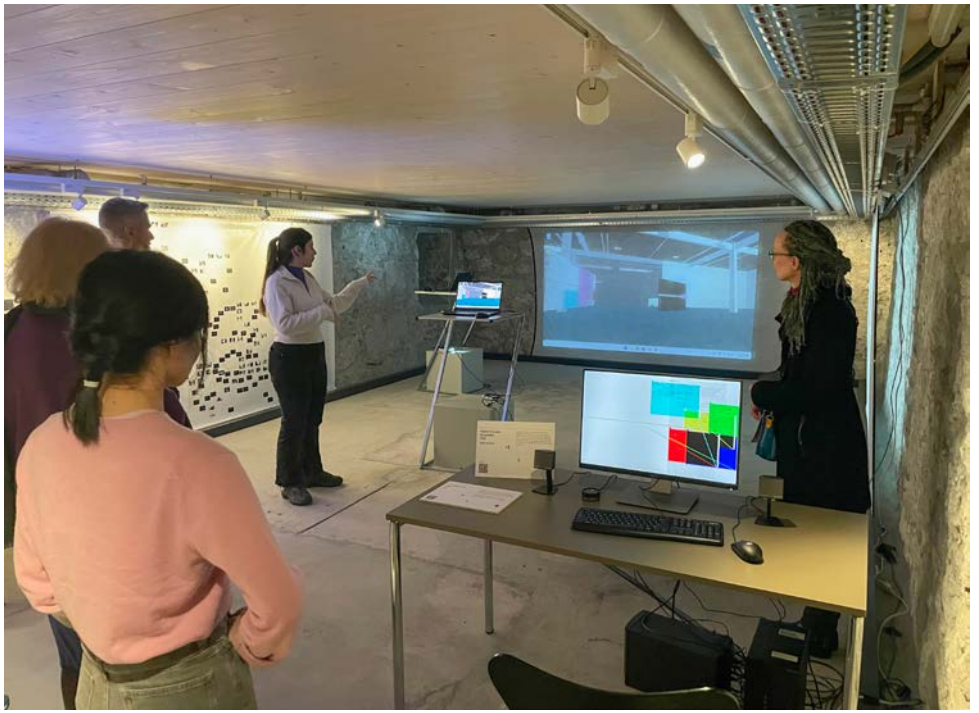




locomotion. To the astonishment of those who easily covered more distance by foot per day than normally per week, Bunting drew a quite consistent link structure. About 80% of the locations were retrievable and the confidence that the rest would also be the London of the early 1990s grew to 100%.

The second approach involved mapping all views of the artwork, and thus creating an overview in the form of a poster  $\searrow_P$ . Given the volume of items and the desire to classify them, we decided to create a physical layer model that could be operated  $\searrow_M$ . The layers primarily show correlations horizontally, but also in depth when combining the layers and stacking them on top of each other  $\searrow_N$ . This way, the user can regulate the amount of information. Nine layers were created, seven of which show the whole project (1. street view, 2. text messages, 3. chalk tags, 4. site plan, 5. semantic fields, 6. reenactment photos, 7. geotagging), two of them present a detail or zooming in (8. combination of street view, chalk tag and text messages, 9. click-sensitive areas in each view). Combining the topological with the topographical layer turned out to be revealing. The map proved useful as an epistemic tool, enabling us to identify key topics addressed by the artwork.

The third approach was another type of mapping  $\searrow_O$ . The file directory and the metadata stored within, made it possible to feed an interactive 3D network graphic, showing the links between the navigation from one page of the work to another as lines and the pictures as nodes. The network can be explored interactively and can be used to emphasize specific paths by hiding the others. A limited set of experiments were done with volunteers who agreed to go on Bunting's journey for the first time. Their online session was recorded and their path was extracted. In the digital version of the map, users could then choose to see either the whole complex or the individual path of the anonymized volunteers. On average, participants would spend three to



*five minutes with the work, mostly exploring only one and the same half of the network of pages. Identifying factors influencing their decision-making process would be the subject of another study.*

*Instead of producing established text-based journal articles alone, we experimented with additional formats, albeit triggered by a certain need. We refer to the results of these experiments as models. Model building in the humanities is gaining traction with the establishment of Digital Humanities approaches. What feedback did our models prompt? We would like to share some of the reactions by the visitors to Docu & Demo.*

*As soon as the scholarly production moves beyond mere text, all of a sudden the question about the interface design arises, concerning our leading design metaphor and its impact on the power relation between us as authors and the readers. People would suggest involving psychologists or cognitive scientists to help us create competent reader guidance. With the shift towards a diagrammatic or pictorial rendering of our findings, the status of our output becomes debatable: is it the next version of the artwork itself? Is it a collaboration with the artist? Are the artists OKAY with what we do to their work? And some saw our endeavors as a departure toward setting new standards for the conservation of digital art.*

*Daniela Hönigsberg M.A. is an art historian and has been working as an academic scholar at the Chair of Art History since December 2019, initially in the Browser Art project (2019–2023) and since then in the Coded Secrets/COSE research project.*

*Prof. Dr. Inge Hinterwaldner is Professor of Art History at the KIT Department of Architecture since autumn 2018 and is currently leading the ERC research project Coded Secrets/COSE.*

*Mayte Gómez Molina M.A. is an artist and has been working as an academic scholar in the Coded Secrets/COSE research project since December 2022.*

Im Rahmen der Forschungsgruppen *Browserkunst* und *Coded Secrets* (COSE) beschäftigen wir uns mit programmierter Internetkunst. Um zu verstehen, wie diese Werke funktionieren und strukturiert sind, entwickeln wir innovative Analysemethoden – und wir betreten auch in Bezug auf die Kommunikation unserer Erkenntnisse Neuland. In der Ausstellung *Docu & Demo* am Collegium Helveticum der ETH Zürich waren im Februar 2024 mehrere unserer Modellkomplexe zu sehen, die wir gemeinsam mit den Kunstwerken, auf die sie sich beziehen, zeigten. Man sah also die Werke und daneben unsere Analysen dieser Werke. Diese Modelle sind unsere Forschungsergebnisse und gehen über die akademische Textproduktion hinaus.

Das erste Modell, *Navigation* (2022), erhielt die Form eines Buches, basiert jedoch auf einer experimentellen Anlage und ist als Methodenreflexion einzustufen. Darin versammelten wir zehn *beste Lösungen*, die zehn Forscher\*innen unabhängig voneinander exemplarisch an ein und demselben Kunstwerk (JODI: *.co.kr*, 2001) erarbeitet haben.

Das zweite Modell *In Depth: Roaming Around the Conceptual Space of JODI's .com Browser* (2024) widmet sich einem Werk aus derselben Reihe. Die Publikation der Ergebnisse erhält dreierlei Gestalt: ein bebildelter Text, ein interaktives Spiel und eine papierbasierte Fassung des Spiels. In der Ausstellung konnte das Publikum einen Prototypen des Computerspiels testen.

Der dritte Modellkomplex *Second order Visitor's Guide to London* (2024) besteht aus einer gedruckten und einer dynamischen Karte sowie einem interaktiven Schichtenmodell aus bedrucktem Plexiglas. Es vermittelt und interpretiert die Linkstruktur des Kunstwerks *Visitor's Guide to London* (2005) von Heath Bunting.



2024. Jahrbuch  
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