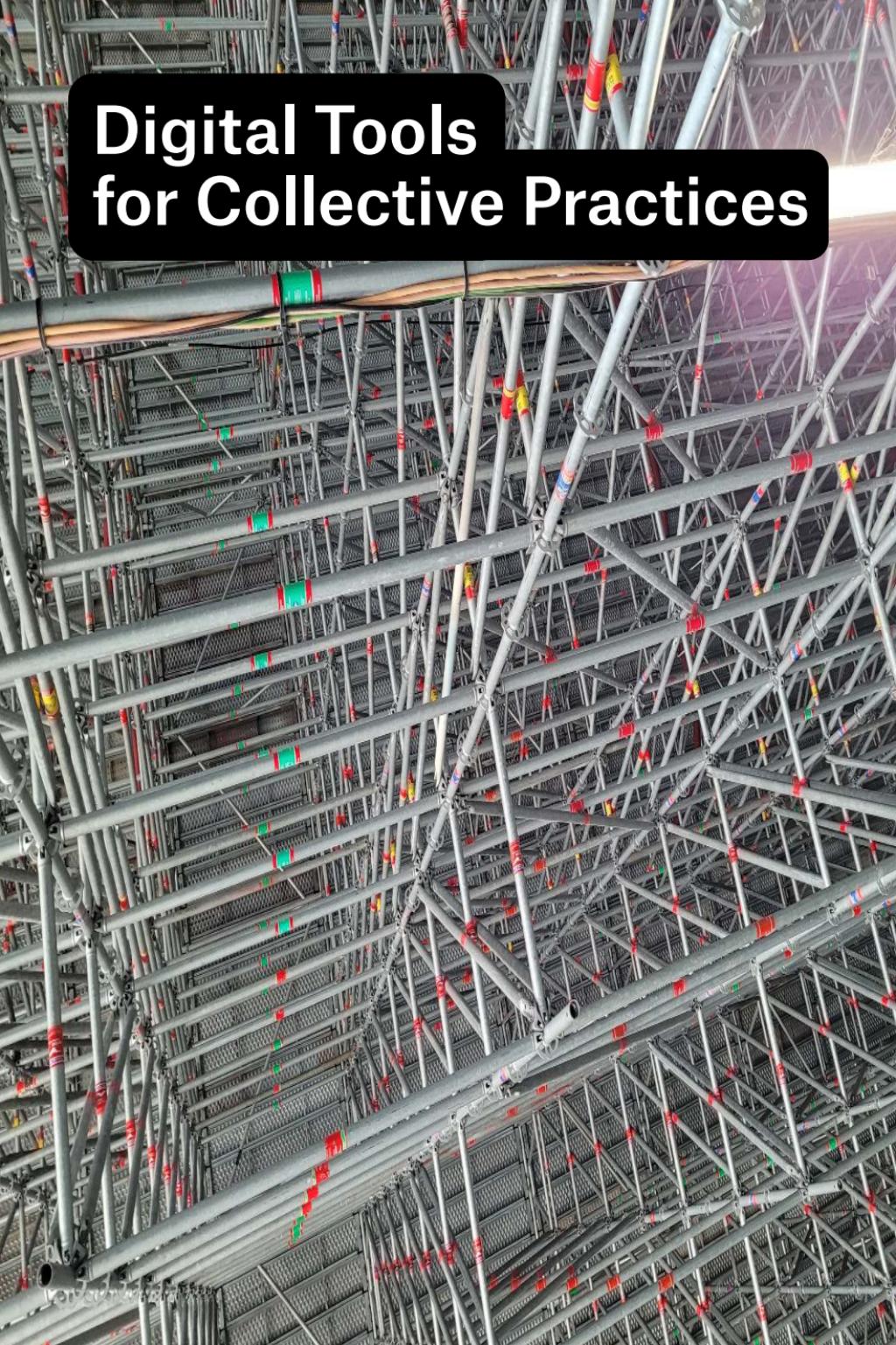


Digital Tools for Collective Practices



Digital Tools for Collective Practices

A Pedagogical Approach to Art and Design Collaboration

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Introduction

As Europe emerges from lockdown and the successful vaccination campaign fills us with optimism for the future, the Ecole Supérieure d'Art et Design Saint-Etienne (ESADSE), in collaboration with the Estonian Academy of Art (EKA) and the Hochschule für Gestaltung Schwäbisch-Gmünd (HfG), its international partners, takes this opportunity to reflect on the past year and a half and contemplate the reinvention of art and design education in a post-Covid era. To address these crucial questions, the Digital Tools for Creative Collaboration project was initiated, co-funded by the Erasmus Program of the European Commission, with the Bureau of Design Associations (BEDA) as an associated partner.

Higher education institutions have demonstrated remarkable adaptability in response to the challenges posed by the pandemic crisis. We have successfully transitioned to remote teaching and administrative procedures. At ESADSE, courses, reports, and competitions have migrated to the digital realm. The 2019-2020 activity report highlighted our exemplary commitment. However, this transition came at a cost. It was executed swiftly, driven by the urgency of the situation, utilizing readily available digital tools. We trained ourselves on the go, often outside of working hours, without conducting a thorough reflection on the origins of these software, web apps, and applications.

In September 2021, as we returned to a semblance of "normal," we began reflecting on our experience, only to realize that it was far from over. Our first observation was that we couldn't yet fully grasp the impact of what had transpired. However, we collectively sensed that teaching had undergone a profound transformation, and we couldn't simply revert to the way things were before the crisis. The challenges we faced and the questions that arose had left an indelible mark. Our second observation was that while the tools we used allowed us to continue the semester and stay connected, they were not well-suited for artistic education and the unique types of interactions it requires.

During this time, we received an extraordinary call for projects from the Erasmus+ program, specifically targeting the challenges brought about by the health crisis and the periods of lockdown. The call was structured around two main thematic strands: "Preparing for digital education," aimed at strengthening education and training systems to effectively navigate the sudden shift to online and distance learning prompted by the Covid-19 crisis, and "Partnerships for Creativity," designed to provide support to the cultural and creative sectors, which have been particularly impacted by the health crisis.

In response to the call, Random() and the International Relations team of ESADSE in Saint-Etienne, France, collaborated to develop a European project focused on exploring digital tools for collaboration in art and design. Implementing a European project requires the involvement of multiple partners from different countries, with a minimum of three partners being a condition for participation in the program. DTCC has provided us with a valuable opportunity to collaborate with our international partners from EKA and HfG, who share our concerns and inquiries regarding art and design education.

What is the aim of Digital Tools for Creative Collaboration?

The aim of this art and design-oriented project is to engage teachers, students, and staff from art and design schools in a collective reflection on the challenges presented by online collaboration for creative purposes. Through a critical lens, we seek to raise awareness about 'good practices' and the ecological impact of these new working methods, as well as the responsibilities associated with data processing, data security, etc. Additionally, this project provides a valuable opportunity to collaborate with international partners who share our concerns and inquiries about art and design education.

With the DTCC project, our aims are as follows:

- Build a critical thinking regarding collaborative tools employed within our schools.
- Analyze the notions of collaboration, cooperation, contribution and participation in relation to art and design practices.
- Engage in collective prototyping of tools for creative collaboration that align with our specific practices.
- Conduct research on the development of situated tools for collaborative projects by artists and designers.
- Equip students, teachers and staff in art and design Higher Education Institutions (HEIs) with the necessary skills and tools, ensuring sustainable conditions for digital creative collaboration.
- Involve students as collaborators by involving them in each step of the project for pedagogical purposes.
- Examine at our own international collaboration scenario as a case of study.

To achieve these goals, the consortium has or will:

- Conduct exploratory research on collaborative digital practices in art and design higher schools.

- Develop and test prototypes of collaborative games, software and interfaces for the creative sector.
- Create "*ourcollaborative.tools*", an online catalog of participatory artistic collaborative projects based on digital tools. The catalog can be accessed at: ourcollaborative.tools
- Present the project outputs through three exhibitions, one hosted at each of the partner schools.

Three intensive international workshops, serving as significant milestones of the project, have been organized to actively engage and involve all interested participants in the development of DTCC. The work initiated during these brief workshops often continued during subsequent classes.

Additionally, several events have taken place or are planned to showcase the project's results and enable us to reach a wider audience:

- *openschool.art* professional meetings and its presentation at the *Le Monde Sinon Rien* exhibition during the Biennale Internationale Design Saint-Etienne 2022. *openschool.art* had a second edition organized by ENSAD Paris in March 2023.
- IxDA Seminar at EKA Tallinn.
- International Seminar Week (ISW) at HfG Schwäbisch-Gmünd;
- OpenOpen event at ESAC Cambrai.
- Exhibitions at EKA, HfG and ESADSE, each offering a similar yet unique experience.

What is the purpose of this publication?

We learn from experience

We learn and grow from our experiences, especially those that involve long-term collaboration. The human factor plays a crucial role in design projects, with designers often working in interdisciplinary teams. As educators, a significant part of our responsibility is to support students in developing the ability to work effectively in collaborative situations, even when faced with challenges and complexities. The DTCC project provided us with an immersive experience focused on (digital) creative collaboration. It became a primary case study as we ourselves worked together under difficult conditions - during the COVID and post-COVID era, across different cultural backgrounds, and in the English language. This experience has been immensely valuable, offering valuable lessons for both students and teachers alike.

With this publication, our aim is to share the narrative of our collaborative journey between EKA, HfG, and ESADSE as a starting point for a global reflection on our pedagogical approaches. DTCC has been a collective experience involving teachers, students, and staff from the three schools. Throughout this process, we have critically examined the purpose of our students' training and the tools, including methods, that underpin our teaching practices. Our collaboration has been characterized by meetings, debates, and collective productions, occasionally giving rise to friction that prompted us to challenge our assumptions and explore diverse perspectives on digital design practices and their instruction. For students, this project has represented a significant opportunity to step out of their comfort zones, position their practice within the broad spectrum of digital design, and collaborate with individuals who bring distinct perspectives to the same discipline and alternative approaches to project development.

We have constructed this publication based on the diverse activities and associated productions that we have carried out over the past two years, documenting them on a dedicated wiki platform created for the occasion. These documents, written by several authors including students, serve as a basis to examine the subject of design collaboration from a pedagogical standpoint.

A brief overview of what you can expect to find in this publication

In the first chapter, titled Methodologies and Tools for Collaboration, we reflect on our initial workshop at EKA. This workshop provided us with the opportunity to meet in person for the first time, and we quickly realized that expecting seamless collaboration without prior knowledge of each other's expectations and work habits was somewhat utopian. Prior to, during, and after the workshop, we made concerted efforts to collectively define the scope of our subject, establish the current state of the art, and determine effective ways of collaborating over the following months.

In the upcoming chapter, titled Encounter between different approaches to digital art and design pedagogies, each school will present its pedagogical approach and the distinctive aspects of its program. Additionally, we will introduce the *openschool.art* professional meetings, which were initiated as part of the project and focus on addressing the challenges involved in teaching digital practices within art and design schools.

In the chapter Learning to Collaborate with Different Perspectives, we reflect on the workshops held at ESADSE and HfG, where explored creative collaboration strategies. Additionally, we provide a platform for the students to share their testimonies, shedding light on their experiences and the significance of this two-year collaboration for them

Then, in the chapter Designing Tools for Creative Collaboration, we continue documenting our workshops at HfG and showcase the interf-

aces and prototypes of the collaboration tools created by students. Additionally, we include two articles by designers whose work revolves around the development of tools and collective practices. Furthermore, we introduce ourcollaborative.tools, an online platform that we are currently building. This platform serves as a participatory archive of artistic projects involving digital devices and collaborative endeavors.

Lastly, in the chapter Making Exhibitions as a Collective and Pedagogical Practice, we will discuss our intention of organizing three exhibitions of the DTCC project, hosted individually at each of the partner schools. We will explore how this endeavor aligns with our pedagogical approaches and discuss the ways in which the exhibition format is linked to our educational practices.

We hope you enjoy reading this publication and that our experiences and reflections resonate with your own.

How is it made?

Over the course of two years, we collaborated utilizing various sharing and communication tools, many of which were already implemented in our schools, such as Google Drive, Zoom, etc. Additionally, we utilized specific tools installed and used for the project, including Yunohost, Big Blue Button, Nextcloud, and a wiki built using wiki.js. Through these platforms, we gathered a substantial amount of material, documentation, and images to contribute to our publication. The publication is available in both a printable PDF format and as a website accessible at the provided URL: digitaltoolsforcreativecollaboration.art.

From the outset, all the documentation and archives were conceptualized as part of a hybrid publication chain, integrating various formats and open-source tools. This editorial chain involves the wiki, markdown files, images, and web-based applications that enable us to extract content from the wiki and generate diverse publication formats. It serves as a collaborative creation tool, facilitating the production of our publications in different forms. The development of this chain has been made possible thanks to the contributions and support of the free software community.

Please note that the contents compiled in this edition embody a sense of fragility. This fragility arises from the evolution of our perspectives throughout the exchanges, workshops, and productions related to the project, regarding both the subject matter and our methods. As a result, the editorial design was approached incrementally, and the texts were collaboratively written by multiple contributors.

This publication was generated the **3 july 2023** from the content of our wiki : wiki.ourwriting.tools, with customs apps based on markdown markup language, node.js runtime environment, eleventy.js static site generator and the paged.js web to print library.

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Methodologies and Tools for Collaboration

Tools allow us to practice, while practicing allows us to build these tools. The artist and designer community, who have a keen interest in digital practices, has been utilizing this recipe for quite some time now. At Saint-Etienne Higher School of Art and Design, our pedagogy is based on this principle. Since the very beginning, we've had plenty exchanges with our students regarding the use of these tools. The integration of communication, sharing and design tools into our creative practices has had a significant impact on the way we approach and express our creativity. This project has displayed the varying degrees to which each team, school and country cultivates its unique culture of relationships with technology, particularly with digital technology.

It is indeed a struggle to distance ourselves from these topics: As professionals, students, and teachers, we find ourselves entangled in socio-politico-economic systems that our practices actively participate in. Addressing these fundamental questions becomes crucial for shaping the future, especially amidst the climate and political challenges that lie ahead in the upcoming years.

This project which lasted two years, was rich in exchanges and experiences, and had an indisputable effect on us, especially on our students: questioning and critical positioning tow-

ards our methods and utilization of digital creative tools through collaborative efforts. It became clear that tools and methods we impart are not neutral: they are indeed part of the creative process and have a lot of influence on projects as well as on students, on the way they work and on their designs. Our practices encompass a mix of art, hacking, tinkering, product design as well as the use of both proprietary and free software. However, each school approaches pedagogy with its own unique perspective, adapting toolboxes and methods that directly influence the professional world in which we prepare our students. Within the framework of the DTCC project, we had the opportunity to voice our concerns while enabling different approaches to coexist.

Even though we have encountered some challenges in our collaboration, the encounter of our distinct practices regarding design and teaching proved to be highly enriching. This project gave us the chance to share and compare our methodologies and tools -- analyzing their modalities, origins and realities in our institutions and also in professional contexts, while allowing students to think both individually and collectively about their strengths and weaknesses.

Digital Tools for Creative Collaboration, EKA's workshop, 25-29 October 2021, Tallin (EE)



First presentation at EKA in Tallinn

The first workshop in Tallinn was a significant milestone as it marked our first in-person meeting after having numerous fruitful exchanges beforehand through platforms like Zoom and Big Blue Button. However, due to unforeseen circumstances, we had to quickly synchronize our expectations and adapt to the situation. Unfortunately, the initial plan for an in-person meeting was canceled, and we didn't have the opportunity to properly meet face to face. This unexpected turn of events was mainly influenced by the challenges posed by the Covid-19 pandemic, which greatly impacted the organization of our collaborative work during the first week.

In October 2021, we finally had the opportunity to meet in person at EKA, Tallinn, bringing together both students and teachers. The week proved to be intense and pedagogically challenging, particularly because the students from Esadse had a strong inclination towards the Google Sprint model and design thinking methods proposed by EKA, which are commonly employed by our partners. However, the focus of the workshop was on the students' experiences of remote learning and

collaborative work, highlighting the isolation they faced during the pandemic.

Subject and goals of the workshop

Since the first workshop was being held after the pandemic and DTCC project emerging from its aftermath, discussions around the workshop were obviously based on our experiences of teaching, learning and working together remotely. This week was dedicated to the inventory of tools we use for remote collaboration and to exchanging "good" or "bad" experiences we had with them. This served as a basis to a common reflection on what tools could have been better or complementary to those we have, in order to ease remote collaborations or to allow new ways of creating together at a distance.

During the whole project, workshops have been one of the important means to involve students at every step of the way. This one is part of the first phase of the DTCC project, dedicated to exploratory research (that was documented by EKA in this publication, here, we intend to document this workshop from a pedagogical perspective). The main goal of this workshop was to encourage students to engage in analyzing the digital tools used for collaboration during the pandemic and reflecting on lack of tools. These two outlooks were both important to the study and to the researchers.

Introduction: projects and methods

As an introduction, some of the students as well as some of the teachers Presented their previous works and ideas:

Jekaterina Suharenko, Conversations with the Water: Experiencing Life-Centered Design

- Marc Guntow and Ludwig Kannicht, Hybrid Workplaces
- Hugo Saksik, Hardware controllers for digital graphic design

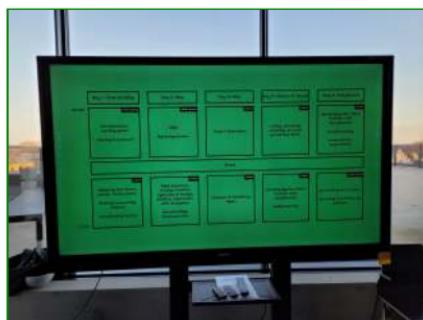
- Samantha Zannoni, Create drawing tools

The EKA team led by Tanel Karp and Jekaterina Suharenko had prepared a precise and busy program: the methodological model was strongly inspired by a Google Sprint. The main idea was to find an efficient and well-documented format to work together in a short time, combining creativity exercises, meetings and design workshops. Marc Guntow and Ludwig Kannicht are familiar with this type of format, and from the very first hours they provided exercises to form working groups by topic. Methodological tools were offered during the week to guide the students' responses.

For example, Marc introduced us to the *Four-Step Sketch* method, an exercise that helps people to create well-formed concepts through a structured process that includes:

- Reviewing key information
- Starting design work on paper
- Considering multiple variations
- Creating a detailed solution

Workshop's schedule



Our planning for the workshop's week

Talks and visits

The EKA team proposed meetings with designers, artists and visits to their workplace to build interviews and gather data for exploratory research in professional contexts. Each group went to talk about the topics identified in the previous sessions as well as more generic topics such as: how do you work and with what kind of tools? Do you use pre-defined methods? How do you collaborate with one another as well as with external collaborators or clients?

They had a video call with Annie Abrahams and visited:

- TRINIDAD WISEMAN
- Pipedrive
- DUX



Meeting with Trinidad Agency in Tallinn for research purposes

Projects made by students

During the workshop, many topics based on our experiences during the quarantine period, were expressed, from the best to the worst situations:

- on technical environment (how we depend on internet connection, accidental microphone on, etc.)
- on social behavior (it is hard to get feedback, can or cannot be a peaceful moment for introvert people, etc.)
- on cognitive overload (concentration problems, headaches, etc.)
- on self-organization (wider possibilities to attend lectures, saving travelling time, etc.)

Once the material was gathered, the teams met to define their objectives and discuss the data collected.

Four topics were chosen:

- online social behavior, politics
- emotional bonds
- work/life balance
- motivation and creativity

We quickly understood that it was not reasonable to think of devices or software. As we realized that we work in very different manners and are used to make distinct types of productions, we spent a lot of time on discussions and negotiations. Some interesting debates were initiated by students and we decided to give them space to grow by exploring the topics in depth and project them into situations.

At the end of each days, teams made a presentation of their progress and documented their paths on our collaborative wiki.

Emotional bonds

There is a strong connection between emotional bonds and creativity. The group is creating a social link about the rituals (individual, or social) #emotionalbond #privatespace #personalexperience. What is a ritual? Why is it important to share?

The group has come up with an idea for a gardening app, inspired by the theme of rituals. They have brainstormed the elements that will be

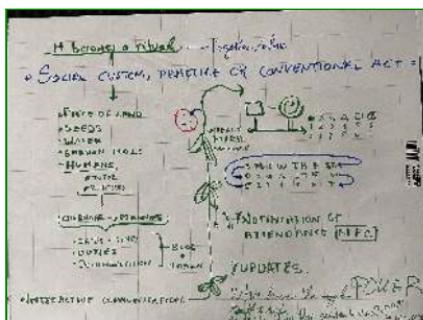
included in their product, identified the target users, considered the user experience, designed the interface prototype, and created user stories. They have also completed the prototyping phase and will further develop the visualization.

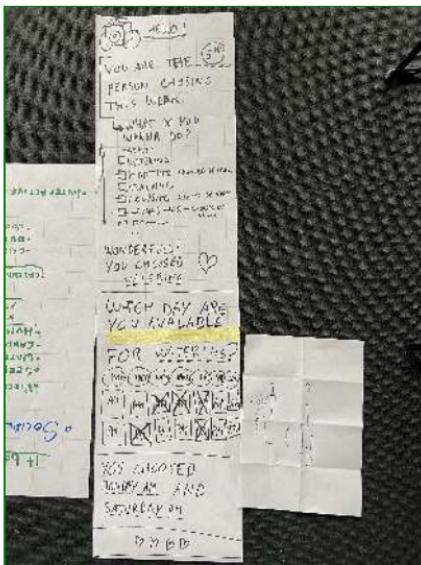
They wanted to create a gardening community where people can grow together while still having their own individual experiences. The results would be shared among the community members, fostering a sense of collective participation. The digital tool aims to reinforce interpersonal relationships by addressing questions such as how it will function, how people will feel a sense of belonging to the community, how it will create meaning, and how it can be inclusive. They have designed a system that is free from hierarchy.

The group wants to make a prototype of how the platform will look like and what experiences it would create (interactive communication):

- be in contact communication but without a tuff structure
- NFC scanner to be sure that the person is present.

Gardening is about responsibilities, so it is very important to be present. Scan the code and see who the gardener is.





First sketches for the *Emotional bonds* project

Motivation and creativity (music)

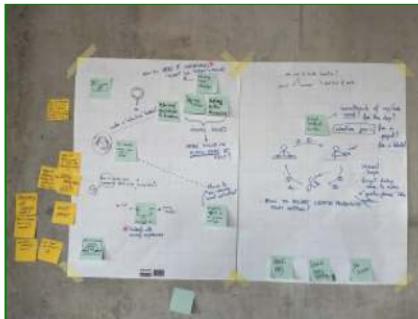
Audio is often overlooked, yet it plays a crucial role. We need to identify the problem we aim to solve. How can we make audio more personalized? How can we enhance personal interaction in digital communication? The theme of sound was not given much attention during the discussions. How can we bring energy and liveliness to participant communication during calls? These are the questions we need to address. We should consider the target audience and the specific context in which we are designing. #team #collaboration #sound

The aim of the project is to enhance motivation during study and work sessions, as well as lectures. Many of us have a deep connection with

sound. The group came up with the idea of jamming sessions using microphones. This provides musicians with a unique opportunity to engage in digital collaborations, as it is a playful way of utilizing digital tools. It also allows for connections with different musicians. The group explored potential issues with delays and is focused on creating a fun and creative atmosphere while using this tool. They are also exploring a more gamified experience and have been inspired by various references.

Perhaps we will show the references tomorrow during the presentation. Groups express the need to envision the visual interface concept, considering aspects such as sound communication, whether it includes a camera, chatting capabilities, or other features. Sound is a way of communication. They have also created wireframes to determine the elements they want to incorporate into this tool. Musicians and non-musicians are involved in this process, aiming to achieve radical simplicity. They are considering factors such as the session start time, instrument choices, and the ability to control access to the jamming space. Addressing the issue of delay in live sessions is a challenge they need to overcome. The goal is to enable multiple participants to contribute sounds to an existing 'music' piece. They are exploring options for simplified instrument choices. Their main focus is to grasp the system's functionality and establish a basic premise for the project.

This tool is not to be utilized by professional musicians since it might not fully meet their requirements or expectations. However, musicians could potentially create a library that allows other users to explore and engage with it. This goes beyond the limits of design bubble, inviting anyone who is interested in music to participate. It is a tool designed for creative people, allowing them to freely express themselves without necessarily knowing how to play a physical instrument.



First sketches and moodboard for *Motivation and creativity*

Social behaviour online, politics

The problem we encountered was trying to understand why we are here together in this workshop. After a long discussion and sharing several insights gained from an interview that took place earlier that day with Annie Abrahams and Ülo Vihma, we had a dot-voting session to gauge our ideas. We collectively arrived at the idea of developing a *transpire *platform which consists various formats such as discussion mode, presentation mode, and classroom mode. We established clear roles for each participant in the conversation, determining who they are and the specific roles they play. Additionally, we discussed the importance of gathering feedback in real-time while a person is presenting. How we want to get feedback while the person is presenting. For

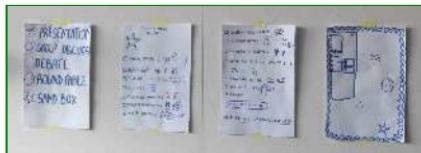
example, we can use emojis to show if we agree or disagree. The way how people communicate during the pandemic has changed tremendously, people started using corporation platforms like Zoom, Google Meets, Slack etc., as opposed to the traditional classroom interactions that were prevalent before.

During one-on-one debates and discussions, we asked what digital space can provide while not being a physical space; what is the role of individuals, what would be the different characters, relationships and responsibilities towards actions. They aimed to introduce certain functionalities related to user interaction. For example, participants within the Zoom ecosystem engage in digital interactions both as individuals and as members of the community.

How to represent one's self when in a digital space? For instance, we reflected on the camera mode while trying to explore alternative forms of representation. This includes options like choosing a color or a drawing to express oneself, recognizing that not everyone may feel at ease appearing on video. Additionally, our considerations expanded to more experimental avenues, such as incorporating sound.

We haven't discussed further about distinct modes, such as switch modes. It is possible to choose pre-settings (structure or default settings that will help the user to be more engaged). There would be only one tool where the user can switch modes easily so the software could adapt accordingly. However, we haven't tested it yet. We experienced Zoom during the lockdown. Sometimes, discussions might not work so well, and breakout rooms might not be the best solution. We have made it an obligation to say goodbye, thank you for the lesson, and switching the microphone on. But there was always something missing. In the digital space, there are certain limitations. It is crucial to recognize that digital and physical mediums have distinct characteristics. Therefore, we took a step back to evaluate our actual needs and explore how we can use these specific elements to improve the overall experience. By considering the unique context of social interaction, we must be prudent about proposing romantic scenarios, as it raises ethical questions that require careful consideration. While we haven't yet

thought about the graphic interface, our focus is more on developing the features.



Research and ideation for *Social behaviour*

Work/life balance

Our topic is separating work and personal life. The idea was to create a "buddy", connected to the calendar. There are multiple ways of using this feature; firstly, the buddy notifying you to take breaks, secondly approach incorporates physical cubes that can be interacted with on a tactile level, offering various work modes, as well as providing exercises to offer help to deal with stress. If you are stressed, the app tracks it down and notifies you about it, helps you reflect on your day, and

your achievements. The buddy helps you not to have a burn out and organize your life in a more ecological way.

Start with setting up your mode cube to enter your mood, your team, enter time while checking in and checking out, accomplishments of the day and planning of the next days, as well as giving you the opportunity to share it all between users.

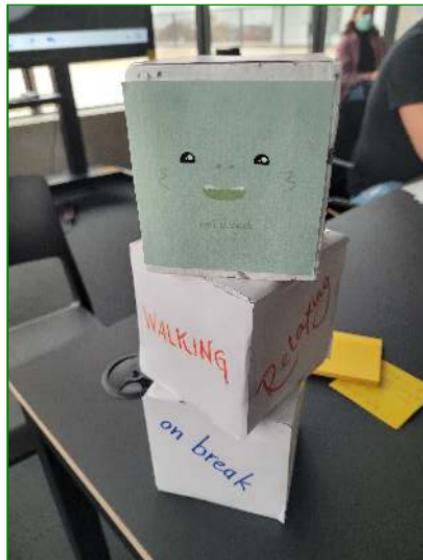
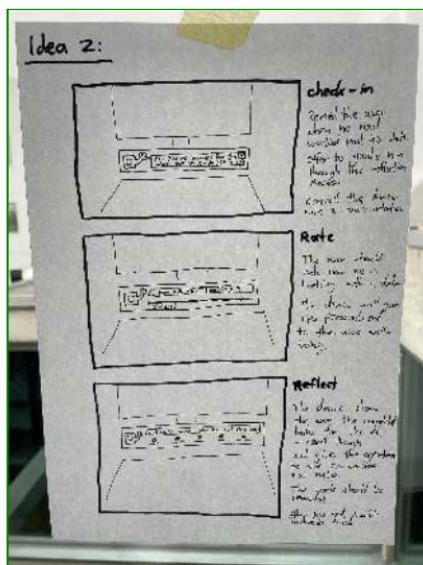
Next step is to create a storyboard to help you organize your day. It is a two-way communication: the app will give you advice on how to make you less stressed, encourage you to take a walk and get away from the screen to be able to separate the work time and personal life.

The questions are multiple: Who should be in charge to program the buddy: a friend, a colleague, or a psychologist?

How to prevent an addiction towards the Buddy while allowing the users continue to listen to themselves? Since this data can be used in both ways, it can empower both parties.

Various forms of analytics can be generated, encompassing personal data and addressing potential concerns related to privacy. The buddies can foster a community-like environment, where friends come together to discuss and enhance their collaborative work processes.

The buddy was created with the aim of helping people to not to over-work themselves.



Research, Sketches and mockup for the *Work/life balance*

Participants

EKA

Alicia HARDEGEN, Artemiy GUSLISTOV, Jekaterina SUHARENKO, Kai RAKU, Quinn DARBY FELLER, Natsumi NONAKA, Sigmund ABOU CHROUCH, Tanel KÄRP, Yareni, DURIEZ URIAS.

Esadse

Adrien DELIMARD, Alix DIAZ, David-Olivier LARTIGAUD, Ekaterina BRYTKOVA, François BRUMENT, Hélène DEBRAND, Hugo GUY-OMARD, Inge ELLER, Jérémie NUEL, Laura EGO, Manon PICAT, Mathias HU, Vadim DROBOT, Samantha ZANNONI.

HfG

Bianca TILLMANN, Lucie WITTMER, Ludwig KANNICHT, Marc GUNTOW, Luis PFLÜGER, Thang NGUYEN, Vanessa SIGG, Yannick HOFFMEISTER.

Shared references

People

Annie Abrahams did a video-call interview with students during the workshop.

Total refusal is an artists' collective, they made a twitch ballad in GTA.

Tools

Slack, Asana, Miro, Reddit, Zoom, Facebook, Instagram, Snapchat, What's app, Wiki.js

Shared Piano is a simple tool for remote music teaching and collaboration that lets you play music together live on the web. It's part of the project Chrome Lab Experiment, launched by Google.

Incredibox is an interactive music experience, half a game and a tool.

Methods

"What if...?" method

The "Four-Step Sketch" method by Jake Knapp is an exercise that helps people to create well-formed concepts through a structured process.

Other

Open Emoji is an open-source icons library.

120 years of electronic music is a project that outlines and explores the history and development of electronic musical instruments from around 1880 onwards. It was initiated in 1995 by the author and musician Simon Crab.

Very Nervous System(1986-1990) of David Rokeby is an installation where he used video camera, computer, synthesizer, image processor and a sound system to produce music with his body.

Midi Art is based on making illustration in a MIDI interface. In this way, the usual "rectangles" (corresponding to tones) are organized to form a graphic content, which remain, in the other way, to a MIDI clip.

Mass Interaction Digital Arts is an open platform, community, and resource database for mass-interaction physical modelling in digital arts and creative fields. It is used in different project in relation to music as Sonification of Hand Gestures in Dance Performance.

Magenta RNN is an open-source research project made by Google exploring the role of machine learning as a tool in the creative process. It's available on Python and JavaScript.

Conclusion and openings

The biggest interest in this workshop was seeing our different approaches on tools, methods and projects -- which was also the most difficult and tiring part of the process. We were actually surprised to see how different we were, but it is now what we consider to be the strongest point of our collaboration. However, with the benefit of hindsight, we can allow ourselves to say that if we were to repeat the whole process, our differentiating methods and perspectives on design and tools would be the core of our first workshop together.

Reflecting back on October 2021: Following a week of rich experience, discussion, and thinking, each school went back to its country of origin. We had prepared a Wikipage to gather and document all the work, which is the tool we have improved during the project and that we are using currently for this publication. During the following months, each school integrated the process of ideation, design and implementation of mock-ups, interfaces and prototypes into their respective curricula. This unification was influenced by the concepts and advancements generated during the week-long session in Estonia.

Post-workshop : designing post-pandemic tools for collaboration, student's projects.

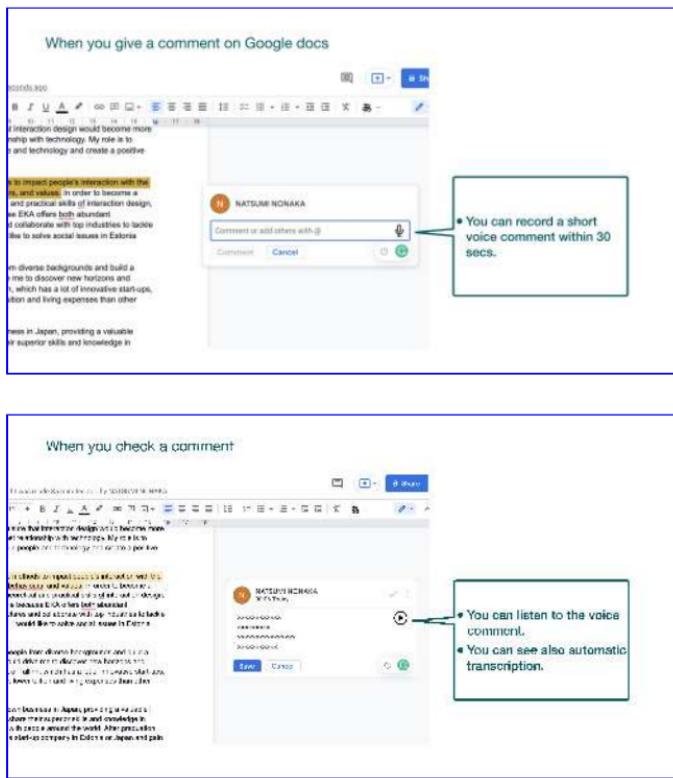
After a few months, following the first workshop at EKA in Tallinn, our students continued their researches by building new teams. Each school, according to its organization and its academic calendar, has integrated the subjects evoked during the initial workshops into its curriculum and pedagogy.

An online final presentation of the students' projects was planned on the 18th February 2022 to share the results. Here are the projects they have designed.

A plugin for making small comments on a document with voice

Natsumi NONAKA (EKA)

How can we help people in giving quick and concise online feedback?



Mockup of the plugin to comment Google documents

Why is this tool for?

My final concept is a plugin for making small voice comments.

Who is this tool for?

This tool is for teams working online.

How does it work?

When leaving a comment on Google Docs, you can record a short voice comment within 30 seconds. Moreover, when checking a comment, you can listen to the voice comment with an automatic description.

What type of collaboration is it made for?

Asynchronous collaboration, feedbacks.

How did I came up with this idea?

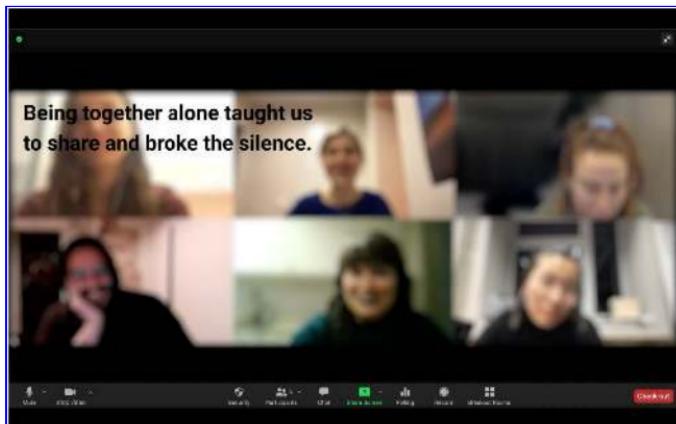
To begin with, I have identified some research questions for the project: What kind of digital tools do people use for collaboration? Why? How do they collaborate online by using these tools? What kind of problems do they have? etc. Based on those questions, I conducted desk research and interviews with people who have experience in both office and remote working.

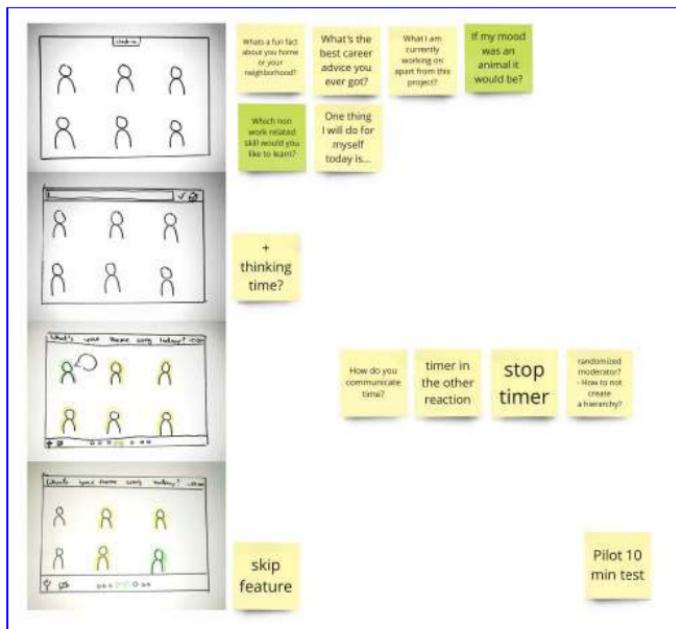
Based on my research findings, I found that the absence of small, quick interactions and feedback while working online could slow down the work. Addition to that, while remote working, text-based communication is increasingly replacing oral communication and non-verbal forms of communication. Text-based communication helps communication to be more accurate and well-structured while being also suitable for recording. However, at the same time, text-based communication is time consuming and compared to oral communication, makes it more difficult to express feelings and emotions. Based on these findings, I decided to focus on the problem concerning the lack of quick and concise feedback while working online.

A plugin for check-in and check-outs

Alicia HARDEGEN (EKA)

How can we create a digital environment where we can emotionally connect people with each other?





Researches for the plugin to check-in and out in video calls

Why is this tool for?

This plugin is a video meeting tool specifically designed for check-in and check-out questions. It is already being used by many design teams. It functions as a seatbelt to identify if someone needs help or can provide support to others.

The check-in would be about warming up, checking on each other, sharing something personal in order to create a digital environment where you can connect with each other; whereas the check-out would be more about reflecting, appreciation and feedback.

Who is this tool for?

This plugin is made for remote workers' teams and online classes.

How does it work?

An individual, for instance the moderator writes a check-in question that aligns with the current session. Using a personalized question often demonstrates a genuine interest, but there is also the option to generate a question if inspiration is needed. Afterwards, the question is answered in turn, with visual cues indicating the current speaker and those who are yet to respond. If someone does not want to answer the check-in question, they can press a button to change their status without necessarily answering the question.

After everyone has answered the question, the meeting can start.

When you leave the meeting, you will be automatically redirected to the check-out room, where a pre-existing or generated question related to appreciation, feedback, or self-reflection will appear. The answers given are visible either anonymously or with respondent's name depending on the group's default settings. Considering that some individuals may need to leave early, the concept is for everyone to individually submit their check-out remarks, which will then be stored.

How did I came up with this idea?

After the workshop week, we cleared/reverted all that we had discussed. Within the EKA team, we discussed about different kind of collaborative apps and our shared experiences with them so far. In order to identify patterns and issues across different categories, we made the decision to divide them. Together with Quinn, we conducted a research on the topic of communication.

To generate an HMW (How Might We) statement, we reviewed the complaints and praises shared about the five tools we had previously assessed. We gathered quotes from Quora and Reddit regarding topics such as "What are the benefits of Slack?" or "What are the pros and cons in Zoom?". Each quote was carefully tagged with relevant keywords for further analysis. We collected quotes from Quora and reddit on entries like "What are the benefits of Slack?" Or "What are the pros and cons in Zoom." All these quotes were marked with keywords. I added quotes from brief guerrilla interviews to the same table. Among the various issues and recurring patterns, we observed, the comments

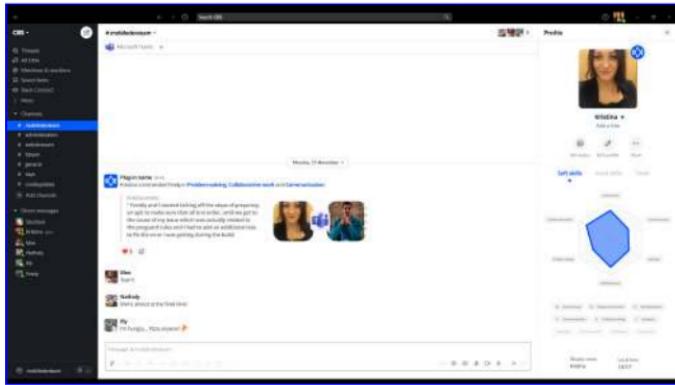
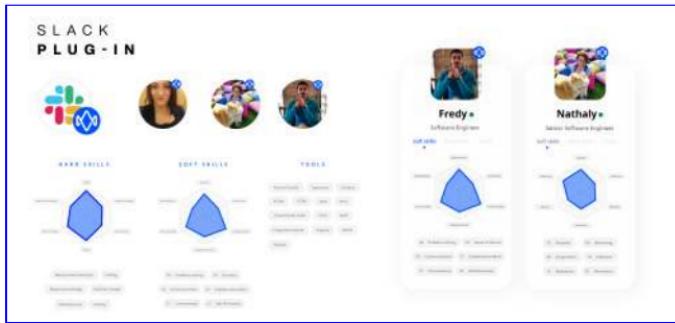
that resonated with me the most were related to Zoom's inability to create a social environment and its contribution to feelings of loneliness and distance.

My first approach to generate ideas was the Crazy 8 Method. During this stage, I sketched various solutions for my HMW statement, exploring possibilities such as improving feedback mechanisms, adding features to facilitate emotional expression, and creating a safe space for discussing personal matters. So, I started to read articles what kind of games were suggested for remote teams to let the team spirit grow. The problem I saw with many of those online games, like a photo competition, was that often they take a lot of effort to prepare or can be only played one time, but then I stumbled on an article about Team Check-Ins and Check-Outs.

A Slack plug-in that showcases the user's soft and hard skills

Sigmund ABOU CHROUCH (EKA)

How can we establish a meaningful connection across a group that can help all its members equally in their personal growth with digital tools?



Mockup to explain how work a slack plug-in to show user's soft and hard skills

Why is this tool for?

The final concept is a Slack plug-in that showcases the user's soft skills, hard skills and tools that they possess, which would facilitate more efficient collaboration within their team. Such a plug-in would also overcome barriers of shyness, inviting people to seek assistance in

a more confident way, thereby igniting a sense of mentorship and promoting learning.

Who is this tool for?

Slack-user medium to large teams.

How does it work?

The user would input their top skills, which would then appear on a hexagon graph. This graph would help team members identifying who they can approach for assistance or collaboration. Additionally, it would serve as a display to individuals outside the organization.

After each collaboration, the other user can provide feedback by 'endorsing' the user's existing skills or suggesting new skills.

The graph will always display the top six skills, both in soft and hard skills, that have received the most endorsements. If a new skill surpasses the endorsements of one of the existing top skills, the new skill will replace the previous one on the graph, and the cycle continues.

How did I came up with this idea?

As a team, we've spent the first two weeks trying to understand the world of collaborative applications. During this time, our focus was on identifying the main players, understanding their Unique Selling Points (USPs), studying their competitors, and searching for relevant blogs, videos and other resources about these key applications. In addition, we took the time to speak with individuals who actively use the identified applications. Our aim was to understand their engagement patterns, uncover their pain points, gather their preferences, and learn about the challenges they have encountered and how they resolved them. Our goal was to acquire comprehensive information that would enhance our understanding of the subject matter. Furthermore, we were encouraged to actively engage with the applications ourselves, utilizing them and reflecting on our own experiences.

When checking the data collected by the team, two patterns stood out to me. The first pattern revealed a group of individuals who lacked

knowledge or proper training on using the applications, resulting in their inability to fully leverage the available features. The second one showed a confident and proficient group who could easily work with the applications.

What if the second group was able to guide the first group? This led me to consider the following: How can we foster a meaningful connection across a group using digital tools, enabling members to support each other equally in their personal growth?

Once the problem has been identified with data and insights that we've collected and opportunities that we've uncovered, coming up with ideas to solve it can be unlimited. It is very important to establish certain guidelines or a pathway that can guide the ideation process. Such guidelines, which I have identified, are called design principles. They are as follows:

- Engaging is an important component that actively involves individuals, fosters interaction, and facilitates effective communication, which is a crucial element. Individual: In a collaborative effort, the collective's spirit and growth are determined by each individual's spirit and growth, therefore, the solution should facilitate individual growth.
- Uplifting: Constructive criticism, acknowledging milestones, lending hand etc. contribute to the growth of the individual but also in the growth of the collective. And all that was mentioned in the beginning have a goal in recognizing the progress of the person, resulting in uplifting them rather than the opposite.

With these principles in mind, I proceeded with ideating by using the crazy 8 method which is the "core component of the design sprint stage within design thinking." I was able to come up with 5 ideas, which were:

- A platform with free resources that everyone can contribute to and collaborate in creating. Individuals can create guides and resources and share them with everyone through the platform and such resources can be upgraded by everyone.
- Virtual Rooms dedicated to various purposes such as discussions, design, and ideation etc. Each virtual room is equipped with tools specifically adapted to support the corresponding theme.

- Gamifying the experience by celebrating each individual's strengths and collaboration skills, while also highlighting the unique qualities they bring to the group.
- A Virtual Campfire where everyone is given the opportunity to share their thoughts and ideas.
 - An interactive box network where each box is connected to others. When one box is illuminated with a specific color, all connected boxes light up with the same color, fostering remote connections and facilitating communication.

Out of the 5 ideas, I moved forward with "Gamifying the experience". The core idea of it is that it aids in one's personal development, showcases their skill sets (hard skills, soft skills) and establishes connections through highlighting the strengths of the individuals.

Through my research on gamification, the main elements of it stood out that, collectively, would define the gamification experience (Teodorescu, 2018). Other sources in my research of the elements that would establish the solution decided on were LinkedIn skill assessments and skill endorsements, where people can endorse you to enhance visibility and credibility.

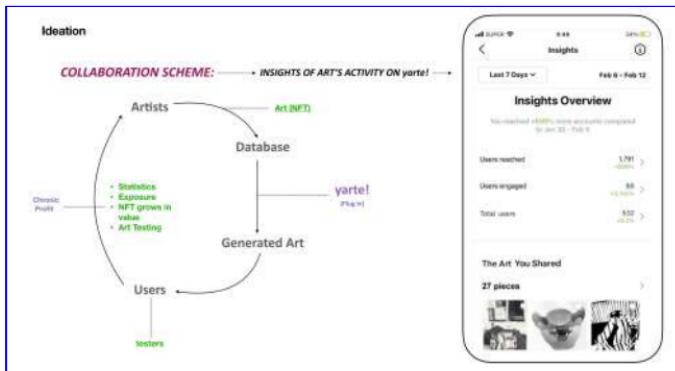
Another resource was shared with me by Alicia which is a Slack plug-in called Hi-Ki, where one can tag anyone in their team with their skills, interest or field of expertise which can be added to their profile on Slack. The point of this plug-in is to get to know each other and get closer, get the recognition for the work, find out who has the know-how to tackle a specific task/solve a problem and have insight into the strengths and talents of the entire team.

This led to the first raw idea: a plug-in for slack that is optional to install for the team, where the goal is to develop their skills in the use of digital tools by collaborating, helping and learning (hard skills and soft skills). Giving the user the chance to engage with their teammates, where they can also help and guide others in developing new skills by assisting them if they ask for assistance.

Yarte

Artemiy GUSLISTOV & Yareni DURIEZ URIAS (EKA)

What happens when the references upon which most digital tools are based do not align with your own experiences or references?



Ideation to understand the most standard tools part of our daily life

Why is this tool for?

Based on the research, analysis and understanding of the popular, most useful & almost standard tools that have become part of our daily life, we designed the concept of a **plug-in for spontaneous collaborative drawn art** we called Yarte.

The concept supports the idea of providing help, motivation, and inspiration by creating a context. It aims to offer an accessible first-hand experience in a creative environment for individuals who want to join or have access to the world of drawn-art. The specific purposes of this concept include visual communication of work, ideas, plans, and more.

How does it work?

We decided for it to be a plug-in that could be used as a complement for the work that is being done in other digital tools, with the purpose of replicating the facility and experience of having a notebook for sketching.

ng ideas. The difference within the notebook experience and the plug-in "yarte" would be the support and instant follow up that the tool will provide to the user, based on the "context" given by the user themselves.

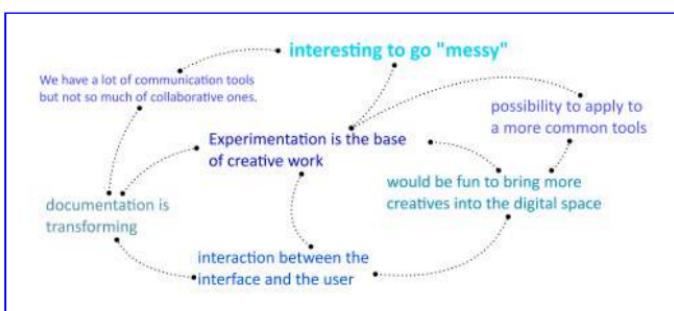
What type of collaboration is it made for?

With this approach to the digital tools, we found the potential for this facility of creation to become a collaborative environment in the open platform for people to test-advertise their artwork as NFT's in order to have access to the statistic that would be proof & reference of the usage and audience that their work reaches.

The value of these scheme is in the value of data and previous experience in the current professional work career building, especially in the art and creative fields.

How did we came up with this idea?

After the workshop week, all the students from EKA formed a team in order to gather a more integral research on the topic of the digital tools that are part of our everyday life. This helped us to identify what are the interfaces, interaction & practices that had an area of opportunity to be improved. During our research upon the existing digital tools, and more specifically about the most popular ones, we found interesting & defining quotes and statements on the comments, reviews and websites on those. These findings led us to establish our own conclusions between the popular opinion and our own experience and expectation when using digital tools for creativity and & or for collaboration.

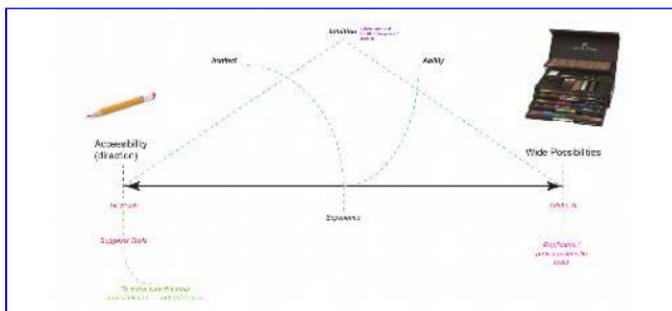


Mindmap on creative work and experimentation

In the next stage of our research, we have clarified the differences between existing tools and identified why not everyone is using the same ones. These tools offer unique features within the same category, but who are they specifically designed for? What factors help individuals decide which tool aligns better with their needs or personal identification?

Among a variety of answers, additional questions, and conclusions, we have identified a specific difference that distinguishes tools providing easy access to a world of possibilities (1) from those that replicate tools for putting one's practiced talent or skill into action beyond the confines of a screen. (2):

- (1) corresponds to the "**Accessibility**" category of digital tools, which represents the programs and apps and websites that allow one to explore an alien world, far from our real abilities and/or possibilities, but very close to our imagination and desires. It suggests and facilitate tools that might only be available in the digital world, but also regular or analog tools with exponential "power" or "capacity"
- (2) is the "**Possibilities**" category, which addresses tools, programs, apps, and websites that offer specific functionalities replicating high-fidelity analog tools. These tools facilitate the user's capability to represent desired outcomes with ease through the utilization of screens, while also granting access to a diverse range of digital tools.



How to understand the range between Accessibility and Possibilities in digital tools experience

As shown in the map above, we have identified a common point for both categories, which is the need for experience. However, the two categories are driven by distinct motivations and strengths: Instinct and Abilities.

We concluded that experience is equally applied in both cases, yet in different forms (instinct and ability). Furthermore, we identified that intuition serves as the driving force that motivates users to continue using or experimenting with the tools, facilitating the acquisition of expertise and knowledge in specific digital environments or toolsets.

While identifying these two approaches to creativity in the digital world, we realized that despite its potential for providing possibilities, it can also be limiting for inexperienced users. The instinct we mentioned earlier can only exist and be effective when one has had the opportunity to gain experience within specific environments.

However, what about the people who would like to explore untapped abilities that they believe they possess or wish to acquire? Joining the digital world is no longer only an option or an alternative. For sure, certain aspects can and should be preserved in analog and physical experiences, yet digital tools should support and enhance how we represent our ideas and enable the easy distribution of messages worldwide in today's interconnected age.

That is why we chose to focus on this question: "What happens when the references that most digital tools are built upon do not align with your own experiences or references?" Not identifying with a particular world does not mean that our instinct will be turned off when faced with mismatched references and archives. Instead, it will operate based on the possibilities it has been exposed to and execute accordingly.

We found some other examples that highlight the role of references and instinct in executing creative plans or ideas. These can be child-

ren's coloring books, fashion game magazines, architectural exercises and games as well as certain products that provide a starting point for an idea and facilitate users in generating complementary ideas. In other words, these examples help users in overcoming the anxiety of starting from a blank page. Indeed, we observed that when a contextual starting point is given, engagement becomes more natural and works as an engine or motor for the references in our minds to start constructing and creating.

One popular example that perfectly illustrates this concept is the game Minecraft. Its most distinguishing characteristic is the balance between exploration and freedom, allowing players to set their own goals each time they play. The game provides a contextual world, and it is up to the player to decide what they need from it or what they want to add to it. Furthermore, Minecraft offers a creative mode that serves as a tool for creating compatible and ideal pieces for each environment. This mode not only grants accessibility to the creation process but also offers flexibility for personalization and editing whenever desired.

After deconstructing this successful example, it became easier to identify numerous other domains that embody a similar philosophy with a wide range of applications. One such example is the 'text' tool, which is integrated into various independent apps. It assists users by providing placeholder text known as 'Lorem Ipsum,' demonstrating the visual form of a text box without relying on meaningful content. Another example that stood out during our process is the Google Images tool/option. By simply inputting a word or a sentence (context), it generates images that align with the given starting point. This feature opens the door to endless possibilities, as each image selected leads to Google Images suggesting and displaying more similar or related images.

curious.me

Vanessa SIGG & Yannick HOFFMEISTER (HfG)

How to get the user out of their "bubble" and arouse their curiosity?

Why is this tool for?

Curious.me is a mobile app designed to arouse and encourage curiosity, a quality that is often lost by daily stress, lack of time, and various other factors. The impact of the COVID-19 pandemic further exacerbates this issue as many people miss out on the exchange with others while working from home, resulting in a lack of new impressions and inspiration. curious.me offers the user a wealth of articles on interesting topics and the opportunity to delve deeper into the topics. Value is placed on getting the user out of his "bubble" and offering him topics that he has hardly or not at all dealt with before. This ensures new stimuli and areas of interest, and thus the chance to arouse curiosity.

Who is this tool for?

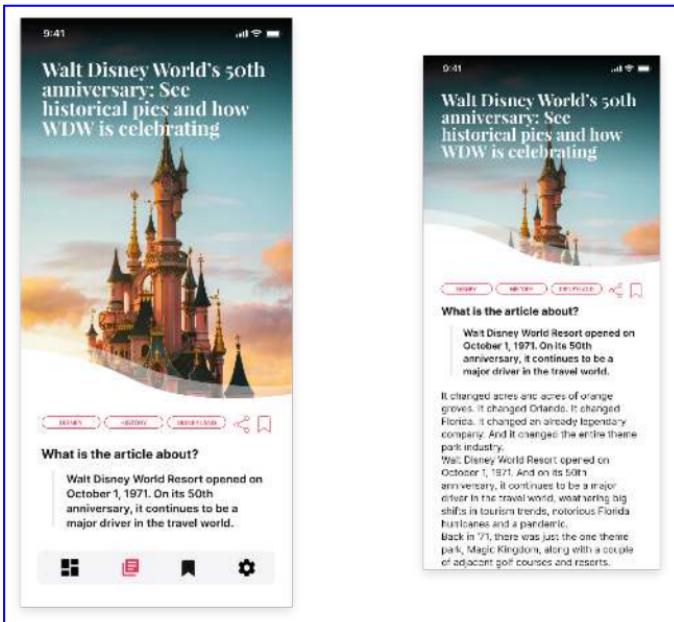
curious.me is primarily intended to help creative people and people working in creative areas to get new impressions and inspiration for future projects. However, since curiosity can be aroused in everyone and the range of topics is very wide, the app is also suitable for the general public.

How does it work?

Curious.me encourages curiosity by presenting users with solvable tasks. When users find a topic or solution that interests them, they can satisfy their curiosity and delve into the associated subject. Statistics also give insights into the topics that users have dealt with the most, offering a glimpse into their own interests.curious.me features:

- **Articles:** curious.me offers a variety of articles to browse through at will. A brief introduction to the topic, tags, a headline and attractive images convey the first impression of the article on offer. If int-

erested, the article can be read in its entirety and further articles related to the overarching topic can be read via endless scrolling.



Example of an article proposed by the *curious.me* mobile app

- **Tasks:** When you open curious.me for the first time each day, you are greeted with a question or task designed to pique your curiosity about a specific topic. These may include estimation questions or other engaging tasks aimed at generating interest in the subject matter. After answering the question, you are presented with the corresponding article for reading. However, if you prefer, you also have the option to skip the article and proceed to the normal article view.

The image displays two side-by-side screenshots of the Curious.me mobile application. Both screens feature a red header bar at the top with rounded corners. Below the header, the main content area has a white background with a light gray shadow on the right side.

Screenshot 1 (Left):

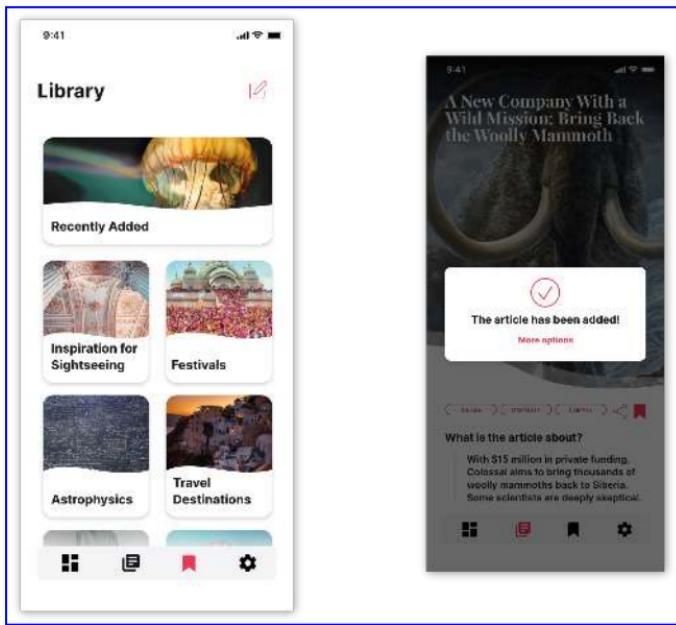
- Welcome back, Mara!**
- It's time for your daily task. So take a guess! When did the last mammoths go extinct?
- 10.000 years ago
 - 3.700 - 4000 years ago
 - 2000 years ago
 - 20.000 years ago
- [Skip for now](#) [Answer](#)

Screenshot 2 (Right):

- Welcome back, Mara!**
- It's time for your daily task. So take a guess! When did the last mammoths go extinct?
- 10.000 years ago
 - 3.700 - 4000 years ago
 - 2000 years ago
 - 20.000 years ago
- That's correct! The last mammoths went extinct around 3.700 - 4.000 years ago. Want to read something about the mammals?
- [Skip for now](#) [Show article](#)

Curious.me propose a task or a question to start the day

- **Library:** If an article is interesting and you would like to be able to look at it again later, or if you don't have time at the moment but are curious about an article, the article can be saved in your personal library. Articles can also be organized by assigning folders to them.



You can read article later in the library section of the app

- **Dashboard:** The dashboard provides information about which topics have aroused the most interest and how diligently you have used the app. The tasks can also be found and called up here. There are also evaluations for these. Another option found here is the ability to submit articles that you think are good and useful.

Dashboard

Welcome back, Mara!

Submit an article

Did you find an interesting article which you want to share with the world?

Add article History

You have read...

38 articles this week 12 more than last week! 25% Were about new topics!

You're on a 33 day streak with your daily tasks - keep it up! ❤️

Day Week Month

Add article History

Submit Article

Add the link

[https://edition.cnn.com/2022/07/18/...](https://edition.cnn.com/2022/07/18/)

What are the first 3 words that come to your mind with this article?

Summary of the article in one sentence

"Encanto" charms with its focus on family dynamics, fantastic traits of diversity and respect for Latino culture, writes our film critic.

Source Name CNN

Source Link <https://edition.cnn.com>

The dashboard section provides information about topics

Mosaic

Lucie WITTMER & Thang NGUYEN (HfG)

Why not be creative together?

Why is this tool for?

MOSAIC is a collaboration tool for artists to work together on creative projects. This is to simplify working remotely in agencies and with other artists around the world and combine multiple workspaces into one.

Isolation Kills Creativity: a lot of artists, especially illustrators, work very isolated and the pandemic has made this issue even more severe. In times like these we are lacking outside influences and inspiration from others.

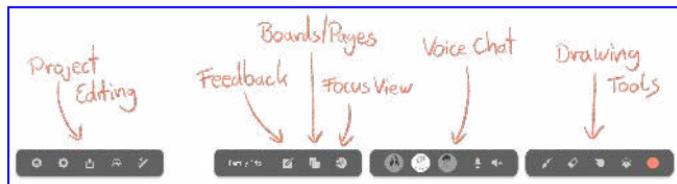
MOSAIC brings community back into remote work and allows for agencies and independent illustrators to create their own illustrations together. In its focus stand communication and collaboration, which make the users feel close to their colleagues, even if they are worlds apart. Working with artists around the world gives the opportunity to explore new art styles and combine them in one artwork. The goal for this tool was also to make interdisciplinary work possible, by including animators or authors into the project.

Who is this tool for?

MOSAIC is made for isolated artists and designer (especially for illustrators).

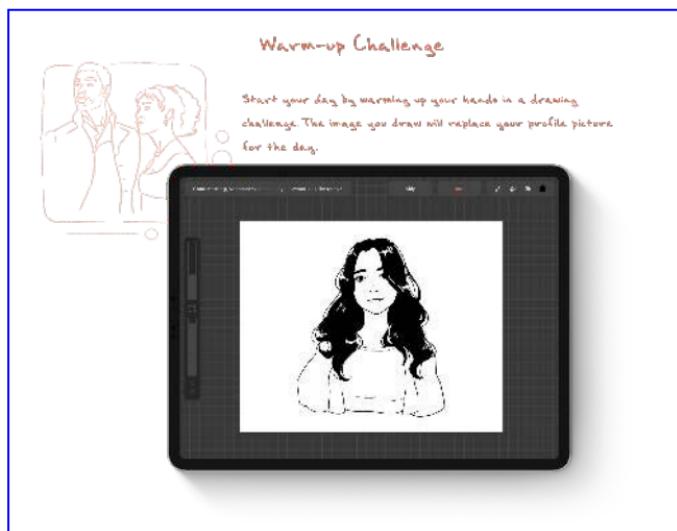
How does it work?

In the drawing tool itself the users will find all the tools they need for creating illustrations:



Menu for the *Mosaic* tools

As well as other special features that allow for easier communication, such as a voice chat or the option to ask your colleagues for advice on an artwork. These collaborative features separate MOSAIC from your ordinary drawing tool like Procreate, Illustrator or Photoshop.



Boards / Pages

You're not only limited to one artboard! Add more pages like a moodboard or reference board to plan your project.



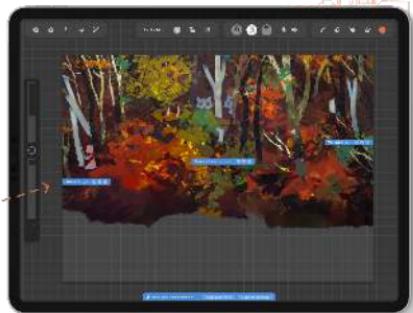
Observation-Mode

You can view your team mates live while drawing, see what tools they are working with and follow their workflow! This can be disabled in the settings for privacy.



Collaboration Changes

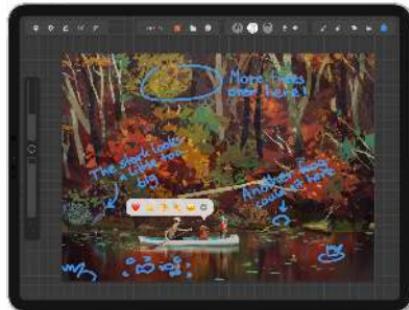
When changes made by your team partners appear in your workspace, these changes will be highlighted and the user can choose which one they want to keep or discard.

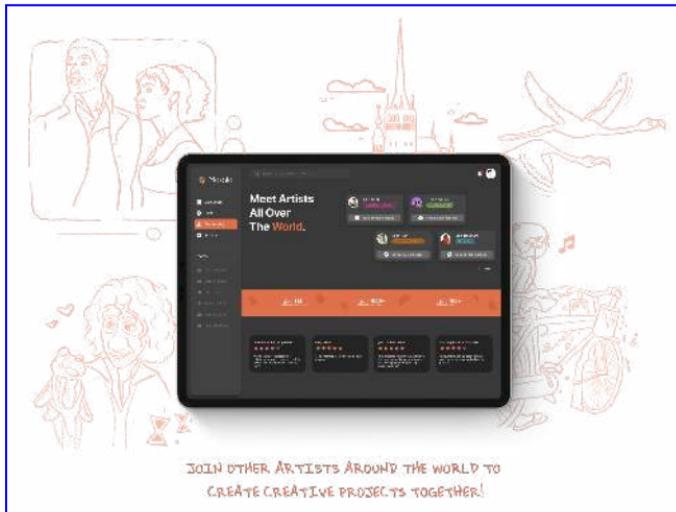


Notes / Feedback

Notes can be left by directly drawing onto the artboard, this allows for a much more visual thinking process.

Quick feedback can also be left through reactions.





Different mockups of the *Mosaic* interface

reflect.it

Bianca TILLMANN & Luis PFLÜGER (HfG)

We don't learn from experience; we learn from reflecting our experiences.

Who is this tool for?

reflect.it is a cross platform tool for reflection at work. You can reflect your work on your own, or in a team. You can also use reflect.it to check in and out of work.

How does it work?

To document your thoughts, you can write down notes for every question. Choosing between multiple categories gives you exactly the questions you want.

To make check ins and outs and retrospectives in a team easier, you can use the reflect.it zoom plugin. By discussing the questions together, team communication can be improved.

Every time you reflect on your own, reflect.it will ask you about your current mood. The data gained from these assessments is then used to show you statistics about your mood history, your average day and your average week. These statistics are useful to analyze how your work makes you feel and to find the specific reasons for especially good or bad moods.

What type of collaboration is it made for?

We aimed to create a tool that every person working in front of a screen can use to reflect their work and create a healthier work environment and better work habits.

How did we came up with this idea?

Reflection is one of the most important skills to have, but it's especially important in the workplace. It can help us understand and improve our own behavior, way of working and skills. While most of us are aware of the importance of reflection, we rarely take the time to ponder our feelings, thoughts and actions and to analyze them.

Illustration protocols with Free Softwares

Adrien DELIMARD, Hélène DEBRAND, Manon PICAT, Mathias HU & Samantha ZANNONI (Esadse)

Short presentation of the project : how did we came up with that idea?

Free culture (social movement, subculture, philosophy) is largely derived from free software, but is much broader and includes other aspects (music, food, movies). It promotes certain beliefs such as the fact that knowledge and learning should be available to all, that no entity should dominate others. It induces a form of horizontality by distributing power among the members of the community. There is an asymmetrical relationship between the engineer who designs, who owns the knowledge, and the user who uses, does not know, and is potentially used. We feel the need to reclaim the tools, to understand them and to regain sovereignty over them.

Why is this tool for?

To research and share software used in the school, interviewing administration, faculty and technicians to gather information, then organizing the collected data accordingly.

How does it work?

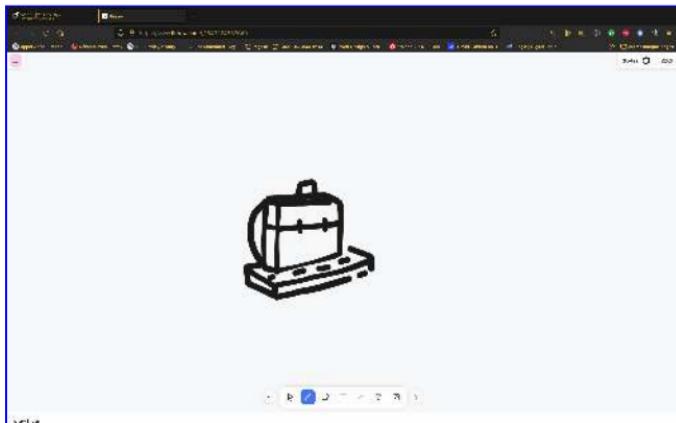
We are conducting an investigation on how the school system integrates digital tools like Adobe. We are particularly interested in understanding how these tools have been "forced" into our studies from the beginning. As part of our research, we will be giving short weekly presentations on the topics we find intriguing. Additionally, we plan to explore collaborative tools and processes to enhance our learning experience together.

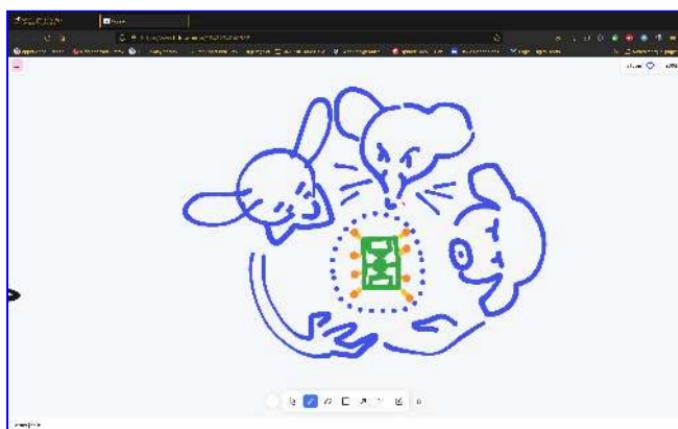
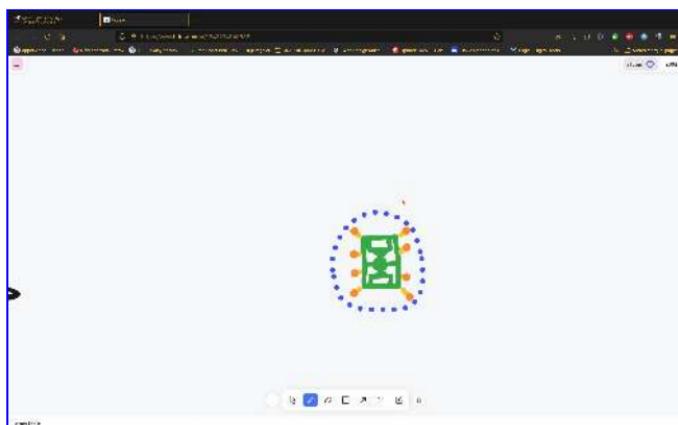
What type of collaboration is it made for?

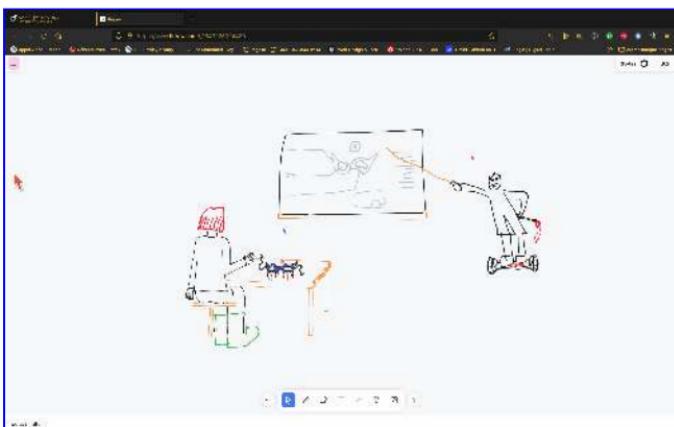
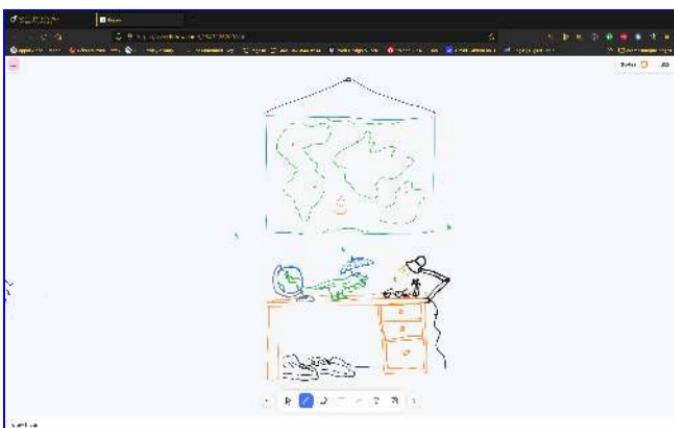
We would like to invite other students or professionals in the field of Arts and Design, in which we evolve, who use standardized software, to take a step back, to ask themselves questions, to look beyond their interfaces, to be aware of what they are using to become full actors of their digital creation experiences. Autonomous and independent professionals, an ideal that, like any utopia, cannot be fully realized.

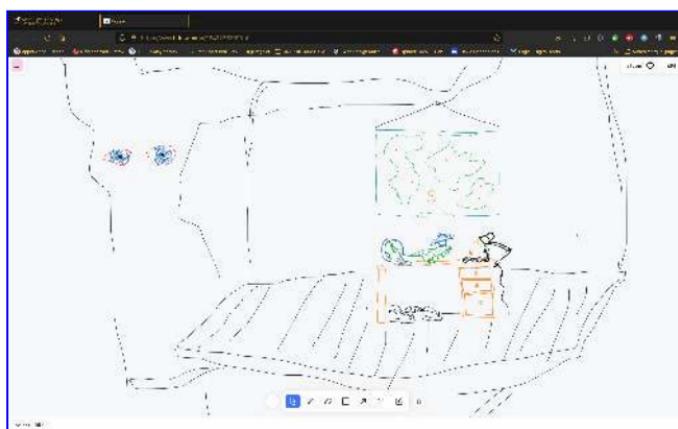
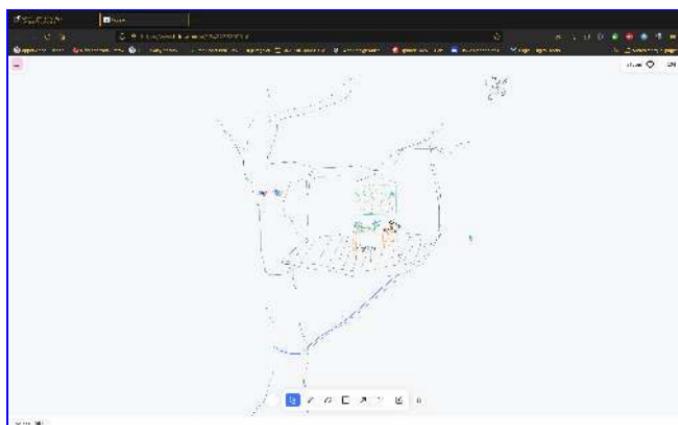
How did we came up with this idea?

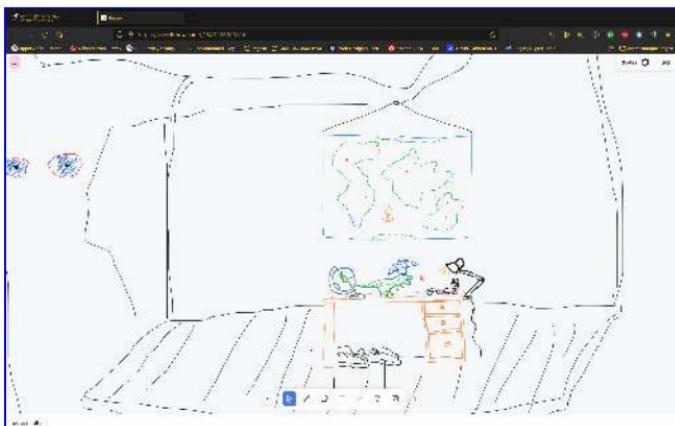
Questioning changing priorities: While companies are often expected to avoid mistakes, it is worth noting that some of the most surprising achievements can arise from those very mistakes.











Screenshot of multiple experiences with collaborative drawing app from free software community

Collective digital illustration protocols

Wave of specialists

Participants in the project will each choose a digital drawing tool of their choice. They will also choose and/or design one or more digital formats to experiment with during the drawing process. Participants must agree on the number of colors or shades of gray that can be used and the choice of the background color.

The participants divide up the roles in the following order:

- The 'contour designer(s)': One or more individuals draw several imprecise shapes for the figure drawer(s) to refine.
- The 'figure drawer(s)': One or more individuals transform the shapes into figures.
- The 'shade and contrast designer(s)': One or more individuals handle colors and contrasts.
- The 'detail designer(s)': One or more individuals add graphic details such as patterns, textures, gradients, etc.

The participants agree on the export and the final format of the composition. It is possible to double the roles by assigning the decoration to one group and the characters to another.

Rumor of a sentence

- Each participant uses the digital medium of their choice to draw.
- Participants decide together the order in which they will draw.
- One of the participants opens a book to any page and reads the first sentence they find.
- From this sentence, the first participant will draw a picture for 5 minutes.
- The first participant sends their drawing to the second participant, who will reproduce or modify it loyal to original in 5 minutes on their format before sending it to the next participant, so on until the last participant.

- Participants design a composition by combining their drawing, the signatures of each participant and the original sentence using an online sharing tool or by designating a member of the group to share their screen and manipulate the elements.

Talking drawing

Participants choose whether or not to time themselves. Participants form groups of four. The roles to be distributed are the draftsman, the colorist, the graphic designer and the writer. Together, they choose a medium and a format and take turns. The order is determined by the team.

- The designer draws the elements of the composition.
- The colorist takes care of the color and textures.
- The graphic designer prepares a text area.
- The writer chooses one or more typefaces and writes a text related to the image.

The groups present their work to the others and choose to put them together or a way to present them that distinguishes them. It would be interesting to reverse the order and see the effect. It is possible to combine the tasks and form groups of two.

Cycles

One participant performs a trace. Another participant performs another one, close to the first one. The operation is repeated until all participants feel that the traces form a satisfactory and well-structured composition. Variation(s): Participants can choose to move or distort elements rather than draw. The protocol can be performed without using speech.

Chewable Fictions

Participants determine a running order by drawing lots, alphabetical order, "plopping" or any other possible technique.

The first participant represents a scene including a setting, a character and an action. Following the direction of play, the next participant repr-

esents the next scene. The protocol ends when a participant concludes the story. The participants give a title to this story.

Mise en abyme

Participants determine the order of passage using various techniques like drawing lots, alphabetical order, using a counting-out game or other methods. All participants choose a common area and zoom in to the maximum. The first participant begins by drawing within the zoomed-in area. The second participant then zooms out slightly and incorporates the first participant's drawing into their own.

This process continues as each subsequent participant zooms out slightly and adds their contribution, including the previous realizations. The action repeats until the zoom out is exhausted. As a variation, participants can try completing the activity within a specified time limit.

I write a drawing

Participants take turns writing a sentence on the page. The sentences do not necessarily have to be logical. Each participant deconstructs the sentence of the previous participant in order to compose an illustration.

The participants give one or more titles to the final compositions. Alternatives: It is possible to allow the distortion of lines, the creation of new drawings after their destructuring or to limit the time.

One sentence less, one drawing more.

Graphic Jam

Hugo SAKSIK (Esadse)

How to transcribe the communication experience of local multiplayer video games into a graphic design context?





Set up for the Graphic Jam experimental app for collaborative graphic design

Why is this tool for?

While contemporary digital collaboration design often focuses on remote communication, Graphic Jam proposes to transform the computer back into a machine which physically brings people together. It

transcribes the communication experience of local multiplayer video games into a graphic design context.

I envision a few use cases for this tool:

- **A jam tool for graphic designers:** As the entire process of creating a graphic is a very "hands-on" approach, interesting results can be created quite quickly. It can be used as a kind of warm up tool for fueling new ideas in an informal and fun setting.
- **An installation displayed in an exhibition context:** The way of generating graphics and posters with the tool is a straight-forward process and is a nice for giving a public insight into a graphic design process and the effects of experimenting with shapes, colors, fonts, images, superpositions...

Who is this tool for?

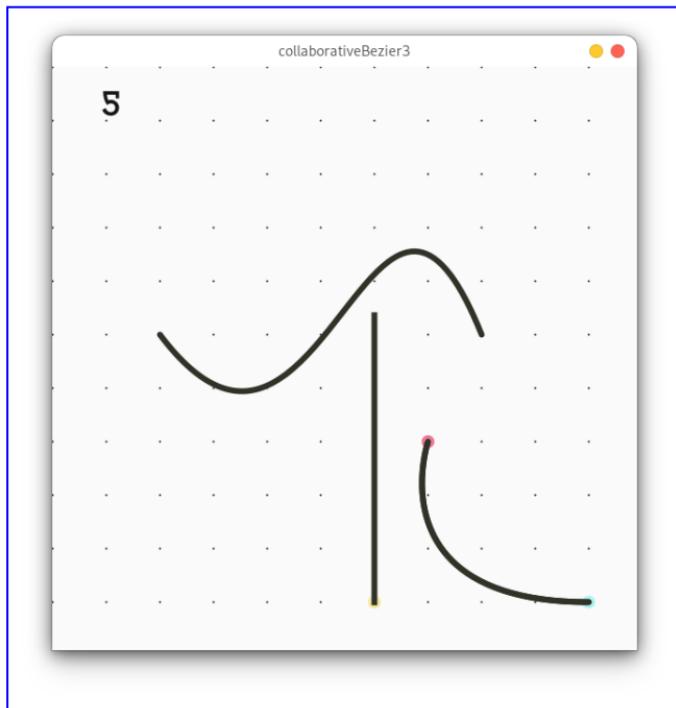
Graphic Jam is both made for graphic designers (experts) and for the public (non-experts) to learn the basis of graphic design process through experimentation.

How does it work?

Developed with Processing, the graphic generator features a vector editor based on bezier curves, a bitmap editor and a font editor. This software must be simultaneously operated by two people using gamepads, as the graphic functions require cooperation and communication in order to unleash their full potential. The tactile approach leads to an instinctive workflow as well as happy accidents and therefore, interesting visuals results emerge swiftly straight from the first jam.

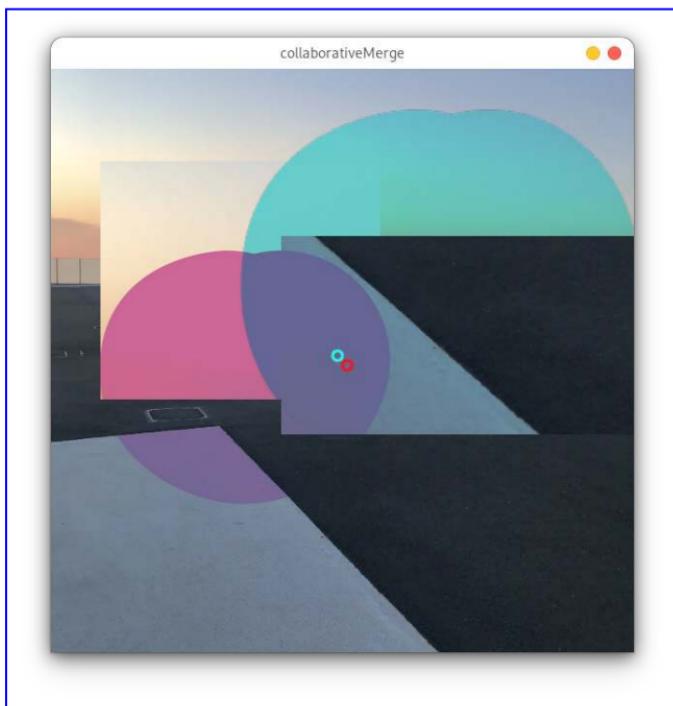
Shape editor: The first "tool" or experiment that I developed is a shape editor based on bezier curves. The nature of the design of traditional computer input peripherals, such as keyboards, is to be used by one individual. Even if we manage to squeeze in front of the computer in order to use one keyboard simultaneously, we certainly can't do the same thing for only one mouse. As a result, it was an evident choice to me to apply a gamepad as a means to control my tool. Several can be plugged in at the same time on a computer, and they allow a variety of input values, which are useful for moving items on a screen. Conseq-

uently, I used two gamepads for the conception of this tool. Concerning the bezier editor, one joystick of each controller is mapped to control the anchor point of a bezier curve, whereas the second joystick controls the magnet point of the curve. Then, a timer of ten seconds sets off and is repeated in a loop: each time the timer reaches 0, the curve that is currently being edited stays in place, "printed" on our canvas, and a new curve controlled by the users appears. The idea for introducing a timer system was inspired by the video game **WarioWare**, and aims at enhancing verbal communication between the users, which proves to be necessary in a fast-paced drawing context. It is also intended as an experiment investigating how this time and drawing constraint can potentially produce interesting shapes, similar to applications demonstrated here **Constraint Systems**. The minimalist grid-based aesthetic was inspired by the image processing tool **Ronin**.



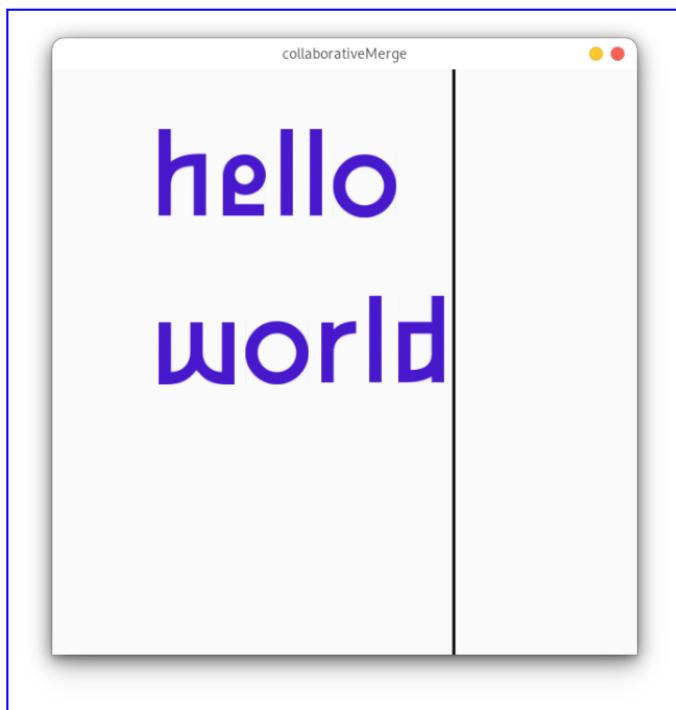
Screenshot of the Shape editor

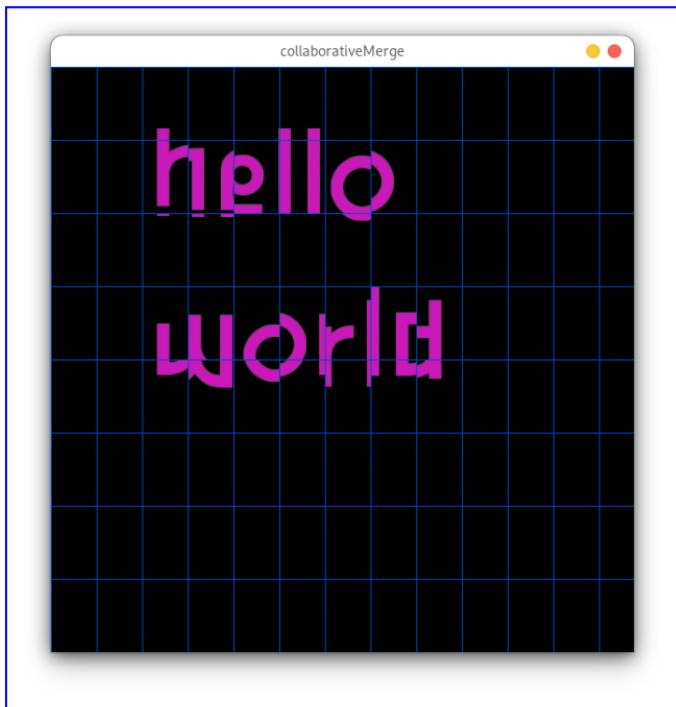
Bitmap editor: Further pursuing these synchronous local experiments, I created a simple bitmap editor. It allows copying and pasting specific parts of a picture. Each user can control a cursor on the canvas, defining an area which can then be copied with the triggers, moved around, resized, and pasted. After conceiving these two tools, it was necessary to assemble and place them into a fitting framework. Once merged, shapes drawn with bezier curves can be pasted on images with two blending modes. I realized throughout the project that I found the aspect of being able to generate quick visuals and posters to be even more interesting than creating independent graphic tools, which is why I decided to lose the timer after all. However, I added a button to "print" the curves more freely. Additionally, I added further parameters for altering the curves, such as the stroke cap shape, the width, color and saturation of the curve.



Screenshot of the Bitmap editor

Font editor: The final tool I added to my poster generator was a font editor. It has two modes: a writing mode, allowing to input text, and a deformation mode. The deformation mode works by cutting the text in small parts and rearranging them on a grid. Users can then modify the size of the grid, the type and strength of the deformation, switch between different fonts, and duplicate a non-deformed layer of the text. By quickly switching though and playing with the parameters, variations on the base font can be generated. Alternatively, a nonreadable texture may be generated which can be blended in the bitmap mode.









Screenshots of the Font editor

What type of collaboration is it made for?

Local mode real-time collaboration.

How did I came up with this idea?

The origin of this project is the observation that nowadays, most of the digital design propositions for collaboration focus on remote collaboration. This is true for productivity softwares, but also in the field of videogames. Most games propose many features in an online multi-player context, but often no local mode. However, I have some very fond memories of playing video games with friends on a video game device. During these occasions, a special connection is built between players, as they act together on the gaming device and turning the computer into a social machine that brings people together. The project I have

been working on aims at bringing these special moments back into our contemporary relationship with computers, and in this case within the context of graphic design processes.

Conclusion of this step

The post-workshop ideas quickly evolved into more concrete projects, sometimes very specific, as devices, plugins, applications, or more experimental proposals. It is interesting to notice that each of them integrated the specificities of our pedagogical programs both into their proposals and by the way they were presented. It was also a way to introduce ourselves through projects. This important step in the project allowed us to build the foundations of a sustained and solid collaboration, a common ground, to pursue our work.

We had underestimated the importance of a longer preparation in situ, with people and without communication apps but the pandemic was still there, and we did as we were allowed to under the circumstances. Yet, we anticipated quite well the necessity to document everything, to produce a lot of texts and images that would allow us later to come back on the multiple evolutions of our work together and to learn from it.

Being critical about the digital tools we use: a cross-disciplinary issue

From the beginning of the project, we knew that it was necessary to have a theoretical perspective from researchers and practitioners involved in the subjects that will occupy us for two years. The lecturers we invited in Esadse to give conferences in the framework of DTCC, were chosen to give students aside perspectives on the subject of tools for collaboration, in and out of the creative field. As inter-disciplinary projects are more and more common whether in schools or in the professional world, we thought it would be interesting to question the digital tools others are using for collaboration. We also chose all these lecturers for their critical approach on tools and the numerous issues raised by digital technologies, in line with our pedagogy.

We first invited Vincent Hugoo, to enlighten us on the survey, from a sociological perspective, to understand how we could borrow some methodological tools to enrich our preliminary explorations.

The work of Tallulah Frappier imposed itself by questioning the governance and the political dimension of exchange as a democratic act on web platforms.

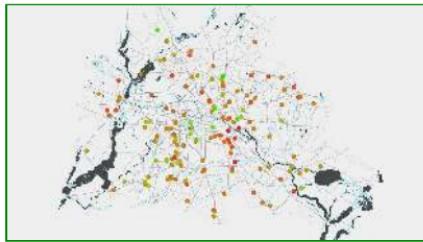
In the continuity, we invited Angie Gaudion, who represents Framasoft, an association famous for its involvement in the production and distribution of free software.

We set aside the practice in interaction design, to focus on different perspectives, and to finish this theoretical cycle, we chose to invite Sarah Garcin, an important creator of the French scene in the field of graphic design and digital practices.

Vincent Hugoo: The Sociological Survey

14 December 2021, Esadse

Vincent Hugoo is a doctoral student at the European Center for Sociology and Political Science (CESSP, EHESS/Paris 1). His research focuses on the relational processes that surround daily life --- sociability, interactions, socialization ---, considered from the angle of class and gender, and on the development and role of the French school system in foreign countries.



Cartography

This lecture focused on the method of inquiry in the humanities and social sciences, as a scientific approach to the social world. It explained the principle of inquiry and gave an overview of the different techniques -- observations, interviews, questionnaires, work on secondary data -- as they fulfill distinct objectives.

[Link to the event's page](#) [Link to the video caption](#)

Tallulah Frappier: Designing the debate

17 March 2022, Esadse

Tallulah Frappier is a PhD student in Design and Political Science at the University of Paris 1 Panthéon Sorbonne and works on the design of digital deliberation platforms.



European Parliament, Strasbourg, France © Frederic Köberl

Debate plays a major role in many theories of democracy: it is the basis of all legitimate decisions. As an oratory practice and an exchange of ideas between several people, one might think that debate depends only on the individuals who lead it. However, from the agora to the internet forum, the debate is regularly accompanied by materialities and procedures that concretize the explicit and implicit rules that structure it. It becomes a propitious subject for the designer's reflection who is able to ask himself how these objects linked to the debate reveal and condition it.

[Link to the event's page](#) [Link to the video caption](#)

Angie Gaudion (Framasoft): How do free software contribute to the emancipation of users?

30 March 2022, Esadse

Angie Gaudion is in charge of public relations for the Framasoft association and coordinator of the Collective of Alternative Hosting infrastructures (CHATONS). She regularly leads conferences and workshops around digital and cultural commons.



a selection of Free softwares logotypes

Faced with the monopolies of the digital giants (GAFAM, NATU, BATX, etc.) that generate huge profits on the processing and sale of our personal data, it is becoming urgent to gradually regain control of our digital life. With the Framasoft association, understand why free software and services are essential in a process of digital emancipation and discover ethical, decentralized, solidarity-based alternatives that are more respectful of your privacy.

[Link to the event's page](#)

Sarah Garcin: Long distance relationship (or not)

8 November 2022, Esadse

Sarah Garcin does interaction design, programs softwares, cooks, draws and broadcasts. She is interested in collaborative writing, sharing knowledge, pedagogy, alternative publishing systems, free software, wild picking, direct and multi-streaming, and superposition.



backing.js

Over the past twenty years, advancements in technology have made remote work easily accessible. Writing texts, discussing ideas, and collaborating on projects with multiple individuals remotely has become a common practice. It is now routine to work with colleagues, clients, service providers, friends, and collaborators, even without ever meeting them in person. While this conference acknowledges the well-known phenomenon of remote collaboration, its focus is on introducing experimental tools that enable collaboration in the same physical space and in real-time.

Encounter between Different Approaches to Digital Art and Design Pedagogies

As stated before, despite being in the same disciplinary field, we have noticed significant variations in our conceptions of design and working methodologies. Additionally, our pedagogical approaches differ, as evident from the feedback received during the first workshop and student discussions

We thought it was essential as we contemplated proposing a shared vision of digital pedagogy, to assemble the following three texts. Our intention was to provide an opportunity for every school representative to express their perspectives, facilitating a deeper understanding of our differences, which have played a crucial role in this project. Additionally, we aimed to emphasize the aspects that unite us.

When collaborating on a project centered around the research object of collaboration itself, our collective collaboration becomes a case study. It is crucial not to overlook the differences of opinion and the tensions they generate. Instead, we must utilize them to comprehend the complexities inherent in collaborations that transcend individual perspectives. Throughout our journey, we have consistently observed that we were looking in different directions. This, perhaps, is the strength of our project---it explores divergent viewpoints that coexist within the design world but rarely intersect.

In addition to the three actors involved in this reflection on teaching digital art and design practices (ESADSE, EKA, and HfG), ESADSE took the initiative to organize openschool.art meetings to foster a broader discussion at the national level in France. These meetings, held on the 10th and 11th of May 2022, brought together approximately thirty teachers and students from various art and design schools across the country at ESADSE. Building upon this momentum, we envision cultivating ongoing dialogue and exchanges by establishing an annual meeting, initially at the local level and eventually expanding to a European scale. The second edition of open-school.art was successfully held at ENSAD Paris in March 2023.

The Pedagogical Approach of the IxD Program in EKA, Tallinn

The Interaction Design (IxD) program at the Estonian Academy of the Arts (EKA) is designed to provide a holistic and hands-on approach to designing relationships between humans, technology, = and environment. The IxD program at EKA focuses on designing for humans, developing the right attitude, and creating a positive impact on the planet. The program is structured to provide students with the skills and mindset to become problem-solving innovators who can shape the future through their designs. Furthermore, the program is designed to equip students with the necessary skills, knowledge, and experience to become experts in the interaction design field.

Each year, we select twelve people to study at IxDma. The international program provides an opportunity for students to obtain a master's degree in interaction design without prior design-related education or experience. Instead, the program welcomes professionals from various fields who are interested in pursuing a career in interaction design. The program's emphasis on diversity is crucial in creating a dynamic and vibrant learning environment where students can learn from each other's unique perspectives and experiences. The program recognizes that interaction design can benefit from a range of perspectives and insights, and therefore values a diverse selection of students.

The study curriculum spans four semesters, with a total duration of two years. The breakdown of the curriculum is as follows: - The first semester focuses on building empathy, a core skill for designers. Students are taught to understand human behavior, values, and attitudes while learning to conduct user research and identify design opportunities. Subjects taught during this semester include Introduction to Interaction Design, Service Design, Visual Interaction Design, Design Storytelling, and Design Anthropology. - The second semester focuses on interactions with technology. Students are taught to build and develop ideas by making them tangible and actionable. They learn to prototype, test, and iterate their designs. Subjects covered include Tangible-

le Interactions, Design for Digital Innovation, Emotional Design, Practical Business Design, Digital Portfolio Development, and Design in the Changing World. - The third semester centers around reflection and forward-thinking. Students are taught to consider the broader impact of their designs beyond human needs, and to adopt a critical mindset in their design projects. Subjects taught during this semester include Design for Social Innovation, Design for Emerging Themes, Immersive Experiences, Facilitation, Speculative Design, and Psychology for Designers. - The focus of fourth semester is to refine and develop expertise in the student's chosen area of specialization. Students are asked to prove their maturity as a professional and to enhance their portfolios. Subjects covered during this semester include Degree Project, Doing Research in Design, TASE Exhibition (a showcase of the degree projects alongside other departments' works at EKA's annual end-of-year exhibition).

The program's focus on sustainable, accessible, inclusive, and conscious products, services, and experiences that reflects the current trends in the design world. Many companies and organizations are now prioritizing these factors in their design processes, recognizing the need to create products and services that meet the needs of a diverse and conscious user base. The curriculum supports students to understand human behavior, values, and attitudes. By focusing on the human-centered approach, students are taught to build empathy, conduct user research, and develop their understanding of human needs. Students learn to adapt to the constantly evolving world while focusing on humans, technology, and environment.

The IxD program at EKA recognizes that the designer's job description is constantly evolving. Therefore, it focuses on developing the core attributes of a designer, including the right mindset, skillset, and toolset. A designer's personality is critical in shaping their approach to problem-solving. Therefore, the program encourages students to be curious, experimental, and open to failure. They learn to be critical, creative, and meticulous in their designs. The program also instills values of humility, care, and responsibility towards the planet and its inhabitants.

Human-centered design is no longer enough. The IxD program at EKA recognizes that to create a positive future, we must look beyond human needs when designing relationships between humans and technology. The program encourages students to consider the impact of their designs on the planet and its inhabitants. Interaction designers have the power to shape human perception, values, and behaviors. The program emphasizes the need to create designs that have a positive impact on the planet.

The IxD program at EKA is experiential and studio based. Students develop their designer intuition, experience, and portfolio through constant iteration, guided by passionate mentors who bring their experience to guide students through challenging projects. The program is structured around four semesters, each focusing on a different aspect of interaction design.

IxDma is a well-established program that has been providing students with high-quality education and training in interaction design for several years. Over the years, the program has undergone continuous development, with feedback from students and reflections from mentors, making it more innovative and responsive to the changing needs of the industry. The program is committed to providing students with the skills and knowledge they need to succeed in the field of interaction design. To achieve this, the program employs a variety of teaching methods that focus on real-world experience and collaboration with professionals in the industry.

One of the unique features of IxDma is its use of external mentors from a wide range of industries. These mentors are experts in their respective fields and provide valuable insights into the current trends and practices in the world of interaction design. The program believes that mentorship is a critical aspect of education, and by having external mentors, students can gain a broader perspective on the industry and its challenges. In addition to external mentors, IxDma partners with renowned companies to provide real-life work experience for students. The program engages with these companies and makes them clients for every project, enabling students to work with actual companies and

experience a real-life working environment. This approach not only provides students with practical experience but also helps them develop their skills on how to collaborate with others in a professional setting.

Moreover, IxDma believes that education should be innovative and respond to the latest trends and values in the world of interaction design. The program constantly updates its curriculum to keep up with the latest developments in the design world, ensuring that students have access to the most relevant and up-to-date information. IxDma is a comprehensive program that provides students with a well-rounded education in interaction design. With its focus on collaboration, real-world experience, and innovation, the program prepares students to succeed in a rapidly evolving industry.

Jekaterina Suharenko & Tanel Karp

Design Pedagogy in HfG, Schwäbisch-Gmünd

"Education is the passport to the future, for tomorrow belongs to those who prepare for it today." (Malcolm X, 1964)

Brief History

The roots of the university go back to 1776 when the first predecessor institution, a drawing school, was founded. In 1860, it was transformed into a royal college for the then important precious metal industry in Schwäbisch Gmünd. The influences of the Bauhaus and the Ulm School of Design (Hochschule für Gestaltung Ulm) are formative both in structure and orientation for the general teaching approach at the Schwäbisch Gmünd School of Design.

In 1972, the "University of Applied Sciences for Design" (Fachhochschule für Gestaltung), today known as the School of Design (Hochschule für Gestaltung, or HfG), was established. Prof. Karl Dittert, as the founding rector, aligned both the name and the educational concept of the institution, which had previously been artistically oriented, with the design principles of the Ulm School of Design. In 2004, bachelor and master programs were introduced as part of the European Bologna Process, which also resulted in the transformation of the elective option "Media Design" in the visual communication program into the BA program "Interaction Design" in 2007. This was the first program of its kind in Germany. The emphasis on technological developments also led to the establishment of the fourth BA Program "Internet of Things -- Design of Networked Systems," which has now been renamed "Digital Product Development" since 2014.

Today, the university has around 750 students enrolled in five design programs located on a relatively small campus with five locations. The most notable location is the historical art nouveau building from 1909, which previously housed the royal drawing school. The university is the

smallest in the federal state of Baden-Württemberg and exclusively offers design study programs. It admits approximately 230 students each year into its bachelor programs. These programs are primarily project-oriented and taught in small student groups of around 15 to 20 students per course.

Bauhaus, Ulm School of Design

The dynamism and creative power of HfG stem from maintaining a delicate balance between current scientific, social, and economic developments and the continuous tradition that underlies the university. This tradition is deeply influenced by the teaching methodologies of the Bauhaus and, in particular, the Ulm School of Design. The founders of the Bauhaus responded to a profound societal and cultural change brought about by industrialization, which transformed everyday lives on an unprecedented scale. They believed that in the pursuit of productivity, we had lost touch with art, humanity, and nature. The Bauhaus sought to rectify this by translating mere objects into artistic creations that fostered more human connections. They emphasized the interconnectedness of form and function, teaching that both aspects are integral to design.

After the atrocities of World War II, the founders of the Ulm School of Design (HfG Ulm) strongly believed that design, as a rational approach to problem-solving rather than solely artistic expression, was necessary to address the humanitarian, political, and factual devastations caused by the war. They recognized that design could have a positive impact on society. The Ulm School of Design, along with the Bauhaus, played a pivotal role in transferring methodologies from the sciences to design, introducing system thinking and emphasizing sustainability. Ulm represented a paradigm shift for design in Europe. Both institutions, especially Ulm, continue to influence the direction of design education in Schwäbisch Gmünd and reflect HfG's steadfast belief in the transformative power of education and the importance of preparing students for future challenges.

A century after the Bauhaus, industrialization has given way to digitization, profoundly impacting everyday lives. Design has moved beyond tangible objects to encompass intangible elements. It now encompasses not only the physical products we create and use but also their interfaces, logic, social implications, and societal impact. The ecological consequences of mass production remain a pressing concern, and design is now also involved in mass-producing emotions at an unprecedented scale. Design shapes digital experiences that reach millions of people, engaging and eliciting reactions. Manufacturing these experiences has a profound effect on society, offering vast opportunities to empower, connect, motivate, and enlighten. However, like all technologies, it can also have unintended consequences that create harm, isolation, fear, and doubt. Design now extends into behavioral science, as designers have the ability to influence these experiences and, therefore, society and humanity at a large scale.

Design as interconnected discipline

HfG holds a deep-rooted belief that design, as a discipline, encompasses scientific, social, and technical aspects and should actively contribute to shaping cultural, technical, and economic advancements in a responsible and sustainable manner. Unlike many other design schools, HfG intentionally diverges from placing excessive emphasis on artistic or artisanal prerequisites in the teaching of design fundamentals. Instead, all five study programs at HfG prioritize imparting scientific knowledge and fostering rational decision-making skills to justify design choices.

Systematic basic training

One of the defining characteristics of HfG is its intensive and interdisciplinary approach to fundamental training. This comprehensive training establishes the foundation for the following specific curricular

model of the respective design programs, ensuring a consistent quality of design studies. During this phase, students are equipped with a reliable repertoire of methods, develop a sense of formal aesthetics, and learn various techniques. They delve into the principles governing surface and space, light and color, as well as time and movement. This systematic study of design fundamentals prepares students for future design challenges and aims to enhance their problem-solving competence.

The teaching concept at HfG is designed holistically, incorporating a combination of coherent teaching programs, self-determined learning, practical relevance, international orientation, and collaborations with other institutions and, when appropriate, companies. The aim is to foster curiosity, inquisitiveness, and methodical thinking among students while also strengthening their social and intercultural skills. HfG tries to encourage an open culture of discussion between students and lecturers, creating an atmosphere of intellectual exchange and exploration.

Following the initial three semesters of basic studies, students at HfG have the opportunity to work on projects aligned with their individual interests and passions. In addition to engaging in effective individual case studies, all teaching programs emphasize the development of solution-oriented principles to address identified problems. This approach showcases the model character of the projects and serves as a valuable demonstration for future design tasks.

HfG believes that critical-methodical thinking, theoretical backgrounds, and practical skills are interconnected and essential for the growth and development of well-rounded designers.

Teamwork

HfG places a strong emphasis on group projects rather than personal projects, with a focus on developing solutions through the identification and understanding of problems. The university prioritizes rational

decision-making over artistic exploration, while maintaining a critical stance towards the influence of big tech and big money, striving to strike a balance between the utilization of technology and the ethical implications associated with it.

The pedagogic concept at HfG is rooted in the belief that design has the potential to improve human living conditions, regardless of the scale or scope of projects. This core belief drives the university's commitment to responsible and impactful design practices.

Rationality

HfG recognizes the significance of scientific principles in design. By integrating scientific, social, and technical aspects into the curriculum, HfG adopts a rational and systematic approach to design education. The university acknowledges that design is not solely an artistic endeavor but a discipline that requires a comprehensive understanding of underlying scientific foundations and technological concepts. Through the imparting of scientific knowledge and the promotion of rational decision-making, HfG aims to equip its students with the necessary tools to navigate the complexities of the design landscape.

Method-based critical thinking

The teaching concept at HfG is designed to foster intellectual curiosity, methodical thinking, and interdisciplinary collaboration. Students are encouraged to engage in critical discourse, explore different perspectives, and challenge established norms. The open culture of discussion with lecturers creates an environment that nurtures intellectual growth and encourages students to develop their own design philosophies.

Real-world-projects to address real-world problems

Through project-based learning, students at HfG gain hands-on experience in tackling real-world design challenges. The emphasis on identifying and understanding problems ensures that students develop a deep understanding of user needs and societal contexts. By focusing on solution-oriented design principles, students are empowered to create innovative and meaningful solutions that address the pressing issues of our time.

Interaction Design

One distinctive program at HfG is the discipline of Interaction Design. It positions itself at the intersection of design, psychology, mechanical engineering, and computer science. HfG recognizes that designing exceptional products requires not only a solid understanding of design principles but also the ability to effectively communicate with specialists from mechanical engineering and computer science. Consequently, the Interaction Design program provides students with insights into digital technology and programming, albeit only to the extent necessary for the design process.

The curriculum of the Interaction Design program encompasses a wide range of topics, including software interfaces, machine and device controls, internet applications, information systems, and the utilization of the latest technologies. The program goes beyond the realm of developing mobile apps, as interaction designers are needed wherever new digital technologies emerge. HfG acknowledges that technology alone does not guarantee a successful product. Instead, it emphasizes the importance of innovative ideas and coherent design in creating useful applications that are both easy and enjoyable to use. This user-centric approach is the overarching goal of the Interaction Design program.

Design contributing to society, pro
technology

HfG's approach to education is rooted in its belief in the transformative power of design. The university recognizes the need for responsible and sustainable design practices that contribute positively to society. By instilling a critical stance towards the influence of big tech and big money, HfG encourages students to consider the ethical implications of their design decisions. The university strives to create designers who are conscious of the social, cultural, and environmental impact of their work, working towards bettering human living conditions in various domains.

Marc Guntow

Teaching Digital Art and Design: Some reflections based on the pedagogy developed in ESADSE (Saint-Etienne Higher School of Art and Design)

From the 1980s onwards, adapting to the transformations of Western society, certain French art schools have incorporated the question of digital technology into their teachings. Firstly, through the acquisition of technical equipment, typically dedicated to video and graphic design, and then through the widespread adoption of "computer rooms" which, particularly in the 1990s, allowed for the training of entire classes on specific software while also providing access to the Internet. This was followed by the establishment of "digital hubs" designed to manage the educational computer infrastructure while also providing opportunities for initiations, particularly in the field of electronics. Then, around 2010, certain institutions, inspired by fablabs, were equipped with tools such as 3D printers, laser cutters, and various computer-controlled machines - which are still widely used today - in addition to more "digitally-based" tools such as VR headsets.

The integration of the digital world into art and design schools has been accompanied by exceptional technical instruction, enabling students to achieve mastery of the tools within the unique framework of personalized pedagogy that characterizes art and design education.

However, in retrospect, it becomes evident that the formal and theoretical approach to the digital world has not always been adequately addressed during these decades, creating a significant bias in the education provided by French art schools. This bias involves considering the digital domain solely from a technical perspective, regarding it merely as a tool serving traditional practices without fundamentally questioning the transformative changes it entails. The new means of expression, along with the conceptual, aesthetic, performative, cultural, societal, and political aspects associated with them, have often been neglected, if not hindered or overshadowed by a necessary but limiting technical learning process. This technical focus, while essential, fails to

fully represent the entirety of the challenges presented by digital creation.

However, this criticism should be approached with greater nuance and subtlety. It is known that art schools are shaped by the trends driven by successive management and teaching teams. Digital "moments" have indeed emerged in certain institutions, only to fade away due to changes in direction. The recent initiative Openschool.art (note or reference), which invites "digital" teachers in art schools to share the diversity of their practices during regular meetings, demonstrates that the "digital" domain, while acknowledged and integrated into contemporary practices from a technical standpoint, still needs to prove or reaffirm its legitimacy as a "medium" or "artistic language" despite decades of existence.

ESAD Saint-Étienne is one of the institutions that have succeeded in consistently integrating a digital "mindset," which has evolved over time but remains persistent. The recent establishment of the "Digital Creation" program highlights the distinctiveness of digital expression, setting it apart from more traditional conceptual approaches in design and art. The objective is to educate creators who go beyond being mere users of tools and become conscious actors aware of the possibilities offered by digital technology, while also taking into account the societal and environmental implications inherent in such productions.

However, this essential objective, once stated, does not provide a singular path to follow. The paths to achieve this goal are numerous and marked by numerous questions. During the first session of the Open-school.art meetings, we compiled a list of questions to fuel discussions. Without reproducing them in their entirety here, these lines of inquiry form a problematic foundation that remains relevant at the time of writing this text. The fundamental questions can be summarized as follows: Are there specific elements inherent to digital creation? Does declaring oneself as a "digital artist" or "digital designer" hold any significance?

And if we develop it further:

What are the "best practices" in digital technology that should be taught to art and design students? Is there an essential digital cultural background to transmit? Does teaching digital design go hand in hand with teaching specific tools? Does using software or digital production tools (such as laser cutting or 3D printing) in a project make it a digital project? Can original and creative work be created using proprietary software? Is peer learning the most effective method for mastering digital tools? Can digital creation training be devolved to tutorials?

Amidst this array of questions, we can identify inquiries related to the transmission of knowledge (practical, cultural, methodological), the relevance of learning tools, and the renewal of pedagogical techniques. Without aiming to provide definitive answers in the following lines, we will simply attempt to shed light on certain points based on acquired experience and current observations. After briefly recalling the specific teaching context at ESADSE, we will clarify the chosen position within the "Digital Creation" program - namely, an approach focused on "creation" - and then emphasize the importance of advocating for a distinct "writing" as a key element of contemporary digital creation.

Context of Digital Education at ESAD Saint-Étienne

Starting from the 1980s, technical courses as well as artistic and theoretical teachings have established a "digital culture" within ESAD Saint-Étienne. As early as 1982, artist Gilles Roussi, later joined by economist Yann Moulier-Boutang, spread the FLOSS (Free/Libre and Open Source Software) culture within the institution, supporting, among other things, the creation of a student association called "Le Garage," which became a pioneering hub for debates and initiatives in the field of "open-source". In 2008, the arrival of designer François Brument within the school sparked a new dynamic around digital design and parametric design, which is still carried by the current team. In 2010, the establishment of the Random() laboratory, which enables the development of experimental digital projects and provides post-master

level opportunities for students, contributed to integrating research aspects into the digital creation challenges of the institution. At a later stage, Random() was associated with the Labo NRV of ENSBA Lyon through a partnership agreement to create the Digital Research Unit in Art and Design of ESADSE-ENSBA Lyon (a research laboratory that we unfortunately don't have enough space to describe in detail here).

In 2014, the introduction of the "Media" department (graphic design and digital) within the Design master's program at ESADSE was another milestone. It was replaced in 2021 by two departments, one of which is titled "Digital Creation" (an autonomous syllabus separated from graphic design with the intention of being open to all forms of practice, including artistic). This transformation clearly demonstrates the the institution's commitment to digital practices as inherent to contemporary art and design.

In terms of the "Digital Creation" department, and the the Random() lab rely on a permanent team capable of addressing technical, methodological, artistic, and theoretical questions. The team includes Damien Bais, François Brument, Jérémie Nuel, Jacques-Daniel Pillon, and Lucile Schrenzel. They are supported by a technician responsible for machine maintenance, Smail Khellouf. The department and the lab have access to the resources of school's digital department as well as their own equipment. The machinery is designed to provide a range of diverse tools, including 3D printing (including ceramic printing), laser cutting, plotters, robotic arms, and more. It also involves interfaces such as electronic prototyping platforms, various sensors, VR headsets, graphic tablets, and exhibition devices such as screens, projectors, and the MireOS software.

The "creation-oriented" approach of the "Digital Creation" department

Approaching the digital world as a space for "creation" is not a principled stance. It is a way to specify, and thus distinguish, an approach to art and/or design creation from fields such as innovation, engineering,

"industrial" design, R&D, and numerous forms of digital-related creativity. Indeed, our position as an art school implies an approach that deviates from the aforementioned logics and instead encourages practices that invite reflection, critique, and experimentation. The skills we provide to our students do not correspond to a specific profession within the digital field, but rather to a different way of approaching it, one that goes beyond the ideological prism often associated with the GAFAM (Google, Apple, Facebook, Amazon, Microsoft). In opposition to this ideology, we offer a thinking and an imaginary that allow us to break free from the solutionist tunnel and ideally lead to unique creations that are positioned with accuracy.

Hereof, one could say that the idea takes precedence over the project. Throughout the design process, it is the idea that guides the project and evolves towards its realization, ultimately leading to the creation of mock-ups, prototypes, or finished works accompanied by their technical solutions. However, it may also result in an incomplete outcome if the design reveals significant problems and deadlocks (technical, ecological, or ethical). Choosing to abandon a project, as long as it is justified, can indeed be the best response to a given issue, especially in the present time, and holds equal pedagogical value to the skills acquired through a "finished" project.

In this sense, the "creation-based" approach clearly questions production through massive automation and standardization, as well as the normalization of creative forms primarily derived from major names of contemporary digital world.

This positioning is therefore based on several guiding principles:

- **Not training for a specific profession in response to market trends, but rather cultivating a profile of an artist and/or designer with expertise in digital approaches to creation.** These young professionals do not simply have a "digital touch" within a more traditional practice; they are expected to navigate fluidly within the ever-changing transformations of the digital world. In this regard, it is more about their understanding of processes, transformations, and potentials rather than simply adhering to a specific technical platform. This approach to digital practice can

ation), considering the fact that the digital landscape at the beginning of a student's first year is vastly different from what they will encounter upon graduation (the current explosion of AI being just one example). This kind of digital creator profile naturally goes hand in hand with the ability to work collaboratively or cooperatively.

- **In certain cases, adopting the position of a "digital artisan" is equal to a design approach that opposes standardized production.** Digital technology, enabled by programming, parametric design, and other tools, makes case-by-case creation possible. The digital artisan exercises control over adaptation and variations within a "computer workshop", utilizing their expertise to make precise adjustments based on specific requirements. This proficiency, in order to go beyond mere virtuosity, is accompanied by conceptual and formal reinvention for each project.
- **Integrating environmental impact into education.** Recycling, reusing, repairing, and considering electronic pollution throughout the production process are subjects that need to be taken into account. Moreover, in a logic of "best practices," digital technology allows us to do less (reducing quantities compared to industrial production), and adapt to specific needs while minimizing the use of physical or "dematerialized" materials. In other words, while digital technology facilitates abundance (of images, diverse products, storage medium, etc.), if used in an economical and thoughtful manner, it can also optimize the limitation of the ecological impact of a project.
- **Encourage students to use FLOSS (Free/Libre and Open Source Software) tools such as Blender and Godot as an alternative is not merely an economic choice.** Unlike proprietary software, these open-source tools are the result of co-designing within the user community. With a certain level of programming proficiency, these tools can even be directly modified. This shows students that software is not something stagnant but it can be adapted and reconfigured according to their needs. This initial step leads to greater autonomy, which can even extend to creating one's own tools. Certainly, this freedom requires learning how to code, but this investment makes the difference between being a user of digital tools and being a digital creator. The goal is not to turn the student into a developer, but to provide them with the necessary tools to gain greater freedom in manipulating digital materials. The "creation-based" approach shifts the current focus of digital technology, allowing for critical

distance and a certain autonomy in practice, which is conducive to the development of original creators. However, this educational framework also aims to enhance the student's ability to develop their own "digital expression" or "digital language."

What does "digital writing" mean?

Since the 1960s and the irruption of computing in the field of art, creators and theorists have identified specific characteristics of the digital world: information discretization/sampling, the ability for repetition with variations (permutations) unlike mechanical reproduction systems, hybridization functions, plasticity leading to "hypermedia," interactivity, generativity, and more. These characteristics highlight the unique qualities of the digital medium and its potential for artistic expression and exploration.

These different elements make the digital medium unique and distinctive. The concept of "digital expression" aims to describe an approach in art or design that specifically utilizes the inherent possibilities of the digital world, as opposed to other practices that use it primarily as productivity tools. Developing a "digital expression" requires an understanding that behind every action performed by a computer, there is code, variables, hardware, and more. It entails adopting a mindset grounded in the flexibility, impermanence, and constraints of the digital medium.

To be able to guide the students along this path, autonomy is emphasized during the learning process. Guided by regular support from teachers, progress is shaped as projects flourish, rather than being dictated by hardware and software updates. By developing the ability to cultivate creative projects that leverage the advantages of digital technology without seeing them as limitations, students acquire more than just technical skills that may become obsolete. Instead, they cultivate an aptitude for seizing opportunities and preparing for the ever-changing landscape of the digital world.

This ability to perceive the focus of a concept or technique within a specific context is also acquired through knowledge of art and design history. This allows for the integration of digital technology into a broader "history of forms" -- one that extends far beyond the major players of the contemporary digital world and mostly representing Western perspectives but also those from other cultural contexts. Without becoming overwhelming, these references allow us to understand why, for instance, virtuality and AI have reached their current state and how these techniques have already been the subject of projects and artworks that have sparked waves of questioning and critique. This knowledge prevents a naive approach and allows for a critical distance from the dazzling promises and technical effects produced by the competition for "innovation," placing creation and its demands at the heart of concerns. This cultural acquisition work, in addition to nurturing sensitivity, is also accompanied by attention to - and even involvement in - societal and political domains.

During the course of their education years at ESADSE, students can encounter and experiment with various classes and workshops, including programming as a tool for artistic research, parametric design, interaction (installation, virtual spaces, video games, etc.), digital fabrication, graphic design, digital publishing and web design, live coding and digital performance, working with data and AI, methodology and workflow for digital projects (including the documentation process), and more. This broad foundation opens up possibilities for diverse digital experiences and, in turn, nourishes an artistic practice that, in addition to its specific characteristics, also seeks to foster the uniqueness of each student. The goal is for students to develop their own digital artistic expression, not conceived as a predetermined formal or conceptual framework, but rather as an extension of contemporary issues to be shared freely.

Conclusion

With "Digital Creation" department and the Digital Research Unit of ESADSE-ENSBA Lyon, ESADSE covers various aspects of digital technology throughout its curriculum, from the first to the eighth year, ranging from introductory to specialized levels and even research-oriented programs. This pedagogical program enables comprehensive training in accordance with the orientations described in this text, namely the "creation-oriented" approach and the assertion of a "digital artistic expression." These two points, as developed here, do not address the entirety of the initial problematic nor encompass all aspects of digital education at our school.

The aim of this text, as understood, is not to present ESADSE as an exemplary model to follow or to impose our approach to various questionings. The intention is rather to testify - without the desire to generalize - to a pedagogical experience that seeks to articulate the field of creative arts with the digital world, addressing its challenges, particularly in a context where producing less - or even not at all, in order to preserve the environment - is a fundamental issue.

Thinking and rethinking the formal and conceptual aspects of digital technology in art and design is a task that can never be completed but remains fascinating to study, share, and transmit.

David-Olivier Lartigaud

openchool.art

Professional meetings, 10-11 May 2022, Esadse



View of the Openschool first edition at Esadse in Saint-étienne

Becoming an artist or a designer in a rapidly evolving digital society requires adaptability and a deep understanding of its dynamics. How can we navigate a world that is strongly influenced by human actions? How do we reinvent or preserve practices and tools that contribute to a brighter future instead of overshadowing it? Maintaining a critical distance while creating at the speed of the digital world is essential. Furthermore, how do we effectively transmit our ideas amidst the constant flux of new stimuli? These fundamental questions resonate with many creative institutions, and openschool.art provides a unique opportunity to address them by bringing together various art schools and universities.

On the 10th and 11th of May 2022, approximately fifty teachers and students from French art and design schools gathered in ESADSE's auditorium to discuss the challenges involved in teaching digital creative practices.

Questions we discussed together:

- Are digital practices in art schools a game changer for the real world?
- Can we teach digital practices without environmental awareness?
- What is the common ground for a shared digital culture? or What are the basis of a common digital culture?
- What are the good digital practices to share with art and design students?
- Should we teach tools AND design? or Does digital design education go hand in hand with teaching tools?
- Can we be a digital artist without knowing computer programming? or Can a digital artist be ignorant of computer programming?
- Is digital art history a needed knowledge for a contemporary artist?
- Does the status "digital artist" make sense? or Is it meaningful to claim to be a "digital artist"?
- Does the status "digital designer" make sense? or Is it meaningful to claim to be a "digital designer"?
- Does digital design involve a particular ethic?
- In our digital society, should computer programming be a skill of the contemporary designer or artist's toolbox?
- Does digital design facilitate inclusive design?
- Should a digital artist or designer be self-reliant for technical knowledge?
- Should a digital designer be able to design algorithms?
- Should hacking be included in digital design education?
- Is integrating digital into a project an ideological act?
- Is peer-to-peer learning the most effective way to master digital tools?
- Can digital design training be delegated (or outsourced) to tutorials?
- Is there a minimal technical base, common to all digital creation?

- Should art and design schools train computer programming artists or equipped creative individuals?
- How does digital transforms drawing and volume teachings?
- Regarding art and design schools, should we value computer programming or should we rather privilege "no code" environments?
- Does using software or digital production tools (laser cutting, 3D printer...) in a work make it be a digital project?
- Can we make digital do-it-yourself practices fit into the pedagogy of art and design schools?
- What position should video games have in art and design education?
- How can we value collaborative and cooperative practices within digital design?
- Are there any specificities related to digital creation?
- What is the position of industry-derived vocabulary inside creative digital practices?
- Is metaverse a place for creation?
- Should we train artists and designers to metaverse?
- Should digital culture and practices be connected to social struggles? Are they naturally linked together?
- As new business models for creation, should NFTs be included in pedagogy within art and design schools?
- Is it possible to be original and creative using proprietary software (Adobe, Microsoft...)?
- Does teaching proprietary software (Adobe, Microsoft...) in creative schools produce creators or consumers?
- Does promoting a specific "digital writing" in art and design make sense?
- Is artificial intelligence a tool to be taught in the creative field?
- Who is the author when a work is created autonomously by an algorithm?

With the involvement for this session 2022 of:

École européenne supérieure d'art de Bretagne, site de Rennes (EESAB Rennes) École européenne supérieure de l'image Angoulême-Poitiers (ÉESI) École nationale supérieure d'arts Paris-Cergy (ENSAPC) École nationale supérieure des Arts Décoratifs (EnsAD Paris) École nationale supérieure des beaux-arts de Lyon (ENSBA Lyon) École nationale supérieure des beaux-arts de Paris (ENSBA Paris) École supérieure d'art d'Aix-en-Provence Félix Ciccolini (ESAAIX) École supérieure d'art et de design d'Orléans (ESAD Orléans) École supérieure d'Art et de Design de Reims (ESAD Reims) École supérieure d'art et de design des Pyrénées (ÉSAD Pyrénées) École supérieure d'art et de design TALM-TOURS (ESAD TALM-TOURS) École supérieure d'art et design de Saint-Étienne (Esadse) École supérieure d'art et de design Le Havre Rouen (ESADHaR) École supérieure d'arts & médias de Caen-Cherbourg (ésam Caen) Haute école des arts du Rhin (HEAR) Université de Nîmes (Unîmes) Université de Strasbourg (Unistra) Université Rennes 2

openschool.art in *Le Monde Sinon Rien* exhibition

Biennale Internationale Design Saint-Etienne 2022

Since our event coincided with BID Saint-Etienne, we had the opportunity to showcase openschool.art as part of the 'Le monde, sinon rien' (The world or nothing) exhibition, which featured projects from students and young researchers representing five French art and design institutions.

The 'Le monde, sinon rien' (The world or nothing) exhibition served as an extensive experimental platform open for public participation. Upon entering the exhibition, visitors encountered a large floor map representing a realm of exploration---the very landscape that art and design school teachers offer their students each year, which they traverse, document, and transform.

Curated by Sophie Pène (lecturer-researcher at the Learning Planet Institute) and Benjamin Grindorge (designer and lecturer at ESADSE), the exhibition dedicated a space to openschool.art, both physically within the exhibition and on the website.



Screenshot of the website *le monde sinon rien*

We decided to showcase the questions that were discussed during the professional meetings, alongside videos that were inspired by those questions and produced by some of the participating schools. Throughout the entire Biennale, videos and displays were continuously added as the ideas and discussions evolved.



View of the openschool corner inside the exhibition *le monde sinon rien*

openschool.art, second edition

20-21 March, ENSAD (Paris)



Group photo during the last OpenSchool

The latest openschool.art session took place in Issy-les-Moulineaux, hosted by ENSAD Paris. It served as an open forum for digital educators from French art schools and universities to engage in discussions on a wide range of issues. During this session, participants focused on four main themes: "The impact of AI on art and schools," "Exploring alternatives to Adobe: common tools for schools and resource sharing," and "Exploring digital tools through collective practice".

One question that remains unanswered is the role of students, which needs to be reconsidered. In this regard, a compelling proposal would be to consolidate the financial resources allocated to the event, allowing for the inclusion of students with diverse profiles and backgrounds. This approach is crucial in ensuring a diverse range of thoughts and practices around the table.

Learning to collaborate with different perspectives

Collaboration is rarely a seamless and effortless process; rather, it requires negotiation and a willingness to learn and work together. Establishing a productive group dynamic and finding common ground that extends beyond mere consensus often demands patience, empathy, effective communication, and open-mindedness. Indeed, collaborating with individuals who hold diverse perspectives can present significant challenges. People from different disciplines, cultures, or backgrounds often bring contrasting approaches, values, and ways of thinking and working to the table. While these differences are valuable for generating new ideas and undertaking ambitious projects, they can also give rise to misunderstandings, conflicts, and communication barriers within a team.

During the first workshop in EKA, our collaboration was definitely not easy since we had very different working methods and expectations. As Ludwig Kannicht aptly remarked after this workshop:

"The first workshop was an incredibly valuable experience, despite the challenges we faced. It was a learning journey, even if we had to overcome some difficulties along the way. Looking back, I realize that we had diverse cultures and understandings of design.

If given the opportunity to repeat the workshop, I would prioritize addressing these differences from the start. Allocating dedicated time for open discussions and understanding each other's perspectives would be crucial. It takes time to bridge the gap when collaborating with individuals from different contexts. Expecting seamless collaboration from day one is unrealistic."

After the initial workshop, we proceeded to the second one held in Esadse, Saint-Étienne in April 2021. For this workshop, we opted for a more flexible approach, where no specific methods or tools were imposed or even suggested. The aim was to provide students with the freedom to experiment and discover their own ways of collaborating, culminating in the creation of a playable game by the end of the week. The students were tasked with familiarizing themselves with one another and leveraging their individual perspectives and skills within small group settings. Additionally, this week-long workshop provided an excellent opportunity to explore the nuances between collaboration, cooperation, contribution, and participation within diverse group dynamics.

During the final DTCC workshop week at HfG, Ludwig led a workshop titled Radical Col-

ation dynamics from a psychological perspective. In this workshop, he encouraged the students examine and analyze some collaborative moments where they encountered obstacles that led to tensions, in order to better understand what happened and learn how to effectively respond and navigate similar challenges in the future.

In this chapter, we will revisit these two workshops, recognizing them as key moments in our collective journey of learning how to collaborate effectively.

We will then feature interviews with students who participated in these workshops, offering valuable insights into their experiences and the lessons they learned within the collaborative context of three European schools. These workshops not only exposed them to alternative approaches to design but also introduced them to different school cultures, methods, and tools that diverged from their usual practices. Furthermore, the workshops prompted a profound self-reflection, encouraging students to question their own practices and attitudes in relation to those of their peers.

Cooperative Games: Play Together, Esadse's workshop, 11-15 April 2021, Saint-Étienne (FR)

In connection with the objectives of the Digital Tools for Creative Collaboration project, the workshop aimed to provide an experiential understanding of the fundamental principles underlying collaborative work. Recognizing the challenges we faced during the initial workshop at EKA, where we struggled to reconcile our diverse design visions and methodologies, we believed that games, as a shared cultural artifact, would serve as a suitable foundation for our exploration.

Subject and goals of the workshop

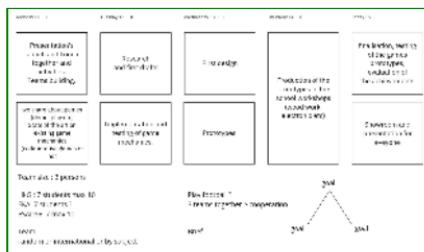
Considering that games (including board games, video games, sports games, etc.) incorporate mechanisms that involve various forms of collaboration, we decided to center the workshop around the concept of collective play. While many games emphasize competition, only a few are centered on collaboration and cooperation, allowing participants to work together towards a shared victory instead of playing against each other.

During the workshop, we introduced two guiding principles:

- Designing games collaboratively in small groups.
- Developing rules that encourage collaboration as a means to achieve success.

Esadse provided resources such as laser cutting, 3D printing, and VR headsets to support the creation of prototypes that could be played on the final day.

Workshop's schedule



The planning of the workshop week in Esadse

As an introduction to the workshop, David-Olivier Lartigaud discussed cooperative games, drawing upon references such as the book "**Rules of Play: Game Design Fundamentals**" by Katie Salen Tekinbaş and Eric Zimmerman (MIT Press, 2003), as well as other sources mentioned in the text.

Conditions for a game to exist

- Every game exists within a defined framework, encompassing a specific time and space, which communicates to players that they are engaged in a game.
- The magic circle, a concept introduced by Johan Huizinga in his book "*Homo Ludens*" (1938), defines the space in which a game unfolds. Unlike informal play, which lacks clear boundaries, games establish a formalized structure that explicitly delineates the magic circle.
- Within the magic circle, the game's rules create a special set of meanings for the players of a game. These meanings guide the play of the game.
- As a system, a game can be considered to have an open or closed relationship to its context. Considered as RULES, a game is closed. Considered as PLAY, a game is both open and closed. Considered as CULTURE, a game is open.

- The lusory attitude refers to the state of mind necessary to engage in gameplay. It entails a collective acceptance of the rules' constraints, driven by the enjoyment and satisfaction that games offer.
- Rules form the fundamental structure of games, defining the parameters and interactions within which players operate.
- Rules limit player action
- Rules are explicit and unambiguous
- Rules are shared by all players
- Rules are fixed
- Rules are binding
- Rules are repeatable

While there are games that challenge and deviate from these characteristics, these traits represent the general attributes of game rules when viewed strictly from a formal perspective.

Games as systems of conflict

- How many players can participate in the game?
- Is the gameplay simultaneous or turn-based?
- Does the game include a high score list?
- Do players receive continuous feedback on their relative scores?
- Does the game provide opportunities for players to compare their scores and game statistics?
- Are there computer-generated opponents and obstacles that players collectively face, or do the players compete against each other?
- Does the game structure allow for direct conflicts between players?
- Are there resources in the game that players can compete for?
- Can players use money to continue playing or enhance their gameplay?

Coopetition or co-opetition (sometimes spelled "coopertition" or "co-opertition") is a neologism coined to describe cooperative competition. Coopetition is a portmanteau of cooperation and competition. Basic principles of co-opetitive structures have been described in game theory (source: "Coopetition," in Wikipedia).

Talk: How to make a collaborative game?

Mathias Hû, an Esadse student, presented his incomplete brand game project: Run-off. The purpose of the presentation was to highlight the issues and difficulties involved in creating a collaborative game. Here are some key points discussed:

- When designing a game for multiple players, it becomes crucial to consider how they interact with each other.
- The most common approach is through **competitive** gameplay, where all players compete against each other to win. This can be seen in games like Street Fighter, Risk (territorial conquest), or Mario Kart (racing for first place).
- Alternatively, players can be grouped into different teams, introducing cooperative relationships within each team. While competition still drives the game, it fosters collaboration. Examples include team sports like basketball, multiplayer games like Overwatch, or brand games like Time's Up.

Finally, if you want to create a game that focuses solely on cooperation without any competitive aspect between players, you need to provide a new motivation for players to engage in the game. Competition is often used because it easily attracts people to play and keeps them engaged. However, there are alternatives to drive cooperative gameplay. Here is an initial list of alternatives for the core concept of cooperative games:

- The desire to **create** something together can be a sufficient motivation. This is evident in certain Minecraft servers or construction games like Lego or Kapla (although the latter two may be more accurately classified as toys with the potential for creating games).

- In other cases, **exploration** serves as a driving force for player engagement. This is observed in narrative, linear, or puzzle games. The collective desire to uncover the next step, part of the story, or environment motivates players to continue together. Examples include games like Broforce or Portal 2 in cooperative mode, as well as many role-playing games.
- **The game itself can serve as the opponent** for a collective team of players. In this case, the game presents challenges that the team must overcome or achieve the most desirable score.

All of these *motors* can be combined and many games use a combination of them.

Run-off



The prototype of the game *Run-Off* by Mathias Hû

Run-off is an incomplete brand game project that initially aimed to create a competitive game but with a twist: adopting a non-cooperative strategy proves to be counterproductive for all players involved. The game begins with individual players pitted against each other, but as the game progresses, teams gradually form, and collective strategies are built. In the game, each player is responsible for managing a floor of tubes in a tower. Rain falls on the top floor and runs off through each subsequent floor until it reaches the ground. On the ground, each player has a vase and must collect as much water as possible. However, without collective coordination, the water is wasted for everyone.

Difficulties and conclusions

The game became too complex and required a high level of spatial projection, which made it challenging to play. Additionally, certain rules within the game system were unbalanced, further hindering its playability. These various aspects ultimately rendered the game unplayable.

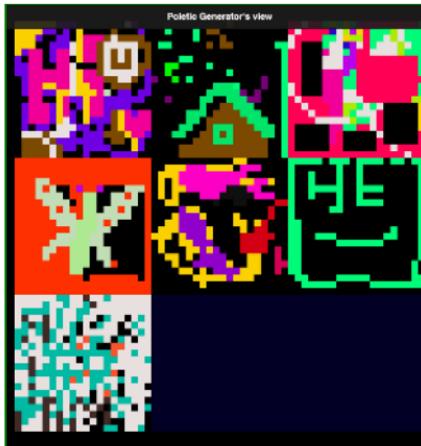
This experience has significantly influenced my approach to game creation. I believe it is crucial to start with a concept that is not overly complex and focus on achieving a balanced and playable situation initially, before adding additional features. Maintaining this balance is delicate, so it is important to extensively test the game with each rule change to ensure its preservation.

The use of metaphors or narratives can be highly beneficial when introducing new rules or features, as they tap into our familiarity with the concepts they represent. This familiarity makes it easier for players to understand and apply these elements. In the case of Run-off, the concept of gravity was utilized, allowing players to grasp the intricate movement of water without the need for extensive explanation, given their existing familiarity with the concept.

Talk: Collective creation(s) based on a contributive model

Samantha Zannoni, a Third Cycle student at Esadse, presented her collective experiment using Olivier Auber's poétique generator. This net artwork was originally designed and programmed in 1987 as a form of free art.

Currently, the artwork has been further developed using Ruby on Rails and JavaScript, allowing anyone to connect to the webpage. Users have access to a set number of pixels and can draw simultaneously within their designated strip. The objective of the artwork is not to determine winners or losers but rather to collaboratively create something

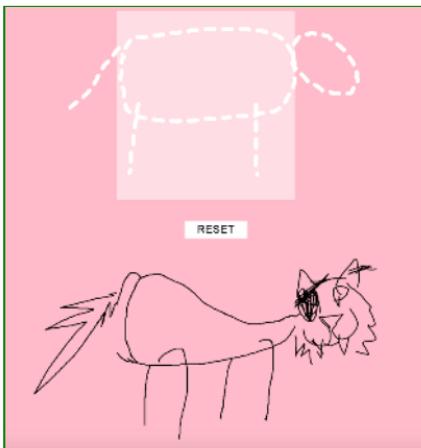


The game *poietic-generator.net* by Olivier Auber

Samantha also introduced various references of collective creations based on a contributive model.

Otherti.me, Raphaël Bastide, 2019

An experiment conducted by the French designer Raphaël Bastide, during the lockdown.



Otherti.me by Raphaël Bastide

L'éventuel, Bonjour Monde, 2019

A contributive typography made by Bonjour Monde, which invites people to contribute to the creation of a new typography.

L'éventuel	
Explanation dans le filtre des formes typographiques 	<small>An Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo Pp Qq Rr Ss Tt Uu Vv Ww Xx Yy Zz</small> Dessiner Documenter
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L'éventuel by Bonjour Monde

Shared references : Video games

In some MMORPGs, such as those with Guild systems, players must join forces and work together to conquer dungeons or defeat powerful enemies, drawing inspiration from tabletop RPGs. Participants engage in discussions, solve puzzles, and coordinate strategies to overcome challenges.

Additionally, many sandbox games offer cooperative or collaborative modes. For example, in GTA, players can team up to carry out bank heists, while Minecraft allows players to collaborate on building projects. However, the gameplay of these games is not exclusively focused on cooperation, as players can also pursue individual activities.

On the other hand, there are games specifically designed to require co-operation in order to complete or win.

Below are a few examples along with brief comments showcasing the significance of collaboration in these games:

It Takes Two / A way out

Two players must cooperate to complete tasks. It is the complementarity and coordination of actions that counts.

Overcooked

Working together to go fast. What is interesting is that everyone redistributes tasks according to the situation in order to be as efficient as possible.

Nvidia omniverse

Not a game but proceeds on the same principle. Everyone collaborates on a specific task to obtain a quick result.

Among Us

In this game, there're tasks to be done with a common goal (just a pretext), but the real goal is to find an imposter. Here's an interesting dis-

uptive element, like a bad collaborator. No synchronization or coordination between actions necessarily. Everyone does their own thing until it is time to discuss for eliminating a player. It's a bit like some TV shows where several people in a loft vote to eliminate a roommate. (In the case of Among US, which is map-based, it is easy to imagine an adaptation in the form of a board or a card game.)

Out of Space

It's a collocation game. You have to maintain a *space station*, avoid dirt, have food, etc.

Keep Talking And Nobody Explodes

Collaboration when the players are not at the same level of information.

Alternate Reality Games (ARG)

ARG has the power to create communities searching together to solve a riddle. The cooperation is active after the start of the game and not before, as in many games. In this case, we can speak more about contribution, which is a very specific type of cooperation.

Heave-Ho

This game is just a lot of fun! It also involves the exploration of a collective movement created by the addition of individual movements.

A Way Out

A videogame created to be played in coop mode only.

Brothers : A Tale of Two Sons

This game offers you the possibility to control two characters with a single controller. Although it is intended to be played by only one person, it can easily be played by two. This creates a new relationship with

the controller as an individual object and introduces a new way to play collectively.

Medieval games

This game for four players is released on Wii. It simulates a brand game where each player competes against the others. In each round, all players participate in a mini-game, and the winner(s) receive rewards within the overall brand game. The mini-games create various collective structures, including 1v1v1v1, 2v2, 1v3, and 1v1 with two players who can assist or hinder one another. These dynamics create alliances and implicit teams among the players.

Shared references : Board games

Mafia/The Werewolves of Millers Hollow

Two sides engage in a collaborative competition where they silently exchange information to strategize against each other.

5-Minute Dungeon

A very simple cooperative game!

Legend of Andor

A very complicated cooperative game!

The Mind

It's a very simple board game where players must collaborate on a task without the ability to communicate verbally. It presents an interesting challenge of how to achieve a goal with a significant constraint.

Mansion of madness - 2nd edition

The game master is a tablet that provides instructions for solving puzzles together and battling enemies."

Cerberus

In this board game, all players start as survivors who must escape from the cerberus. Cooperation is essential for this objective. However, as everyone has the potential to be saved, players must sacrifice one another as each individual who joins the cerberus's team becomes an obstacle in their path.

Puzzles

It will be interesting to understand how puzzles, with their ultra-simple principles, can create collective relations and lead to the formation of monuments

Concept

This game is a 'describe and guess' game where players have to describe a concept using a combination of pictograms representing simple concepts. The interesting aspect of this game is that while it was originally created with competitive features, they can feel unnatural and players often choose to abandon them and play in cooperative mode for the sake of fun.

Cooperative games made by students

Throughout the week, students organized themselves into inter-school teams to develop game concepts. We ended the week with a day of public opening and testing of the game prototypes. Students had the occasion to get immediate feedback from various types of public including children. It was also a great exercise for them to present their work to an audience also composed of people out of the art and design field.

C'est la vie

Lilas Zerouati, Marion Benoist-Grandmaison, Sarah Sadoun, Sigmund Abou Chrouch



Artwork for the game *C'est la vie*

Game concept

The concept of the game is that all participants have to reach the center or the number 0. In order to move forward and reach your goal, there are challenges that need to be achieved. The challenges have certain restrictions. If successful, you get closer to the center. Except you're not the one doing the challenges. It's everyone participating in the game that are doing the challenge for you. And you moving closer to the center depends on how well they succeed in the given challenge.

Your success depends on their success.

Think of it this way: Life throws you challenges, and many restrictions come along. Many of them require your motivation but also the help of others. Sometimes you succeed and sometimes you don't. But you keep on trying. And that's life.

A small story for this game: "*You thought you were just going to play cards with your friends. But a strange murmur is charming you from the center of the decks. You want to know more. You're curious. You try to get closer, but a thin wall is stopping you reaching that voice. Walls in the form of circles. You cannot go through alone. One challenge is given to have the chance of hearing this charm of a voice and finding the answer to your curiosity. That requires help. Bribes are in the way; the cards reveal a way for you to move closer and closer. But beware, those challenges hide glitches. You're bounded to the others. You cannot move with the others. Follow the voice, unite and find that murmur you're looking for.*"

Rules and restrictions of the game

The game is played by a minimum of five people.

- Each player will have a ticket that indicates their position.
- All players will begin at the same circle (depending on the number of players and rounds you'd like to play) but the minimum is 3.
- The youngest player gets the first call.
- You have two decks of cards, one deck that is the challenge given called "challenge" and the other that is restriction given for the challenge the player will do which is called "glitch".

- Shuffle each deck at every turn, then draw a card from each deck. You have to say what's the challenge and what's the restriction, but you cannot participate in it.
- Everyone on the same circle as the player calling the challenge, can choose to participate by raising their hand and getting around the caller.
- With each call, one should be devoted (a minimum of one player) and one should step aside. When the caller reveals the combination, a given time is set and the responders will have to coordinate to achieve the challenge together, as a scene.
- It's up to the player aside to decide if the challenge has been a success or not by raising their hand.
- If it's a success, the caller of the challenge moves to the next circle and chooses the next caller from the ones that have responded to their call.
- If the challenge was not a success; the next caller is chosen within the players that are aside.

When two people are alone in the same circle, they should go along with the same combination:

- In this case, each of them picks on other player, and the teams present their "answer" at the same time.
- The selected player goes on and chooses the next caller// or if it leaves a player behind the group (on the lower circle), everyone should join forces (even the caller) and "answer" the challenge for one to pass.
- The player keeps the call.

What was the process during the game design?

We started with the goal of creating a game that embodied the concept of "competitive by cooperation". This guiding principle helped us during the brainstorming and ideation process. We began by mentioning different game ideas that could fit into this category, such as Mario Party, Fall Guys, and Simon Says. We then proceeded to describe these games and identify common elements, such as the equal opportunities and fairness given to all players. It was a collection of bits and pieces

from various games that we remembered, all falling under the theme of "competitive by cooperation".



Initial research for the game concept

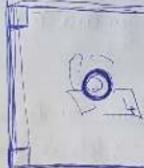
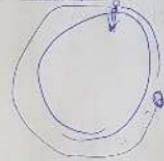
game like Mario Party - very active game
everybody is equal - no winners / losers
disadvantage for less experts

Fall Guy / Pilemiko
D'Pilem / N. Kuroshima
Quirkle / Rummikub

relate in action - ON/OFF switch
gender inequalities / mirror / language with the body /

story - people can act or stage and interact with the story

colors for kids - chain reaction - inequality - creating a path
while modeling the board - snake game -
paths - life trees - idea to defend your area - either have to play in a
team or alone to get to a certain point
idea of a tool with can be used in different ways



- color combination(s)
- to be able to move to a certain place
- roll about with events
- gates open with different colors
- challenge with combinations

2 dice, 1 for directions - 1 for how much

↳ I can create some more rules with the colors
ideas of knowing where we are going but we don't know what's gonna happen there
color combinations make different events
every team face diff. colors

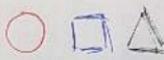
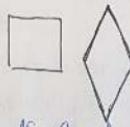


playground game?

- game master to give directions / challenges
- in the end: what have I learned? what problems will I have
- 2 teams, each of them have tasks to do and you have to collaborate to do them
- time limit? / teams? / 2 decks of cards / 3 for sabotaging
- being quick on our feet? 1 min time limit / 3 stages
- To move forward, the others have to do the task with the rules
- 1 try / in the first round?
- extra dynamics.

In each corner: 4 parameters, 1 die for each

- 1: color
- 2: directions
- 3: number of step
- 4:



geomag

Idea of defending the board

objectives: being able to connect to each corner
an opponent can become an ally (kind of a wider bidding rule)
need to connect the sides of the people

strategic game but with a chance factor

prob. 0.5

(you can only target someone on the same case or next)

The space for the paths must again be the same if the board
is a square or a triangle

first shape is put on the table - is random, instead of the
players determining it

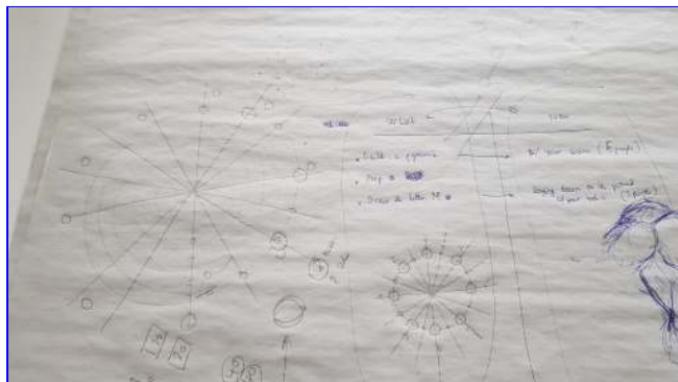
idea of a grid as a board | you have to be RNG carried

chance factor is still on.

6 dice: number of steps/direction number of dots

you can use your opponent(s) dots at your advantage

How are we going to determine each players' dots and \square/Δ



Notes and drawing for research

Iteration and Testing

For the iteration process, we relied on questioning every step and rule we implemented. As we progressed in laying down the possible platform, we constantly tore apart each idea by asking 'what if.' This approach allowed us to strip away unnecessary steps, rules, and gaps that the game might not need, ensuring that all players would remain engaged, progress, and enjoy the story.

Due to time constraints, we were unable to physically test the game extensively, as it requires a full immersion with a significant number of people for a time period exceeding 5 or 10 minutes. However, we cond-

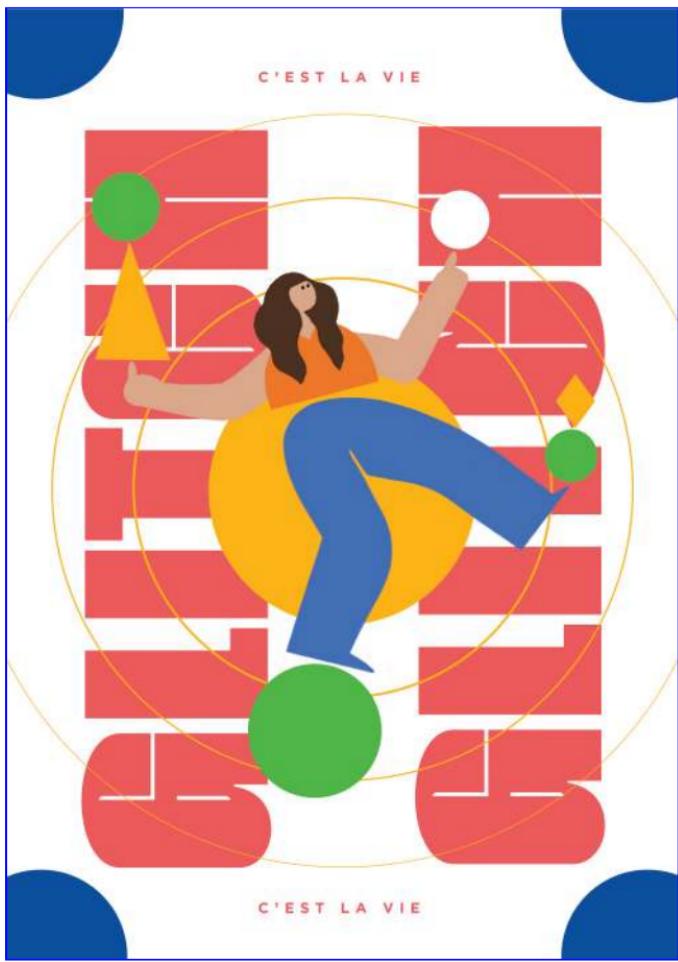
ucted testing in two parts. Firstly, we showed our printed cards to various individuals and observed their curiosity and excitement as they imagined themselves undertaking the challenges and restrictions. Secondly, during the exhibition day, we witnessed the actual immersive experience of the game.



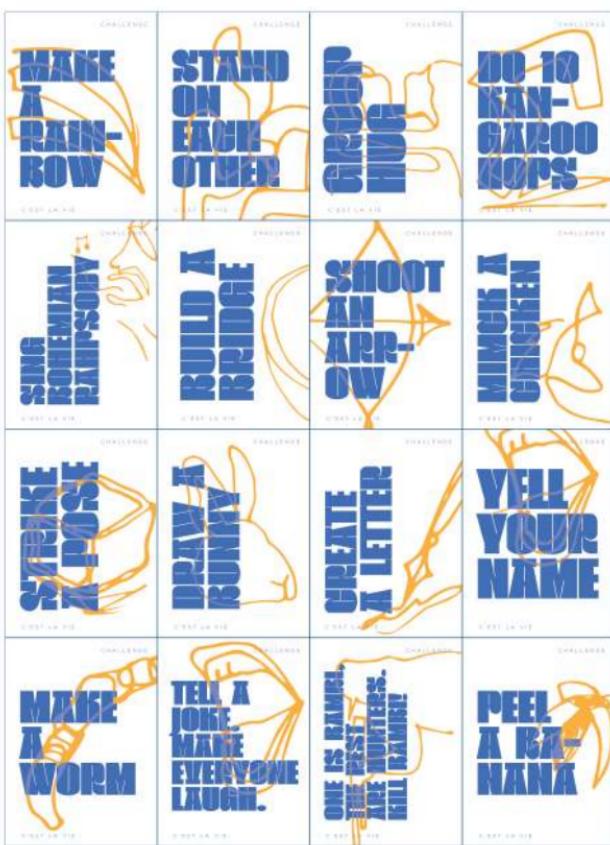
Testing the game in action

End Result

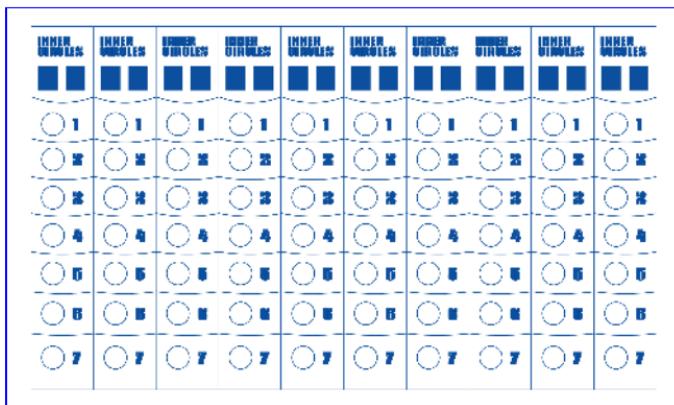




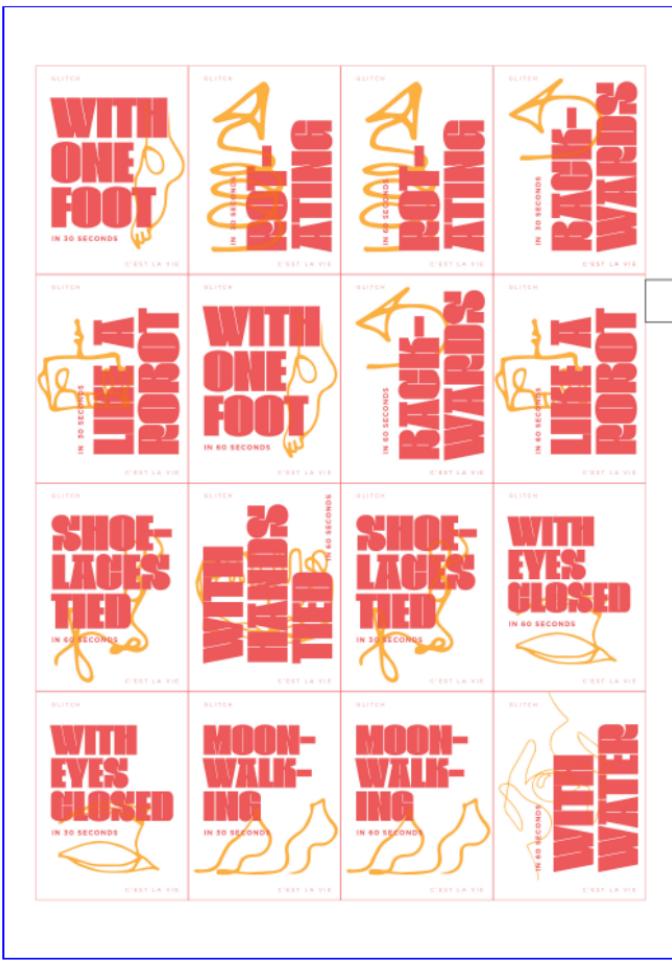
Artwork (back of the cards) and Posters



All the cards for the challenge



Ticket for each player (inner Circles)



Cards for the Glitches (restrictions)

Spacimen

Sarah Hadjazi, Felix Häberle, Yareny Duriez

Game concept

Spacimen is a game about survival, which is why it combines elements of collaboration and competition. Up to four participants are given a limited amount of time to create and shape a Spacimen (creature) according to a set of predetermined parameters derived from a specific natural environment. These parameters are presented in the form of statements and a story, allowing players to imagine and interpret the world in their own unique way



The board game during the last day for testing

Rules of the game

- Shuffle the circular pieces of the Worlds and stack them face down.
- Group the 4 Facts & Scene cards according to the environments they represent and place them within reach of all players.

- Distribute an equal moment of clay to each player.
- The round begins when one of the Worlds pieces is placed in the center of the board.
- When the World is revealed, all players must take the corresponding card, read the Facts & Scene and keep it visible.
- Within 2 minutes, each player must build a Spacimen that can survive in the given World, following the Facts & Scene.
- Each player must defend how & why their Spacimen is the ideal inhabitant for the given World.
- Players must take notes, question, and assess every Spacimen's features based on their viability in the World's described in the Facts & Scene.
- 1 point is awarded for the best feature for each fact of the World.
- After defending their Spacimens and reviewing all the Facts have been revised, players must calculate their earned points.
- The player with the most points wins the round and the World. The player with no points loses the round and can't play in the next round.
- The round for the next World may begin.

Semi Final & Final Trial:

- When only one World remains, all Spacimens must collaborate.
- Before the assessment of the second-to-last World, all Spacimens must find a partner for the final round.
- The assessment proceeds as usual, but for the start of the final round, they must work in pairs. One person models, and the other person directs.
- The player with more points in this round wins. In case of a tie, the player with more Worlds wins overall.



During a test session with players

Restrictions of the game

- Players have 2 minutes to shape their Specimen according to the given environment
- Each fact represents a specific number of points, which determine the winner of the round.
- The players must collectively decide who earns the points for each environment and discuss the reasons behind their decisions.

What was the process during the game design

- Understanding of the topic
- Research
- Analysis of the potential approach
- Exploration
- Ideation
- Definition of the product
- Manufacturing of the product



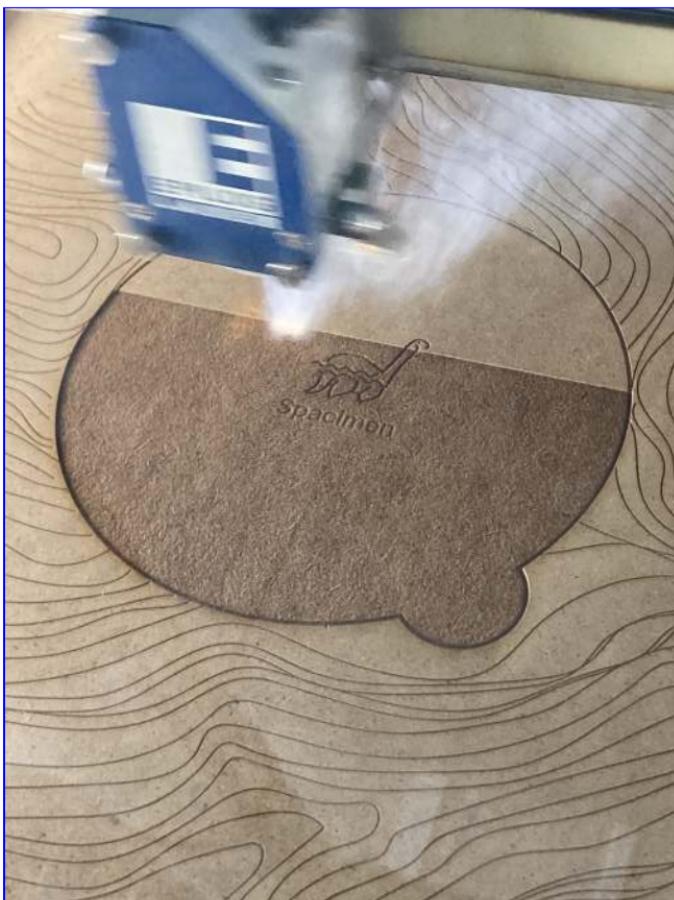
Discussion between students during research



Design and prototype



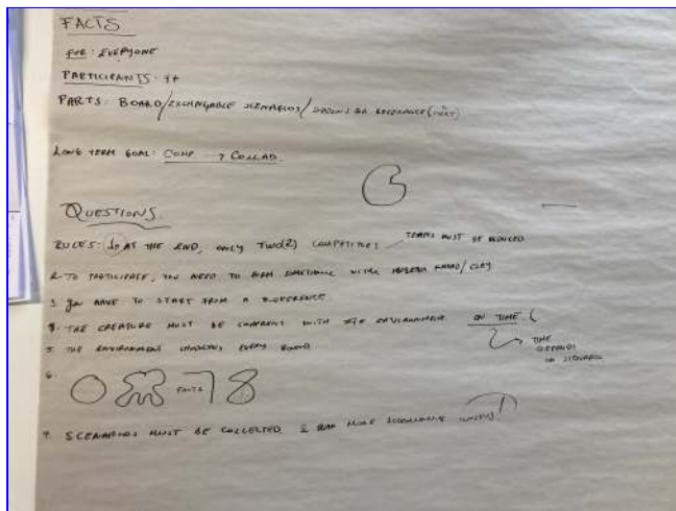
Work session for prototyping the board game



The production of the prototype with laser cutting

Iteration

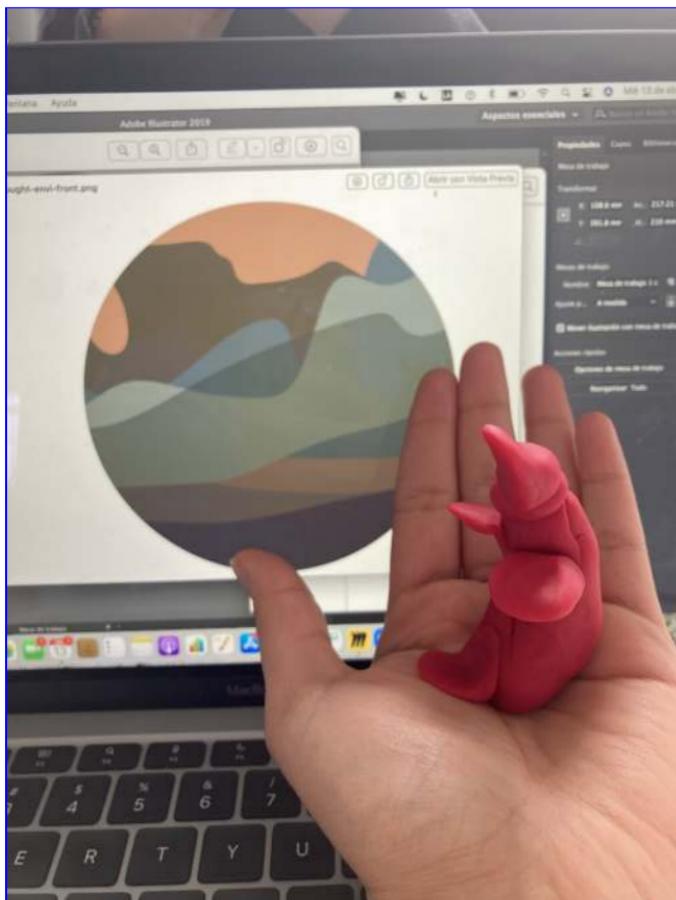
The discussion of the rules was an ongoing process. We did a draft of the assumed rules, but definitely we had to try it out among ourselves and with others to actually understand the needed logic for the game to make sense and create a playful, yet collaborative & competitive environment as we have established our wish.



Iteration for research purpose

Testing

Before printing or cutting the pieces of the game, we tested the game with the illustrations of the environments for testing the needed time for shaping the creatures, to test with external audience if the illustration made sense with the narrative facts and to also measure how fun would the challenge and assessing the results be!



Shape the creature

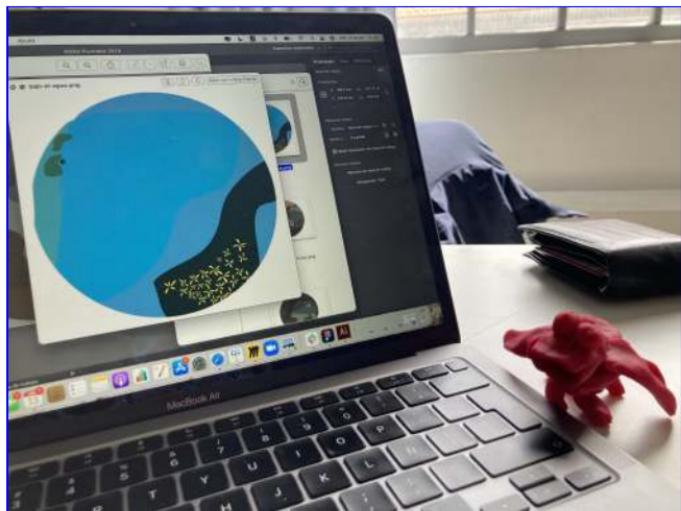
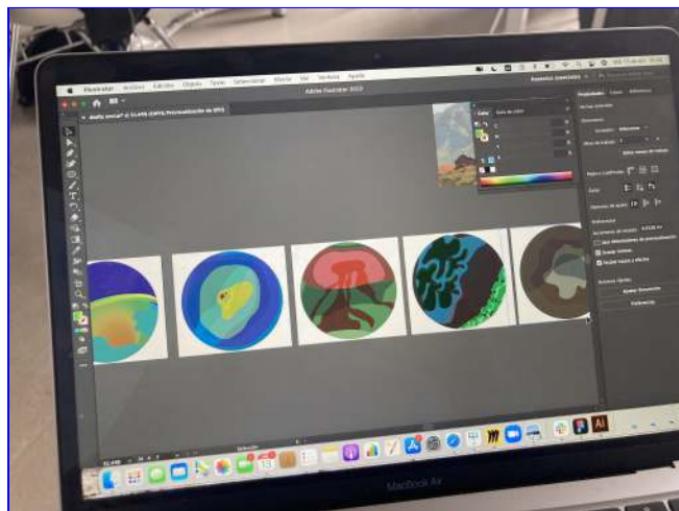


Illustration of the board elements



Modeling the creature



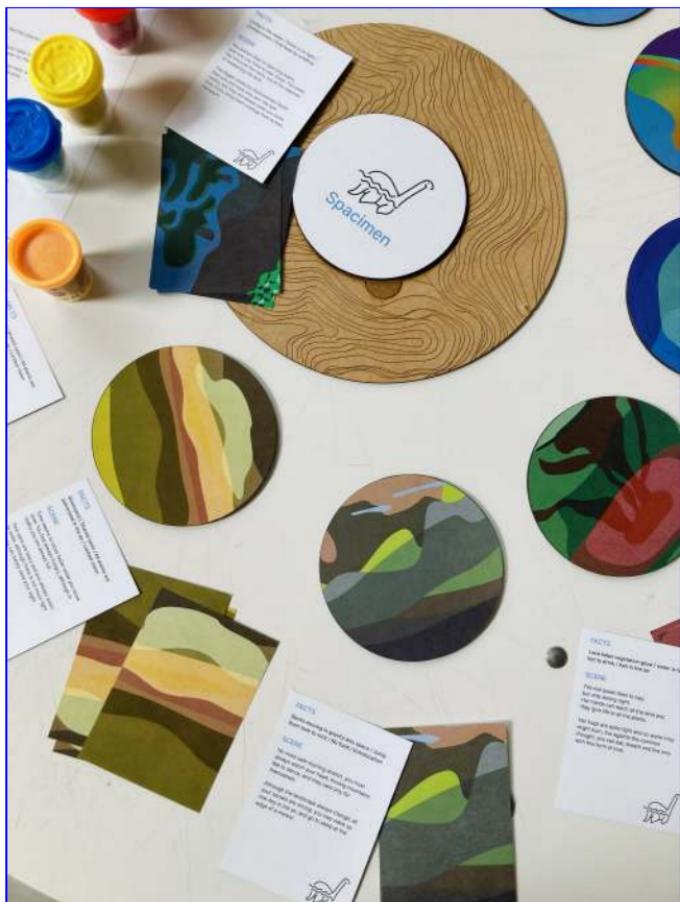
Mockup of the illustration process

End Result

The final result demonstrated to be very fun for the audience. We saw smiles, laughs, debating, stress and engagement while playing, which successfully portrays the kind of game we wanted to design, searching for surprises that stimulate imagination but also provide perspective and stretch the standard way of thinking of the participants. We wanted for this game to also foster communication between the participants, in a debate form for taking decisions, as we believe that this would be a very good example of how collaboration and competition can exist in the same world.



The final prototype of the board game



The final prototype of the board game



Testing the game in action



Play the game together

Progress

We are currently discussing how to improve the rules and the logical acquisition of points, aiming to create fewer controversies and make the decisions less subjective. We want to better align the point system with the elements of the game and the stories depicted in each world.



The cards in action

Aela

Natsumi Nonaka, Viki Schmidt, Dorothée Abaiadze



Aela game elements

Game concept

Aela is a drawing game that can be enjoyed by people of all ages and encourages creativity. It is designed to be easy to understand and play,

without a specific goal but focused on having fun. If you feel you have played enough, you should be able to stop playing at any time.

Rules of the game

- You need at least three people to play the game. Two people form a team, and the others guess.
- The team picks a keyword and both team members roll the dice. The displayed restriction is the rule they have to follow while drawing the keyword.
- Now, the team has 30 seconds to collaborate and create a drawing that represents the chosen keyword, using only drawings without talking.
- Once the 30 seconds are over, the other players have to guess the keyword based on both drawings.
- To continue game, form new teams and start the next round.
- Play for as long as you have fun. There's no winner or loser!



Draw without lifting your pen.



You have five seconds to draw while your partner still has 30 seconds (if they don't get the same restriction).



Close your eyes while drawing.



Draw using only the shapes displayed.



Switch to your non-dominant hand to draw.



Only use straight, horizontal, vertical and diagonal lines to draw.



Hold your pen in your fist to draw.



You're lucky, it's a joker!
Choose your preferred restriction.

a

the rules of the game

Restrictions of the game

Each player is given a restriction in drawing by the dice.

They are also given a 30-second time limit for drawing and a restriction not to speak while drawing.

What was the process during the game design

We started with just brainstorming around keywords like simple, body, random, collaborative. Afterwards we tried to connect different words and categories to combine them and formulate possible games out of it. Then we came up with different contexts like where should it be played and who should play it etc.

Iteration and testing

First, we came up with the idea of combining the whispering game with drawing. We also made a paper dice to give players constraints such as "draw without looking". When we tested it, we found that the constraint idea worked but it's too easy to play and the waiting time was boring. Next, based on the feedback in the first test, we changed our concept that two people working together to complete one picture instead of one person drawing each. We also increased the variety of constraints. In the second test, we saw participants enjoyed it much more than before. Finally, we made wood dices with 8 faces, 40 cards with keywords, and instruction paper. We selected keywords that are conceptual and can be interpreted differently by different people such as "sustainable".



Testing the game in action the last day

Collanque: a collaborative petanque

Morgane Rousseau, Helen Staak, Florens Schwendowius

Game concept

The concept of the game is that a group of people have to throw a ball collaboratively. They have to communicate well to coordinate their movement, so that the ball flies in the right direction.

Rules of the game

The game is played between two to four teams, each consisting of two to four players. Each team uses three balls. To start, place the tiny pink ball (called cochonnet) on the ground and distribute the different shapes around it, ensuring an equal distance of one large step between each shape.

Build teams and choose a color. Then, grab the fabric and balls of your team's chosen color. Position yourselves five large steps away from the cochonnet. In a team of four, each member gets a leash to grab. If there are only two players in the team, each team member gets two leashes to grab. Place a ball on top of the fabric. In a team of three, fold the opposite corners of the fabric to create a triangle.

The aim is to get as close as possible to the cochonnet. Repeat this step with the second and third ball. Once all the balls have been thrown, measure which ball is closest to the cochonnet. The team that has thrown this ball receives three points, while the team whose ball is furthest away receives a deduction of one point.

After counting the points, collect the balls and start a new round. The team that reaches nine points first is declared the winning team.

SHAPES When a thrown ball lands on a shape the team has to do an extra difficulty in the next throw: - Stand on one leg during the next throw. - Close your eyes during the next throw. - You're not allowed to

speak during the next throw. - Throw from five steps further away during the next throw.

Restrictions of the game

Minimum two people in a team, maximum four. Minimum two teams, maximum four. For the best experience, it is recommended to be played outdoors, on grass, gravel or flat terrain, where the balls do not roll away or bounce too much.

What was the process during the game design

After going through a lot of ideas we landed on a concept, which we gave a working name "collaborative petanque". The initial inspiration came from two already existing games: petanque and parachute. As petanque is a very popular game around France, which we also saw played a lot around the school grounds, we wanted to take this already familiar concept and find ways to make it more collaborative.



Reference for inspiration



Iteration with a first prototype

Iteration

Our first idea was to use the regular pétanque boules and some kind of fabric that would be used to throw the boules. We tested the first idea of the game outside on the school grounds by using a stone and a jacket. When we saw that it could work, we started searching for materials to create our first prototype. We were able to use the leftover fabric from the Design Biennale and created our first version of the game. When the fabric was done, we tested it with different paper balls and then bought different sized balls from the store to see how they work with the game. We also moved away from the original formation of the pétanque game, where people play the game one after each other in a line. We thought it might be much more emotional, when the teams are placed in a circle facing each other. After that we tested the game with two teams and different kinds of balls outside on grass. Everything seemed to work well, but we felt that the game was still missing something. We got a recommendation from our mentors that we could add some additional features to make the game more challenging. We decided to create shapes out of cardboard that could be put on the ground while playing and would challenge the players.

more. We also decided to add leashes to the fabric so it would be more comfortable to hold them. The final version of the shapes for the game were laser cut from plywood and we also decided to engrave the challenges on them, so they would always be visually there and easy to keep in mind while playing.



Production and sewing for the game elements



Manufactured balls to play



Cutting the shapes

Testing

The testing was a crucial part in our design process. Right from the start we tested our ideas and developed them further with the experiences we made. While testing the game the participants had very interesting ideas for variations of the game that differed from the original idea.

Therefore, the game could additionally be used in other ways as well:

- Using the fabrics to throw and catch a ball in two teams of two to four people
- Using the circle shape in the middle to throw the ball through it and catch it with the fabric
- Using the circle in the middle on the ground and make the ball bounce in the middle of the circle



Play with the last prototype in the real world



Play with the last prototype in the real world

End Result

The end result is the game called 'Collanque.' The name is a combination of 'petanque,' the word for a French boules sport in which players play their balls towards a target ball. The game consists of one small ball to place in the middle, three different sized and weighted balls for each team to throw, fabrics for teams of two to four people to throw the balls with, and four different shapes to put on the ground for extra challenges.

Untitled game

Daisy Muntean, Mélissa Lenain, Kaisa Uik, Artemiy Guslistov



Screenshot a one of the game level

Game concept

You play as a designer who is always seeking new technology to improve their work. In pursuit of this, you purchased a brand new 5D printer from a dubious website. Excited to test its capabilities, you attempted to print a file, but to your surprise, it caused a rift, splitting your reality in half. Now, you and your friend must work together to merge the two realities back into one.

Rules of the game

Your room, which used to be purple, has been affected by the split in reality, resulting in two dimensions. As a consequence, your room, along with some objects within it, has been divided into the red room and the blue room. One player interacts with the split reality of the red room, while the other player is in the blue room. The objects in each room that are colored opposite to their surroundings hold the keys to restoring and fixing the merged reality.

When the objects affected by the split reality are placed into the 5D printer, they reveal riddles that provide codes for teleporting the objects to their respective realities. Some of the riddles require collaboration with your friend, as crucial hints are hidden in their room. The ultimate goal is to solve all the riddles and successfully merge the realities, allowing you to return to your original purple room.

Restrictions of the game

Communication with your friend is not possible within the game itself. As the game is designed to be played in different physical locations, you must find alternative ways to communicate, such as through phone calls or text messages, to emulate the experience of being in different realities. The game can be played offline, as it consists of two mystery games intended to be played simultaneously, with each game containing hints that are relevant to the other player's game.

What was the process during the game design?

Initially, we contemplated creating a detective or mystery game. While the basic idea was present from the start, the plot required some adjustments as it would serve as the central element of the game. We began by discussing the story of a physics professor whose science experiment went awry, resulting in the splitting of his reality into two separate dimensions.

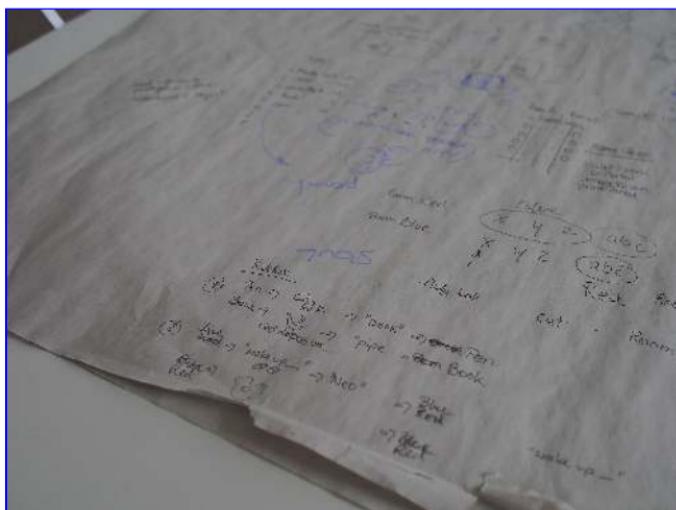


Another room in the game

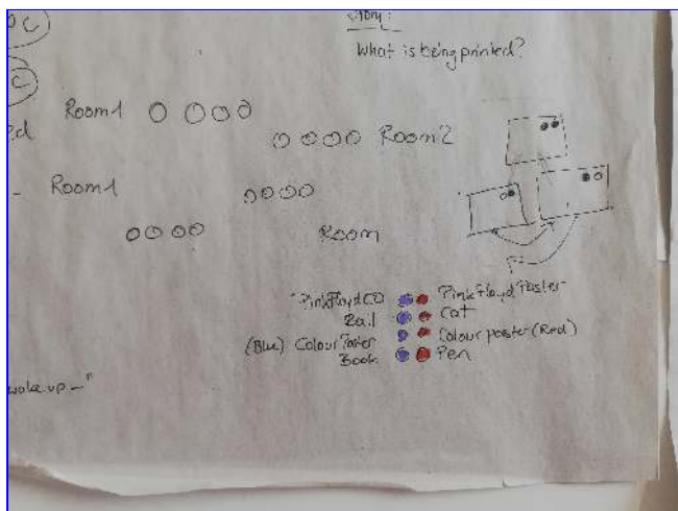


The blue room

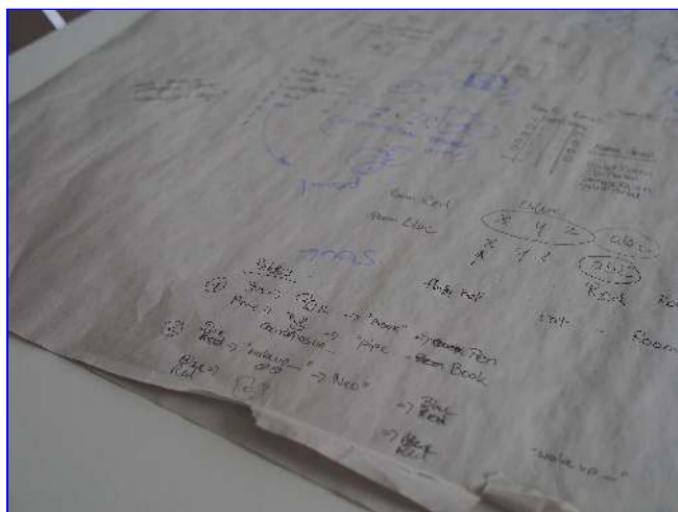
Progress

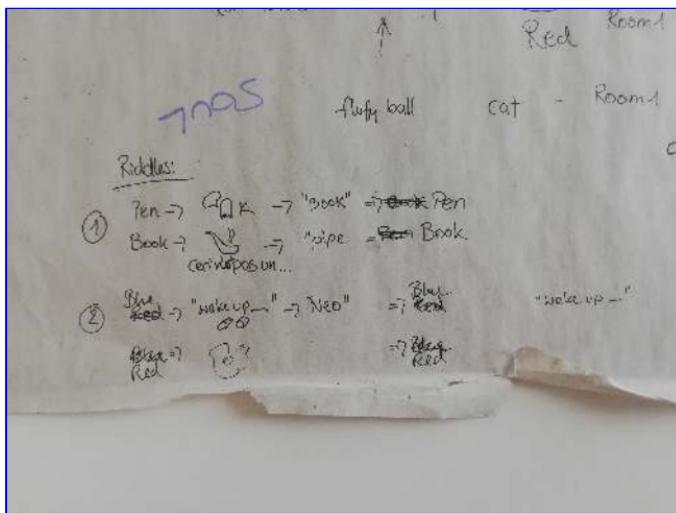
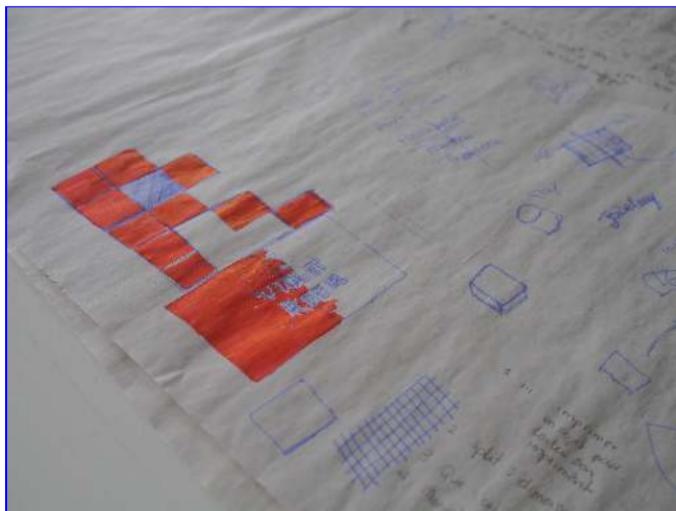


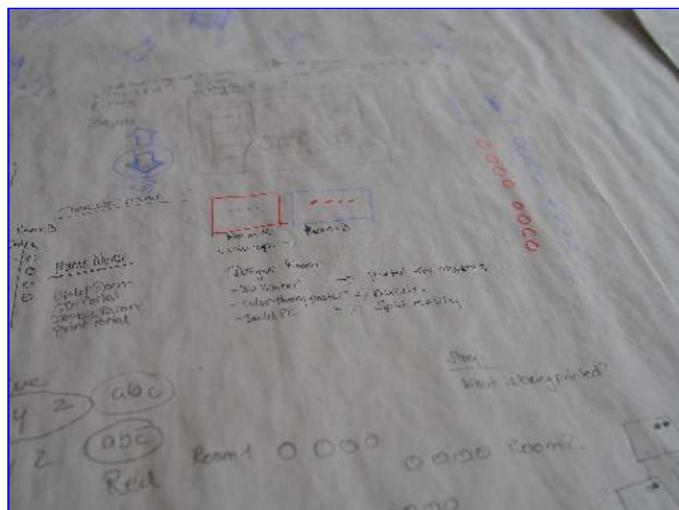
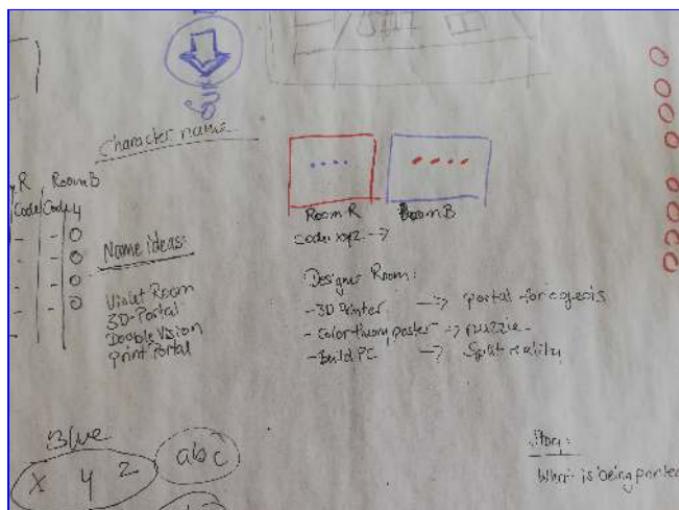
Iteration with pen and paper



Still drawing







drawing for research

Testing

We created and developed various riddles, and then approached different people to solve them. The solving time varied, with some riddles proving more challenging while others were relatively straightforward.

The difficulty often depended on the individual's experience and familiarity with the subject matter. Knowledge of pop culture references proved helpful during the solving process. Considering our target audience, we wanted to appeal to individuals who grew up with these pop culture moments and could share them with people from other generations. To ensure accessibility for everyone, we decided to include hints within the game.

The Cube

Maëlys Bard, Alféa Morelli, Mark Uustalu

Game concept

The Cube is a cooperative game designed for two players, combining elements of interactive storytelling and escape games. The game revolves around a story where one friend finds themselves trapped in a bar with no recollection of their whereabouts due to excessive drinking. They reach out to another friend for help and rescue. The objective is to successfully save the trapped friend, leading to a happy ending.

In the game, one player assumes the role of the trapped friend inside the bar. They navigate the bar through a series of images that they can switch between, exploring their surroundings to gather information that they must then relay to their friend. The other player engages with the game on a computer, presented with choices and riddles that they must communicate with their partner to answer correctly.

Rules of the game

You have to communicate with your partner in order to win. Spamming through answers is not allowed. You need to actually try to complete the riddles. You are not allowed to see what the other person sees.

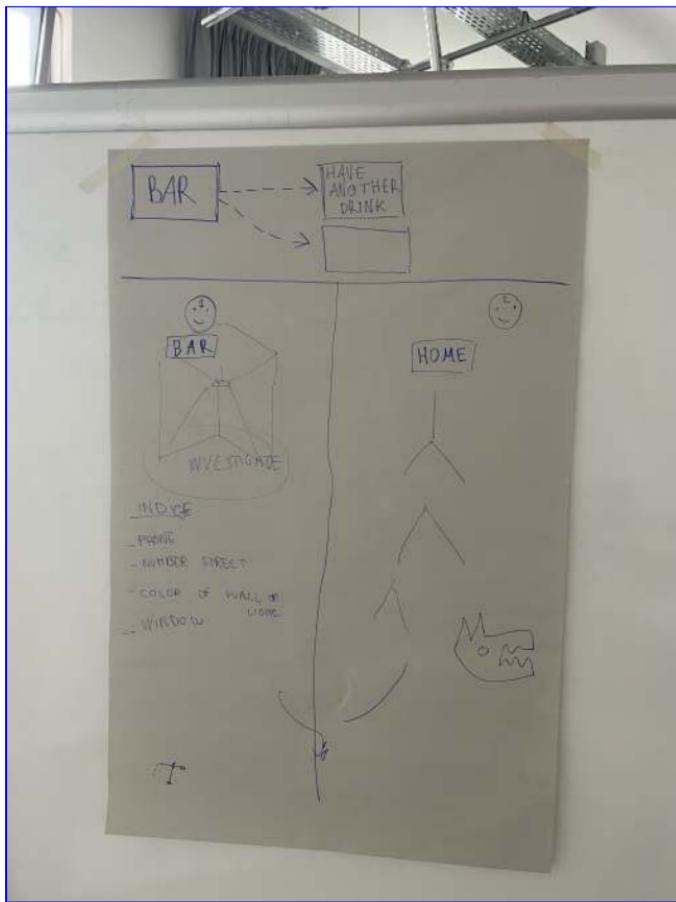
Restrictions of the game

You can't inspect scenes in more detail.

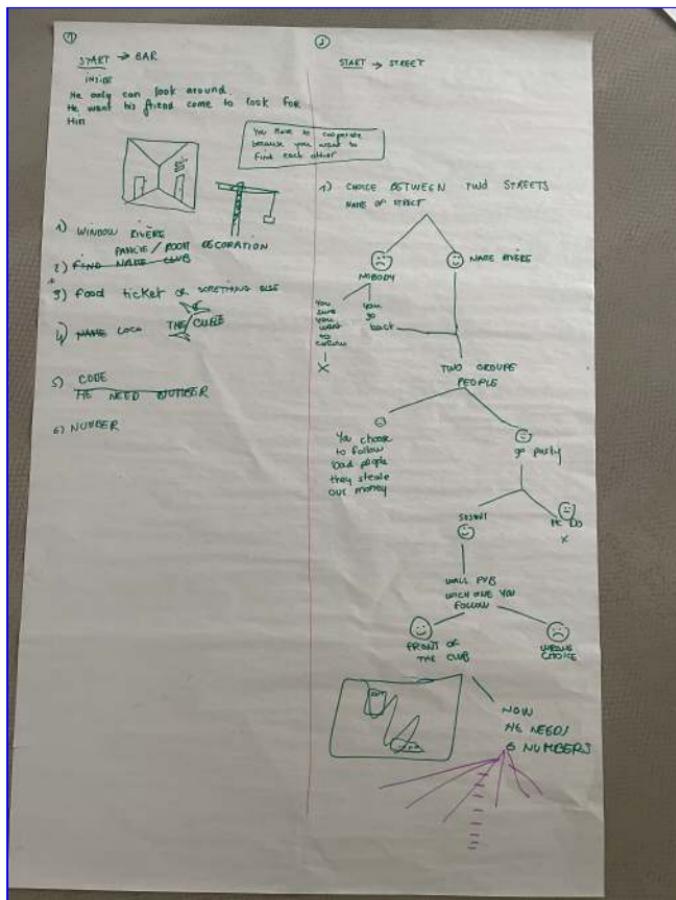
What was the process during the game design

Firstly, we decided to create a video game. Then we came up with the idea of making it a storytelling game with choices and cooperative gameplay. We proceeded to sketch out the game's path and assigned tasks to each team member. The process went smoothly, and everyone actively contributed. While we all worked on the story, special thanks go to Maëlys for contributing most of the good ideas. Maëlys and Alféa

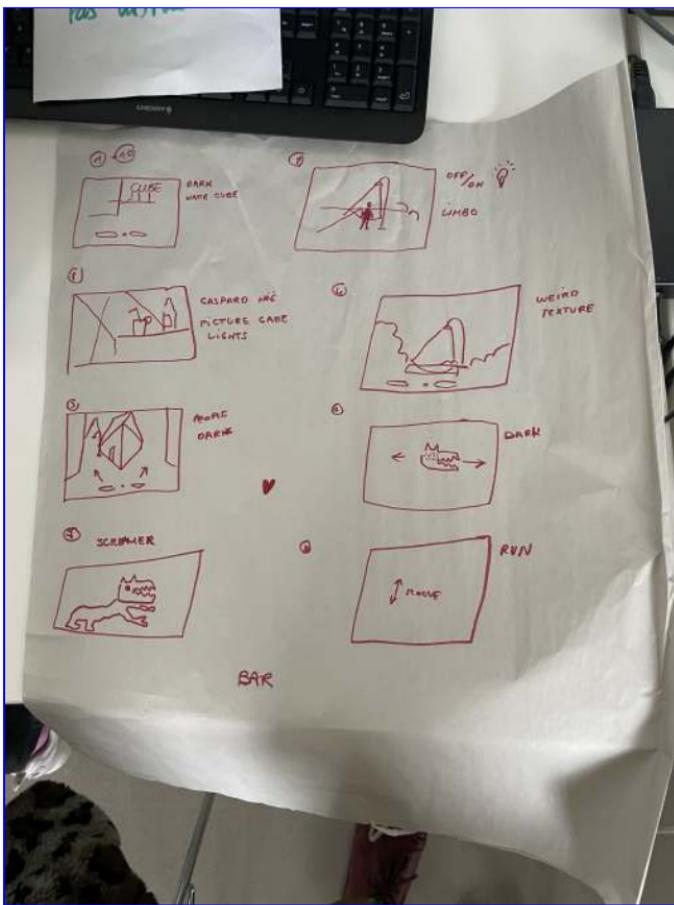
created the 3D models and scenes using Blender, while Mark developed and coded the playable part of the game in Twine.

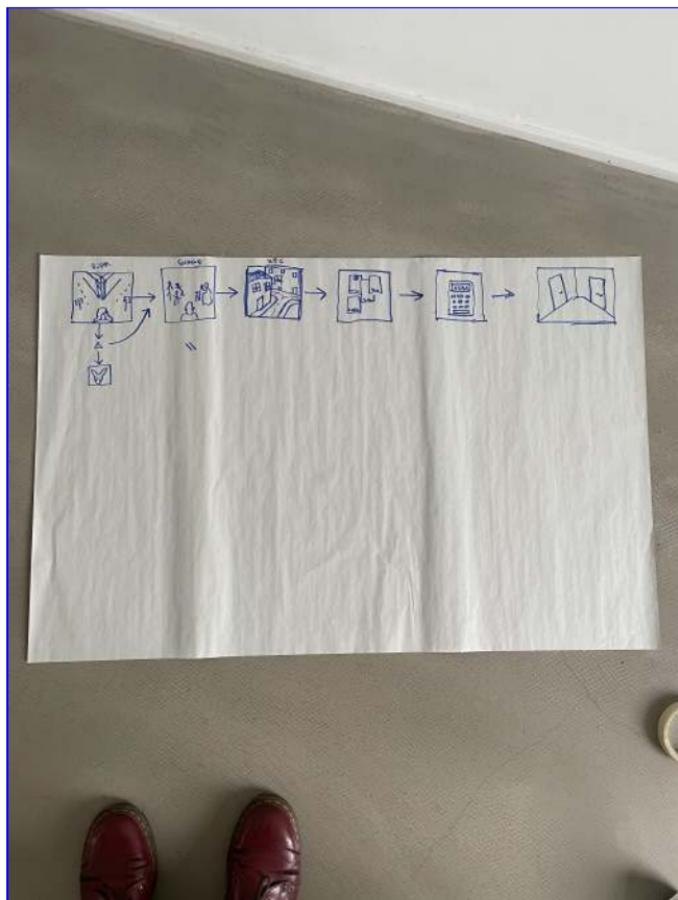


Define the story of the game

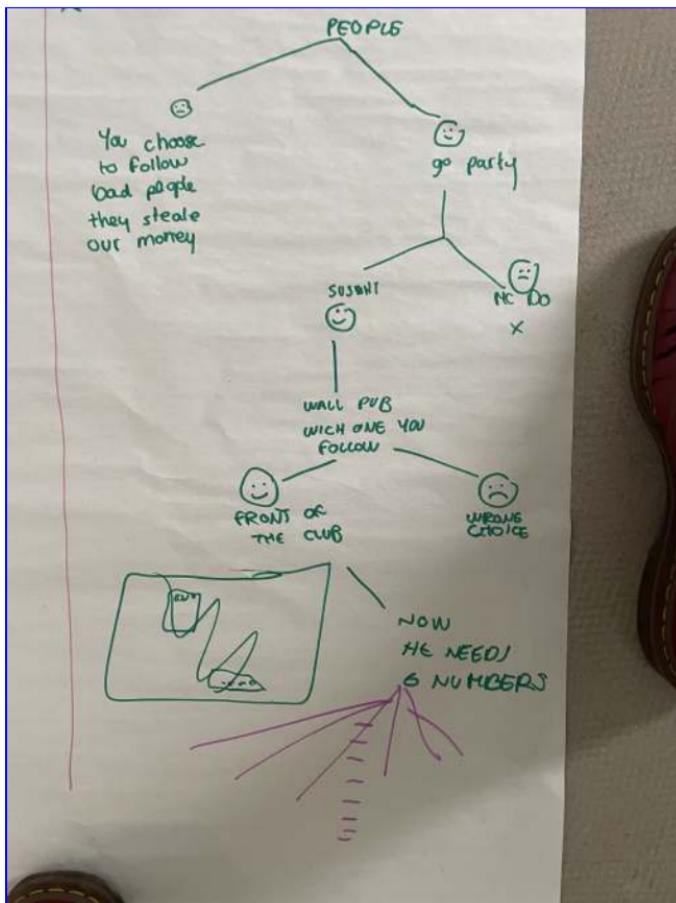


Tree representation of the story





Sketch the storyboard



Tree representation of the story

Iteration

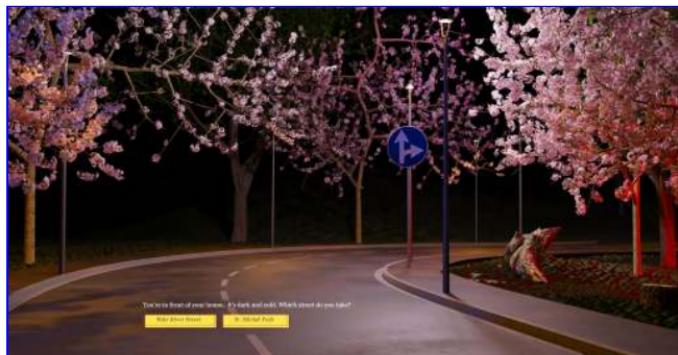
The core loop of the game is to solve the riddles/answer the questions, communicate with your teammate to make correct choices, win/die.

Testing

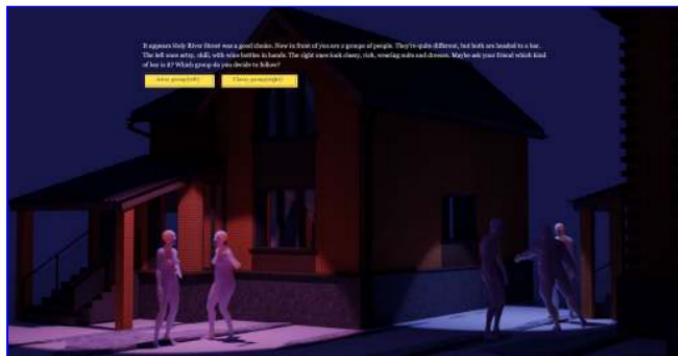
The gameplay was fully tested with a handful of different people, and we also discussed the idea with teachers and other individuals. Overall, everyone liked it.

End Result

End result came out like we imagined. We wanted to make a game that isn't just a basic prototype, but something truly playable.



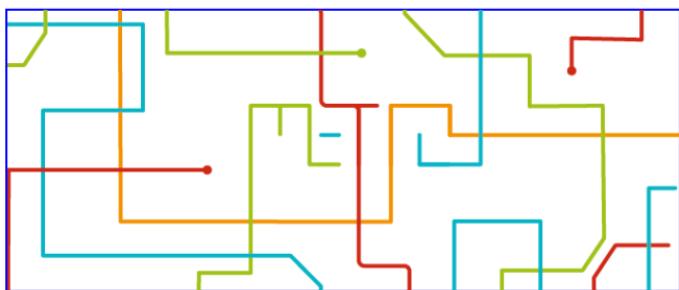
Screenshots of the video game





Metro

Alina Remlinger, Sarah Boutière, Katrin Koskela



Metro game artwork

Inspiration

Our inspiration was the *trax* game. We liked the simplicity, the shapes and the intuitive way the game was designed. However, we wanted to design a game for more than two players, so we needed to bring the game to a higher complexity.



Trax game for inspiration

Ideas

So next up, we played with geometrical shapes and built different symbols, creating a puzzle that could be assembled into different symbols depending on the focus color. We prototyped this game on paper and were pleased with the results. However, we soon realized that it was a non-cooperative, single-player game. Therefore, while keeping the concept of different colored lines on each square, we decided to go back to the idea of tracks, incorporating a starting and an ending point.

Conception

To make the game more collaborative, we made the decision for each player to choose one color. Using the same concept of lines on the square cards, the goal is for players to connect the starting and ending points of their chosen color. During this phase, we were introduced to the game "*Connect*" by Ken Garland, which captivated us with its geometric and simple appearance. Additionally, we discovered the synonym of *train* or *metro* tracks, which further resonated with our game concept.



The game connect by Ken Garland

Paper prototype

We decided to create small squares with the various geometric shapes needed for our game in our initial **paper prototype**. During this stage, we discovered that there are numerous possible variations, which led us to the realization that we needed to determine the specific versions and quantity of cards required for a playable and enjoyable game.



We test a paper prototype

After creating the squares for the paper prototype, we gathered to play a round and refine the game's details. We soon realized the need to limit the number of colors on each tile and enforce the rule of having only one line exiting from each side. Without these restrictions, it would become excessively challenging to find matching pieces for the players to connect. As a result, we ended up with eleven distinct pieces, each with its own color variations

Materials

In the subsequent stages, we conducted tests using different materials for our pieces. We were particularly drawn to the concept of using clear plexiglass with colorful lines. To implement this, we created a testing document in Illustrator and used a laser cutter to engrave the lines onto the plexiglass. We then hand-colored the lines using Posca markers. The aesthetic result was pleasing, but we soon realized it lacked practicality in terms of usability. The one-sided pieces could be accidentally turned around, rendering the intended line restrictions ineffective. Our second version, which involved combining two pieces back-to-back, also proved confusing as it created the impression that all lines needed to be connected, which was not the case. Additionally,

the painted lines were prone to scratching, making them less durable for repeated use.



Production of the board and elements

Our second test involved using pressed wood. We drew the lines on it using the AxiDraw and then cut it with the laser cutter. This material proved to be much better for the game, so we decided to use it for our final prototype.

Final game

Our game is called 'Metro,' and the goal is to complete the metro line and conclude your travels. It is designed for up to four players, with each player needing to complete their colored lines. Our final prototype consisted of 72 unique pieces and included the game instructions.



The final game to play with

Rules

Game for two to four players.

Before the game:

- Each player chooses one color (orange, red, blue or green). The pieces with end and start points are part of the stack and must be found by drawing a new piece each turn.
- Each player gets three pieces, the remaining pieces are stacked on the side.
- The player whose birthday is next starts the game.

During the game:

- The player begins by drawing a piece from the stack **or** from the already constructed metro plan (not possible for the very first move)
- One of the four pieces **must now be added to the metro plan.**
- Pieces can only be added if the lines fit with all the surrounding pieces.
- Pieces must be placed in a way that each "empty" space has no more than two different colors ending it.

Congratulations!

The player who has both their starting and ending point of the metro line connected first, wins.

Conclusion and openings

During the first workshop in Tallinn, we had the feeling of passing an important step, this was also the case here.

The notions of collaboration, cooperation and participation appeared more complex than we had anticipated: it was the major topic of the week and students were invited to participate to the reflection on those notions.

The theme of games fulfilled its purpose to serve as a common cultural basis, with students tracking the tiny national differences of some of them and sharing games they like. It also allowed students to design games with the technical knowledge and tools at their disposal respectively within their team and within Esadse. Everyone was then in a kind of "comfort area" since no methods or tools were imposed.

The process of the game design also allowed us to step aside and move away, for a moment, from the digital and functional perspectives that we are used to.

Finally, we had the feeling that student had a great time and got the chance to know better each other's, mostly by working together in international teams. Their differences in methods were less visible than in the previous workshop and were mostly perceived as an added value.

Radical collaboration : HfG's workshop, 21-25 November 2022, Schwäbisch Gmünd (GE)

New workshop, new rules.

At HfG Schwäbisch Gmünd, Marc Guntow, Ludwig Kannicht, and Florian Geiselhart introduced a new working format in the form of three simultaneous workshops, each focusing on specific organizations and subjects. These workshops were conducted during the International Workshops Week at HfG, providing a valuable opportunity to share the outcomes with a large audience during the final presentation at the end of the week. The entire school transformed into a museum, with workshop exhibitions displayed in various rooms.

Lets Kill zoom calls

Florian revisited the subject we had previously discussed, which involved taking a critical approach to reinventing communication software such as Zoom. We will delve further into this workshop in the following chapter.

Collaborative interaction patterns

Marc suggested exploring the history of the mouse pointer and examining potential contemporary advancements. We will provide further explanation about this workshop in a later section.

Radical collaboration

At Ludwig's suggestion, we embarked on a reflection about the dynamics of collaboration in our workplaces and school teams. We explored the key conditions for effective teamwork, strategies for resolving challenging collaboration situations, and appropriate behaviors towards our teammates. We also considered whether it is advisable to openly share our personal feelings within a professional context. Throughout the

project, we maintained a project logbook on our wiki, which is reproduced below.

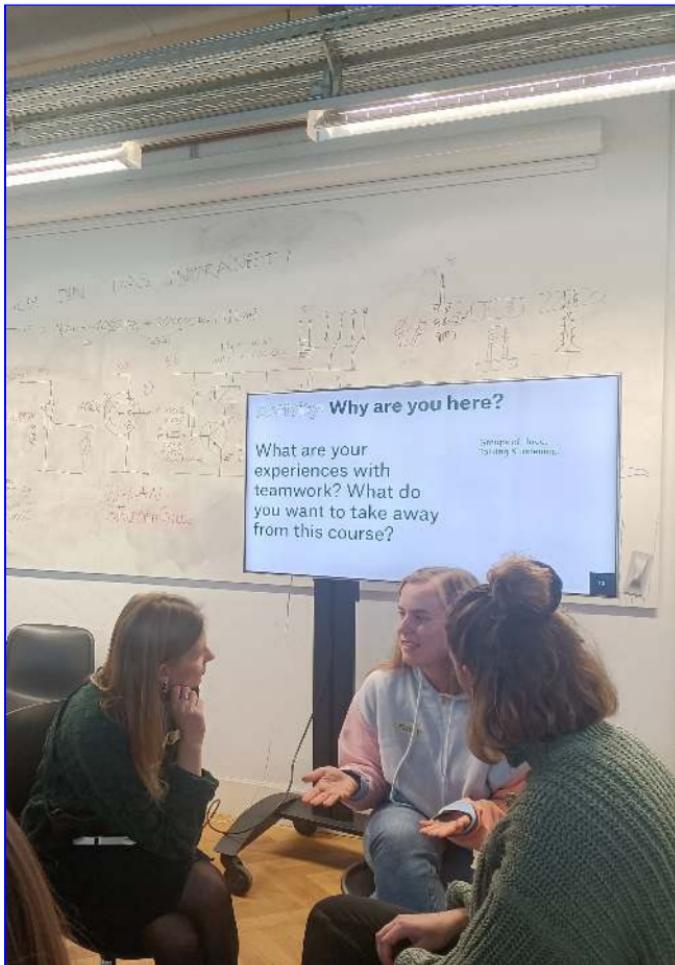
Radical collaboration

Friederike Bechtel, Sarah Boutiere, Yareny Duriez Urías, Kiara Has-souna, Aileen Hoffmann, Paulina Juárez Badillo Chávez, Katrin Koskela, Eva Liisa Kubinyi, Kristi Laanemäe, Mélissa Lenain, Tobias Raab, Lena Rettich, Lukas Strohhecker, Mary Wang, Katja Weißker, Hannah Wels, Samantha Zannoni and Emily Zeyer

Day 1

A.M.

At first, the students formed groups of three to four people to discuss their expectations for the workshop week."



First day, let's define the purpose of this week

"Why are you here?" They collectively shared their motivations using the popcorn method:

- Exploring the meaning of collaboration and understanding if it differs for each individual.
- Meeting new people and reconnecting with the students they had met in previous DTCC workshops.
- Taking a break from their job and being a full-time student.
- Learning the fundamentals of working together after experiencing challenges or failures in previous team projects.
- Overcoming frustration in teamwork, stop being a people pleaser and finding their place within a team.
- Finding their strengths and valuing them in teamwork.
- Breaking away from the usual teams, embracing different work habits and methods.
- Improving interpersonal interactions.
- Discovering the city.
- Analyzing previous team projects that went only "ok".
- Finding good pretzels.
- Managing tensions within a group to enhance overall team performance.
- Escaping from personal projects for a week.
- Freshening up English skills.
- Overcoming difficulties in working within teams.
- Party!
- Learning how to communicate to avoid frustration, and dividing tasks based on teammates' skills and strengths.
- Creating a cohesive team that goes beyond a mere combination of individual projects.
- Finding a balance between enjoyment and productivity: Too much work is actually less efficiency.
- Focusing on collaboration on itself.
- Tasting some good beers.

- Getting to know a new aspect of oneself.
- Breaking the habit of constantly assuming leadership within a team, reducing personal stress.
- Being more comfortable in a group setting.
- Having a theoretical background on collaboration.
- Preparing for future collaborations with individuals they didn't choose, accommodating different work styles within the school context.



Sharing is Caring

After that, students discussed their experiences with teamwork within small groups, then shared them with the whole group.



Shared Reflexions?

Ludwig has shown a video by Marianne Simmel and Fritz Heider (1944) and asked students to reflect on what they observed first individually and then, back in groups.



A film from 1944 by Marianne Simmel and Fritz Heide

P.M.

The afternoon started with some teambuilding exercices.



Teambuilding exercices

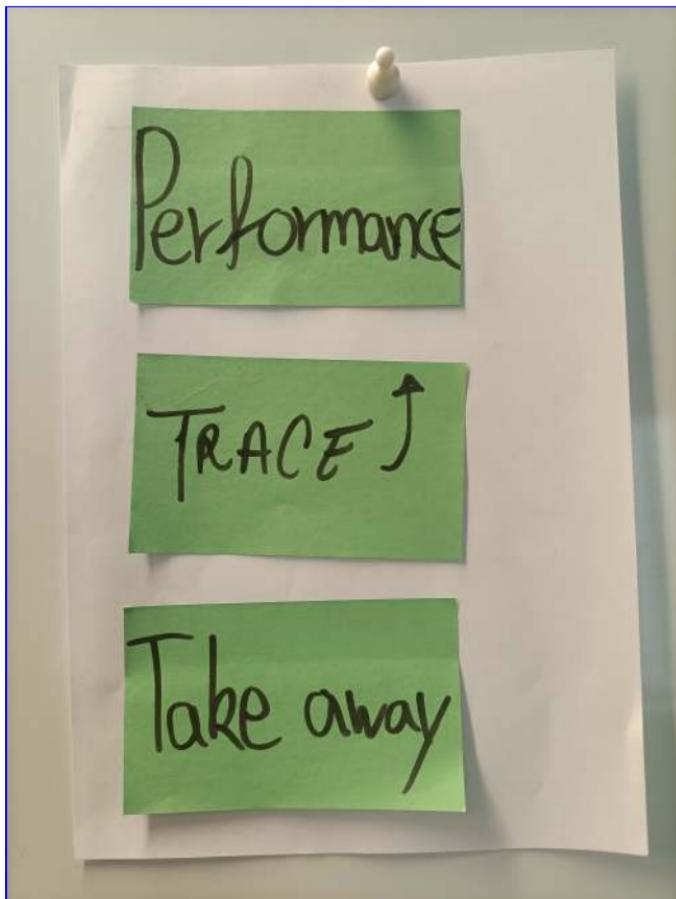
Then, the group discussed what they could present for the exhibition on Friday to empower fellow designers for teamwork. Ludwig asked them to also think of future teammates who hadn't been there. They formed two discussion circles.

At the end of the day, they presented their discussions using the fish-bowl method. They arranged a circle of listeners around a smaller circle for speakers. People in the center had a discussion while those on the outer circle listened. If someone from the outer circle wanted to speak, they could join the center circle. If there was no more space in the center, the person who had been speaking the longest would give up their seat. The goal of this exercise was to reach agreement on ideas and create a cohesive plan for the exhibition on Friday.



Team discussion and reflecting collectively at the end of the day

For now, they have agreed to create performances, documentation (to capture what happened), and a printed takeaway publication (such as a poster, booklet, or cards?)



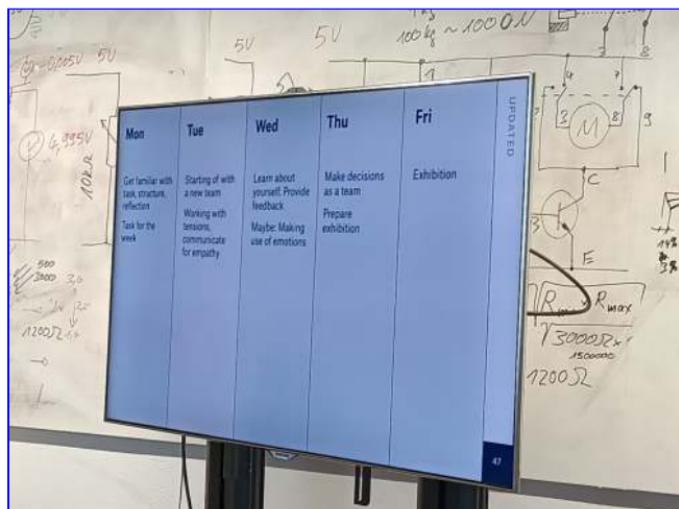
Feedback from students to improve the next days

As a conclusion, throughout the day, they experienced working in small teams (3-4 members), medium teams (2 groups), and as a large team (all together). They concluded the journey by collectively reflecting on their own feelings about working in these teams during the day. Additionally, Ludwig asked for feedback from the students, seeking their input on what he should keep, what he should drop, and what he should change to improve his preparation for the next days.

Day 2

A.M.

We started the workshop a bit later this morning due to beginning the day with a guided tour of the school led by Marc. At 10:30, Ludwig announced the schedule for the week and provided students with a template example of an email for soliciting feedback. In fact, yesterday, students suggested requesting 10 to 15 minutes of feedback on their proposals from three to six different people.



Prepare the week with a planning

Then, it was time for the initial team building. Ludwig prompted the students to reflect and engage in a collective discussion about their 'origin systems': what values or aspects do they hold dear and would like to see in their new group? What would they prefer to leave behind? Additionally, Ludwig encouraged them to envision elements they never experienced before but would like to initiate. He also requested that they find metaphors to represent their "origin systems".



Prepare the group for work



Sharing expectations

At the end of the morning, the students began working on how they wanted to organize themselves as a team for the exhibition. Using the

fish bubble method, they aimed to collectively decide on defining sub-teams to divide tasks.

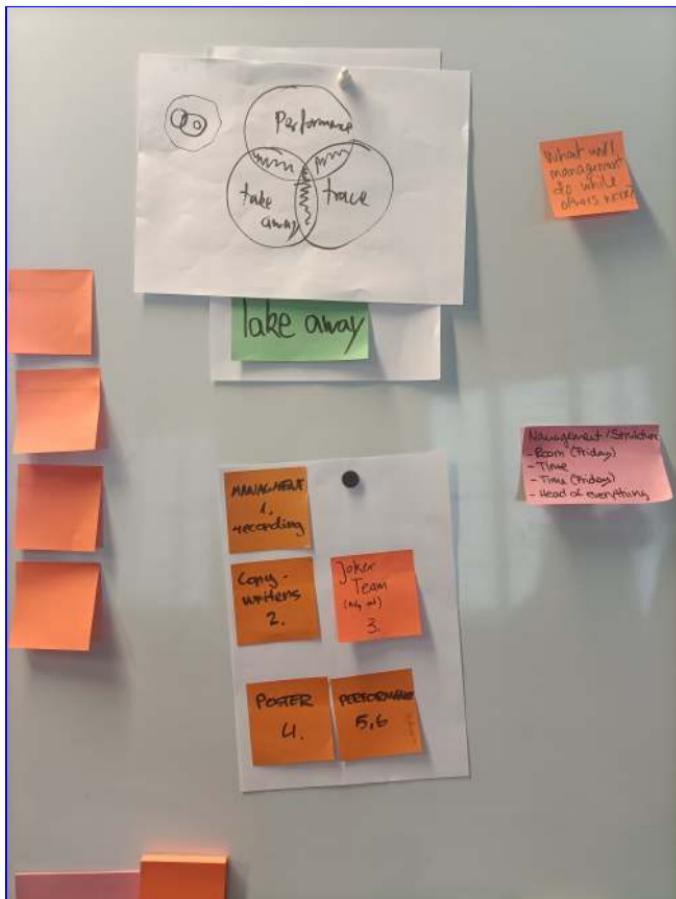
Initially, they came up with the idea of creating three teams, each responsible for a specific aspect:

- Performance
- Traces
- Take-away

However, they soon realized the need to establish connections between these teams to ensure that all parts merged together as a cohesive project. This sparked a lively debate on the necessary adjacent roles to maintain coherence throughout the separated components of the exhibition project. Additionally, there was a discussion on how to precisely define the teams.



Making teams



Planning the teamwork

P.M

The debate initiated in the morning continued at the beginning of the afternoon. They decided to make flexible teams for now.



Debate about three forms of power

Ludwig then initiated a talk about three forms of power:

- power of sovereignty: the given power through hierarchy (top-down, sometimes bottom-up through vote).
- power of sense-making: the power given by other members of the team because what someone is saying is making sense to others (bottom-up). This power is mostly relying on charisma.
- power of the creator: this power relies on people thinking that a person is a rightful leader, capable of being in charge of a specific project and push-it forward.

Power is not only a matter of "control". It is important to understand these different types of power because power is also a means of influencing a project. Power can help expedite decision-making, but it should not be used to corrupt. An interesting question raised by a student was: should people in power be individuals who do not desire to be leaders to prevent the abuse of power?

After this talk, they made small groups to exchange their experiences of these forms of power. Ludwig asked them to reflect on their strengths and weaknesses in being a leader.



Manage tensions when working in teams

Afterward, Ludwig had a talk about tensions and the need to be able to manage tensions when working in teams:

- sense of tensions
- collect tensions
- address tensions

He made a link between tensions and non-violent communication and criticized the term itself. Communication would always be about information transfer and relationship clarification. A message always comes in both layers and is received in both layers. The relationship layer always defines the interpretation of the information. Voice, tone, attitude (non-verbal communication) are sub-messages that impact how the information is transmitted.

What is a complete communication?

- Observation: What is causing tension?
- Feelings: What triggers these feelings in me?
- Need: What is important to me?
- Request: What could bring me closer?

During this process of communication, Ludwig insisted on the importance of following certain rules:

- Be present (in the situation).
- Be authentic (express your true feelings).
- Be empathetic (have a good understanding of your point of view but also seek to understand the situation your interlocutor is in).

This slide moment was then followed by a role play.

Day 3: A special day with introspective work on participants

How did you feel on that day? How did these exercises develop a sense of group and collaboration? Can you share your experience, if you wish, in a few lines?

Day 4

A.M

This morning, the workshop started with a little game to wake everybody up after last night's mulled-wine party at school. Then, Ludwig gave a presentation about "How to: critical feedback." To explain the value square concept in a more interactive way, he asked students to:

- Provide positive feedback to one another.
- Share a value they see in someone and its counterpart.
- Devalue someone's value (e.g., a flexible person => you are chaotic) to illustrate overcompensation, which can be a source of conflicts.

This lecture was supposed to be followed by an activity where students could experiment with giving and receiving feedback. However, due to a lack of time, they held a vote and decided to skip this activity in order to have more time to work on Friday's exhibition. Before returning to their exhibition teams, they did a quick activity to share the feedback they received yesterday.

P.M.

The afternoon was dedicated to project work, with students divided into teams working on a poster, a performance, and its script. One of the students was assigned the role of coordinating between the teams.





Divide the work between teams

Final presentation

The performance took place three times on the final day, which was dedicated to the presentation of all the workshops conducted throughout the week. It was accompanied by a poster that served as a take-away, containing the key reflections and insights generated by the students during the workshop.

The performance titled "*Why are you here?*" was a participative play that depicted a conflictual collaboration situation. The audience was actively engaged throughout the performance and was regularly invited to make choices on how to react to the unfolding situation. These decisions directly influenced the course of the collaboration.

The performance drew inspiration from forum theater, a technique developed by Brazilian theater director Augusto Boal as part of the Theater of the Oppressed (TO) methodology. However, the students chose to structure their performance as a multiple-choice experience, where the possibilities were somewhat constrained, rather than a completely open-ended play allowing for spontaneous action from the spectators.



A performance as a final presentation

Students' feedbacks on the international collaboration

The following texts are a short selection of transcripts from video interviews we conducted with students who participated in one or more workshops organized as part of the DTCC project. Our choice was focused on stories that clearly demonstrate some of the issues arising from the convergence of our three approaches to design and pedagogy. Each workshop, in its unique way, served as a stage in the collaborative learning process.

Ones and Zeros, Over-Humanizing, New Perspectives

Natsumi Nonaka (EKA)

What are the most interesting aspects of this cooperation between three countries?

The best part for me about this project was that I had the opportunity to participate in these five-day workshops with students from France and Germany. I usually study design in Estonia, and I was surprised to see that German and French students approach design in a very different way from how we do it in Estonia. At first, it wasn't always easy for me to adapt to their approaches. But as we worked together, I started to realize that there was a lot that I could learn from them. And in the end, I became grateful for our differences and was able to open up to trying new things. And I also think that this experience has helped me grow, and I am happy that we have been able to build such a good relationship between students from these three countries through this project. Overall, I really appreciated the workshops.

Do you have an anecdote of something you experienced during the project that stuck in your mind?

I have a moment that stuck in my mind, which was during the workshop in Germany. It's about the words of my team-mate from France. When we were designing a mouse pointer at the workshop, me and another team-mate, and first we were trying to make it look like a living thing, so that people would feel more affection for "their" mouse pointer. But the French girl told us: "I don't like humanizing the computer so much." Her words really struck me. She said that the computer is just a combination of ones and zeros, and that there is a risk of "over-humanizing" it. For example, smart home devices are so familiar to us that we take it for granted that they are in our homes. But in fact, a lot of personal information is collected by them without us noticing and companies are using that data to make more money. Honestly, I had never really thought about it. I only focused on designing things

that are easy to use and pleasing to their users. So, her critical attitude was quite eye-opening for me. I am grateful for her role in changing my perspective. That's why I strongly remember that moment.

What did you learn from the other partner schools and their approach to design?

I have learned a lot from the French and German students. Esadse, HfG and EKA each have very different approaches to design. I believe that French students prefer an organic approach. They follow their intuition rather than strict adherence to theories and enhance their understanding through hands-on activities. In contrast, I believe that the German students possess a strong understanding of design thinking and its methodology, and they strive to incorporate this knowledge into their projects. They are also quite good at time management. I think EKA's approach is somewhat similar to the German one. We usually proceed step by step based on the double diamond design process. The approach of French students was totally different from ours, so, at first, it wasn't easy for me to follow their way of working. But since I trusted their process and worked with them, I gained new perspectives. This experience meant a lot to me. I think it has also influenced my attitude towards design. And, of course, I learned a lot from the German students as well. Their project management abilities are exceptional, and I believe this is crucial for success in the real world. And I am also grateful for learning documentation and time management skills from the German students.

Intuition, Sketches, Reflections

Viki Schmidt (HfG)

What have you learned from our partner schools and their approach to design?

So, in general it was really exciting for me to see how people have a quite different mentality in France and that they have less structure, but it still works, and that this actually helped me in the end. Because at HfG in particular the way of working is much more analytical. And sometimes it is difficult to make decisions intuitively. And I think the trip to France reminded me of listening to my gut feeling again from time to time.

How did you students adjust to each other during this short workshop week?

Well, we were actually a group of two, so it was maybe a bit easier. But it was quite satisfying because we always sketched lots of things in order to come to a common understanding of what we both meant in that situation. So, in the end we had a big poster on which we had made lots of little sketches to communicate about small games that everybody knows but that may have different meanings or different names in the respective country. And yes, we adjusted a lot through sketches actually. I found that inspiring, because it demonstrated that if you visualize something, you can come to a common understanding much better, in communication in general and especially as a designer..

So drawing was a universal communication channel that worked for you?

Yes, and also as a starting point to share new thoughts.

Neutrality, Reappropriation, End in itself

Mathias Hû (Esadse)

What did you learn or observe in this project that you will take away for your professional or personal life?

I was able to do all three workshops, so I could have a different experience on each of them. That allowed me, mainly the first workshop allowed me to gain a lot of self-confidence in the sense that I had several times... How can I put it? In fact, it taught me to stand up for myself when I felt there were things that went against my principles. It also allowed me to dare to speak a lot more. And I know that since this workshop, I am more likely to stop letting things pass when they rush me or bother me or don't go well in a project. So that really did something for me in that sense. And I also learned a lot about methods, [specific] methods that were used [then].

Have you been able to combine different working methods in your group or did one method take over?

No, we haven't. Overall, it worked rather poorly, I think. Is it good or bad that it didn't work? I don't know that, but I have the impression that I have also learned that methods are not neutral in themselves and tools are also not neutral. And in fact, I realized that the tools that we are using, and the methods, they strongly shape our way of thinking and our way of working. We cannot separate the tools and methods we use from the way we use them. I could see and feel that strongly because [during the workshop], many methods were, well, not imposed on us, but suggested and from the moment we use them, they are very difficult to reappropriate. Because the methods have an influence on the rythm of the work, they prevent us a bit from getting out of a well-defined, straight line, like a train on rails. And it's true that as a result, it was a great opportunity for me to look into how these [design] methods work. Why do they make sure that other methods become obsolete, or in any case prevent us from deploying other methods? What

strategies can be adopted to manage to distort them, to transform them? So that was a bit like the personal approach I had in there. And yes, on the collaborative aspect, I don't think it's necessarily a failure, because it would be like putting a good or bad label on it, but it did not necessarily work as we might have hoped. But at the same time, I say to myself that collaboration is not an end in itself. It is rather a way of proceeding to achieve a project. As a result, I know that now I am a little more wary of people who want to collaborate at all costs before making good projects. That's it.

Equality, Differences, Progress

Sigmund Abou Chrouch (EKA)

What are the most interesting aspects of this cooperation between three countries?

My initial observation is that the students from all three schools hold a particular perspective or inclination [towards design]. Regarding the French students, I observed that they uphold the principle of equality for all. Everyone needs to be considered. Moreover, during our workshop encounter, I learned from them that design or design thinking does not always work as intended. At times, we may need to delve deeper into imagination, while at other times, we need to be more grounded in humanity. The students from Germany employ a linear design process, following a structured approach from A to Z, in a very organized way. Thus, from them, I gained insights into being well-organized, while from the French students, I learned about the importance of imagination and the value of taking a human approach instead of always following the crowd. The German students taught me to work in an organized manner and also to think in an organized way. From my friends at EKA I learned the importance of being receptive "like a sponge", as they communicate and gather insights from everyone. They taught me to actively listen and strive to understand before taking any subsequent actions.

Can you describe the best and the worst moments during these workshops?

Why was it [workshop in Tallinn] the best and worst moment? Because we all had diverse backgrounds and varied approaches to reasoning. I believe that the students from EKA and Germany share a similar way of thinking, but we were already in the middle of our semester project and we started designing and putting ideas together. We noticed that the students from France seemed somewhat detached and hesitant towards our approach to work. This resulted in an unstructured and sometimes immature discussion, with arguments being presented in a

random and chaotic manner, causing our voices to raise, and highlighting the differences in our perspectives. However, despite our differences, we were able to eventually converge on a single idea. We were able to do this by actively listening to each other adjusting our thoughts and identifying the positive aspects and opportunities in each other's perspectives, which allowed us to work collaboratively towards a common goal. We were able to leverage our collective strengths and generate more interaction, all in line with the theme of our overall subject, which is Digital Collaboration.

Contribution, Complications, Perspectives

Alféa Morelli (Esadse)

Can you describe the best and/or the worst moments during this workshop or any workshop?

During the first workshop, there was a pretty cool moment when we formed our teams and where we introduced ourselves and the expectations we had for the workshop. And to realize that there were other people that, especially the person with whom I later worked, who was from Estonia, who really wanted to work on the same things as me, but with a very different point of view. [He wanted] to do it because it was a workshop and he wanted to do things a little less as usual, he was curious to experiment. And instantly, we both had the feeling to be able to contribute something to the work of the respective other person. And that was really cool. On the more complicated moments, those were more about ways of working since we are used to super different processes, especially during the second workshop where we were in a group with two persons from my school and two from the German school and they would work (on the project) according to protocol in a very method-based way, with a very defined process, whereas we felt the need, to discuss things more freely, and that was painful for them to discuss freely because they were so used to their methodical protocol. So, there was a day when we really struggled to just get along and succeed to produce something that suited everyone. That was the most complicated.

What was interesting for you about collaborating with someone who works in a very different way?

I found it very interesting that, even during times when it was super complicated because working methods were incompatible on certain points, it pushed us to do things that we really were not used to and we had to get out of our comfort zone, even when that meant to do things that do not put us in a very creative position and where we will not get

to produce something that we actually like, to just change our point of view on how we work. And that was super fun in the end, even if at the time it was difficult, in hindsight. I really feel that I have reevaluated my own way of thinking and working. And it is satisfying to have succeeded in doing so and that was quite productive from this point of view: I now reconsider things in a different way and, even if I don't apply the methods that I have seen during the workshop in Germany, I have reached a broader perspective on different ways of working.

Designing Tools for Creative Collaboration

In this chapter, our aim is to delve into our approach to designing tools for creative collaboration within the context of our schools, while also considering the perspective of professional designers. This unique perspective provides valuable insights on how to prepare students for their lives "beyond the classroom".

Firstly, we will revisit two workshops that took place at HfG Schwäbisch Gmünd. These workshops specifically centered around the design of alternative communication tools and their interfaces, such as video-call software and mouse pointers for simultaneous collaboration. As we initially approached the topic of digital tools for collaboration in art and design, our focus was on the tools utilized within our schools and by professionals for remote collaboration, which became increasingly prevalent during the pandemic when in-person meetings were not feasible. These communication tools primarily fall within a broader category that is not exclusive to the creative field, representing only a limited spectrum of what currently exists and what could be imagined for creative collaboration tools. Through our exploration of digital technology within our own practices, we came to realize that while improvements could certainly be made to these tools, what we truly yearned for during times when physical meetings were not

possible were creative devices for collaboration and the ability to create together.

With the rise of international collaborations, telework, and remote education, facilitating remote creative collaborations has become a significant challenge and objective for digital product companies. However, it's important to note that the exploration of online creative collaborations predates lockdowns and has been an ongoing endeavor since the advent of personal computers. This very issue forms the foundation of the Free/Libre and Open Source Software (FLOSS) culture, which emphasizes collective practices of creating, improving, repairing, maintaining, and forking tools.

Furthermore, many artists and designers, either through their programming skills or in collaboration with programmers, are actively opting to code their own tools as a means to break free from the restrictions and costs associated with proprietary software. This approach allows them to adopt a holistic perspective on technology, which we believe holds significant value in teaching our students. The second part of this chapter focuses on Nolwenn Maudet's insightful reflection on the development of collaborative tools created by graphic designers as alternatives to proprietary software, with the aim of overcoming creative limitations.

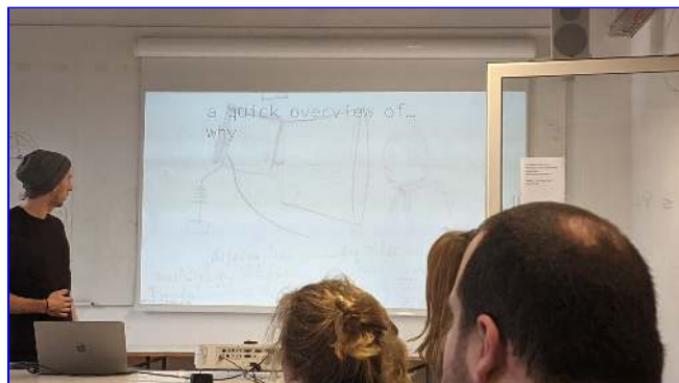
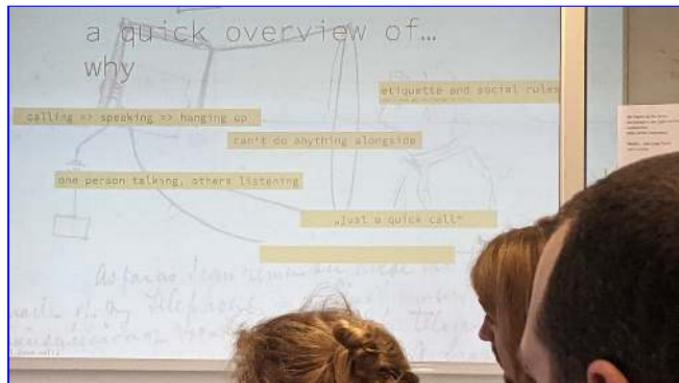
What emerges from these predominantly collective practices are often context-specific tools. One particularly intriguing aspect of some of these productions is their ambiguous status---they exist as both artworks and tools. To provide further insights into the design practice of creating tools for creative collaborations, we have included an article by designer Sarah Garcin, who shares her interactive and collaborative experiences. This text will be featured on ourcollaborative.tools, an online platform that serves as a participatory catalog of collective artistic digital projects. Designed to be utilized, enriched, and refined by students, artists, designers, and researchers alike, we will provide a comprehensive description of the platform and its objectives at the conclusion of this chapter.

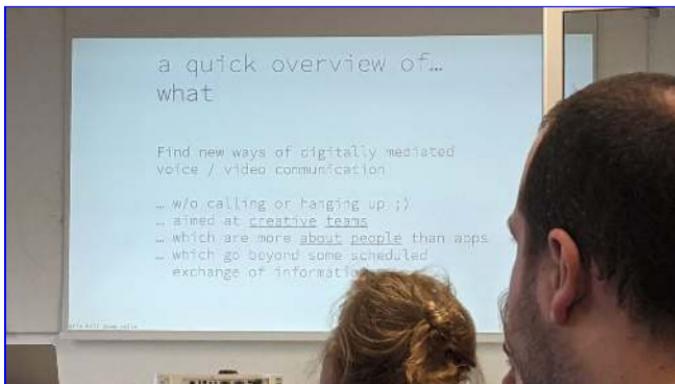
Let's kill zoom calls : HfG's workshop, 21-22 November 2022, Schwäbisch Gmünd (GE)

Florian Geiselhart, a computer scientist and former temporary professor at HfG, played a significant role during the pandemic by creating hfg.design 1.0, a teaching platform. Currently, he is actively working on the development of the 2.0 version. Florian not only provides technical guidance to students but also offers design support throughout their projects.

A quick overview of...

Florian discussed the tools we utilize for remote collaboration, highlighting that most collaborative tools are designed for productivity rather than creative work. We cannot deny the limitations of platforms like Zoom when it comes to fostering true creative engagement. We can't argue on Zoom.





Florian present the week workshop

We collected several thoughts regarding Zoom:

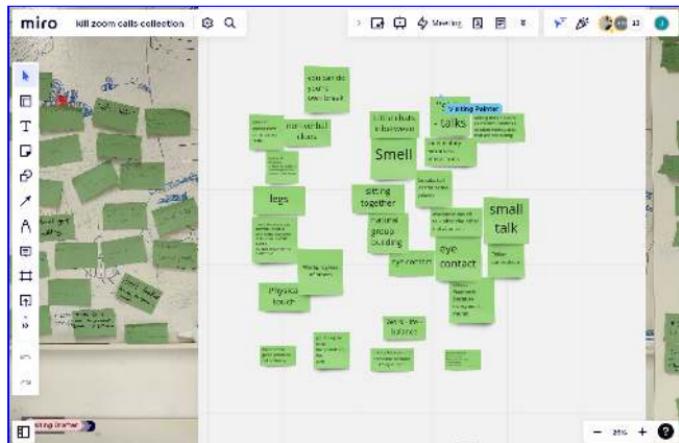
- Communication is constantly active on Zoom, not on-off.
- It enables us to be together despite physical separation.
- What about non-verbal communication when we are not speaking?
- Many conversations often happen simultaneously.
- How can we share emotions and atmosphere, not just information?

Following that, we played a game to break the ice: Two truths and a lie.



Making teams

Each student wrote down their thoughts on a piece of paper regarding the various topics related to video calls discussed during the initial days. Here is an excerpt of the ideas compiled:



Some notions on Miro

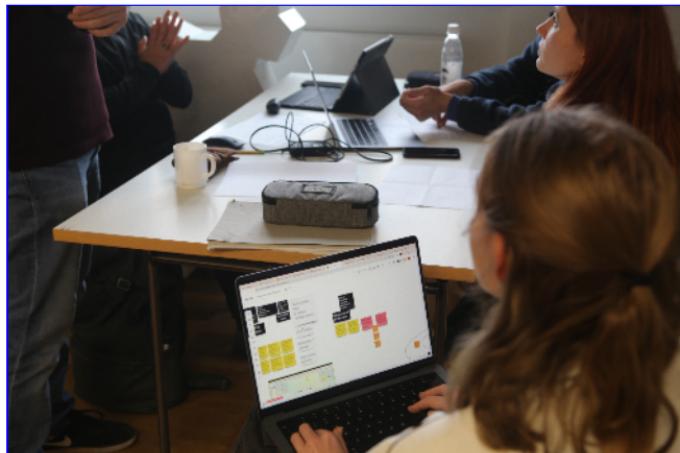
- You can do your own break when working remotely.
- You can't really assess how other person feels.
- Non-verbal clues are important.
- Feelings of closeness or distance to others depending on their location in the room is absent via Zoom.
- Legs are hidden.
- "Synchronization" between people when someone is talking, is easier to avoid speaking at the same time.
- How to have a view on work progress of others?
- Physical touch is missing.
- Getting up to stick the post-it notes to an absent wall.
- The truth/lie game wouldn't be so funny on Zoom.
- Small chats in between meetings.

- Smell of a room.
- Sitting together.
- Side-talks.
- Seeing the emotions (gestures/mimics) of other participants that are not talking.
- Rudimentary extra-class interactions.
- Breaks (all at the same place) are missing.
- Everyone would talk to each other's after a IRL meeting, not as a whole group.
- Natural group-building.
- Small talk.
- Chilled atmosphere.
- Eye contact.
- Direct feedback because everyone is muted.
- Work/life balance.
- Being in the same environment/experience the same environment as the others.

After collecting our ideas, we formed the groups by deliberately mixing the students, primarily based on their areas of interest as much as possible.

Teamwork

After first day ended, the rest of the week was dedicated to work on teams' projects that were presented at the end of the international workshop week in HfG.





Working session in teams

Projects made by students

Echo

Maëlys Bard, Alféa Morelli, Lars Dörper, Maximilian Becht



echo is a 2D virtual environment that allows users to move around in a video-call space. We focused on the spatial and sonic aspect of group work by imagining that it would be possible to move closer to the people you want to listen to and further away from others rather than mutating to simulate the sensation of sharing a space with other people. In *echo*, users can interact with each other in many ways such as sharing a presentation, activating magnetism to automatically follow the person as they move, or teleport to each other. The idea of this project is to get away from the strict and static aspect of the grid

Who is this tool for?

Our software can be used by creative teams that need to work remotely, by groups of friends or by companies, mostly large groups.

What type of collaboration is it for (synchronous/asynchronous, collaborative/cooperative/participative)?

On *echo*, you can work alone while maintaining direct contact with your colleagues, collaborate simultaneously as a team, or simply present your work and hold meetings. It's a versatile tool that supports various types of collaboration

How does it impact the collaboration?

We designed *echo* as a way to maintain a connection between individuals, immersing them in the same environment to foster a sense of closeness and unity, which are crucial elements in collaboration.

How did we come up with this idea?

First, in collaboration with other groups, we identified the problems encountered with Zoom, as well as the elements we would have missed if the first day of the workshop had taken place through video calls.

Our group focused on the following key aspects:

- Non-verbal clues
- Small talk/side talk
- Sensing the vibe of the other collaborators
- Local separation
- Chilled atmosphere
- Sharing the same environment/experiencing the same environment as the others

From those points, we arrived at the realization that the most effective way to enhance the dynamism of a video call would be to introduce movement. This led us to the decision of eliminating the grid entirely. Applying the "morphological grid" method, we explored various potential actions to break free from the constraints of the grid. This exercise generated numerous ideas, and we had to carefully consider the form our project would take for the final presentation three days later.

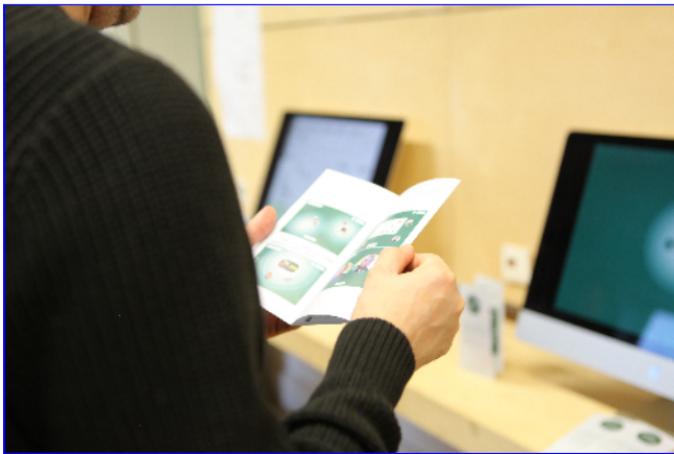
Why is it better than Zoom?

Zoom avoids the sensation of forming a group by freezing us in one place and removing the sensation of being in space in relation to others. With *echo* the videocall experience is more human and interactive.

What other existing tools could it be compared to and why is it different?

echo shares similarities with Spatial Chat as both platforms employ a sound spatialization system. However, *echo* distinguishes itself by offering a more minimalist and sensitive approach. While Spatial Chat attempts to replicate a sense of reality, *echo* focuses on creating the sensation of being part of a team rather than just occupying a virtual open space.





Echo, Final presentation

eyesync

Leoni Stein, Enis Sentürk, Philipp Roser

First, we began asking ourselves why eye-contact was not working and why it was necessary for us. Soon we found out that side conversations have a huge impact on the authenticity of meetings.

Why we have no eyecontact during zoom calls

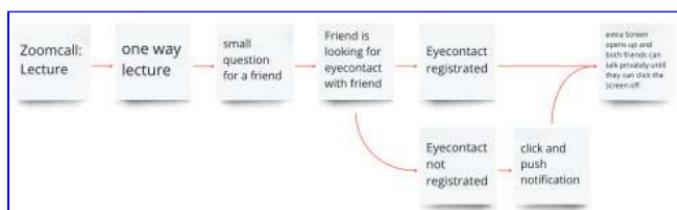
- You see everyone at the same time
- You look at yourself
- You don't know if someone is looking at you
- Every device has a different grid (of people)
- Sometimes the camera is off

Why do we need it?

- For direct feedback
- For inclusion
- For when you need to stay focused
- For emotional connection
- To feel spoken to
- To feel heard

"How might we" questions

- How might we make someone feel listened to?
- How might we show two people that they look at each other?
- How might we solve the problem of having side conversations without disrupting the host?



The technology we want to use is called eye tracking. For this we use an API called *webgazer*.



Eyesync, logotype

re.act

Roman Samarskyy, Sarah Fütterling, Tobias Reinhart



What is this tool for?

re.act is an online meeting tool that enables participants to engage in conversations based on their virtual location within a room. It allows you to express your emotions and reactions to ongoing discussions throughout the call.

Who is this tool for?

The tool is designed for any kind of project group, teaching situations and teams that require simultaneous collaboration.

What type of collaboration is it for (synchronous/asynchronous, collaborative/cooperative/participative)?

It is for real-time collaborations.

How does it impact the collaboration?

It makes it easier to connect with other people in the room.

How did we come up with this idea?

The goal of the workshop was to reinvent digital communication and kill a certain aspect of Zoom calls that was particularly annoying to most of us.

We decided to focus on enhancing the ability to express reactions because in a video call, it's challenging to convey your immediate response to something that occurs during the call, unlike in a physical room where others can hear your laughter or comments. We aimed to provide a solution where participants can express their reactions without disrupting the entire call or having them go unnoticed.

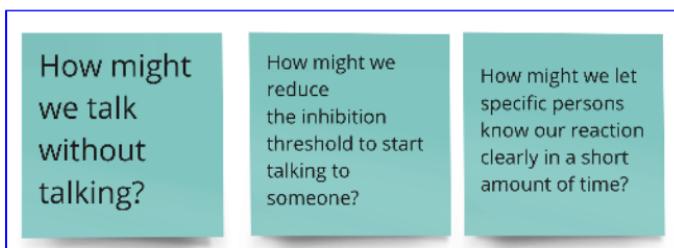
We began our project by collecting 'How might we...?' questions and systematically deconstructing them. We started by asking ourselves, 'Why do we want to do this?' and continued to delve deeper by answering the question and subsequently asking ourselves 'Why do we want to do this?' again. Additionally, we explored another perspective by inquiring, 'What's stopping us from doing this?' This approach helped us identify and understand the underlying problems.





re.act, researchs

Finally, we were able to summarize our findings in the following questions:



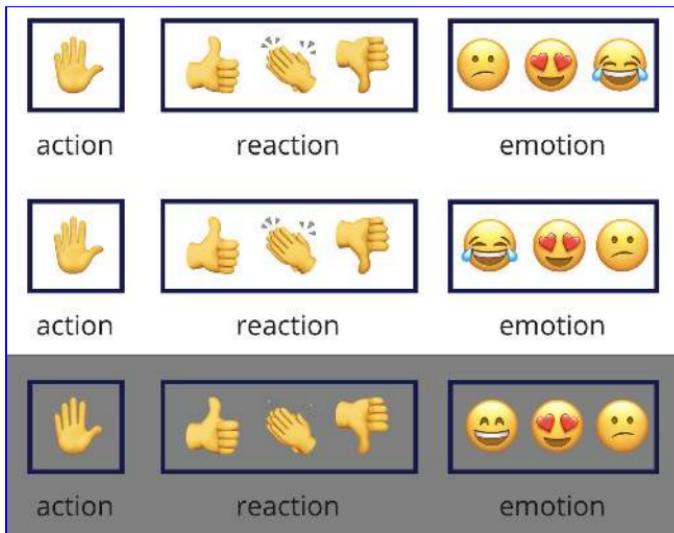
We then conducted competitor analysis by researching other tools that allow users to send reactions.



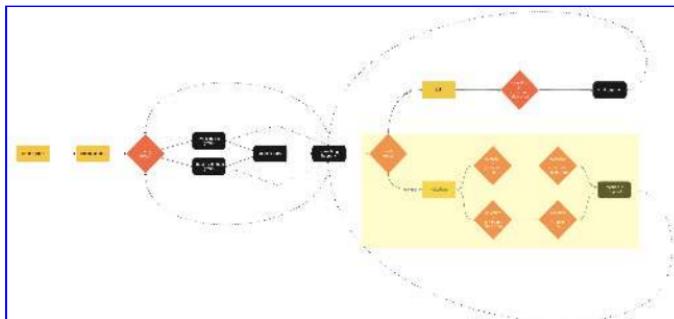
Most of these tools enable users to send emojis as reactions. We then proceeded to analyze numerous emojis, aiming to identify the ones that carry the most universally recognized meanings.



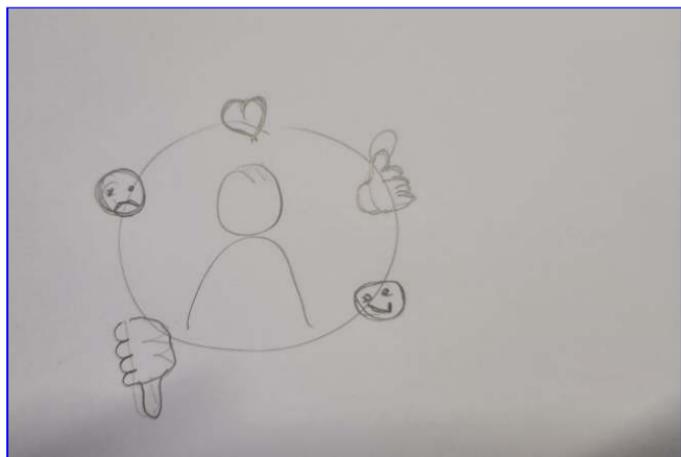
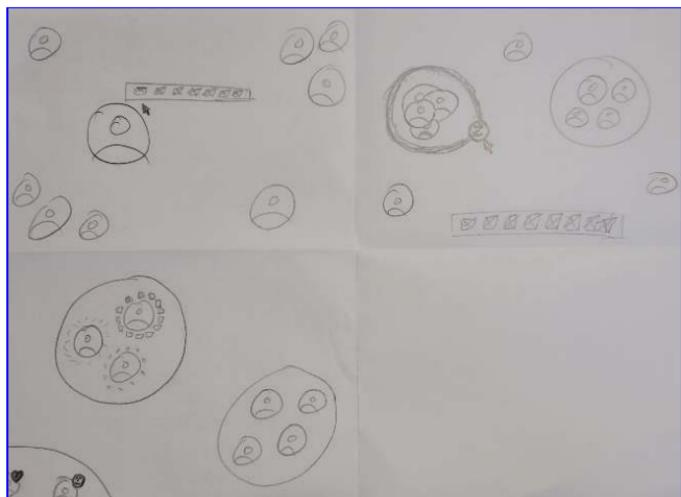
Since most emojis have multiple meanings and can be easily misunderstood, we embarked on a process to determine the most important ones and their specific applications. After extensive discussions, we carefully selected a small set of reaction emojis that we identified as crucial. These emojis are categorized into three groups: action, reaction, and emotion. The final set is visually represented with a grey frame.

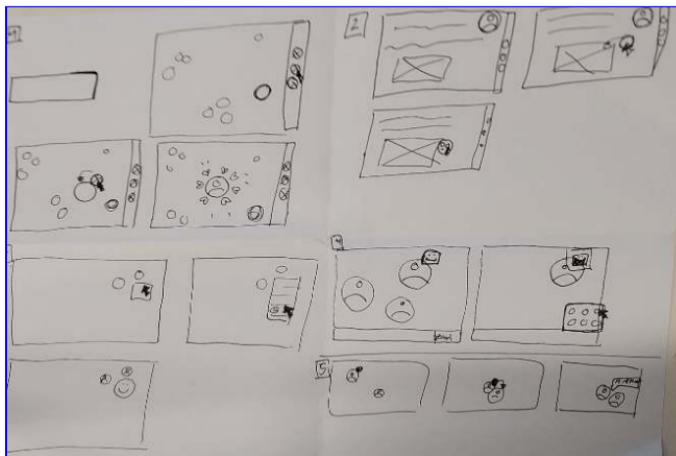


The next step involved creating a concept that could be transformed into a prototype. To achieve this, we developed a flowchart that illustrates the process of sending reactions and provides an overview of how our digital meetings function.



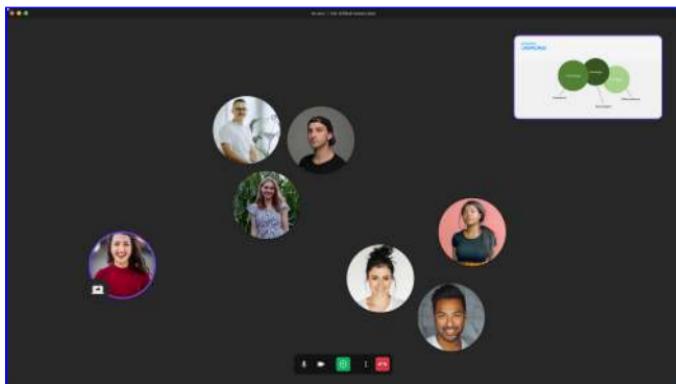
Then we sketched out first ideas of what our interface and reaction process could look like visually.





re.act, mockup

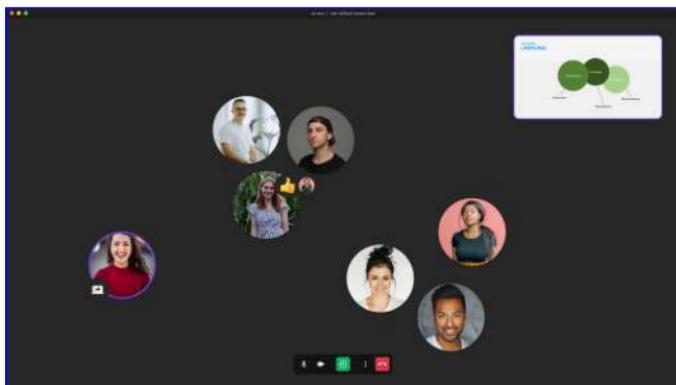
Our result is an online meeting tool that allows you to move freely in the room and therefore to pick a seat and seat neighbors. You can talk to the people you sit close to and hear those further away too but more muted.



You can send reactions to a specific person, a group of people or the whole room depending on where you drop the emoji after you dragged it out of your selection.



You can receive reactions as well, and like any other tool it allows you to do all that while listening to a presentation or watching a shared screen.



re.act, interface

Why is it better than Zoom?

It offers a superior experience compared to Zoom as it closely mirrors the dynamics of an in-person meeting. With numerous opportunities to choose your actions, such as selecting your location in the virtual room and deciding with whom you interact and share your reactions, it provides a more immersive and realistic meeting environment.

What other existing tools could it be compared to and why is it different?

The tool uses all of the basic features that Zoom offers too but has extensions that are connected to the real world. It is similar to the app "wonder" which lets people walk to different places and chose their talking partners as well.

Collaborative interaction patterns: HfG's workshop, 21-25 November 2022, Schwäbisch Gmünd (GE)

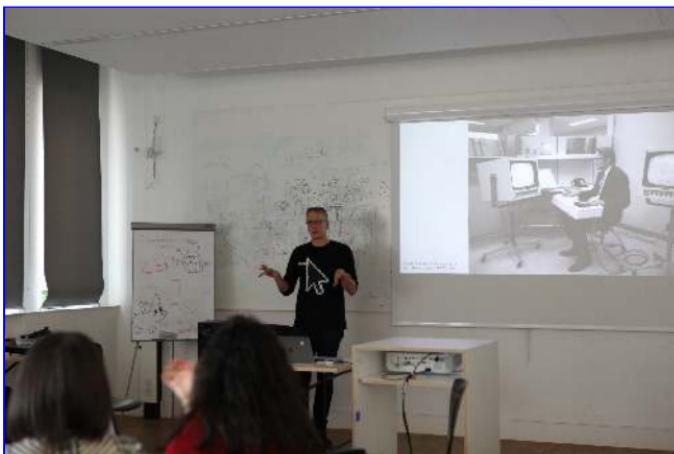
Do the tools we use take on a different form when we create as a group of people on the computer?

Personal computers were originally designed for individual use, with established human-machine interfaces like the mouse or keyboard. These interfaces, represented on the screen as mouse pointers or text cursors, have undergone gradual changes over the past 50 years. However, with the rise of web-based tools, we now have the ability to collaboratively edit documents in real-time with others. Tools such as Figma, Miro, or Google Docs display the presence of team members on the screen, but is this the ultimate culmination of development? What other input patterns could be possible and useful?

To explore these possibilities, Marc Guntow, an HfG teacher, organized the workshop "Collaborative Interaction Patterns," inviting students to investigate input patterns in team situations and visualize their ideas through prototypes and simulations.

Marc Guntow's Talks

During the first days of the week, each working session started with an introductory talk by Marc Guntow who is leading the workshop

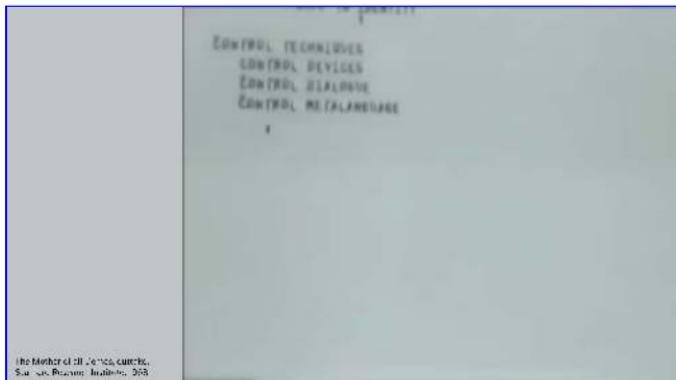




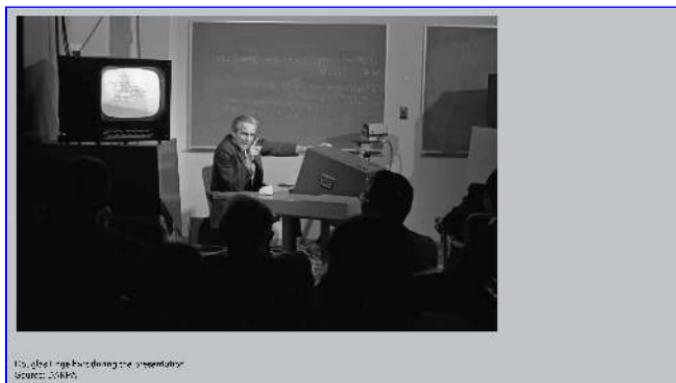
Marc present the workshop

A Brief History of Mouse Pointers

Mouse and Mouse Pointer have been around for a very long time. Famously they were introduced by Douglas Engelbart in his later so-called *Mother of all Demos*.



Engelbart performed during the joint Computer Conference of the Association for Computing Machinery and the Institute of Electrical and Electronics Engineers (ACM/IEEE) in San Francisco in 1968.

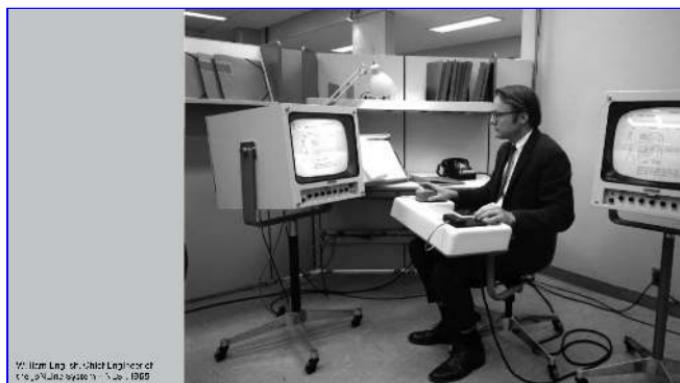


Douglas Engelbart during the presentation
SOURCE: ZUMA

The original title of his conference was *A Research Center for Augmenting Human Intellect*.

Not only the mouse, but also the desktop metaphor, the videoconference, the conference call, the electronic mail and the hypertext system were displayed to the audience. That was in 1968. Engelbart's presentation was the first to publicly demonstrate all of these elements in a single system. The demonstration was highly influential and spawned similar projects at Xerox PARC in the early 1970s. The underlying concepts and technologies influenced both the Apple Macintosh and Microsoft Windows graphical user interface operating systems in the 1980s and 1990s.

Computers go from text input to graphical input. Therefore, a new input device was needed.



In 1967, Douglas Engelbart registered the patent for the first computer mouse. This early version of the mouse was a simple wooden box with two metal wheels and a single button. Meanwhile, the Rollkugelsteuerung, a similar input device, had been under development since 1965 as part of a contract with German air traffic control to track aircraft positions on radar screens. Although the Rollkugelsteuerung was not utilized for its intended purpose, it was repurposed as a peripheral device for Telefunken's mainframe, which was released in 1969. However, it was quite expensive, costing 5,200 Deutsche Marks (equivalent to 10,300 euros today). Interestingly, the idea of the mouse was published in a Telefunken magazine two months before Engelbart's

demonstration. A patent application was made but ultimately rejected due to "insufficient inventiveness."



left: Teletype machine prototype, developed by William Teletype, 1940

right: Teletype's teletypewriter, 1942 ICA, 1942

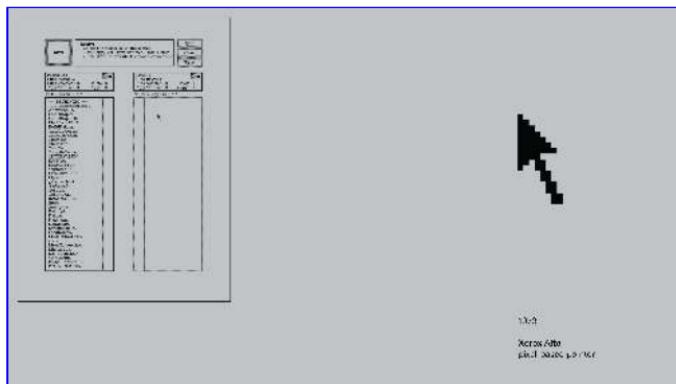
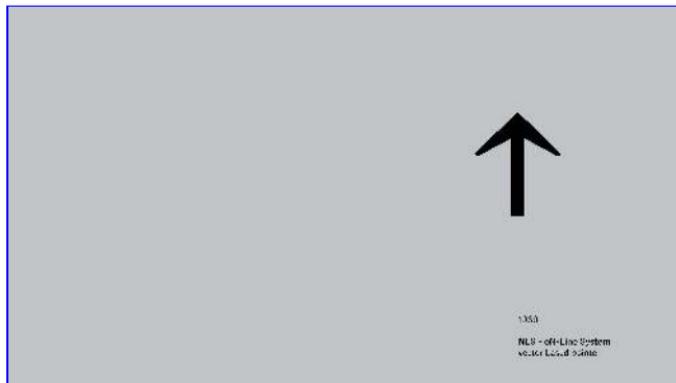


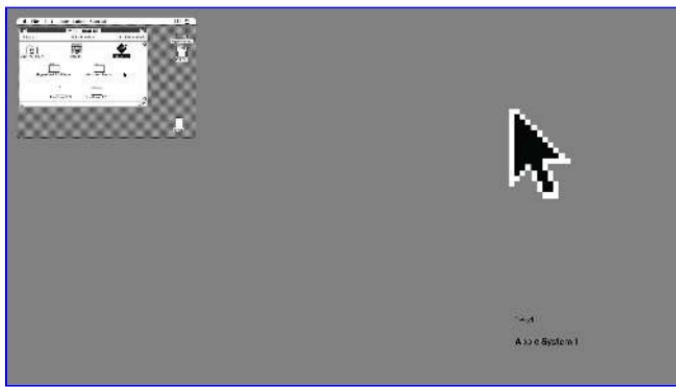
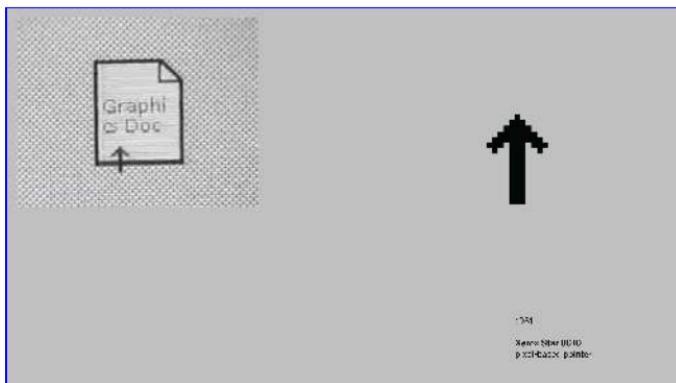
left: Smith-Corona Teletype Model 10, type input, 1942

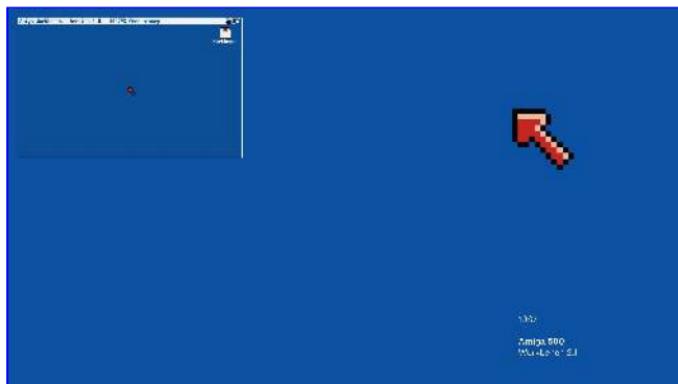
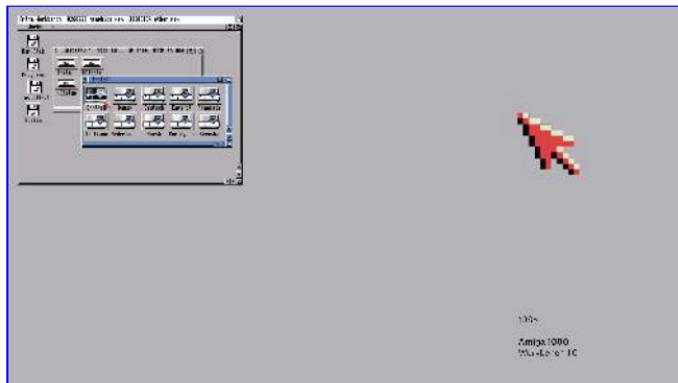
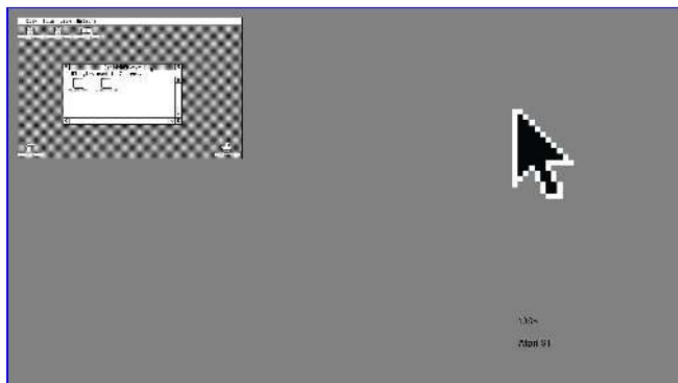
right: Teletype card reader, 1947 ICA, 1947

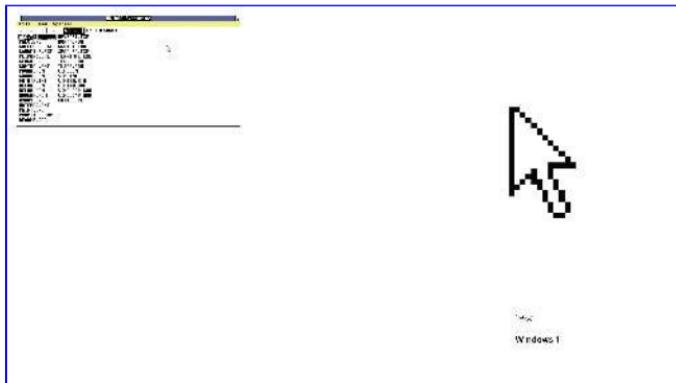
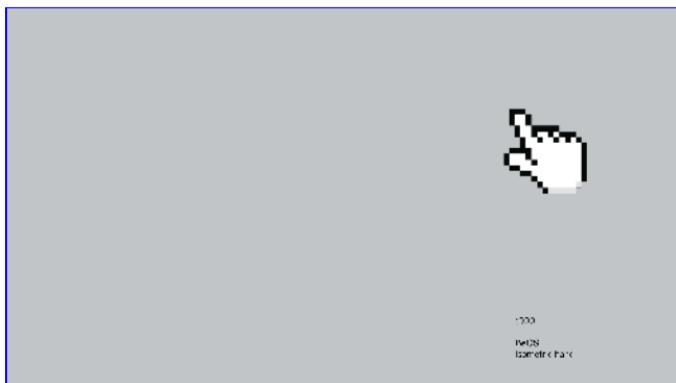
But we do not want to talk about and work on hardware this week...
But rather about their graphical representation and behavior.

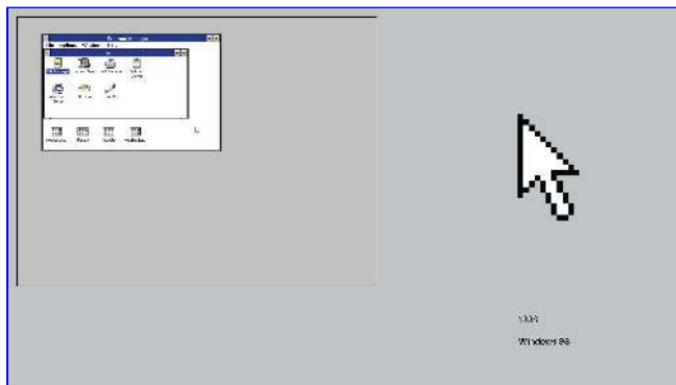
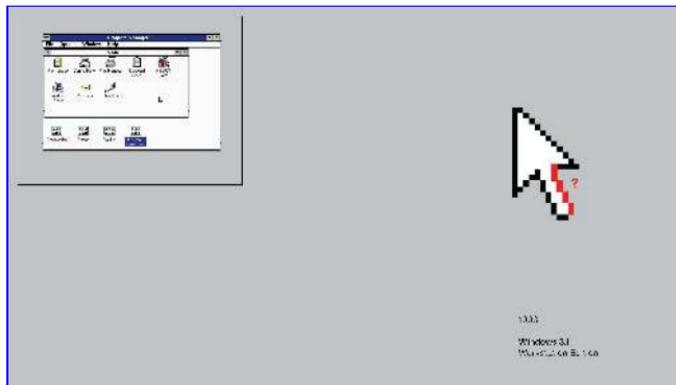
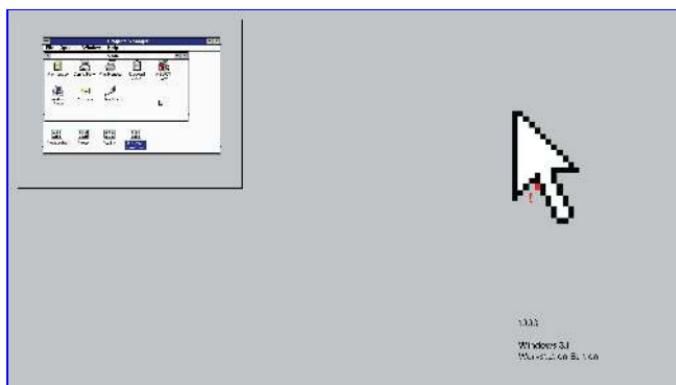
The Evolution of Mouse Pointers Through History

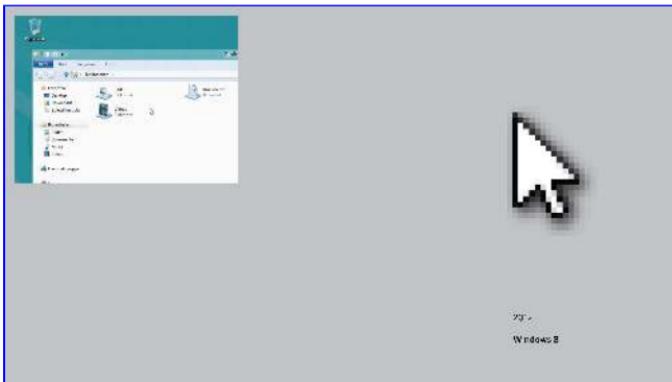
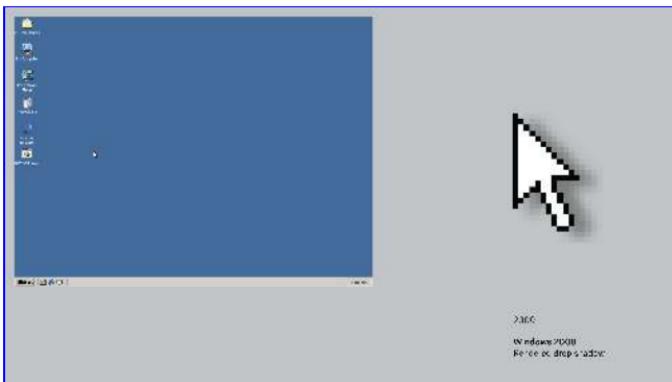


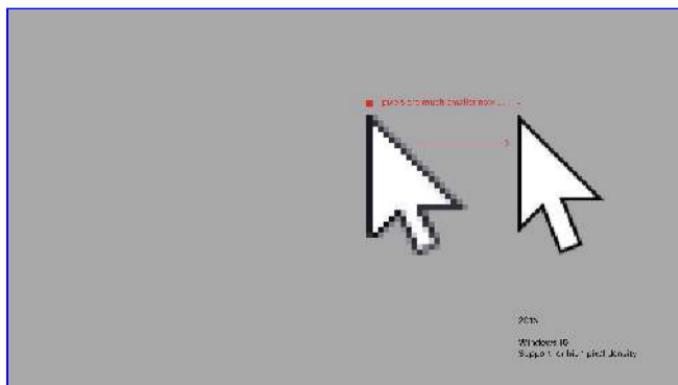
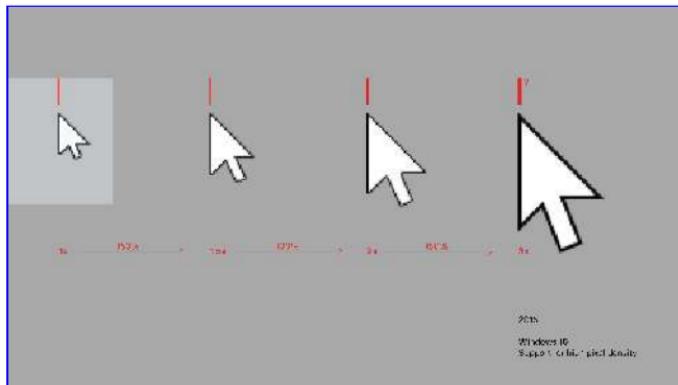
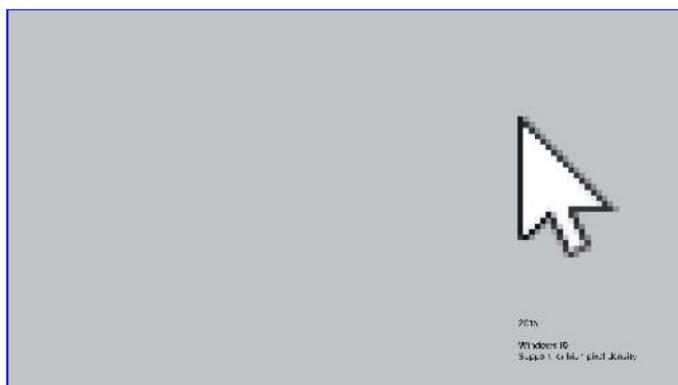


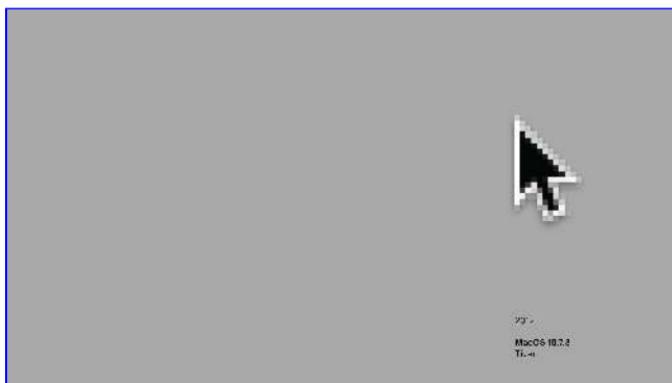
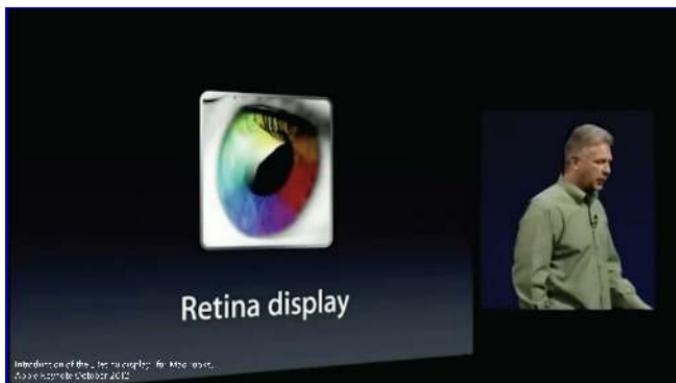


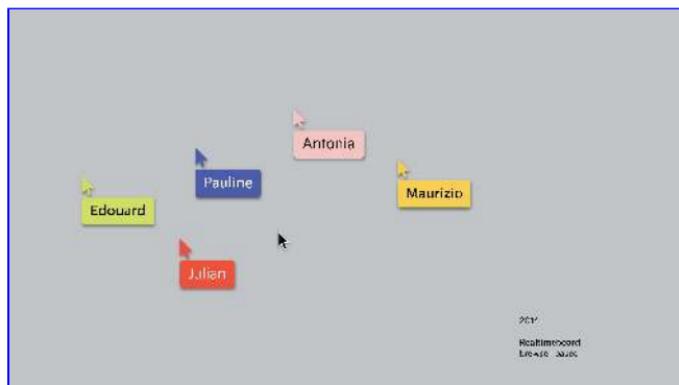
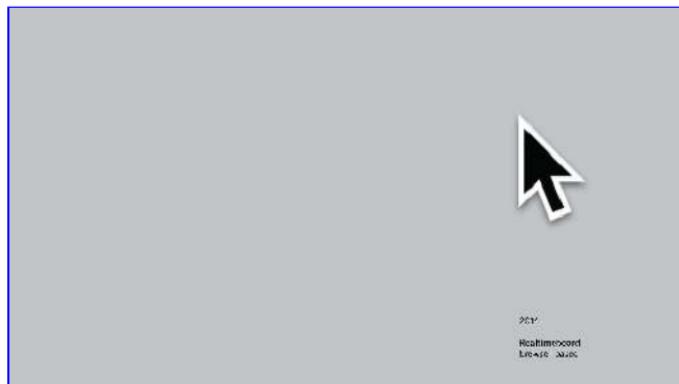
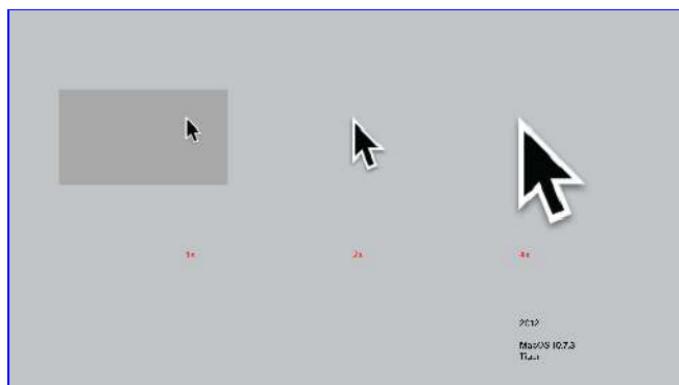


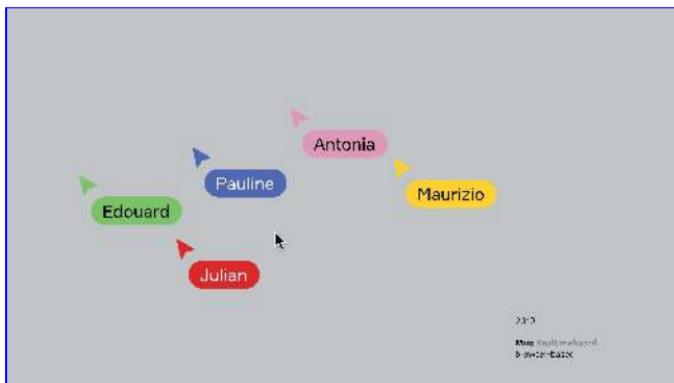


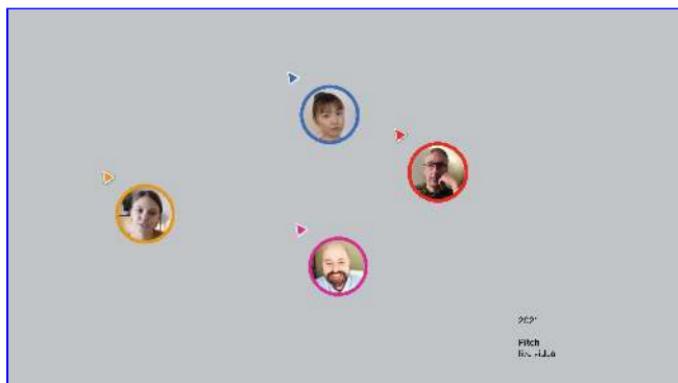
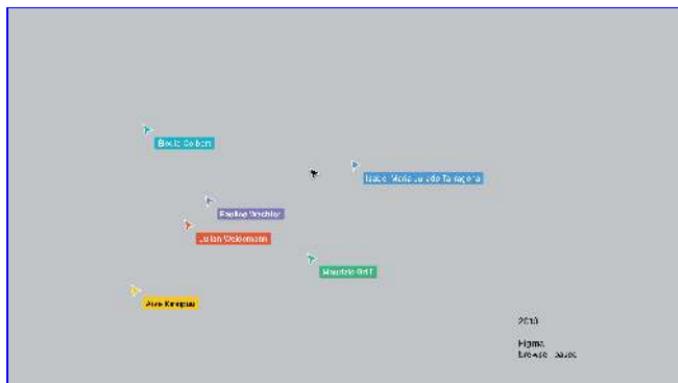








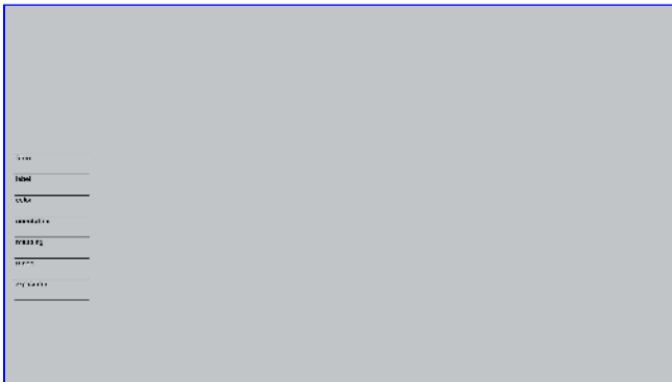




A Brief History of Mouse Pointers

Morphology

The morphological box is a heuristic creativity technique after the Swiss astrophysicist Fritz Zwicky (1898-1974). For a given question, determining parameters are defined and noted vertically. Then possible expression for each parameter is noted horizontally. This creates a matrix which displays all possible solutions. Then for each parameter one expression is selected, resulting in a combination of expressions -- one single solution.



	angle/size
size	size/area
cent	center
color	black/white/light
whether	whether/whether not
position	left/right/center
shape	rectangle/oval/circle
size/size	large/small/big/medium

1 possible solution

6 possible solutions

	application	status	possible solutions	
item	description	status	order	date
test	test	test		
code	fix code	in progress		
model	train model	in progress		
process	process	in progress		
ui	ui	in progress		
api	api	in progress		
database	database	in progress		
pk	pk	in progress		

	digit/char	value/char	min/char	max/char	freq.	val.	value/char	min/char	max/char
first	0-9	0-9	0-9	0-9	1	0	0-9	0-9	0-9
middle	0-9	0-9	0-9	0-9	1	0	0-9	0-9	0-9
last	0-9	0-9	0-9	0-9	1	0	0-9	0-9	0-9
total	0-9	0-9	0-9	0-9	3	0	0-9	0-9	0-9
possible	0-9	0-9	0-9	0-9	36	0	0-9	0-9	0-9

The solution space gets exponentially bigger with an increasing number of parameters.

216
possible solutions

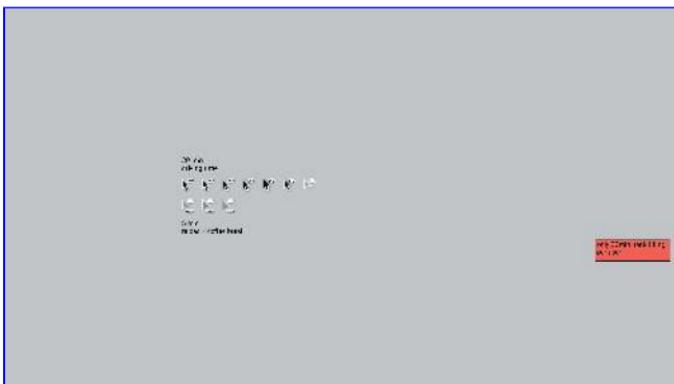
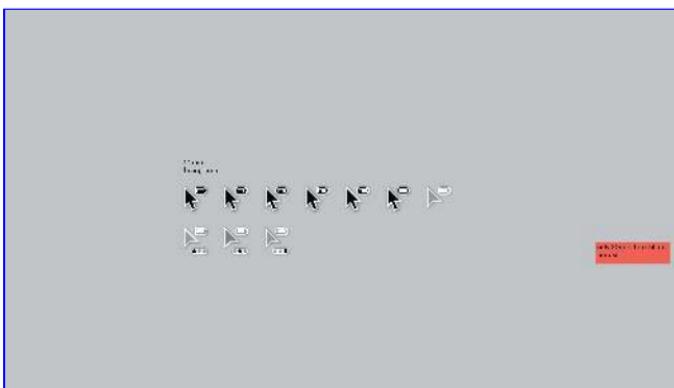
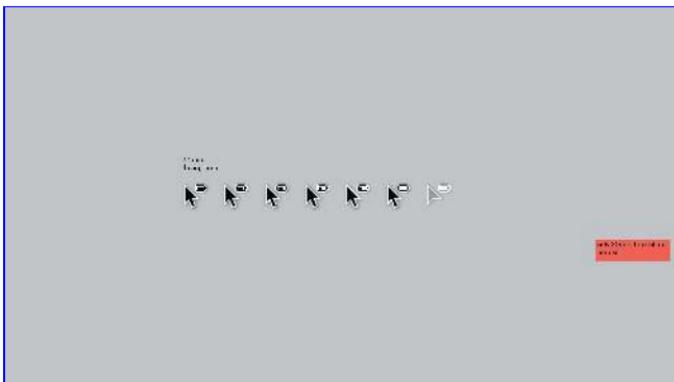
1.679.816
possible solutions

	digitizer	radii user	radii calc	Y-axis	X-axis	order	area
size	Größe 10x12	Absp. 500 mm	Absp. 220 mm	Y-axis	X-axis	order	area
text	text	text	text	text	text	text	text
circle	Radius 100 mm Mit dem Mauszeiger die Kreisfläche markieren	Radius 100 mm Mit dem Mauszeiger die Kreisfläche markieren	Radius 100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
rectangle	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
triangle	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
pentagon	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
hexagon	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
octagon	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
circle	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area

This is a first solution generated by our morphology. Thus, a morphology can be seen as an algorithm generating possible solutions in our solution space.

Solution A

	digitizer	radii user	radii calc	Y-axis	X-axis	order	area
size	Größe 10x12	Absp. 500 mm	Absp. 220 mm	Y-axis	X-axis	order	area
text	text	text	text	text	text	text	text
circle	Radius 100 mm Mit dem Mauszeiger die Kreisfläche markieren	Radius 100 mm Mit dem Mauszeiger die Kreisfläche markieren	Radius 100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
rectangle	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
triangle	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
pentagon	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
hexagon	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
octagon	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area
circle	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Größe 100x100 mm Mit dem Mauszeiger die Kreisfläche markieren	Y-axis	X-axis	order	area

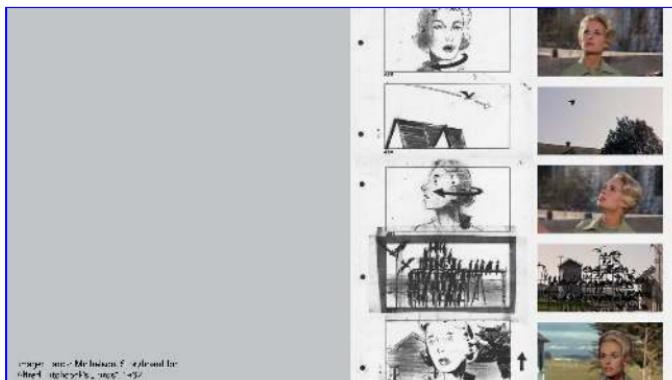


Some attributes can be interdependent.

Solution B

	Employee	Job Title	Address	City	State	Zip	Country	Phone
First	John	Analyst	123 Main St.	Anytown	CA	90210	USA	(555) 123-4567
Last	Jane	Analyst	123 Main St.	Anytown	CA	90210	USA	(555) 123-4567
Role	Analyst	Analyst	123 Main St.	Anytown	CA	90210	USA	(555) 123-4567
Model ID	10000001	Analyst	123 Main St.	Anytown	CA	90210	USA	(555) 123-4567
Address	123 Main St.	Analyst	123 Main St.	Anytown	CA	90210	USA	(555) 123-4567
City	Anytown	Analyst	123 Main St.	Anytown	CA	90210	USA	(555) 123-4567
Position	Analyst	Analyst	123 Main St.	Anytown	CA	90210	USA	(555) 123-4567
Ok								

Storyboards



Storyboards are used to visualize screenplays and plan individual film scenes with sketch-like representations before shooting begins. The finished screenplay is translated into images for the first time in the storyboard and enriched with the concrete design such as perspective, viewing angle and size of settings.

The invention and use of storyboards dates back to Disney Studios. The storyboard is related to the comic strip in terms of structure and use as a visualization of narratives.



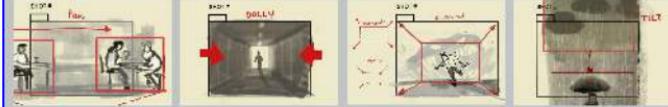
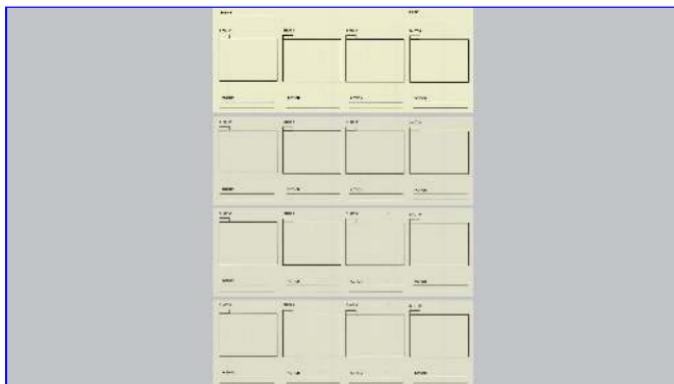
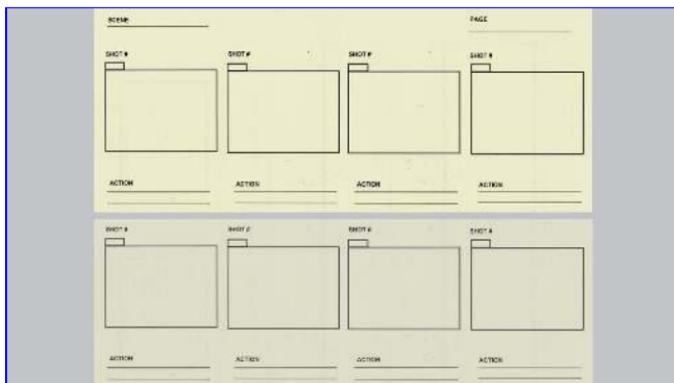


Image direction 1

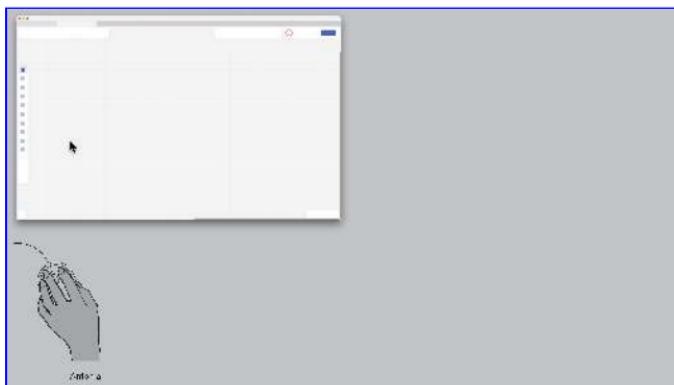
Image direction 2

SHOT #	SHOT #	SHOT #	SHOT #	PAGE
<input type="text"/>				
ACTION	ACTION	ACTION	ACTION	<input type="text"/>
DIALOGUE	DIALOGUE	DIALOGUE	DIALOGUE	<input type="text"/>
PR	AE	PR	EX	<input type="text"/>

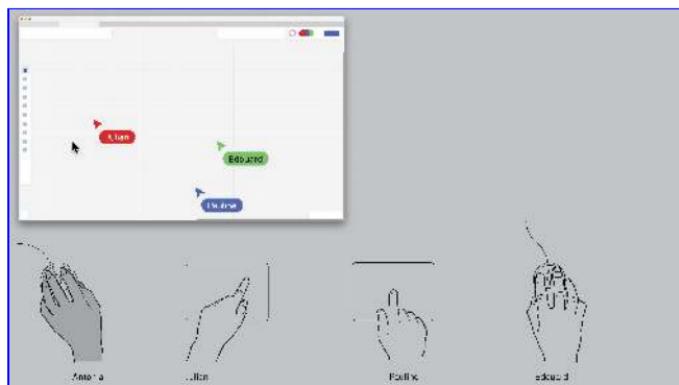
If we draw out storyboards for collaborative situations, we will have to look at each user's perspective separately.



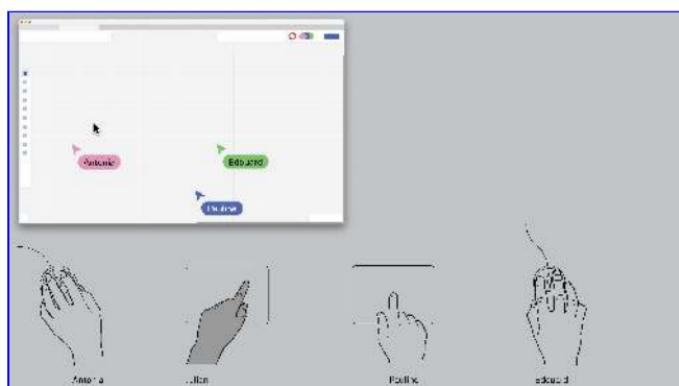
Antonia is using a web-based application.



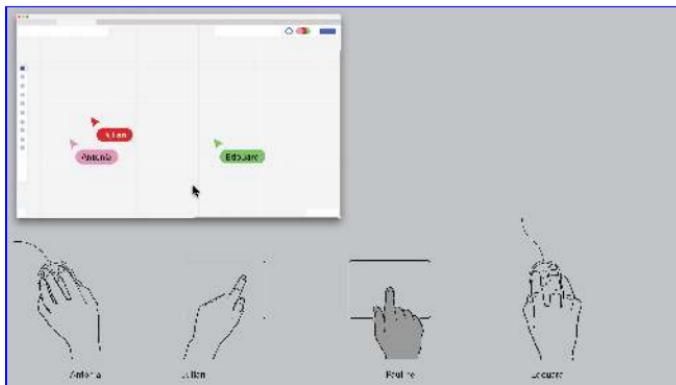
Together with three other users. Those users are identifiable (by color, name tag, etc.)



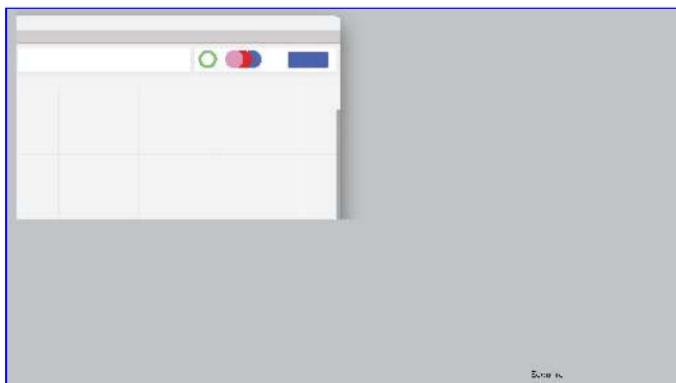
Notice: Julian has a different view. His cursor is now the system cursor.



And so on for Pauline...



There is also a convention of minimized status displays for present users.



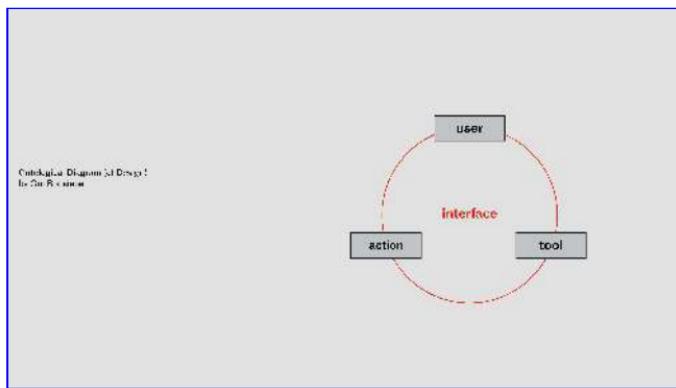
Storyboard

Interface, Action, Man-Machine-System

What is an interface?

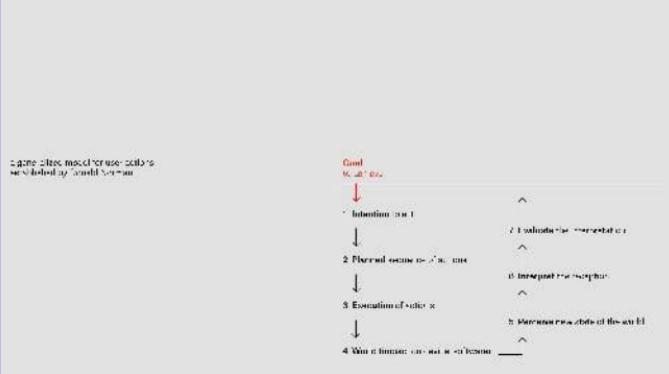
- Not a thing
- Not touchable
- A relationship between user, tool and action
- The relationship of a user who, with the help of a tool (a hammer, a computer or a bank card), performs an action (hammer in a nail, create a drawing, manage money).

"Design is the domain in which the interaction between user and product is structured to enable effective actions" (Bonsiepe, 1996).



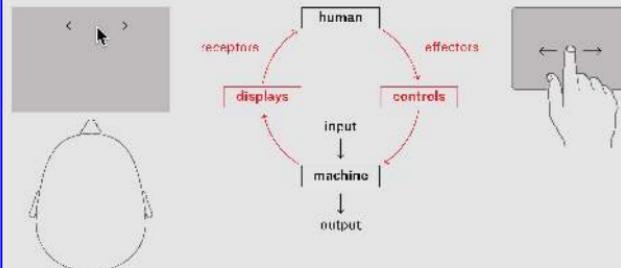
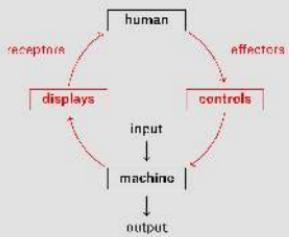
Seven stages of action

Seven stages of action are a generalized model for user actions established by Donald Norman



Man-Machine-System or (hu)man-machine-system

A human-machine-system is the relationship between processes in a system that describes human activities to solve tasks with machines.



Interface, Action, Man-Machine-System

Prototypes

Visual Prototype

A simulation that should come as close as possible to the desired result. In our case, a click-dummy, a slide presentation or a video that visualizes your ideas.

You could use Keynote Magic Move -- you have just seen this or the respective PowerPoint Morph Transition to create simple animated clips that display mouse pointer actions. More sophisticated animations can be done with Adobe After Effects or clickable prototypes with Figma (and smart animate).

Wizard of Oz Prototype

The name is taken from the 1939 musical fantasy film starring Judy Garland as the girl Dorothy from Kansas. Dorothy finds herself in the fantasy land of Oz and the only person powerful enough to bring her back home is the mighty wizard. At the end of the movie the wizard is revealed to be just an ordinary man, operating machinery that projects his ghostly image.

So, "Wizard of Oz" means that the technology is not here yet, but the experience is created through a clever deception -- everything is operated manually in the background.



Proof of Concept Prototype

This is the opposite concept to a Wizard-of-Oz-Prototype. The main technical part works and can be evaluated, but visually everything is still rough or not yet designed.

```
import java.awt.*;
import javax.swing.*;

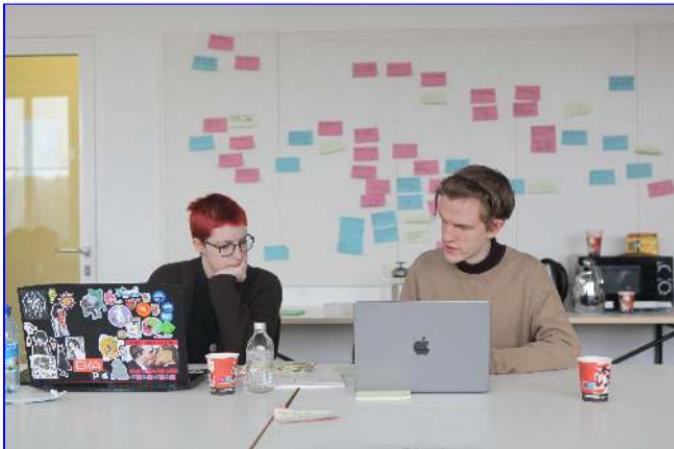
public class Prototypes {
    public Prototypes() {
        JFrame frame = new JFrame("Prototypes");
        frame.setSize(400, 300);
        frame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        frame.setVisible(true);

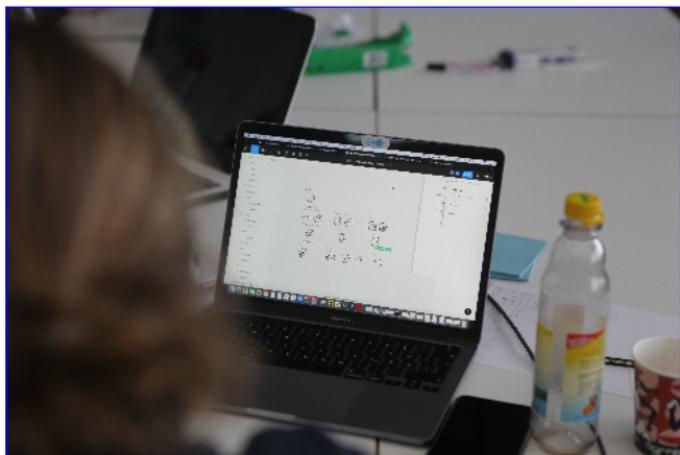
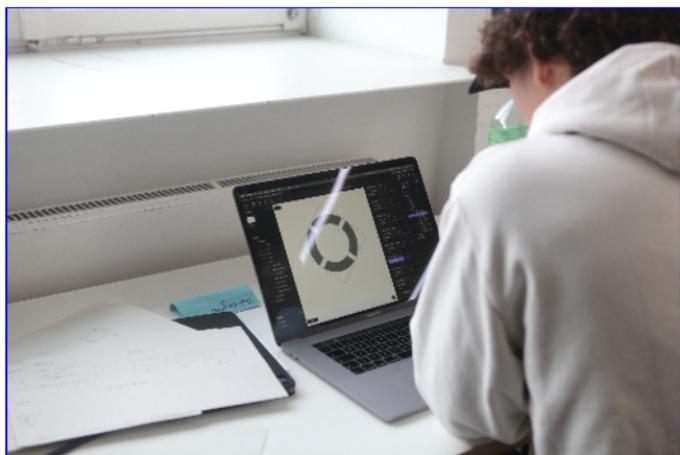
        JPanel panel = new JPanel();
        JButton button = new JButton("Start Experiment");
        panel.add(button);
        frame.add(panel);
    }
}
```

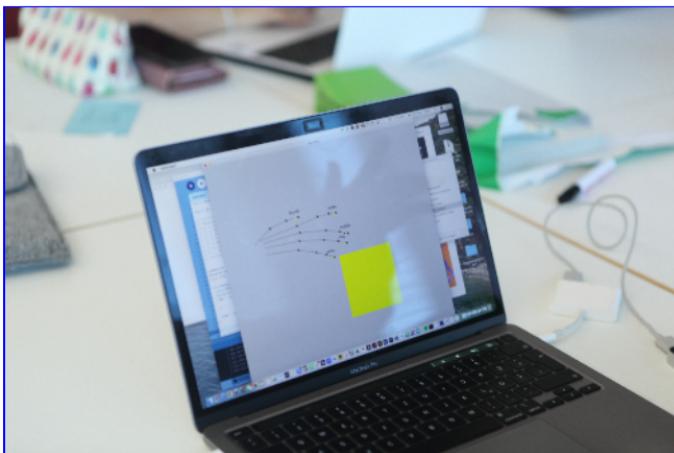
Prototypes

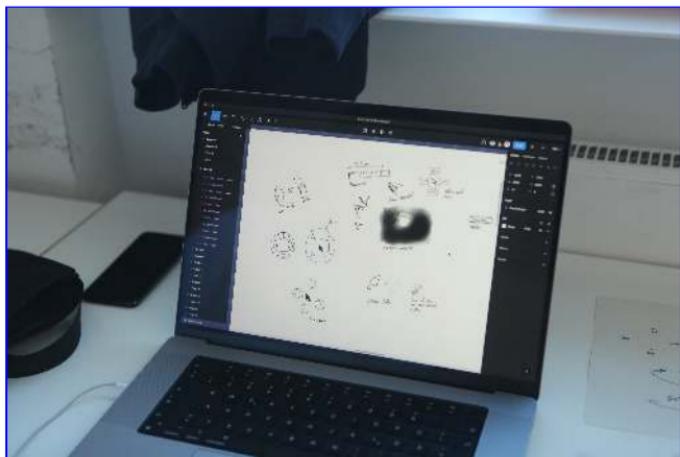
Teamwork

The teams were formed during the first day, according to affinities between students and teamwork began immediately, in order to prepare Friday's presentation. Marc Guntow's talks listed below, introduced each step of the work.









Teamwork

Projects made by students

Authentic emotion capture in digital collaborative working spaces

Andy Parker, Nicole Krein, Kaisa Uik



What is this tool for?

In the digital collaboration era people tend to lack emotional connection in the workspace. They are working with computers rather than the people using them. This tool makes it easier for co-workers to create emotional connections, it helps start conversations both about work and personal life and it lets you see authentic feedback of your work.

How does it work?

When you are viewing your co-worker's frame, motion capture system starts detecting your facial expressions. When you have a distinctive reaction, a picture is taken of you and posted in the frames corner. You can add a comment to explain your reaction or make a face with a stronger emotion to change it. You cannot delete your own reaction, but others can.

What did we make?

Within four days we made a Figma file with different components that could be added to Miro or Figjam. We also recorded a video with three scenarios of the ways the tool could be used after drawing storyboards. In the end we made an explaining poster with pictures of scenarios.

What type of collaboration is it for (synchronous/asynchronous, collaborative/cooperative/participative)?

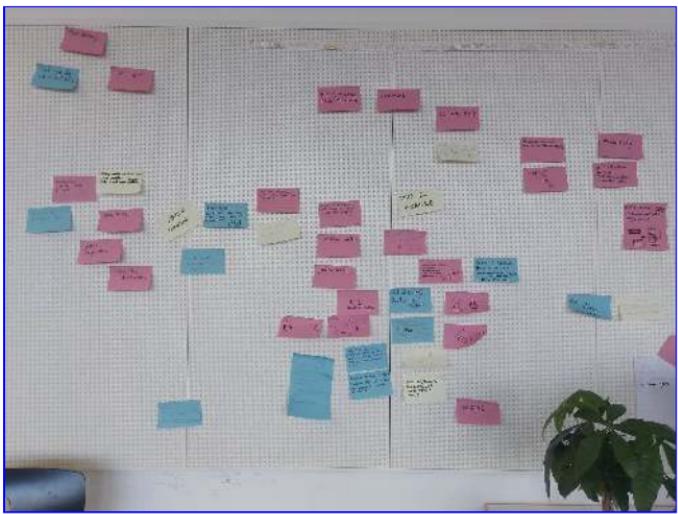
This is made as a new feature for digital collaboration tools like Miro and FigJam.

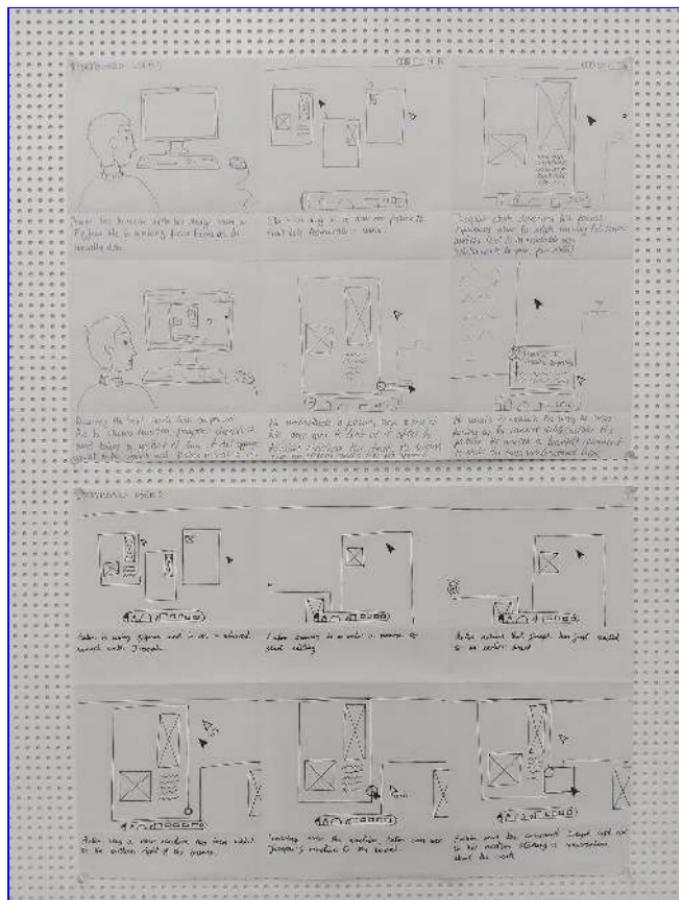
How does it impacts the collaboration?

Digital collaboration is often very serious, and it lacks emotional connection. With our solution people would give insight into their mood and working spaces. By making the workspace more intimate by creating an emotional connection between people. It also makes it less formal and more fun so people would feel less anxious and alone while working from distance.

How did we came up with this idea?

At first, we came up with a few ideas which would be interesting to work with concerning digital collaboration and cursor qualities. We thought about gamification, making the workspace less formal and more connecting. We then defined the problem we see in digital workspaces -- that people lack emotional connection that they usually have because they see face to face. We then started brainstorming about different ideas and stuck with the one where a picture is taken of you automatically to ensure authenticity.

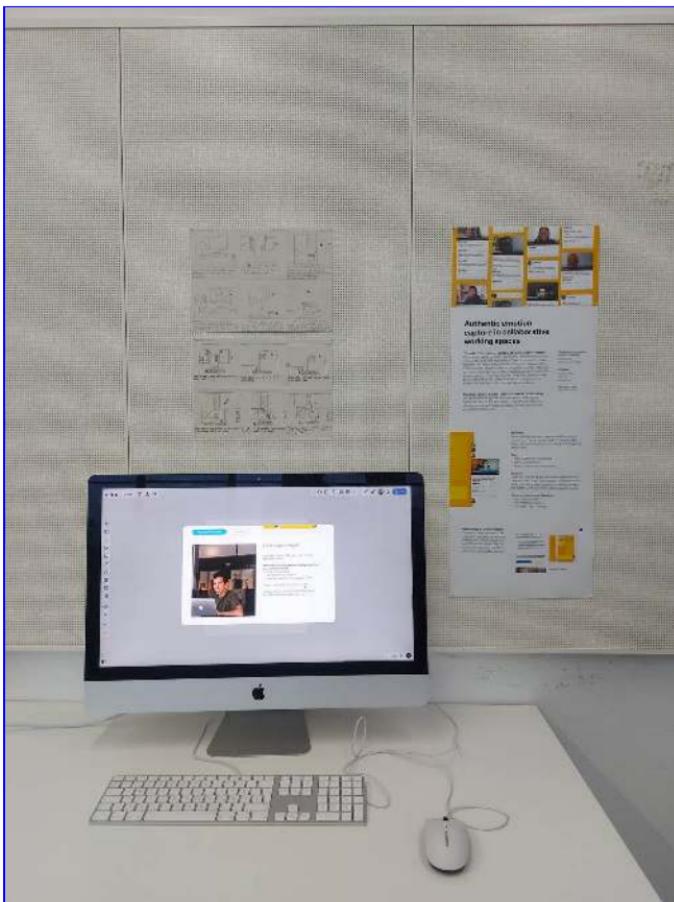




Authentic Emotion Capture researches

What other existing tools could it be compared to and why is it different?

The solution can be compared to the stickers feature because they also show what the other person is feeling. However, with our solution, the reactions are real and authentic, they cannot be faked. In contrast, while using the stickers, one can choose any reaction, even if they don't feel genuinely that way. Seeing people's faces also makes you more familiar with them, creating a more comfortable working environment.

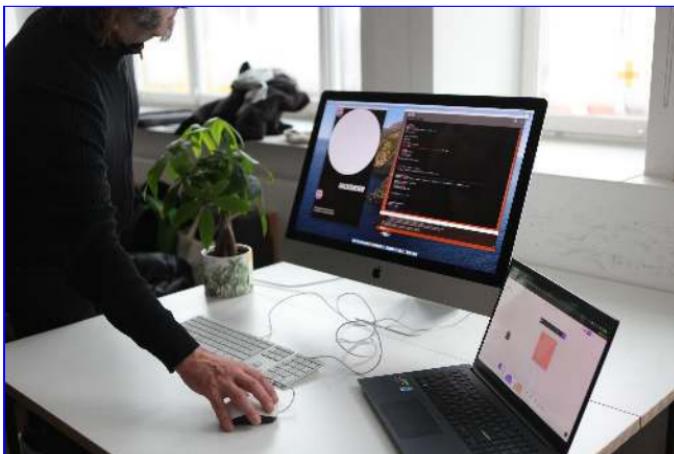




Authentic Emotion Capture final presentation

FaceCursor

Vadim Drobot, Julien Dzviga, Hugo Guyomard



FaceCursor final presentation

What is this tool for?

FaceCursor is a short program that comes with a simulation of an interface, incorporating a webcam into the mouse clicker. This tool has the potential to reinvent the concept of video content by introducing live elements, for example. Furthermore, it could serve as an add-on to integrate into our operating systems, allowing us to move away from simple video chat software and embrace a hybrid solution between TeamViewer and Facetime (or the good old Skype).

What type of collaboration is it for (synchronous/asynchronous, collaborative/cooperative/participative)?

This tool is clearly designed for synchronous collaboration, distinct from a simple "emoji" or "thumbs up" discussion. It has the potential to be cooperative as well, with the inclusion of additional features such as drag-and-drop or clipboard actions that involve simultaneous user clicking. Currently, users have the ability to draw directly on their

"mouseelf," extending the functionality of a paint program to include live webcam capabilities.

How does it impacts the collaboration?

FaceCursor clearly doesn't claim to be a huge innovation, but rather a "cool" blending of several existing tools brought together.

How did we came up with this idea?

The inspiration for this project came from our frequent use of Snap or Instagram filters, but also with this ability to move your face anywhere on the screen, when you are in a Facetime or Messenger call on a smartphone (or similar device).

What other existing tools could it be compared to and why is it different?

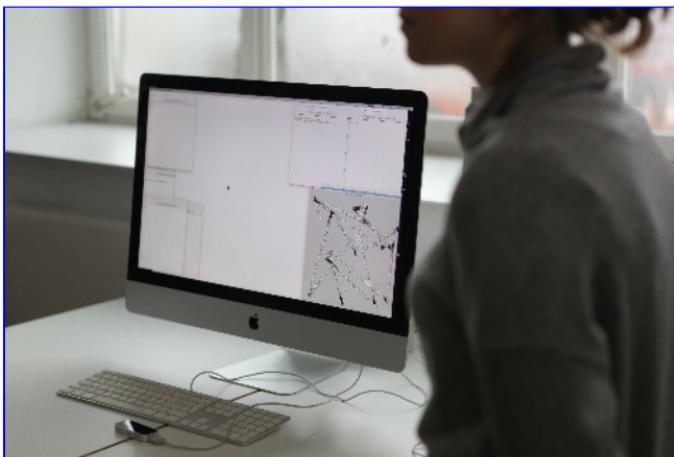
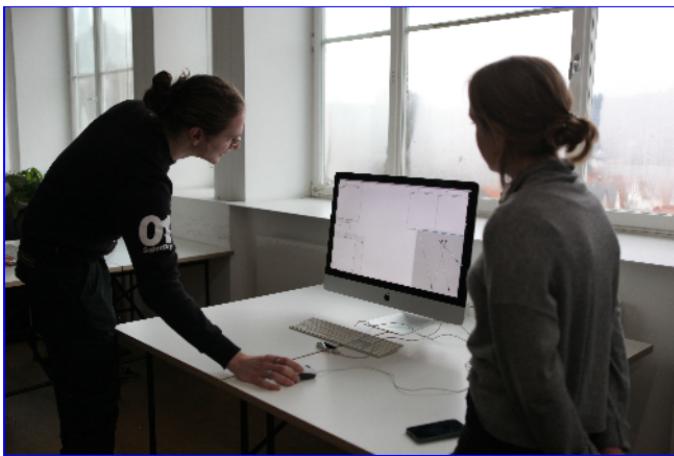
The difference with an overknown tool like Miro or Figma is the add of the mouse pointer with live camera on integrated, and the ability to get a "real human" interaction with it.

Autonomous mouse pointer

Nicole Krein, Héloïse Debrand, Ludovic Hohl

What if your mouse pointers were retired?

Thanks to the Leap Motion Controller, there is no longer a need for mice or even mouse pointers, so they are now retired and living their best life as autonomous pointers. Let's see what this one is busy doing in the background.





Autonomous mouse pointer final presentation

Conclusion and openings

This week was productive in terms of discussions, experiences, and design. Students modeled numerous tools and explored a wide variety of intentions that aim to discover new ways of interacting with each other. We witnessed moments of skills and tool sharing among team members, which was particularly interesting as it blurred the boundaries between our school's pedagogies. The exchange between students allowed for a porous integration of different educational approaches.

During this third and final workshop week, the teachers also had the opportunity to discuss how to showcase all the work that had been done. We considered different formats for disseminating the work and ultimately decided on an exhibition in each school, with similar content. This would involve video interviews with the students who participated in the workshops, all answering the same set of questions that we collectively wrote. Throughout the workshop, we received informal feedback from the students, as they were the ones most directly involved in the collaborative work. Recognizing the importance of their perspectives and experiences, we felt it was essential to give their testimonies and reflections on the subject of digital collaboration a prominent place.

Appropriating to share better: Digital Tools for Design Collaboration

Nolwenn MAUDET, Professor-
Researcher in Design, University of
Strasbourg

Abstract

Appropriating to share better: This seemingly paradoxical dual movement lies at the heart of tool production practices in contemporary design and opens up a redefinition of design: farewell to the creation of unique, controlled, and definitive forms and welcome to the fabrication of infinite potentialities to be explored in collaboration. And if these collaborative tools proudly brandish their openness as a standard, it's often rather from their functional closure that the creation of singular and original forms is born. By offering a narrow infinity of possibilities to be explored in collaboration.

Article plan

1. Introduction: How the appropriation of programming by graphic designers has connected tools and collaborations
2. Redefining the profession: How collaborative tools revolutionize design by shifting from the creation of unique, finalized forms to an endless factory of possibilities to be explored through collaboration
3. Open-Closed: How do collaborative tools bring into play limits that promote diversity of forms
4. Different nuances of collaboration: In what ways do various forms of collaboration manifest themselves in tools?

Introduction

Many hands make light work

Back in 2011, Andrew Blauvelt, a graphic designer and design theorist, concluded that the relationship between graphic design and technology has reached a new phase of maturity, redefining design that encompasses the creation of new tools that enable others to practice des-

ign.¹ This evolution has been built through gradual adoption of the power of computers, more specifically of programming: "We have to learn how to create tools ourselves. After all, that's what computers are about: a tool for creating tools."² The ability of designers to produce their own tools has enhanced a transformation of practices that takes the form of a seemingly paradoxical double movement: appropriating to share better.

For designers, taking ownership of their tool production is a way of liberating themselves and asserting their independence against the monopolistic position that Adobe holds over the tools of the design profession. This claim sometimes even goes as far as advocating for a level of autonomy close to self-sufficiency or even autarchy, which requires a deep understanding and complete mastery of the technical chain, usually necessitating the acquisition of programming skills.

However, this autarkic approach to appropriation is accompanied by a strong desire for sharing, openness, collaboration and versatility, whether between designers, with clients or with the public. This fruitful duality is well summarized by Anthony Masure when he speaks about the work of the collective OSP: "Many hands make light work³," and it is frequently affirmed and displayed in the discourse of designers themselves. But what tools are we talking about? And what kind of collaborations? What are their effects on design practices and outputs?

- Redefining the profession: How collaborative tools revolutionize design by shifting from the creation of unique, finalized forms to an endless factory of possibilities to be explored through collaboration

The act of developing collaborative tools for production in design shifts the focus from creating final objects or forms to creating tools that are inherently collaborative in nature. Beyond digital realms, we observe the same inclination among designers to produce tools, sometimes even on paper, that will be used by others to create the final forms. Why is there such an enthusiasm among designers for tool production? I believe it's a matter of designers reappropriating a technical expertise that distinguishes them from those who can "only use" traditional digit-

al tools, which have become accessible and usable by everyone. "At the end of the day, if what you produce can be done by anyone with a computer, why would we need a designer? In other words, we adopt the business language and ask: as a designer, what is your added value?"⁴

Today, the true power lies less in the production of forms, which has become widely accessible to everyone, and more in the creation of tools that will then structure the production of these forms. Thus, while the designer seemingly relinquishes their prerogatives over forms, they actually retain the right to define their outlines and conditions, the realm of latent possibilities. Incidentally, developing tools shifts designer's work by requiring additional skills and prompting new questions: How can this tool be made usable by non-programmers? How can it be easily reappropriated/readopted by those who know how to program? How can the tool be maintained, nurtured and evolved? These are new areas of expertise that disrupt the fundamentals of the profession.

In terms of the produced forms, the development of tools promotes en-gendering of multiples responses to each problem. Unique and definitive forms are no longer the sole focus, as developing tools implies their repeated use by multiple individuals. Collaborative tools usually enable the creation of a multitude of forms, serving as a series of variations around a single theme. This possibility aligns well with the nature of the digital technology. It doesn't cost more to produce and display an infinite number of different forms online. On the contrary, the attention economy demands a constant abundance of content to be shared on social networks.

- Open-Closed: How do collaborative tools bring into play limits that promote diversity of forms

Historically, the digitization of design tools has led to their universalization. Global monopolies have emerged around a few companies that produce software with a universal and all-encompassing purpose. Whether in Japan, South Africa, or Europe, we now design using the same tools. Regardless of the project, context or designer, we can always use the same software because they promise -theoretically- to enable the creation of all possible forms.

On the contrary, many digital tools produced by designers are small, highly distinctive tools, often custom-made or derived from an existing base and adapted to a new context. These tools are distinctive not only because they may become irrelevant and unusable outside of their context, but also because they typically have a much narrower range of formal capabilities. Very often, collaborative digital tools introduce a certain number of constraints and provide a limited number of parameters that can then be varied. By offering a narrow infinity of possibilities to explore, the tools created by designers defy the infinite potential of universalist software, which has often fueled the homogenization of productions. This is precisely because the restriction or explicit channeling of possibilities enables the production of a multitude of different proposals while ensuring a certain graphic coherence. It is also this closure that allows for the production of unique forms that are always contextualized and, therefore, constantly renewed. Taken individually, these tools often have a recognizable aesthetic, a sense of *déjà vu*, but it is through their multiplication that closed tools can claim a certain formal openness in the form of contextual diversity.

The interest in producing closed tools is not solely limited to the formal aspect. The more tools have a universal purpose and a large, permanent user base, the more attention, maintenance, bugfix, progress, and feature additions will be required in order to meet new emerging needs. Restricting the possibilities and staying within the context allows designer to free themselves from these maintenance issues and align the tool production with a more traditional process of creation: one project equals one tool, just as we used to have one project equals one form or a series of forms. Once the project is completed, it can be archived, and one can move on to the next. The traditional lifecycle of tools, especially digital ones, is often different, and if we wish for the renewal of a tool, limiting it also allows a necessary end of cycle. Even though they are formally closed, each tool retains an inherent openness that allows those with programming skills to modify them, enabling potential adaptations to different contexts. This process reopens a new realm of possibilities that is simultaneously infinite and constrained. However, the open nature of coding, should not hide the fact that it is rarely sufficient for genuine sharing and true appropriation to happen.

- Different nuances of collaboration: In what ways do various forms of collaboration manifest themselves in tools?

Creating tools only makes sense if others use them. Considering tools from a collaborative perspective is therefore evident, and this relationship has notably emerged in design thanks to the ethics of open-source software, which is based on sharing. Participation has been a part of art and design for a long time, dating back to historically marginalized and activist practices such as Scandinavian participatory design. This approach advocated for a political stance in designing digital tools, involving collaboration with workers and challenging employers⁵. Nowadays, the demand for collaboration with the public has become ubiquitous in design⁶ and is advocated as a mode of action by many designers. Relying on collaboration helps to avoid definitive proposals, which are sometimes perceived as too assertive, undemocratic, and therefore lacking legitimacy. It also allows designers to free themselves from the responsibility of form, because for designers who produce tools or collaboration protocols, "forms are not the subject of their concerns and discourse⁷."

But what kind of collaboration are we talking about? There are several ways to collaborate, ranging from contribution to cooperation, sharing, participation and perhaps even exploitation. The development of digital tools in design today presents at least two distinct aspects, as the collaboration between designers and developers differs significantly from the collaboration aimed at the general public.

We'll begin with collaboration between designers. Within the ecosystem of designer-tool producers, many collectives can be found where collaborative tools are used to facilitate collaborative work. Either designers collaborate in the creation process of tools, or some develop them for others to utilize. More widely, for some tools with greater ambitions, such as paged.js library, communities of designers are formed, who are often both users and contributors. Collaboration between designers can also take the form of variation or forking. In this case, the designer leaves open the possibility for others to take up, develop, or adapt their work. Also in this case, we're talking about adapting pract-

ices from programming culture, even though, when it comes to variation based on existing work, one can draw a connection with older practices such as remakes and variations that are widely used in typography, for example⁸. What is also new perhaps is that designers today explicitly call for an appropriation of their work and often seek to facilitate it through documentation. However, these forms of collaboration are only accessible to a small elite of designers as they require programming skills that are far from being democratized.

The second type of collaboration is the participation of the "public" in the creation process. Rather than true collaboration, the term commonly used in this case is participation, which extends far beyond the sphere of digital tools in the field of design. Yann Aucompte observes this phenomenon in certain forms of exhibition, for example: "Attending to exhibitions is an active contribution by the public, as they, along with the graphic designer, seek to sharpen a critical culture [...] The exhibition is seen as a space for the public's engagement and participation. The spectator of this kind of exhibition is not passive; they contribute to the creation of a collective critical culture⁹." When we talk about participation, we refer to inclusion in a process of creation, but we immediately grasp the asymmetry that exists between stakeholders. In this context, the designer becomes "a producer or orchestrator of frameworks, systems and actions that allow design to exist. They have lost their traditional role as the sole creator of the work; this role has been usurped by "contributors," sometimes numbering in the thousands¹⁰. This type of participation is sometimes aimed at the tool's client and offers them a certain level of autonomy, for example, by allowing them to create variations of visuals by manipulating the parameter(s) provided in the software. Compared to the active and egalitarian collaboration between designer-programmers, public participation generally takes the form of a more limited involvement, utilizing the tool through a few predetermined actions that enable the exploration of the space of possible formal variations. The different proposals created are usually placed and presented at the same level because it is their abundance that makes sense, rather than each individual contribution being taken separately. This participation is also time-limited, taking the form of workshops or guided performances. This form of

collaboration mediated by the tool has its own logic because an audience confronted with a new creative tool cannot be instantly trained in design practice or spend hours mastering a tool that they will often only use once. Supervising and supporting usage through workshops also alleviate some of the tedious work involved in designing a long-term digital tool, which requires meticulous fine-tuning of every ergonomic detail to facilitate independent learning and eliminate bugs.

However, it is necessary to question what this participation represents. According to Duhem, demanding to participate, even with the best intentions, can lead to control and exploitation of the participants rather than emancipation¹¹, including in what he refers to as alternative design. What agency is given to the users of these tools? Are they encouraged to "participate" in the same way as click workers, who can only operate within a limited set of choices and remain anonymous behind the tool's designer? Creating a framework, a set of graphical constraints utilized by others to generate final forms, is not a novel concept. Indeed, it is even the principle behind graphic charters. However, the creation and use of these systems were not introduced as collaborative.

Speaking of collaborative creation tools implies considering this dichotomy and delving into the mechanics of collaboration, which indicates different ways of getting involved. Collaborative creation tools are accompanied by a new divide between those who know how to create or manipulate tools, and those who can only use them. I believe there is still a need to explore ways to bridge this divide.

1. Andrew Blauvelt, *Outil *or *le designer graphique face à la post-production *(Graphic designers and post-production), Azimut 47. Online Access: <https://revue-azimuts.fr/numeros/47/outil-ou-le-designer-graphique-face-a-la-post-production>
2. Jonathan Puckey quoted by Andrew Blauvelt, op. cit.
3. Anthony Masure, «Visual Culture. Open Source Publishing, Git et le design graphique», Strabic.fr, 2014.

4. Andrew Blauvelt, op. cit.
5. Pelle Ehn, « Scandinavian design: On participation and skill », *Participatory design*. CRC Press, 2017. p. 41-77.
6. Ludovic Duhem, « Participez ! Pour une critique politique du co-design », RADDAR N°3, 2021.
7. Yann Aucompte, « Des mondes-ateliers : les lieux et les milieux de la fabrique du design graphique. », in *Revue Design Arts Medias*, 11/2021. Online Access: <https://journal.dampress.org/issues/les-arts-de-faire-acte1-les-modes-dexistence-de-latelier-en-arts-et-en-design/des-mondes-ateliers-les-lieux-et-les-milieux-de-la-fabrique-du-design-graphique>
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9. Yann Aucompte, « Les designerly ways of knowing des graphistes », dans *Design Graphique ? Manières de faire de la recherche*, 2021. Online Access: <https://culturesvisuelles.org/projets/design-graphique-manieres-de-faire-de-la-recherche/les-designerly-ways-of-knowing-des-graphistes>
10. Andrew Blauvelt, op. cit
11. Ludovic Duhem, op. cit

Digital Tools for Creative Collaboration: Logbook

Sarah Garcin, Designer, L'Atelier des
chercheurs

May 3, 2023

On the train from Paris to Karlsruhe

Here I am on the train, on my way to Karlsruhe, Germany. I am going there to give some classes with Raphael Bastide¹ at the University of Fine Arts and Design². We decided to be cheerful and named our seminar³ "A party to print", imagining a festive atmosphere while preparing a new publication. We prepared nothing, so we have no idea about the outcome, and we don't necessarily want to predict. We will create this experience together with the students.

When they ask me, "And you? What do you do?", I don't answer plainly, "I am a graphic and interaction designer", which most of the time signifies nothing for the people I am interacting with. Instead, I try to explain a current project I am working on. I should say, "I am doing a seminar called "A Party to Print" in Karlsruhe". Then, I can talk about horizontal learning, collaborative projects, creating and using open source tools, alternative ways of publishing, experimenting, cooking, and savior syndrome, search for meaning in life.

Rather than presenting my extensive theories on Digital Tools for Creative Collaboration, I prefer telling you five experiences of "working together" based on tools designed for digital collaboration (or not); that made us feel useful (or not), happy (or not), angry (or not). Most importantly, they made us think while doing and do while thinking. Each of these experiences, in its own way, questioned the various ways in which the introduction of collaborative digital tools modifies human relationships and our ways of working together in a defined context. At times, these experiences have exposed us to the limitations of our tools. However, the totality of these narratives shows that successes and failures are never due to the tool itself, but to the way it is being utilized, presented, introduced, and shared. They depend on the tacit

agreement among the parties involved in using the tool and the objectives established together (or not).

PJ Machine

Project duration: Five days

Number of individuals involved: Six

Feeling: Joy

September 8, 2016

Berne Museum of Natural History

We have just spent the entire night at the office of Museum of Natural History in Bern, Switzerland; printing, folding and binding 100 copies of the publication called *Frankenstein Revisited. *We are doing an art residency since couple of days at the museum with Piero⁴, James⁵, Anne⁶, Catherine⁷ et An⁸ accompanied by stuffed animals⁹. We¹⁰ were invited for the festival called *Mad Scientist *organized by Roland Fisher. Piero, James, Anne, Catherine and An came with their chatbots¹¹ inspired by the book *Frankenstein*; or, The Modern Prometheus by Mary Shelley¹². On my side, I preferred Publishing Jockey Machine¹³ (or PJ Machine), a real interface connected to a web program, developed for the occasion. The project consists of creating a publication in three days, including the group in the whole creative process (writing, iconography, layout, printing and binding). The content will be the discussions with chatbots, contextual texts in the form of letters¹⁴ and photographs taken in the museum. After a discussion, we agreed as a group on the basic principles of publishing (format, binding, chaptering and planning). I set up a local shared folder which will include all the content organized in folders. Each folder represents a double page of publication; each is free to add a content; text or image. Any computer connected to the *PJ Machine* functions as a workstation for the layout. I created a simple graphic charter: one size and one typography for the text, one size and one typography for the titles. All the rest is done by *PJ Machine*. This box with the big arcade buttons works like a control keyboard. Each button has a designated function. It is possible to relocate texts and images, increase or decrease the space between words, mix images together or highlight recurring words. Each member of the group lay out their texts once they have been completed. *PJ Machine* is very simple to use however it uses interactions we are not quite used to, which causes some lucky graphic accidents. Concentrat-

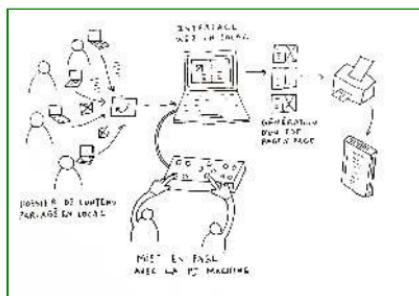
ion is at maximum during the layout. (see image: 04-pjmachine_in-use2.jpg).

When you are satisfied with the outcome, a button allows you to export it in PDF format, ready for printing. The group members take turns using *PJ Machine *and double-page spreads are exported in a random order. We print all the completed PDFs (resulting in total 55 double-page spreads). We place them on the floor to put them in order. And finally, we see the publication in its entirety.

Each of us participated in every stage of the edition's creation process, however only in certain parts. Publication seems like an organized and coherent piece. I am compiling a final pdf for print.

The week ends with the opening of *Mad Scientist Festival. *We watch a ballet of stuffed animal drones and drink mojitos prepared by a robot. We experimented, had a good laugh, and we are delighted to have done this work together.

Epilogue: Access to the complete project documentation here www.al-golit.net/frankenstein



Operating diagram



The PJ Machine



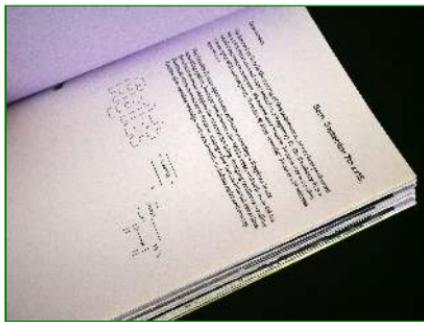
Layout of Frankenstein Revisited by Piero



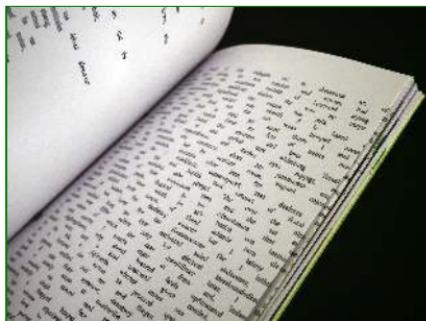
Frankenstein Revisited layout by An (maximum concentration)



Organization of printed pages on the floor



Inside view of edition, contextual page in the form of a letter



Inside view of the edition, inter-word increase



Inside view of edition, highlighted words

DONC

Project duration: Five days

Number of individuals involved: Around forty

Feeling: A mix of discomfort and satisfaction

May 26, 2018

Château de Cerisy-La-Salle

We are on the last day of the conference named *Art, Literature and Social Networks*¹⁵ at Château de Cerisy-La-Salle, and it's time to debrief. We gather together at the great hall of the castle. The question is quite simple: "What did you think of the conference?". The first person intervenes, criticizing strongly the *DONC* experience. "What an idea to propose a digital project connected to internet in such a place, in the middle of nature, where there is hardly any WiFi or 4G. We could have been entirely disconnected. But instead, we found ourselves trapped in a digital experiment, faced with this one hacker who ruined the week for us."¹⁶ For an hour or so, all conversations revolved around this.

They attacked me, Raphaël¹⁷ and Louise¹⁸ as much as they attacked the hacker. I discretely rejoice over the results of our experiment. We had wanted to create a social network during this week. Over the course of five days, we have seen all the awkward situations possible that come with social networking and online open participation. Images shared without consent, trolling, anonymity, identity theft, spam, even a complete hack of the system, which resulted in an absolute anger among the participants. We created a collaborative system of misery.

We arrived to the castle of Cerisy-La-Salle in the beginning of the week to participate in the conference named *Art, Literature and Social Networks. *When I say, "we", I talk about the participants, artists and academics. The place is incredible. Raphaël, Louise and me, we came here with a special task in head for this week: to build up an experimental documentation system for the conference, enabling the creation of an almost real-time publication. Beforehand, we decided to create a tool based on a mailing list, and we called it *DONC*. All content sent by e-mail to this list is received by all the subscribers and is automatically added to a web page formatted in HTML and CSS¹⁹, serving

as a basis for publication. Every half-day, we print the new pages for the publication. We display them on large tables in a crowded room (which also serves as the cocktail area). We provide pens, duct tapes, markers, pencils etc. ready for manual commentary to be written in these pages. The pages are then scanned with a smartphone to create a printable PDF.

It's the first day of the conference and we present our project. All participants are registered by default on the mailing list of *DONC*, nothing is mandatory, if someone doesn't wish to participate, we remove them from the list. Two or three people decide to not participate. Fairly soon after, the publication fills up, and emails pour in. Images from conference are sent in, as well as short texts, jokes, riddles, long texts, text of the previous presentation and so on. All the subscribers participate actively. Printed pages are filled with comments, with words that are crossed out, pieces that are cut out and crushed. In the evening, when the cocktail hour is well underway, we find ourselves surrounded by half-witted jokes. On the second day, some of the e-mails seem to be encrypted and the Cerisybot²⁰ appears. The publication continues to be filled up with making-of images, photos of Cerisy, advices and generated texts. On May 24, the Cerisybot sends another e-mail with a subject line called "«[VIRUS] I <3 YOU".

Identity thefts start to appear. Some emails are sent from the email addresses of participants who are not the actual authors. This leads to a few tensions. More spam texts arrive in the evening of May 24th, and we receive the same emails multiple times. An image of a train, a text that begins with "Queen of Egypt, goddess of Nubia," and some others. These e-mails are completely anonymous. On the morning of May 26th, all *DONC *participants wake up to find their e-mail inbox full of spam. Rumors circulate that there is a hacker within the group, and a few individuals are suspected and even denounced. One of the participants storms into the breakfast room, furious, with his computer under his arm, saying, "You broke my computer!" I examine the so-called "broken" computer, and its email inbox is full; the user has never emptied the trash. I empty the trash, and just like that, it's fixed. With-

ical incapacity), he leaves, slamming the door, and we don't see him again.

But who is this hacker?

Tensions rise.

Between May 25th and May 26th, the mailing list receives an email that causes the DONC system to crash. Tired of the complaints and criticism regarding the experience, we decide to stop it, claiming that the system is irreparable. From a small study room in the castle stables, Raphael, Louise, and I send an email to the *DONC* mailing list:

Dear participants,

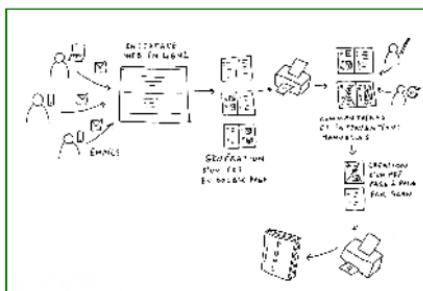
DONC system has been hacked, we regret to inform you that the experiment ends now. After this email, you will be unsubscribed from the mailing list, and your emails will no longer be addressed by *DONC*.

You will be kept informed of the project's evolution.

We thank you for your (very) active participation, which contributed to the success of this project.

The *DONC* team

We take advantage of this interruption to finalize the publication, print it, and bind it. It will remain printed in a few copies that will never be distributed²¹.



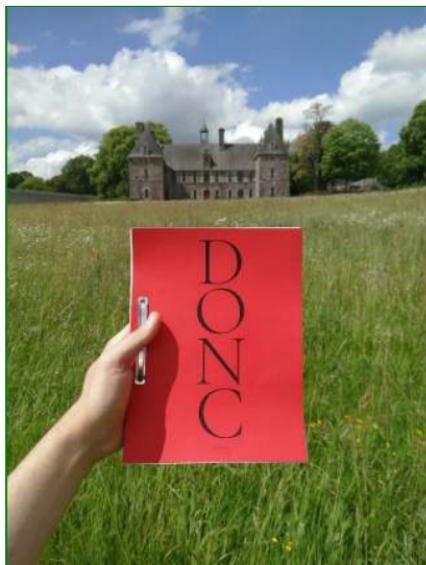
Operating diagram



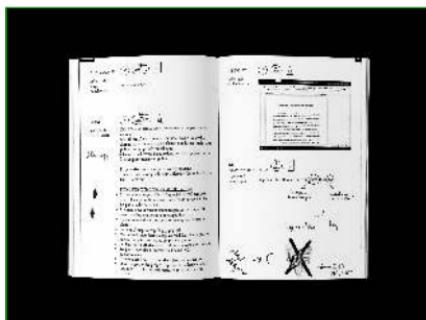
Printed page layout for manual comments



Scan of commented pages



Printed edition cover



Double-page spread from printed edition



Double-page spread from printed edition

Chépa

Project duration: Nine months

Number of individuals involved: Twenty-five

Feeling: Pride

May 23, 2019

Gaîté Lyrique, Paris

I'm sitting at the counter of the bar of *Gaîté Lyrique *in Paris. Romain²² et Anne²³ arrive with middle schoolers from the cooperative school of Collège Jean-Pierre Timbaud in Bobigny. They are here to present the project they have worked on together during the year. Lyna, Ambre and Christelle²⁴ present « *Chépa, Le Journal Pour Tou.te.s » *imagined, written, illustrated and laid out by the students of the class. The presentation ends with a distribution of the journal, and the students, proud of their work, run throughout the building and into the street to offer what they have created.

Since 2015, with Pauline²⁵ and Louis²⁶, under the title of "l'Atelier des Chercheurs²⁷," we are developing, among other things, a software called do•doc (pronounced doudoc). Designed to document and create narratives from practical activities, do•doc is a composite, free, and modular tool that allows you to capture media (photos, videos, sounds, and stop-motion), edit them, lay them out, and publish them. Its composite nature allows it to be reconfigured to be as well-suited as possible to the situation in which it is deployed. "do•doc" includes a local software version and an online version. It has been built using web languages, specifically utilizing tools that enable real-time collaboration such as Node.js²⁸, Electron²⁹, and Socket.io³⁰.

With the intention of building this software in specific contexts, we conduct workshops in educational institutions to test the software and add features based on identified needs.

The project started with the students of Jean-Pierre Timbaud Middle School on September 19, 2018. We meet approximately once a week to collectively create a journal from A to Z, exploring the themes of the Computer Grrrls³¹ exhibition. With Anne and Romain, the two teache-

rs supervising the project, we decided to apply a horizontal pedagogy, a guided laissez-faire approach. We did not impose any decisions, as everyone was responsible and an organizer in their own right.

The first workshops are dedicated to discussion and debate. The floor is given to the students. For each discussion, there are two volunteers: one facilitates the conversation, while another takes notes on the board. I ask them fundamental questions: what type of sexism do you experience as teenagers? Are your extracurricular activities gender-biased? Can you mention any movies, video games, or music that you find sexist?

But also technical and logistical questions: What is a journal? What content should be in the journal? What topic should be chosen? How do you organize your work? How many copies should be made? How do we distribute it? What should we name it?

Starting with these conversations, three groups are formed around three themes: street harassment, gender in professions, and girls in video games. The students begin writing the articles on do•doc in small groups. All of this takes place in the computer room equipped with old Windows computers and a questionable internet connection. do•doc is used locally, and all the computers are connected via Wi-Fi to a central computer that acts as a server. This way, all the content is gathered in one place, offline.

All decisions are made as a group. We discuss the layout, with each group advocating for their ideas, and compromises are reached. One session is dedicated to creating photo illustrations in the school and in the streets of Bobigny with Frédéric Danos, while another session focuses on building a do•doc³² station at the fablab of *Carrefour du Numérique de la Cité des Sciences *(Paris). The final sessions (a bit chaotic due to the temperamental computers) are dedicated to the layout of the articles on do•doc, allowing all participants to finalize the journal together.

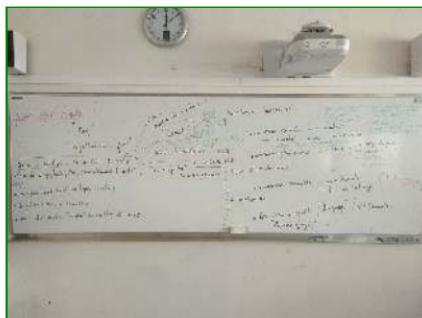
Despite the technical difficulties related to the outdated equipment in schools, the challenges of managing a group of teenagers, disagree-

ents, laziness, the extended timeline of the project, fatigue, insults, and spelling mistakes, we collectively managed to create this journal, printed in 1000 copies.

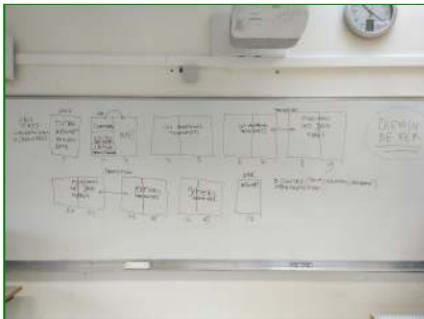
Epilogue: During this workshop, I kept a log after each session, which can be accessed at this address: latelier-des-chercheurs.fr/ateliers/chepa-le-journal-pour-tou-te-s



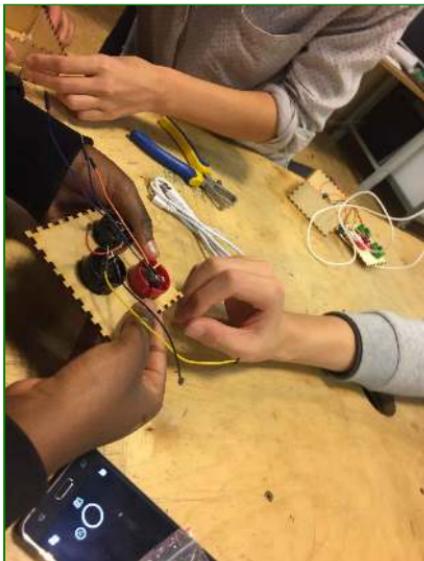
Chépa, the Journal for everyone



Taking notes on the blackboard of a group discussion session



Reflections on the editorial content



Fabrication of the do-doc station at the Carrefour du Numérique fablab



Article layout on do-doc



Computer room work on do-doc



Use of the do-doc station in the school corridors to create illustrations

La matinale en direct de deux points distincts³³

Project duration: Two hours

Number of individuals involved: Ten

Feeling: Ease and pleasure

March 31, 2021

Lorient

Since March 29, I've been in Lorient at EESAB³⁴ for a web2print³⁵ with Roman³⁶. It's Wednesday, which means it's time for the "matinale", an improvised and experimental radio show that takes place live and in public from 7am to 9am at the Vanilla café³⁷ in Pré-Saint-Gervais (93). I have been co-hosting this show with dns and hrbr for nearly three years. However, today I am in Lorient. I scheduled a meeting at 7am with strd, rmn, and clr³⁸ at the corner of the street near my hotel. It's still dark outside. I start the audio streaming application on my mobile phone. The microphone of my phone captures the ambient sound and sends it (streams) to my mount point on the IceCast³⁹ server of p-node⁴⁰. My live stream "goes up" and appears on the homepage of p-node.org. jdsk, comfortably settled at her home, can listen with a 15-second delay⁴¹ to the audio stream broadcasted by my phone and mix it with the live audio stream produced at the same time by dns, hrbr, and their guests from the temporary radio studio at Vanilla Café. It's 7 am, and my phone calmly captures the ambient sound of the quiet streets of Lorient while strd and rmn grab a takeaway coffee. We start our stroll, heading towards the fishing port. Our destination is the sandwich shack that's open at all hours, and perhaps we'll have the chance to interview some fishermen who stayed a little late at the fish market. 500km away, at the Vanilla Café, a lot is happening, but we are clueless since we don't listen to it. We blindly participate in a sound mix, and we don't need necessarily to worry about this collaboration; chance takes care of things for us, helped by our jdsk on the mixing tables. We do as we please, at two distinct points, to create a whole. A kind of altruistic selfishness.

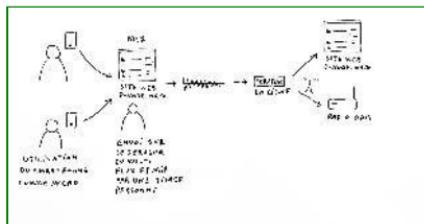
The smell of industrial shrimp from the frozen products factory accompanies us during the walk. We discuss, comment, interview, and des-

cribe. We finish the two-hour broadcast at La Base, the nautical port of Lorient.

So, this live morning show, broadcasted from Lorient and Le Pré-Saint-Gervais, acts like a cloud carved by the wind and returns home, it slides like words flowing through the airstream, like something messing up your hair when you're asleep and dreaming of having your hair done, mixed by jdsk, hosted by grcn, hrbr, dns, and accompanied by their guests.

Epilogue: To listen to this show, you can visit the website of Radio PSG Matin or go directly to the following link: la-matinale-du-mercredi

There, you will find the recording of the morning show that took place on March 29, 2021, along with other similar radio experiments that have occurred at Radio PSG Matin.



Operating layout

Relation longue distance (ou pas)⁴²

Project duration: Two hours

Number of individuals involved: Around twenty

Feeling: Baffled

November 9, 2022

On the train from Saint-Étienne to Paris

Last night, at the auditorium of ESADSE⁴³, I gave a conference entitled "Long-Distance Relationship (or Not)." This talk aimed to explore the question of collaborative digital tools operating in the same time and space, usually functioning offline. For this conference, I used a tool called baking.js⁴⁴. It was designed and developed in 2015 with Ange-line⁴⁵ for the ELIF seminar at ENSBA⁴⁶. This tool was created to facilitate collaborative presentations involving multiple speakers. It allows for real-time manipulation of media and text across multiple devices (computers, tablets, smartphones). Its functionality is inspired by a stack of images that can be browsed and explored, enhanced with digital features such as zoom, fullscreen display, and hypertext. baking.js also allows the audience to connect to the application through a local network and contribute to the conference by adding texts or images. Thus, I tested this participatory system for the first time yesterday as part of the "Digital Tools for Creative Collaboration" project. At the beginning of the conference, I invited the students present in the room to connect to the Wi-Fi and visit the provided IP address to comment, hack, troll, make live suggestions, and interact with the presentation. In less than a minute, the presentation is disrupted, the images prepared for the conference are moved to different corners of the page, memes or images generated by AI are added on top. A sound recording plays in a loop. The presentation is completely trolled⁴⁷ from the start. The audience is destabilized. The public continues these disruptions sporadically throughout the hour and a half of the presentation, without ever discussing their contributions. When I ask, "What is this? Do you want to talk about it?" There is no response (perhaps I didn't insist enough). Some collaborations seem political, such as capturing an article about the potential misappropriation of funds by the former direct-

or of the Cité du Design, or a text titled "A €1.4 million hole in the budget of the Cité du Design." In the end, I proposed an anonymous collaborative tool where all contributions are anonymous. The first contribution was disruption, making it difficult for the presenter with jokes, and trolling. There were political claims without any clear stance, letting the media speak on their behalf. Does anyone take responsibility

IRL⁴⁸? Does anyone openly discuss these issues? Everything seems to occur online, and I continue with my presentation. Is this what true participation looks like? Is this what it means to collaborate? Is this what it means to create common resources together? Is this the essence of sharing knowledge? Perhaps the problem lies in my role as an expert speaking alone to an audience, adopting the position of a teacher addressing students.

An uprising against a certain authority, a "hey, look at me, I'm here too," diverting attention, disrupting focus.

Perhaps this initial reaction is linked to our digital usage, both as consumers and producers of content.

However, baking.js was designed to be participatory, blurring the line between the stage and the audience, with the goal of engaging the audience in the presentation. It encourages daring interruptions, adding images, and provoking debates and discussions. In the face of trolling, wouldn't it be necessary to interrupt the presentation and encourage discussion and comments? Does this align with the true essence of collaboration? Is a misunderstanding equivalent to a quid pro quo?



baking.js home page



Screenshot of the presentation in baking.js after the conference



Screenshot of the presentation in baking.js after the conference



Screenshot of the presentation in baking.js after the conference

1. Raphaël Bastide, artist, graphic designer and professor -
<https://raphaelbastide.com/>

2. HfG, *Staatliche Hochschule für Gestaltung -
<https://hfg-karlsruhe.de>
3. 8 days of working with the students, Thursdays every two weeks
4. Piero Bisello, art historian and writer
5. James Bryan Graves, computer scientist
6. Anne Laforêt, artist
7. Catherine Lenoble, writer
8. An Mertens, artist and writer
9. A platypus in particular caught our attention.
10. This project is a part of the Algolit project: algorithm and literature - <https://www.algolit.net>
11. Chatbots are programs that simulate conversations with human users, using the IRC (Internet Relay Chat) protocol. Chatbots have been developed with Python.
12. 2018 marks the 200th anniversary of the publication of *Frankenstein*.
13. <https://github.com/sarahgarcin/pj-machine>
14. *Frankenstein* is a novel written in epistolary form.
15. *Colloque nommé *Art, littérature et réseaux sociaux
16. This quote is not real, only an outline of the first critic.
17. Raphaël Bastide, artist, graphic designer and professor -
<https://raphaelbastide.com/>
18. Louise Drul, illustrator, artist and graphic designer -
<https://louisedrulhe.fr/>

19. This project is part of the observations made through PrePostPrint. (<https://prepostprint.org/>). We used the open-source Processwire CMS to manage the content from the e-mails. We then used print @media print{} css techniques for the print layout.
20. Spam e-mails are being sent by a certain Cerisybot. Its name makes us think that it's a software (a bot like a chatbot robot). The e-mail address is anonymous and the content of e-mails appear to be generated by a Python Script.
21. The publication is part of the web2print library aimed at bringing together printed editions created with free and web-based tools. Project by Lucile Haute and Quentin Juhel. - <http://2print.org/>
22. Romain Poncato, history and geography teacher
23. Anne Régnier, mathematics teacher
24. Three volunteer students of the class
25. Pauline Gourlet, researcher and graphic designer - <https://www.paulinegourlet.com/>
26. Louis Eveillard, interaction and graphic designer - <https://www.louiseveillard.com/>
27. "Workshop for researchers", latelier-des-chercheurs.fr
28. Node.js is a free and open-source server-side JavaScript runtime environment.
29. Electron.js is an environment based on Node.js that enables the development of software coded in web languages.
30. Socket.IO is a JavaScript and Node.js library that allows the sending of real-time events on a web page or within a

software (the most common example of its use being chat).

31. *Computer grrrls *is an exhibition that took place at HMKV (Dortmund) from October 2018 to February 2018 and at Gaîté Lyrique (Paris) from March to July 2019. Envisioned by this exhibition addressed the issues related to the invisibility of women in the field of computing and brought together artistic positions that explored the past and present relationships between gender and technology.
32. The do•doc documentation station is a modular and mobile kit that facilitates the use of do•doc. Made of wood, it allows for the installation of a microphone and a camera, and includes a box for navigating the media capture interface. The box includes an Arduino component, allowing for an introduction to electronics and programming.
33. The live morning show from two different locations.
34. École Européenne Supérieure d'Art de Bretagne
35. In graphic design, web2print refers to the practice of using web languages to layout printed documents.
36. Roman Seban, graphic designer and teacher at l'EESAB Lorient-<https://www.bureauromanseban.fr/>
37. Vanilla Café, 48 rue André Joineau, 93310 Le Pré-Saint-Gervais
38. At Radio PSG Matin, the hosts and guests are (almost) anonymous. We remove the vowels from the names or first names.
39. Icecast is a free (GPL-licensed) software that functions as a streaming media server, supporting both audio and video streams.

40. PNode is an experimental community radio station.
Radio psg matin is broadcasted on PNode. It is their infrastructure that enables us to have web and DAB+ broadcasting. - <https://p-node.org/>
41. Streaming causes an unavoidable delay of approximately 15 seconds, unlike FM waves which do not cause any delay.
42. Long-distance relationship (or not)
43. School of Art and Design of Saint-Etienne:
<https://www.citedudeesign.com/fr/esadse/>
44. <https://github.com/sarahgarcin/2019-bakingjs>
45. Angeline Ostinelli, graphic designer, g-u-i collective -
<https://g-u-i.net>
46. elif n°1: Electronic resistance, editorial strategy, and cyberfeminism. Elif aimed to follow the paths laid out by creator-pioneers within our digital ecosystem.
47. *Trolling: *In internet language, trolling refers to posting a message or an image with the intention of diverting or disrupting a conversation to create controversy. The act of trolling is generally seen in a negative light.
48. In Real Life

ourcollaborative.tools

As part of the DTCC project, our goal was to create a publication that would serve as a long-term tool---a device that synthesizes our research conducted in collaboration at ESADSE and that would be useful for designers, artists, students, and academics.

At first, we envisioned a toolkit, but ultimately, we conceived of a platform called *ourcollaborative.tools*. This platform serves as an online design research publication, a participatory archive, and a pedagogical tool. It features a catalog of collective artistic projects involving digital tools, emphasizing situated responses rather than generic solutions. Additionally, it includes articles that provide critical thinking to explore alternative uses and approaches in creative collaboration.

The platform is intended for use by designers and artists, whether they are students or professionals, who are interested in topics such as collaboration, cooperation, contribution, participation, the creative process, free software (FOSS), computer development, and visual arts.

All the projects listed in this catalog contribute to the development of commons through digital artistic devices. The artists and designers who create these projects are, each in their own way, establishing frameworks to facilitate collaborations. These collaborations may involve peers, experts from other disciplines, classrooms, inhabitants of specific territories, and even non-human entities. We are particularly intrigued by the ambivalent nature of these productions, which serve as both artworks and tools.

However, our goal extends beyond merely archiving projects. We also aim to document collective practices and examine how artists and designers utilize, combine, and even modify existing tools, as well as develop new ones that align with their unique working methods, so that these tools can be adapted to align with their specific working methods and not the other way around. To achieve this, we will curate a collection of articles and a mediography that provide a critical perspective

on digital collaboration and the creation of situated tools for artistic purposes.

By interconnecting projects and articles through shared concepts and data, this participatory archive serves as a bridge between artworks, narratives of creative processes, theoretical insights, and critical thinking.

We are continuously working on its design and editorial structure and we will continue for some time. With a small team and through workshops, we would like to push this object as far as possible in order to really make it a tool that could be used for several purposes. This project is in progress, here is an abstract of our intentions and current work for *ourcollaborative.tools*.



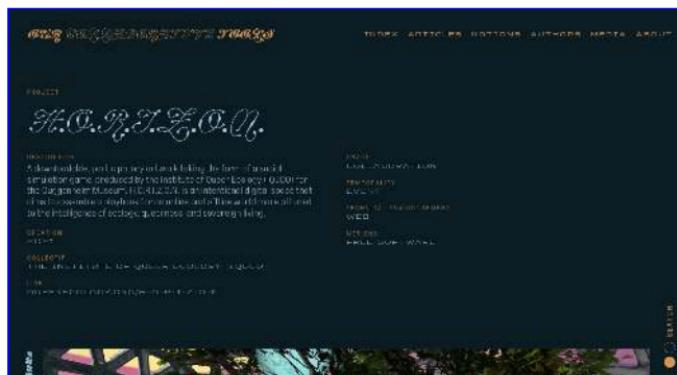
Home page and Index of *ourcollaborative.tools*

What's inside?

Projects

Each project is presented in the form of a sheet that provides the title, description, year of creation if it exists, the author(s), a link to the source, usage, temporality, the technical environment and pictures of the project. We are still thinking about other entries we could add, like tools used to make it, licenses, and programming languages.

Notions are also associated with each project as tags that connects them with articles related.



Project page template

Articles

We invited several academics and practitioners to tell us about their visions of creative collaboration through the filter of their own professional experience. We asked them to write a text as close as possible to their sensibilities to build a corpus of situated articles, in relation to our subject. These texts are either stories of projects presented from a critical perspective, or theoretical texts linked to the authors' research work.

Projects and notions are associated with each text to create an ecosystem of relationships within the various contents of *ourcollaborative.tools*.

Here is a shortlist of the contributions that we know will be published on *ourcollaborative.tools*:

- Garcin, S. (2023). Digital Tools for Creative Collaboration: Log-book.
- Maudet, N. (2023). Appropriate to Better Share: Digital tools for Design Collaboration.
- Mertens, A. (2023). Holding Space for Discomfort in Collective Work: A Potential Role for Trees.
- oooooo (2023). [unknown title: article about feminist servers and federation].

More articles will be added later on.



Article page template

Notions

We intend to enhance the platform with a lexicon of notions related to our research topic. Each concept will be accompanied by its definition, creating a common vocabulary base aimed at engaging a non-initiated audience. This index of notions will also serve as a search filter, allowing

ng users to click on a concept to open a list of associated projects and articles.



Notion index

Ressources

We want this catalog to be as rich as possible. Due to financial constraints and to further enrich the research conducted within this project, we have decided to incorporate a mediography. The mediography will consist of references to articles, books, websites, and other relevant sources that offer diverse perspectives on the subject of digital tools for collaboration in art and design practices. We will continuously update this library with suggestions from guest authors, students, teachers involved in the project, as well as contributions from external sources. The mediography follows the APA model to ensure compatibility with current research norms and academic formats.



References for the project as book, article, website

Images

We have made the deliberate choice to allocate a significant portion of the platform to visual content, allowing ample space for interface illustrations and screenshots of the indexed projects. This decision was made to highlight and appreciate their formal design. In addition, we aim to provide generous visual support within the articles, continuously bridging the gap between practice and theory.

How is it built?

We invited Benjamin Dumond from Bonjour Monde studio. As a graphic and interaction designer, Benjamin was responsible for building the website's graphic identity and developing the interface's logic. Since we consider *ourcollaborative.tools* as a design object in itself, we aimed for a strong and distinctive identity.

We then collaborated on designing the user experience. The development and editorial work are being carried out by our Random() team to ensure ongoing evolution and maintenance in the coming years.

ourcollaborative.tools is composed of two parts:

First, the back office is built on the Django framework and consists of a REST API that publishes all content in JSON format. This allows us to create other graphical applications using the same data. Django is well-suited for content-rich platforms and can be easily scaled according to future developments.

Second, the frontend is based on Vue.js, which provides us with ample flexibility during extensive testing and allows for quick corrections.

The database system is currently in development mode and will soon transition to a PostgreSQL database. The entire platform is exclusively built using free software, including the interface design created with Inkscape, and of course, the development of the platform using Django and Vue.js. All the source code will be made available in open access retrospectively.

How to use it?

The platform is designed to facilitate the creation of meaningful connections between its various components. The overarching goal is to provide users with a wide range of options for exploring the content. Additionally, the platform aims to evolve into a participatory archive that encourages contributions from anyone interested in enriching its content.

Explore

With *ourcollaborative.tools*, our ambition is to create a rich and dynamic database of content for users to explore. The platform is designed to ensure that each element is interconnected with others.

Here are some of the ways users can browse the content:

- The entry page serves as the index of projects, prioritizing visual elements such as pictures. As well as the pages dedicated for "Articles", "Authors", "Notions", and "Media", each providing access to the corresponding content categories.
- Each element within the platform is accompanied by associated data, including the date of creation, usage, temporality, etc. These data points also serve as filters, and clicking on them leads to a curated list of related content.
- Users can also utilize the search feature to explore projects, notions, and articles based on specific keywords or terms.

In conclusion, *ourcollaborative.tools* is designed to empower users to navigate through the information by allowing them to customize their own pathways and explore the data according to their preferences.

Participate

For now, we are feeding the platform with a curated selection of projects, articles, notions, and resources from our own collection, as well as contributions from a select group of artists, designers, and academics within our network.

However, *ourcollaborative.tools* is designed as a participatory archive and will soon be open to proposals from a wider community. Symbolically, it aims to engage a community of creators who are motivated by the idea of creative collaboration.

In order to maintain editorial coherence, we are in the process of deciding how we want to moderate the platform. We are currently considering the implementation of participation guidelines and the development of a submission form for content that would require validation before publication.

What will come next?

From the beginning, *ourcollaborative.tools* has been designed as a pedagogical tool to be used in our schools. The next step will involve testing it with students. Initially, we intend to use it for research work, leveraging its potential as a participative archive with rich content to explore and contribute to. Furthermore, as a constantly evolving tool, we aim to involve students in improving it from both technical and editorial perspectives.

Furthermore, as a dynamic database with interoperability, we envision *ourcollaborative.tools* taking on various forms such as web-to-print publications, exhibitions, and more. We would like to explore these possibilities with students through collaborative curatorial, editorial, and design projects.

It is of utmost importance to us that this platform does not become a static archive but remains a malleable entity in constant evolution. To achieve this, *ourcollaborative.tools* will be passed from hand to hand, it will grow, mutate, and be forked through classes and workshops

Making Exhibitions as a Collective and Pedagogical Practice

The idea of exhibition as a pedagogical tool is already well established in art and design schools.

Designing an exhibition as a holistic practice means producing content, selecting it, thinking about the coherence between the pieces, the general meaning, designing the scenography, the graphic identity, writing the texts presenting the content, mediating with the public, etc. It then involves a wide range of skills and is a valuable exercise for both the teachers and the students. Exhibition is also a very interesting form of production within schools, because it can only be a collective process, engaging the teaching team, the technical ones and the students to work together.

Ideally, students should be included in all these steps as much as possible, so they have a global vision of the entire creative process and can integrate into a single object the learning of various skills through experience, which the teacher accompanies. You become a blacksmith by forging.

Nonetheless, it is not always possible -- due to logistical and budgetary conditions -- to include students in all the steps of the work. There are indeed different levels of students' engagement and collective dynamics possible. In our

schools, we often get them to focus on a particular aspect of the whole exhibition work in order for them to learn bit by bit, by digging into one task and observe, sometimes help for the other ones.

As part of the DTCC project, we had planned to create an exhibition at Esadse, to share the work accomplished over two years. However, as our thinking progressed, it seemed more appropriate to envisage a form of collective exhibition in collaboration with our partners and with the participation of students from the three schools.

After considering the idea of a nomadic exhibition -- which posed a number of logistical problems -- we finally settled on the idea of three exhibitions, one in each school, which would be both similar and unique. To this end, we are working with EKA and HfG to define common content, from which the three exhibitions will be developed. We also agreed that we all want students to be at the core of these exhibitions. Considering that their experience of our international collaboration and what it has generated in terms of experimentation, reflection and friction, is what the project has generated most richly, we have decided that these exhibitions will be structured around video interviews with the students.

On top of those interviews, we've decided to add, a certain number of items to the list of the ones to be optionally included in the exhibitions:

- A collaborative video game made by ESADSE teachers.
- Video filters programmed by ESADSE students.
- Games created during the workshop at ESADSE.
- Collaborative manifestos produced by EKA students.
- Interfaces and prototypes made by students during HfG's workshops.
- Semester projects by EKA and HfG students.

This content will be shared between the teams, each of whom will make their own selection of elements to include in the curating of their exhibition. We are also considering the possibility of freely distributing this content online, so that other exhibitions could take place. The scenography of each exhibition will then be designed independently by each school. A graphic

identity will be defined together and be the visual link of the exhibitions.

What is most interesting is that the process of making those exhibitions is creating various inter-related group dynamics:

- International collaboration between teachers of ESADSE, EKA and HfG.
- Internal collaboration within the pedagogical team of each school.
- Cooperation of the technical teams of each school.
- Participation and contribution of the students.

Indeed, the students were not directly involved to define the issues, objectives and content of those exhibitions, but were invited to contribute in various ways and at different stages of the process.

The first part of this chapter is devoted to student interviews, which are at the center of each exhibition.

We'll then explain the different ways in which we hope to involve students in the exhibi-

ion project, and the pedagogical goals of their participation.

Students' interviews at the center of the exhibitions

After the last workshop at HfG, in November 2022, we met to decide on the next steps of our collaborative work.

At this stage, despite the involvement of our students in all stages of the project, we had not yet documented their feedback and personal reflections on our working subjects. In addition, we didn't feel that the output from the workshops and the work carried out during the courses were sufficient to capture what's at stake in the collaborations, considered as processes that are always in-progress.

Indeed, while the students' productions provide food for thought and formulate proposals concerning collaborative creative tools, we feel that their feedback on our international collaboration and what it generated in terms of questioning tools, positioning practices and the co-habitation of different ways of working, express more explicitly what is at stake in collaborations, through and beyond the technical devices on which they are based on. It seems to us, therefore, that if the students' productions are to be presented at the exhibition, they must necessarily be accompanied by a reflexive form, enabling us to enter into the collaboration itself, beyond the productions that have resulted from it.

To do this, we chose to interview the students. These interviews took the form of videos, an easy-to-exchange format. We decided to ask the students to answer in the language with which they felt most comfortable, and to subtitle them in English and French. We -- teachers from the three schools -- collaboratively wrote a series of questions that we felt were representative of all the topics covered over two years:

- What are the most interesting aspects of this cooperation between three countries?
- What was your biggest surprise during this trip?

- Can you describe the best and/or the worst moments during this workshop or any workshop?
- What was the main insight on collaboration during this workshop?
- Do you have an anecdote of something you experienced during the project that stuck in your mind?
- Was there any remarkable input of one of the project partners or international team members for you?
- What does collaboration mean to you? How can it succeed in the digital space?
- What have you learned about digital collaboration during this project?
- How can we enhance creativity in the digital space? Share your insights.
- What did you learn from the other partner schools and their approach to design?
- Please describe the communication with your international team-mates, how was it for you?
- Was the outcome of the workshop week different from the usual school projects that you are doing at home?
- What did you learn or observe in this project that you will take away for your professional or personal life?
- What's next for collaborative creativity?
- What would you do to deliberately screw up a collaboration project?
- What would you do to save a messy collaboration situation?
- What would you bring from digital collaboration into real life?
- Can digital collaboration ever be intimate?
- What is the point of collaborating with someone who works very differently from you?
- Were you able to combine different working methods in your group or did one method take over?
- What is interesting about collaborating with someone who works very differently?

- What would you bring from digital collaboration into real life?
- Do you think tutors in the project should have taken the very different study cultures more into account?
- We know that digital spaces may build barriers between people. Where do they offer chances?
- Do you think you learned anything during the pandemic to design for that question?
- Is there anything we can do to improve the quality of the creative process in the digital space?
- How does it work to get to know someone new in the digital space?

We then submitted them to the students, who each selected three questions and responded to them on camera. To ensure consistency between our materials, filmed in three different locations, we defined common rules for filming, lighting and temporality. We produced a total of 22 videos, which will be broadcasted in each exhibition.

Here is a list of reflections from student interviews that we have tried to summarize and compile here, they are sometimes intriguing even contradictory and can occasionally seem out of context, but are always rich in learning:

- Workshops are propitious moments to get out of your comfort zone.
- Students had to reevaluate their way of thinking and working in order to collaborate.
- During workshops, a lot of ideas popped up in a very short time.
- Reaching a group cohesion can be tough.
- Students within a team really wanted to work on the same subject but from very different point of views which were difficult to bring together.
- Different working methods sometimes are incompatible.
- It's difficult to get a tangible project by the end of the week.

- The project led to a new understanding of the distinct design methodologies by students.
- They felt like those collaborations were an insight of what they could experience later on in a professional setting.
- It's essential to work with people who have a different way of working in order to learn from each other. Moreover, if different perspectives manage to converge, the project is bound to be richer.
- There will be a bright future for creative collaboration.
- Collaboration is a question of trust.
- The project allowed most students to gain a lot of self-confidence.
- They learned a lot about methods.
- Methods and tools are not neutral and shape our way of thinking and our way of working.
- We cannot separate the tools and methods.
- Collaboration is not an end in itself.
- The communication can be natural: "each of us proposed ideas, as a ping pong game".
- Sometimes it is difficult to make decisions intuitively when you are used to follow a certain process.
- "Listening to my gut feeling again from time to time".
- Since there was a language barrier, students adjusted a lot through sketches.
- If you visualize something, you can come to a common understanding much better.
- In the digital space, the whole environment can be customized.
- Good transparency in the process is a major issue.
- Digital collaboration is not going to be something very intimate.
- Digital collaboration is always intimate to some extent: "We've all seen someone's cat run across the screen".
- It's difficult to take remote relations from a business level to a personal level or even to another level.

- The emotions disappear quickly in video-calls.
- Misunderstandings have a snowball effect and become bigger when collaborating at a distance, because it's harder to communicate clearly.
- Remote communication is the same as in real-life, just more complex.
- Varying feelings and emotions can be used successfully in group work.
- A computer is just a combination of ones and zeros, there is a risk of "over-humanizing" it.

This stage of the project, which involved gathering feedback from the students, on camera but also in front of us teachers, turned out to be a moment of reversed or reflexive pedagogy. The students, by asking themselves and telling us with a critical and constructive approach, what they've learned, and what they've appreciated or regretted, gave us valuable feedback on their experience, but also on the limits of what we have proposed during these two years of collective work.

Involvement of students in the making process

Each in our own way, we are trying to involve our students as much as possible in the design, production and mounting of our exhibitions.

Here is how we envision students taking part: - Some students with graphic design skills could participate in the making of a visual identity. - During the exhibitions and associated events, students could present the work they've done during and following the workshops and express their feedbacks and learnings. - In ESADSE, Damien Baïs will lead a course where students will code some graphic programs that will be a part of the exhibition and related to the collaborative videogame, he and David-Olivier Lartigaud (ESADSE teacher) are starting to make. - In each school, some students will be involved in setting-up the exhibitions and present it to the public.

Students will be invited to participate on a voluntary basis, except when it is the subject of specific courses. It's very important to us that they don't feel instrumentalized, that those who take part actually have the will to do so. Some of the students who participated in the workshops have already expressed their willingness to be involved in the exhibitions.

Programming of bugs by ESADSE's students

For the exhibitions, and following the workshop on collaborative games, the ESADSE team decided to specifically design and program a three-dimensional cooperative game in which the players will face each other (so they don't see the other player's screen) and have to talk out loud in order to meet on the map. When they succeed, events will be triggered in the scenography.

Indeed, students will be programming those events as part of ESADSE's Digital Creation program, more specifically in Damien Baïs' programming course. These programs will generate graphic effects on the interviews we have mentioned earlier, temporarily disrupting the videos broadcasted on screens in the room when players meet in the game. We call it *bugs*.

What is the most interesting is that students actually will be hacking their own videos, as a way to reclaim their form, which has been entirely designed by the teaching teams. In order to do so, they will design computer programs which will be connected to the game. The exhibition then becomes an exciting pretext for them to do some technical exercises. It's also an opportunity to include in the project some students who haven't taken part in the workshops.

Apart from those "filters" and even though the game will mostly be made by Damien Baïs and David-Olivier Lartigaud (Esadse teachers), it will also be opened for students to participate if some of them are interested in.

Setting-up the exhibitions with students

When we build an exhibition with students, it is interesting to involve them from the beginning to the end, particularly in the technical installation of the elements that make it up.

Involving students in setting up the exhibition is an opportunity to pass on technical know-how -- applied to a particular object -- that they can use later in their curriculum. This may involve spatial skills, craft skills (drilling, fitting a peg, choosing the right peg, and so on), setting up technical devices, etc.

In the case of this series of exhibitions in particular, the installation of the system linking a central computer hosting the game, screens showing the videos and micro-computers enabling coordinated actions

between the game and the videos, is an interesting experiment because it can be somehow reproduced for other purposes.

In summary, the mounting of an exhibition is always interesting in terms of sharing knowledge between students and with the support of the teachers and technical teams involved. It is also a -- generally cheerful -- moment of collaboration when the "hierarchy" between students, staff and teachers is less visible, everyone working side by side towards the same goal.

Conclusion

In this publication, we have aimed to specify the pedagogical positions in our respective schools while also explaining how the experience of international collaboration has challenged them. The document at hand is a hybrid object, comprising testimonies, reports, theoretical texts, thoughts, and various remarks that reflect the diverse methods and approaches brought together for this project. To structure these concluding notes, we propose to highlight the most salient elements: our perspective on collaborative tools, the positive contrast between the teaching methods of the schools involved in the DTCC project, the significance of in-person meetings, and the pedagogical paths that have emerged as a result of this collaboration.

The DTCC project as a whole has been centered around the topic of digital tools for creative collaboration, whether conducted remotely or in-person. From the perspective of ESADSE, we saw this as an opportunity to further our ongoing critical work on the replacement of dominant tools in art and design schools, such as the Adobe suite and the communication, project management, and creative tools developed by GAMAM companies. This pedagogical approach, which emphasizes "digital writing" and authorial practices, encourages ESADSE students to think critically about various aspects, including ecological and social issues, as well as governance and

data security concerns, in relation to their projects and the tools they employ to realize them. We believed that these questions, which are central to the pedagogy of the three partner schools (EKA, HFG, and ESADSE), were at the core of the subject of Digital Tools for Creative Collaboration. However, the desired changes we aimed to implement across our respective schools did not materialize. This discrepancy became a point of disagreement among the project partners, highlighting our divergent positions but also providing valuable learning experiences. The question of tools proved to be less consensual than initially anticipated, and our collaborative experience reaffirmed that the choice of tools is primarily influenced by cultural, ideological, and even political factors. Consequently, we had to invest time in both online and offline meetings to delineate the project's scope, placing greater emphasis on the notion of collaboration itself, which became a case study for us, rather than solely focusing on the question of collaboration tools.

In our collaboration, we relied on the tools that we had in common, placing a higher priority on usability rather than critically examining our stance towards those tools. In light of this approach, apart from a shared Wiki that was created for this project and serves as the foundation of this publication, our remote collaboration was organized using widely-used communication

tools such as Zoom, Slack, Miro, and the email applications provided by our respective schools. While we were aware that this project wouldn't bring about significant changes in our schools' established practices, it did spark a collective and critical reflection on the tools we already employ, with a focus on their effectiveness in fostering collaboration. This process resulted in our students taking strong positions and presenting intriguing proposals for new tools or features that could enhance online collaborations.

In summary, we have recognized that the tools we currently use for collaboration are primarily communication-oriented, with only a few specialized productivity tools like Figma or Penpot catering to collective creation. This realization has made it evident that there is still a need for collaborative digital creation tools to be developed. Hence, the significance of our initiative to build ourcollaborative.tools, a catalog that showcases unique and alternative projects fostering creative processes beyond the field of industry, rather than offering pre-existing "solutions."

It is worth mentioning that, from a pedagogical standpoint, the in-person workshop format has reaffirmed its relevance, which is why we have dedicated a significant portion of this publication to it. In particular, the formation of working groups, intentionally including students from

each school in every group, has played a vital role in fostering a sense of collaboration among them. The deliberate effort to exchange perspectives and seek common ground has demonstrated the professionalizing impact of this workshop approach. The diversity of spaces and the range of proposals that have emerged highlight the remarkable fertility of this teaching format, as long as there is a commitment to documenting its outcomes. The establishment of a wiki has provided a means to capture and preserve the activities in a faithful manner. Alongside the wiki, the interviews conducted with the students -- which we have chosen to present in future DTCC exhibitions -- serve as a crucial component of this archive, providing an authentic testimony to the significance of these collaborative moments for the students involved.

In continuation, it is evident that the collaborative value of digital tools, particularly in the creative field, cannot fully replace the direct interaction of physical encounters. While collaborative tools prove to be quite effective in a productivity-driven context with well-defined project goals, their inherent digital nature (interface, screens, etc.) currently falls short of replicating an essential aspect of collaboration: the physical presence. The act of meeting others, experiencing different cultures and perspectives, fostering conviviality, and being "contextualized"

beyond one's usual workplace are elements that are challenging to simulate digitally. Hence, despite the advantages of digital collaboration, there remains an irreplaceable value in face-to-face interactions. At the conclusion of such a project, it may appear self-evident, but putting it to the test has revealed that creation springs forth from a broader and richer context than the mere software framework of a multi-user interface. This realization underscores the true value of an ERASMUS-supported project like ours. Beyond the tangible outcomes achieved, it is the "extras" accompanying the work sessions that have played a significant role in shaping a mental space specific to creation. Cultural visits, friendly encounters, and discussions outside of formal meetings have contributed greatly to this process.

As affirmed by both students and supervisors, the diverse experiences we encountered during this project have transformed our creative approaches and consequently shaped our productions. Our work has become enriched by embracing pedagogical and professional methods that extend beyond the conventional practices of our respective countries. This clearly shows the richness of the European territory, which, through its differences and points of convergence, compels us to view collaboration as an exercise in physical and intellectual mobility. It enc-

ourages us to embark on a journey of cultural and formal discoveries while embracing diverse approaches. In this dynamic context, remaining static is not an option; instead, we are invited to be in constant motion.

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