

1. SCIENTIFIC GOAL OF THE PROJECT

My proposal is in line with the growing trend towards **examining phenomena on the fringes and margins of the hegemonic digital center**, which have until recently been mostly overlooked by researchers in the field. I want to go a step further and use experiences from the so-called margins to reshape the center. My research approach is based in the assumption that lack of interest in peripheries works to the detriment of the entire field of study and there is room and need for multiple narratives. My aim is **to understand how local contexts (economic, geopolitical) affect the creative, grassroots, autonomous use of digital media**. My objective is to draw from local experience of digital media to develop a novel model for research practice that can be further applied in diverse local contexts as well as impact the general development of the still-shaping field of digital media research. The project involves a comprehensive study of **the demoscene of the 8-bit Atari computer as a field of cultural production**. I will run this project at the [Ubu lab](#) equipped with original local machines.

2. SIGNIFICANCE OF THE PROJECT

Decentering Digital Media

In my research, which focuses on the local aspects of digital media, I underline both the hegemony of the English language and the Western perspective in the dominant narratives in the area of digital media (which are developed most influentially in regions where a significant part of digital technology was developed, i.e. United States, Western Europe). However, **the trends that aim to describe the peripheries of this narrative are gaining significance**. Researchers are interested in such areas as Arab countries, the Chinese area of influence and Latin American countries. One area in particular that was not dominated by the hegemonic center is Central and Eastern Europe, meaning former communist and post-communist countries. The Iron Curtain was so tight a wall separating from the Western experience that in this area there arose phenomena that do not have counterparts elsewhere.

Important factors shaping this experience were **the delay in computerization and a lack of models for the use of digital media** that were provided in the Western world by corporate producers. The Eastern European computer users, who often smuggled their equipment out of Western countries themselves, or bought on it in non-market conditions, were forced **to invent their own autonomous practices**. Very often these platforms were so expensive for the users that they remained to use them even if the producers stopped supporting them. The desire to level with more advanced platforms resulted in many independent user-invented creative solutions and "negotiations" with the platform.

Demoscene

The demoscene is **a field of cultural production that is focused around the platform and its creative uses**. In this aspect the demoscene differs from other creative fields of expression in digital media (games, electronic literature, media art), in which the platform remains more transparent (see Borzyskowski 1996, Botz 2008, Carslon 2009, Czernski 2014, Marecki 2018, Reunanen 2017, Tasajärvi 2004, Polgar 2005). What is more, **the platform is overlooked in the study of in most fields of digital expression**. The demoscene is a unique European grassroots phenomenon that has been developing since the 1980s. The term *demoscene* is derived from the word "demonstration" and refers to the presenting the capabilities of a platform and the skills of a programmer, musician, or other creator or group of creators. In the field of digital media demosceners have unique and **holistic knowledge of the platform**, as well as the languages of the programming used on it. A characteristic feature of a demoscener is affiliation with a given platform.

8-bit Atari

The demoscene is present on every platform (from 8-bit computers, through 64-bit computers, to consoles, smartwatches etc.; in January 2019 pouet.net featured a list of 94 platforms used by demosceners). Hence, due to the scale and diversity of the phenomenon, it is difficult to study of the demoscene universum in its entirety (it is estimated that the demoscene counts about 40 000 members). **I chose the Atari XL / XE demoscene as the subject of a pioneering case study focused on the comprehensive study of one platform**. The chosen platform has an estimated number of 4 000 users (mainly in Poland, but also in Germany, Czechia, Slovakia).

I chose the 8-bit Atari for several reasons. First of all: **this particular scene has not yet been the subject of any scientific study**. Second – it developed mainly behind the Iron Curtain, hence it offers opportunity for **studying localness and domestication** the very strong scenes of the C-64, Amiga or more advanced Atari platforms, which dominated in Western countries or in Scandinavia, were not investigated in

terms of localness. In addition, the Atari scene has remained active for over 30 years, which enables to argue that it constitutes **unique intangible cultural heritage**.

Despite the fact that the 8-bit Atari demoscene developed in many countries, Poland is the center of this computer's scene. The phenomenon of Poland becoming an Atari empire occurred due to what I call the **mass domestication of the platform**. Poles used the same (or similar) resources as the original Western Atari users, but overwrote them with their own ideas and culture. Thus, in fact, they created a different platform (if we see the platform as an idea tied with cultural context). Through the process of mass domestication a globally unique creative phenomenon was created. One of the factors that enabled this development was **a very specific approach to copyright, a lack of producer-imposed restrictions**, which translated into many creative uses of the platform (including the demoscene). My team and I plan to examine this significant aspect in detail in the course of our research.

Justification for the pioneering nature of the project

The proposed research project differs from most scientific projects in the field in that its aim is to establish a new area in the field of digital media, which could be called **demoscenology** or **demoscene studies**, employing existing approaches (platform studies, media archeology, practice based research) to research on local creative use of digital media. My team and I do not stop at studying only digital works, but also research the platform itself, the community around it, as well as the unique local historical and present experience of digital media. What we propose is the opposite of traditionally understood humanities centered on studying texts at a library, at a desk. **This project is practice based, involving analysis of code, hardware, experiences, practices and community**. We do not only produce texts, instead our outputs include artifacts, documentation of experiences, **analyses with code snippets**, development of practices for preservation, curating. By focusing on the DIY approach to equipment, **we propose a methodology and good practices for researching the domestication of the equipment present in many cultural contexts** .

Impact of the project results on the development of the research field and scientific discipline

The project addresses several questions the humanities (especially digital humanities) are currently facing. These questions especially concern the hegemony of the Western, Anglo-Saxon culture in the field of digital media and the lack of appropriate representation of other paradigmes, both technological and creative, in the narrative about the history and present of digital culture. It seems that in this respect diversity is not represented in the world of digital media on a scale comparable to other fields in which texts of culture are produced (eg. literature, theatre), both in terms of use, accessibility of machines as well as the use of the English language for artistic expression as well as research on digital phenomena. **Discovering original local digital media phenomena that are absent in the hegemonic sphere is one of the most important tasks of contemporary humanities (enabling to test dominant paradigms and contrasting with them)**.

3. CONCEPT AND WORK PLAN

1. Analysis of Histories and Theories of Demoscene, Platform Studies, Domestication of Technology

Objective: Compare and synthesize existing histories and theories of platform studies, demoscene, especially within scholarship on creative computing, but also considering theories from other disciplines, such as technology studies, subculture studies. The task involves also a critical examination of existing theories from a local perspective.

Short description: There is a lot of literature on platform studies, software studies and platform domestication, as well as a few sources about the demoscene. As part of this task, the team becomes acquainted with the latest literature on these topics. Our findings are applied to further tasks, primarily research on domestication of the platform or ethnographic research.

2. Close and Distant Reading

Objective: In this phase the team will use their skills and knowledge to the reading of Atari works using platform studies methods. Investigators will analyze the works using a bottom-up approach, through the following levels: 1) platform, 2) code, 3) form/function, 4) interface, 5) operation/reception, while taking into account cultural context. The PhD student in cooperation will be tasked with preparing a catalogue of the most important constraints of the Atari platform and analyzing artifacts that demonstrate how demosceners overcame them. These include constraints related to graphics and sound (Carlsson 2008), but also hardware limitations.

Short description: The Atari XE/XL is one of the most limited platforms in terms of hardware capacities. Studying the example of this platform we research how hardware constraints challenge the authors of demoscene artifacts, describing the constraint's impact on the demosceners' creative practice.

3. Study of the Process of Platform Domestication & Media Archeology

Objective: Comprehensive study of the process of platform domestication.

Short description: In this task we use original platforms and peripherals collected at the laboratory. Creators will be invited to the laboratory to demonstrate their equipment, inventions, innovations, home-made peripherals (often produced in small quantities, sometimes even just single copies) and the research team will document their negotiations with the platform. This task could be described as investigating a very specific type of cultural heritage, reconstructing what could be called “**a people's history of the platform**”.

3. Study of the Community

Objective: The platform's community will be researched through ethnographic analysis of existing sources and collection of new data (structured interviews, online survey). We expect study groups to include around 40 demoscene members for structured interviews and up to 100 demoscene members for the online survey.

Short description: A key step will be the study the documents created by demosceners before the advent of widespread internet use. The investigators will also analyze disc magazines and forums devoted to the platform, especially Atarionline and Atari Area (c. 4 thousand users combined). Based on structured interviews, the authors will prepare a report on Atari culture, how the platform was and is used, its creative aspects, and the functioning of the community. This task will be implemented under the lead of the Researcher specialized in digital ethnography.

5. Consolidate and Develop Integrative Research Practice Model

Objective: The aim of the task is to summarize and consolidate the output of the project. In laboratory work what counts is not only the description, the text, but the developed practice and artifacts. These aspects are paramount to this project.

Short description: Gathering outcomes of the research tasks, developing conclusions, developing theoretical framework and good practices for further similar research in other contexts. As part of this task, the findings of tasks RT1, RT2, RT3, RT4 will be consolidated in the form of a monograph and proposed guidelines for a new research practice model. We assume that study of the process of domestication of the platform and of its community will be very detailed, hence the monograph will contain only the key findings and the synthesis of their results. Detailed reports and documentation will be available on the laboratory's website.

Work flow

Year 1: I begin work on the **Analysis of Histories and Theories of Demoscene, Platform Studies, Domestication of Technology** (RT1), and on **RT3** and on **RT4**.

Year 2: I work with the PhD student on **RT 2 – Close and Distant Reading and RT3 Study of the Process of Platform Domestication**. The PhD student also works with me on RT1, helping with the theoretical and historical survey. Researcher begin work on RT 4, that is **Study of the Community** together with me. The work takes part at the laboratory.

Year 3: The team works on a paper on platform domestication. The PhD student continues work on the close and distant reading of demoscene works. The research on the community and platform domestication continues. We establish a catalogue of canonical of digital works to be subsequently analyzed (result of analysis of community and documents). The team works on papers presenting the results of the close and distant reading. We work on analyzing and synthesizing the results of the research on the community of the platform and documenting **RT 4 Study of the Process of Platform Domestication**. A detailed report from the research on the platform and its community is written.

Year 4: The team publishes a monograph on the Atari platform using the results from all the project RTs, especially the study of the platform's community and the documentation of the platform's domestication. Project RTs end.

Risk analysis

The lab, at which work is carried out according to principles of experimentation, **is the cornerstone of the proposed project**. Thus, at the project's foundation there is an assumption of the possibility of occurrence of **errors or some kind of lack of resolution**. Lack of certainty that all study components will lend themselves to combining into one final consistent whole is in the nature of such research. Part of the risk stems from the

significant role of **human-computer agency** in the project. In addition, it should be strongly emphasized that we undertake to **work with non-standard technology** (not replicable on a mass scale, not available on the market), characterized by diversity and individualization. Thus, risk not only lies in the application of the laboratory work model, but is also further heightened by the **experimental nature of the chosen research matter itself** (demoscene, creative approach to equipment and its constraints). However, my comprehensive interdisciplinary preparation, both in terms of previous research as well as institutional experience (including several projects involving analysis and production of digital highly computational works, research on various creative communities, and my broader media studies perspective on digital culture (I am also a researcher in cinema and literature), allows me to competently lead a project that is **heterotopic by nature and affirms difference**. Normativity, standardization, or uniformity are not attributes I would use to characterize any of my previous research - nor would I use them to describe the proposed project.

4. RESEARCH METHODOLOGY

In the case of the proposed research the platform, the digital medium is more than a tool for carrying out the study. The platform itself is the focus of research. Researching the demoscene involves highly advanced study of computers, not only in terms of their technical capacities, but also in relation to art, culture and diversity. The broad scope of the project requires complex research on the materiality of digital works (**platform studies & media archeology**).

Platform Studies

General information: The platform studies approach is one of the most novel and increasingly influential methodologies in research on digital media, strictly connected with the material turn in media studies. Nick Montfort and Ian Bogost coined the term “platform studies”, formulated the principles of this research approach, and are its most eloquent promoters; however, their method was influenced by a number of predecessors who postulated considering the material aspect of media. Among these influences, the most important include the framework developed by the German scholar Friedrich Kittler (Kittler 1999), as well as the media archeology approach founded by the Finnish and German researchers Jussi Parikka, Erkki Huhtamo and Wolfgang Ernst (Ernst, 2012; Parikka, 2012; Huhtamo, Parikka, 2011). Platform studies is a methodology that combines an array of approaches that have been previously used to read and understand digital media, including software studies, code studies, and different aesthetic schools of thought. In comparison with previously existing methods, the distinguishing advantage of platform studies is that this approach offers a type of analysis that includes the material level of the work.

Media Archeology

I want to stress that my project is not interested in the official and well-described history of the 8-bit Atari in the US, but rather the new life of the platform, outside of the control of its manufacturer, that was given to it beyond the Iron Curtain and later in post-communist countries. In this sense, the project fits into the paradigm of media archeology, which underlines the possibility of determining the beginning of the studied period for a given medium depending on geolocal context. This is close to the intuitions of Siegfried Zielinski and his concept of media an-archeology. This scholar summarized his approach: “I have made it the main principle of my thinking that there are no common “only” beginnings – that is why I prefer to say that I practice “an archeology” rather than “media archeology”. An-archeology is against the idea of linear development” (after Póltorak 2016). In this approach, media archeology means achronological research, and engages with a variety of discourses from the past and the present which construct media history differently depending on local specificities. Media archaeology used as a methodology is also a kind of micro-history, interested in uncovering facts that may not be viewed as significant from the point of view of the official history of a given medium.

Laboratory Model

A significant fact that proves the prominent development of mentioned methodologies is that the recent years saw the founding of a number of humanities labs that apply platform studies in their research work (see the online project The Lab Book. Situated Practices in Media Studies) by Lori Emerson, Jussi Parikka, Darren Wershler).

5. PROJECT LITERATURE

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