

On network infrastructure, art, and cyberfeminism. A discussion with Aileen Derieg.

{Zelda, thank you for the additional references on cyberfeminism <3}

I initially met Aileen in Ars Electronica one rainy Wednesday after having been introduced to the members of Stadtwerkstatt (coucou ben si tu lis ce texte, merci beaucoup). When asked why I was here I simply said "network art". Upon hearing this a Stadtwerkstatt member kindly invited me to speak to Aileen, a tall woman with long hair. The following paragraphs are the result of a very informal exchange I had with her in a communal kitchen.

This all happened at the margin of the Ars Electronica festival in Linz at the Stadtwerkstatt building that overlooks the Danube.

Introduction

In 1998, Aileen Derieg translated a book about the Linux operating system from english to german which led her to create and configure her own server. She had already been interested in computers and programming since discovering the Basic programming language in the 1970's. Eliot, the name of her server, started as a personal project but quickly became a communal cyber-space. Aileen hosted a variety of tools like email services and blogs which her friends and family used to communicate online with each other. For her, there was a certain beauty in the early internet and experimenting with new communication tools. Technologies like IRC (Internet Relay Chat) brought people together. Unlike today's social media, there was a sense of proximity and intimacy that came from these early ways to connect online. After her husband Peter passed, Aileen and a handful of women she met online migrated her server to the servus.at infrastructure.

servus.at and [Stadtwerkstatt](https://stadtwerkstatt.at) are housed under the same roof in a three story building by the Danube in Linz. The first, Stadtwerkstatt, is a cultural center founded in 1979. The second, servus.at, is the technical infrastructure that connects the house to the internet and provides access to digital tools to many artists throughout the world. servus.at is also a non-profit initiative that promotes the use of free open source software and deals with central issues of the information society. This initiative started in the 1990's at the same time as other indie servers were appearing across Europe like [LJUDMILA](https://ljudmila.org) in Ljubljana Slovakia. servus.at is rooted in anti-fascism and has always supported the arts while thriving for network autonomy from capitalist and fascist entities.

Out of sight out of mind

Preamble

Early in our discussion, the subject of networks arose.

When talking about the internet, the first images that come to mind are often abstract representations of computers and satellites magically connected together. We don't necessarily think about the materiality of these connections. After all, how many times a day do we realistically pick-up a computer and think about the network infrastructure behind it all?

At a time when the internet is a monopoly tightly controlled and regulated by governmental authorities and mega corporations, the physicality of the internet enabled by cables and physical infrastructure is increasingly hidden behind clouds aesthetics and tightly polished marketing campaigns. Through these efforts, we've grown accustomed to having an enormous amount of calculation power at the tips of our fingers. The interfaces developed for the user make everything seem simple, weightless and impact-less. Yet, the reality is completely different. There is nothing easy, neutral or invisible about the internet despite the promises of "seamless lightning fast cloud infrastructure".

So at the beginning of our talk, Aileen reminded me that servus.at (and by extension the internet) is first and foremost a physical infrastructure. Acknowledging this materiality is important to understand the importance of alternative networks and politically inclined net initiatives. To this extent, she invited me to develop a critical point of view regarding this "invisible" internet infrastructure.

Technically, the internet is a network of underwater cables imbued with a complex history that stands at the crossroads of ecological disasters and colonisation. {1} This infrastructure, which enables worldwide communications, is not and has never been neutral. After all, without the telegraph cable networks there could be no internet, and without colonisation there could be no telegraph cable networks. {2}

Yet, for Aileen and for many net-activists, this physical infrastructure of networks is also a means by which we can reclaim agency... though we mustn't only acknowledge the physicality of the network, we must also build and maintain it.

The physical layer

According to the OSI model, the physical infrastructure of a network is the base layer in networking protocols. {3} This first layer can be anything from wires that connect to modems to power supplies for servers. It is what we don't picture when we imagine servers, AI models and cloud computing.

Building and maintaining this first layer is the first step towards running autonomous servers which in turn will enable us to be free from the corporations who control and moderate our everyday online lives and activities.

This is why the servus.at infrastructure runs on physical machines installed in a small server room on the second floor of Stadtwerkstatt. This is why [cyber trans * feminist](#) groups advocate for DIT (*do it together*) and communal art servers.

Reclaiming agency over this first network layer, enables *us* to create and maintain alternative internet spaces.

In many cases, such alternatives are of no interest for those who already thrive under dominant social structures, but become a tool *for those and by those* who are marginalised and oppressed to reclaim control over the machine.

Of course, let us emphasise that the masters tools will never dismantle the masters house. {4}

Art & the network

Net Social Sculptures

Our conversation, which had now been grounded in material reality, took another turn as I introduced the subject of networks and art.

During the 1990's online communities emerged while adopting new technologies like Bulletin Board Systems (BBS) and IRCs. With these new technologies came a sense of novelty and artistry not unknown to these early adopters. Individuals in these early internet spaces, engaged very tangibly with discourses traditionally carried by what is called "art" such as social, cultural and political questions.

When asked if participating in networked communities in the 90's felt similar to making art, Aileen told me that the borders between art and infrastructure were blurry and intertwined. For many net-pioneers like Aileen, there was a shared impression of artistic intervention through participation, without the manifested will "make art" during this early internet age.

And so even if these communities were never meant to be considered as art, they became communal art spaces where *all of everyday life is art and all members of society are contributing artists*. In other words, these communities became social sculptures. {5}

Unfortunately, what counted as "art" and who counts as an "artist" was not always open to self-determination. These terms were defined by network ontologies, which were themselves determined by the people in charge of the networks... people like system admins for instance. More, to have access to a computer in the mid to late 1990's was often synonymous to being a privileged white male westerner. Therefore, despite all the discourse, essays and efforts that have been made to make us believe that the internet was a *free* technology *for everyone*, material access to these technologies and initiatives were and remain a source of discrimination and inequality. {6}

Infrastructure Art

Even if these early net-communities enable art to exist through networks, we must not forget that the physical infrastructure can, in many instances, be the artwork itself.

Indeed for Aileen, initiatives like servus.at are art experiments. The goal of servus.at was never to be art, but the modality with which it exists naturally invites artists and creatives to think of the network as a medium.

Technically speaking the physical infrastructure defines the rhythm of the network and how information is exchanged through it. This infrastructure ensures stability, autonomy and political agency. Yet, it is important to acknowledge that the physical infrastructure of the network remains fragile and in constant need of being preserved from degradation.

For instance, the network infrastructure is vulnerable to bugs, crashes, and decay, or can be the target of attacks by malicious actors who seek to disrupt services. To prevent these damages, individuals must maintain the infrastructure to insure that it remains functional.

This technical endeavour, the maintenance a network infrastructure, is a deeply collaborative act as it requires individuals to work together and utilise each others skills. As such, maintaining an infrastructure becomes a way to connect with others, learn technical knowledge, and reclaim agency. There can be no alternative networks without communality.

Initiatives like trans * feminist servers and servus.at are collaborative projects where individuals work together to maintain the life of the network. Doing this enables the creation of a community network for others to learn from and challenge dominant narratives. Thus, the technical infrastructure and by extension the community it enables, can be seen as an ongoing and interactive piece of network art. {7}

The man in the room

At this point of our discussion, the subject naturally shifted towards cyberfeminist initiatives and participating in early net-based communities.

When asked about her experience as a woman in these online communities, I was not surprised to learn that Aileen kept asking herself "Where are all the women ?!".

Un-suprisingly these early internet spaces did not escape the reality of our patriarchal society. The male-domination which reigned in the outside world also prevailed over the internet and created male-only spaces that were mostly hostile to anyone who was *not like them*. Today, this phenomenon continues to shape a cultural narrative characterised by the erasure of women in the field of information and technology. {8} For the untold story of women in computing, Aileen recommends Broad Band by Claire Evans (2018).

Since early online communities saw an over-representation of men, it was only natural to create spaces specifically *for women by women*. And so the end of the 1990's and early 2000's saw the emergence of gender focused initiatives, or rather gender exclusionary initiatives {9} that contributed fully or in part to the birth of the cyberfeminist movement.

Cyberfeminism can be traced back to the early 1990's with initiatives like the [Haecksen](#), a witch anti-hackerbro initiative that shares ties with [Chaos Computer Clubs](#). Other well known cyberfeminist initiatives like the [VNS Matrix](#) and [Old Boys Network](#) (OBN) contributed to the movement through the publication of the [cyberfeminist manifesto](#) in 1991. To this day, this manifesto is still regarded as a historical milestone of the internet. Later by the mid 1990's cybercafes we're all the rage. As spaces of social connexion and easy access to computers, places like Cyberia in London {10} sought to create alternative spaces where women would feel comfortable learning about and using computers.

A few years later in 1997, the first CYBERFEMINIST INTERNATIONAL happened at Documenta X Kassel which saw a *"group (of thirty plus women) who {met} in Kassel, united by a desire to explore how women are working with technology, influencing its development, and getting their hands dirty in the codes and hardware of information technology."* {11} The same year, Cornelia Sollfrank made the [Female Extension](#) which embodied the energy and spirit of cyberfeminism. According to her words, the intention : *"really was to destroy the competition or at least disturb it in such a way that it would become obvious that there is a critical energy or there is something in the net that is not happy with what they are doing there."* {12} Despite the contributions to both internet art and cyberfeminism, it is infuriating to see that Sollfrank's work was not featured at the Documenta... or even recognised as "art" by the institutions at the time.

Aileen found refuge and community in these initiatives which became social circles and spaces of mutual aid. Amongst these initiatives, she told me about the [FACES](#) mailing list which was founded in 1997, by Diana McCarty, as *"a pragmatic response to the needs of a small but growing number of women in media"*. In parallel to FACES, Aileen also recalls the [Gender Changer Academy](#) which originated around the PUSCII and ASCII {13} groups in the Netherlands. Since 1999 the GCA focused on creating workshops and spaces for women to learn more about computer hardware, the linux operating system, and free open source software as a whole. The GCA also freely distributed learning materials on their website such as technological dictionaries and programming courses.

As a growing distributed community the GCA quickly sought to organise a conference for all women interested in information and communication technologies. From this desire to encourage more women to take part of the free and open source software movement the first [Eclectic Tech Carnival](#) (ETC) was held in Pula in 2001. Today the ETC still happens every two years, the next edition is set for 2026 and Aileen invites you to come :)

A few last words...

Our conversation ended around some contemplations about the use of internet technologies and the need to keep on supporting and contributing to alternative net initiatives.

Today, more than ever it seems important to be critical of our net surroundings while engaging with local, small and alternative internet infrastructure. It was clear to both of us

that even if the domination of commercial platforms killed free and open source software (FOSS) and online communities outside of social media networks, we can't stop fighting.

One step in this direction is to join online (and offline) communities which challenge dominant narratives. This may seem daunting, especially if you are not a programmer, but *don't worry we'll be here to help you*. If you like to start on this journey we particularly recommend A Traversal Network of Feminist Servers (ATNOFS, <https://systerserver.net/ATNOFS/>) which should provide you a good "how to setup a server" and more context on trans * feminist servers.

Finally, it was clear to me after speaking to Aileen, that there still was so much to uncover on the subjects of network art, cyberfeminism and physical infrastructures. There is also much work to be done in regards of archiving and preserving the stories of those who lived the early internet days.

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Email me at vera@servus.at if you have any questions about servers, would like to chat, or provide some feedback about this article.

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Vera Choudy-Lartisan

[1] Nicole Starosielski, *The undersea network*, (2015)

[2] Dhanashree Thorat, *Colonial Topographies of Internet Infrastructure: The Sedimented and Linked Networks of the Telegraph and Submarine Fiber Optic Internet*, (2019)

[3] OSI model, https://en.wikipedia.org/wiki/OSI_model

[4] Audre Lord, *The master's tools will never dismantle the master's house* (1979)

[5] Josephine Bosma, *Constructing Media Spaces - The novelty of net(worked) art was and is all about access and engagement*, (2004), <https://www.josephinebosma.com/?view=article&id=58:constructing-media-spaces-the-novelty-of-net-worked-art-was-and-is-all-about-access-and-engagement&catid=28>

[6] Lori Emerson, "Did We Dream Enough?" *THE THING* BBS as an Experiment in Social-Cyber Sculpture, <https://rhizome.org/editorial/2020/dec/16/did-we-dream-enough-the-thing-bbs/>

[7] Antoine Moreau, *La voie négative du Net-Art*, (2007), <https://artlibre.org/la-voie-negative-du-net-art/>

[8] Fortunati, L., Edwards, A., & Abbate, J. (2025). Introduction: (re)writing gender in Internet histories. *Internet Histories*, 9(1–2), 1–10. <https://doi.org/10.1080/24701475.2025.2458990>

[9] It goes without saying that these initiative we're primarily for cis-women. Today theses communities use the acronym FLINTA which stands for *Female, Lesbian, Intersex, Nonbinary, Trans and Agender... It stands for anyone who is not a cis man*.

[10] Kyle MacNeill, *Remembering Cyberia, the World's First Ever Cyber Cafe*, <https://www.vice.com/en/article/worlds-first-ever-cyber-cafe-cyberia-london/>

[11] MEDIA RELEASE, *FIRST CYBERFEMINIST INTERNATIONAL*, <https://rhizome.org/community/42414/>

[12] Michael Connor, Flooding the Museum. An Interview with Cornelia Sollfrank,
<https://rhizome.org/editorial/2017/mar/09/flooding-the-museum/>

[13] *Progressive Utrecht Subversive Center for Information Interchange* & Amsterdam
Subversive Center for Information Interchange