Signal to noise: a live interface based on analog radio interference

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Signal to Noise: A Live Interface based on Analog Radio Interference

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Abstract. "Signal to Noise" is a sound installation using radio transmissions and mobile radio receivers as an interface for audience-based performance. Carrying radio receivers, the audience moves through the space created by two overlapping radio transmissions that broadcast on the same frequency, creating a volatile acoustic space of radio interference that changes with each motion of every participant. The result is an embodied and interactive creation of a soundscape which is shaped by the unpredictability of interference and noise in analog radio. The installation deals with the battleground of ideological discourses, broadcasting archived radio programs of the Cold War era. Listeners move through the space in which transmissions from the East and West jam and disrupt each other and with every motion enact an ever-changing soundscape. The resulting choreography technologically reenacts the "fight over hearts and minds" at the border between East and West, recalling the technological and ideological mechanisms used during the Cold War, where Western propaganda radio was jammed by Eastern authorities.

Keywords: Interference, Analog Interfaces, Installation, Audience Interaction, Technological Reenactment

Description of the Work

"Signal to Noise" is a sound installation using FM radio transmissions and mobile radio receivers as a lo-fi live interface for audience-based performance. Carrying radio receivers, the audience moves through the space created by two overlapping radio transmissions that broadcast on the same frequency resulting in a volatile acoustic space of radio interference that changes with each motion of every participant. The outcome is an embodied and interactive creation of a collective non-musical soundscape which is shaped by the unpredictability of interference and noise in analog radio. Using radio transmissions as a medium of interaction, the installation exhibits highly sensitive and lag-free interactivity, facilitating a spontaneous choreography of the audience. As a live interface, the installation demonstrates the "post-digital" use of seemingly outdated technologies in combination with digital devices to achieve a responsive environment that does not presuppose advance gesture recognition or tracking technologies but instead engages the human body in a system whose reactivity results from analog devices alone, and their uncontrollable yet fascinating interaction.

Thematically, "Signal to Noise" deals with the concreteness of ideological discourses and the imaginary of the "Other" by technologically reenacting the interference strategies used during the Cold War period. The volatile acoustic space spanned by the two radio transmitters becomes a space in which two concurring voices compete. These two voices consist of archived material of the Cold War era from (Western) Radio Free Europe and (Socialist) Radio Romania. Carrying mobile radios, listeners move through the space in which both transmissions jam and disrupt each other. It is only when they will come across the middle line formed by the two transmissions, that listeners will break the neutral point and it will become possible to hear fragments from of one of the two broadcasts. It is like being cached between two Logos (or two ideological positions), where beyond words, the ideological and media wars embody beings.

The resulting choreography re-enacts the "fight over hearts and minds"[1] between East and West and recalls the technological and ideological mechanisms used during the Cold War – when CIA-funded Radio Free Europe was meant to counter Socialist ideology and in turn was jammed by eastern authorities. The radio space in that era was considered an "invisible battleground" of broadcasting, jamming and complex technological counter-jamming strategies. Radio Free Europe is considered unique in the annals of international broadcasting because of acting as surrogate domestic broadcaster for the nations under Communism. It also relied on local official media and informal news in order to broadcast what was considered "objective" information. By doing so, it also gave shape to an inaccessible public, instantiated as the "East".

By using lo-fi and DIY-methods, the project also recalls the bricolage strategies used to circumvent state propaganda that are reflected in today's technologies for activism. Far from being historical and contextual dated, the fluidity of radio (or "Hertzian") space continues to be relevant today, in the age of wireless communication and coded information.

"Signal to Noise" is part of the project "Repertories of (in)discreetness" – an art research project that has its starting point in the archives of Radio Free Europe from the Open Society Archives in Budapest, considered one of the most important archives of the Cold War period. The project questions the act and mechanisms of archiving the "Other", with a focus on the European East. It discusses the ways in which information is collected and transferred, the ways in which the East has gained an epistemic body through refraction, as well as the ways in which this body is reiterated today.

Additional Information

Biographies

Following Visual Arts and Cultural Anthropology studies in Cluj (Romania), **Tincuta Heinzel** completed her PhD in aesthetics and arts sciences at Paris 1 University (France) in 2012. She is interested in the relationship between art and technoscience, with a special focus on smart materials and wearable technologies. She curated and coordinated several projects, such as "Areas of Conflu(x)ence" (Luxembourg, Sibiu/Romania, 2007), "Artists in Industry" (Bucharest/Romania, 2011-2013) and "Haptosonics" (Oslo/ Norway, 2013). As an editor, she published "Art, Space and Memory in the Digital Era" (2010) and coordinated Studia Philosophia's issue on the "Phenomenology of Digital Technology" (2010). Tincuta is member of 2580 Association Cluj (Romania) and of Paidia Institute Köln (Germany) and is currently research fellow at Nottingham Trent University (UK) and visiting professor at "Ion Mincu" Architecture and Urbanism University Bucharest (RO).

Lasse Scherffig is an assistant professor for art and technology at San Francisco Art Institute. His work explores the relationship of humans, machines and society, technological infrastructures of communication and control, and the cultures and aesthetics of computation and interaction. He recently defended a doctoral dissertation on Cybernetics and Human-Computer Interaction at KHM, Academy of Media Arts Cologne. He co-founded the trans-disciplinary artist group Paidia Institute and has been a visiting professor at Bauhaus University Weimar. He has published on a variety of subjects, such as locative arts, Cybernetics and the development of Brain-Computer Interfaces. His art projects have been shown at Tranzit Bucharest, Science Gallery Dublin, Transmediale, ISEA, National Art Museum of China, and the ZKM.

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[1] "fight over hearts and minds". Expression used by the American propaganda during WWII.

(in)discreetness" was presented at Tranzit Bucharest in March 2015 with the support of Erste Foundation, Goethe Institute Bucharest, OSA Archives Budapest, 2580 Association Cluj, Radio Romania Archives, Fortepan Budapest and National Dance Centre Bucharest.

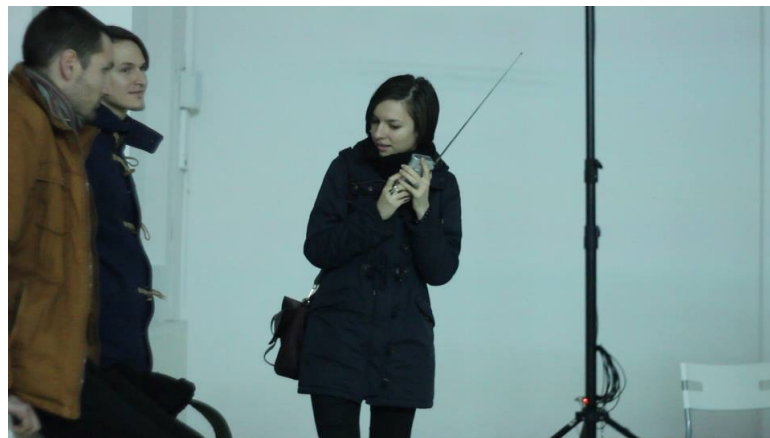Figure 1. "Signal to Noise" installation view, Opekta Ateliers, Cologne, April 2014.

Figure 2. "Signal to Noise" installation view, Tranzit Bucharest, March 2015. Photo: Istvan Laszlo.