Notes

01 ›› In *Postscript on the Societies of Control* (1992), Deleuze builds on Foucault's *Discipline and Punish* to trace a shift in how power operates in Western societies. Where Foucault descriabed modern society as structured through "institutions of enclosure" producing subjects through normalization and continuous observation. Deleuze argues that contemporary control functions through codes, passwords, and continuous variation, modulating access to information rather than confining bodies in space. Gilles Deleuze, *Postscript on the Societies of Control*, October 59 (Winter 1992): 3-4.

02 ›› In *Tubes: A Journey to the Center of the Internet* (2012), Blum argues that imagining the internet as immaterial is a "willful delusion." The network is physical: submarine cables, exchange points, and data centers requiring land, energy, and maintenance. Fiber converges in a handful of controlled Internet Exchange Points (IXPs), where traffic is rerouted and concentrated. Data centers — Google's in The Dalles, Facebook's in Prineville — are private properties where users' data is fragmented across tens of thousands of hard drives, Andrew Blum, *Tubes: A Journey to the Center of the Internet*, 165-173.

03 ›› McKenzie Wark in *A Hacker Manifesto* (2004), describes how, although information appears immaterial and infinitely reproducible, it does not exist without the presence of a material support. She extends that contemporary forms of power (defined as part of the "Vectorialist Class") do not operate on the mere production of information but by controlling the "Vector" (the medium) through which information itself circulates, McKenzie Wark, *A Hacker Manifesto* (Cambridge, MA: Harvard University Press, 2004), paras. 14, 19, 24, 29, 32, 34, 312–13.

04 ›› Gilles Deleuze, *Postscript on the Societies of Control*, October 59 (Winter 1992): 3-4.

05 ›› Deleuze, *Postscript on the Societies of Control*, 3-4.

06 ›› In *Protocol* (2004), Galloway describes internet governance as a "bi-level logic" — horizontal distribution through TCP/IP balanced against vertical hierarchy through DNS, whose inverted-tree structure centralizes control at the root server level. Together, these protocols reveal that power is not imposed from outside the network but embedded in its technical standards. The protocol does not merely enable communication — it structures the conditions under which communication becomes possible, Galloway, *Protocol*, 143, 207, 243.

07 ›› A Firmware is the embedded software that governs a device's core functions. In Wireless Community Networks, replacing proprietary firmware with open-source alternatives allows commercial hardware to be repurposed for collectively managed mesh infrastructures, Ninux.org Community, *Fondamenti per Costruire una Rete Wireless Libera*, Translation from Italian by Author.

08 ›› Concept evolved from the notion of "distributed leadership" defined by Rodrigo Nunes in Neither Vertical nor Horizontal (2021), Nunes, *Neither Vertical nor Horizontal*, 26–27, 163–64, 174–80.

09 ›› Referring to the idea of Utopian spaces of Avery Gordon in Some Thoughts on the Utopian. Avery F. Gordon, *Some Thoughts on the Utopian*, in Utopia, ed. Anna-Marie Smith (Durham, NC: Duke University Press, 2011), 19, 45-57, 82-105.

10 ›› In his work *Neither Vertical nor Horizontal* (2021), Rodrigo Nunes argues that most movements do not operate as a single unified structure, but as an ecology of interconnected actors, practices, and scales. Nunes's conception of the "distributed" is not defined by the absence of centers, nor does it imply a form of decentralization; rather, it's described as a configuration composed of multiple centers. These centers operate at different scales and temporalities; some may be temporary and informal, others may be more stable and enduring, Rodrigo Nunes, *Neither Vertical nor Horizontal: A Theory of Political Organization* (London: Verso, 2021), 26–27, 163–64, 174–80.

11 ›› Concept evolved from the notion of "collective hack" defined by McKenzie Wark in *A Hacker Manifesto* (2004), Wark, *A Hacker Manifesto*, paras. 29, 32, 34

12 ›› Concept evolved from the notion of "collective hack" defined by McKenzie Wark in *A Hacker Manifesto* (2004), Wark, *A Hacker Manifesto*, paras. 29, 32, 34

13 ›› Quoting Galloway, the most effective response to forms of "protocological power" is hypertrophy, meaning pushing a protocol to its limits to "sculpt it anew", Galloway, *Protocol*, 143, 207, 243.

14 ›› Referencing the notion of "stuctural invisibility" introduced by Andrew Blum in describing how the global internet infrastructure is presented, Blum, *Tubes: A Journey to the Center of the Internet*, 7-13

15 ›› The Wireless Commons Manifesto (2003) emerged within the early 2000s wireless networking milieu. It was conceived as a political declaration to foster a sense of belonging among community networks worldwide, by framing wireless infrastructure as a commons built and maintained by citizens, and by rejecting forms of privatization over the network. The manifesto circulated through mailing lists and hacker communities, increasingly gaining popularity until becoming a reference point for wireless movements across Europe, *Wireless Commons Manifesto*, 2003, Wireless Commons, https://personaltelco.org/wiki/WirelessCommonsManifesto (accessed February 13, 2026).

16 ›› In TAZ: The Temporary Autonomous Zone (1991), Hakim Bey describes the "Net" as the hierarchically organized infrastructure in which information circulates: here, power regulates access, transmission, and interpretation. Instead, the "Web" is defined as the medium, the totality of the channels, horizontally distributed, that enable exchanges within the "Net". Lastly, the "Counter-Net" emerges when the channels of the "Web" are strategically mobilized against the hierarchical structure, since it operates from within, opening free spaces to challenge centralized control, Hakim Bey, *T.A.Z.: The Temporary Autonomous Zone, Ontological Anarchy, Poetic Terrorism* (Brooklyn, NY: Autonomedia, 1991), 106–14.

17 ›› Bey, *T.A.Z.: The Temporary Autonomous Zone*, 106–14.

18 ›› Concept evolved from the notion of "hack" defined by McKenzie Wark in *A Hacker Manifesto* (2004), Wark, *A Hacker Manifesto*, paras. 312–13.

19 ›› Bey, *T.A.Z.: The Temporary Autonomous Zone*, 106–14.

20 ›› Steven Levy's formulation of the Hacker Ethic (1984) formalized a new political orientation of hacking practice, starting from the 'Hands-on Imperative,' which defines the hacker as someone who opens devices, examines systems, and takes them apart to expose underlying structures and ultimately challenge systems of control. Here, technical actors recognize that 'access to computers and to anything that can reveal how the world works should be unrestricted' — meaning that the hacker understands that power actively produces knowledge, and that knowledge cannot be understood as existing independently from systems of power, Steven Levy, *Hackers: Heroes of the Computer Revolution*, 1984.

21 ›› According to the definition of "Vector" by McKenzie Wark, Wark, *A Hacker Manifesto*, 2004.

A Manifesto to Envision Techno-communitarian Futures for Telecommunication Infrastructures

A Manifesto for

Issue 01

The Mutable Net

Introduction for the Manifesto

This manifesto was created as a proposal for rethinking the principles guiding technical infrastructures, as well as a base framework for identifying the agents that participate in the creation of what is defined as a "Mutable Net" (such as the "Communitarian Hacker").

It draws directly from the documents that define the shared governance of Meshed Systems — explored throughout the research presented in Issue 01 — reimagining the manifesto form as an infrastructural tool to build upon.

It is conceived as an object to be discussed, exchanged, rephrased, and built upon collectively, aiming for the creation of an open, mutable participatory document. .

This document is to be considered a working draft, and exists as a direct outcome of the design methodology presented in the last chapter of Issue 01: Chapter 04 - Shaping the Mutable Net.

The Private Net

In technical systems Power is not expressed through confinement but through a form of modulation.[01]

Through centralized governance, privatized networks concentrate data and define routes. Connectivity becomes a commodity.[02]

Privatized networks do not just transmit, they exercise authority at the level of the fiber-optic "vectors"[03] through which information travels.

Modulation regulates access or non-access to data and information, and codes and passwords are the shape through which it is expressed within a system.[04]

Private networks express control through a centralized topology. Their structure concentrates data flows, modulating access to information.[05]

The Private Network operates through a rigid, protocol-bound, hierarchically organized corporate infrastructure, gatekept by providers.

The private network presents itself as the only possible infrastructure. It is not. It has been structured for specific authorities and specific interests. This is not the nature of communication. It is the politics of communication.[06]

The Mutable Net

The Mutable net does not operate by erasing control; it relocates it. The relocation is expressed through material act: encoded in routing protocols, firmware[07], and the electromagnetic fabric of its mesh.

Every technical infrastructure encodes the environment in which it was built. The Mutable Net encodes within its architecture a system that is neither private property nor commodity, but a commons.

The devices of Mutable Nets are open. Repurposed. Through the Network, Mutable Antennas are explored, hacked, and made commons.

Mutable Nets operate a "distributed leadership"[08] in their nodes.

Mutable nets are based on distributed node-to-node connections and collective consent; they do not produce changes as distant horizons but as present reconfiguration of possibility.[09]

A "distributed" topology is not defined by the absence of centers, nor does it imply a form of decentralization; rather, a configuration composed of multiple centers operating at different temporalities. Some temporary, some enduring. None absolute.[10]

Mutable Nets restructure centralization. Through node-to-node connections, data authority is distributed within its topology, held by no one center alone.

Mutable infrastructures act as "collective hacks"[11]. "Collective hacks"[12] push Infrastructures to their limit, "to sculpt it anew".[13]

Mutable Nets' physical machine is built upon communitarian participation and territorial care.

Mutable Nets anchor collectivity at the base of technological development.

Mutable Nets are not opaque and abstract but tangible and transparent for the communal members of their system.

In Mutable Nets antennas, cables, and firmwares operate in total transparency; they break forms of "structural invisibility."[14]

Mutable Nets treat their physical components as a commons, actively decommodifying the means of communication.[15]

Meshed connection systems propose a new form of "Infrastructural Imagination". Infrastructural imagination allows networking practices to become a site of collective becoming.

Forms of Infrastructural Imagination hack into existence a future in which collectivity is placed at the center of technological development.

Scale is not where Mutable Nets' significance is put. Mutable netes demnostres alternative futures for communication systems along with forms of collective care.

The "Counter-Net" emerges when the channels of the "Web" are strategically mobilized against the hierarchical structure, since it operates from within, opening free spaces to challenge centralized control.[16]

The Mutable Net acts to embody an electromagnetic expression of the "Counter-Net."[17]

The Communitarian Hacker

In the Mutable Net ecosystem, the hacker emerges as a figure capable of "producing new concepts and relations hacked out of raw data."[18]

The Communitarian Hacker rewires the "Web" in the creation of electromagnetic "Counter-Nets."[19]

The Communitarian Hacker opens code, shares skills, and exposes processes. They make control visible and therefore negotiable.

The Communitarian Hacker breaks asymmetries between the infrastructural operator and the dependent. They curate a meshed system that breaks modulation control through transparency and flexibility.

The 'Communitarian Hacker' directly engages with technical systems through a "hands-on"[20] approach. They intervene and reconfigure the "vectors"[21] of information circulation.

In the context of global private networks, the Communitarian Hacker comprehends how control is expressed in such systems and actively repurposes its vectors in service of the community.