

NETLESS / independent, urban communication platform

project abstract, <http://k0a1a.net/netless>

throughout the last decade the internet became a singular and unified information structure – all communication happens within one (address) space. this space is very hard to avoid – comfort of proprietary web services, email, voice-over-ip are injected into the core of contemporary living. backboneed via commercial and governmental channels (radio, cable) ever-distributed network of the internet became a perfect panoptic structure – data exchange between the participants can be easily tracked down, inspected and searched through (carvinor, data-retention systems). 'IP address' became synonymous to 'personal ID' and used as evidence in law enforcement. many internet service providers consider deep-packet-inspection (DPI) and traffic shaping a necessary part of their business, undermining the neutrality of the network. many attempts have been made to overcome internet surveillance and preserve privacy while staying online. projects such as 'tor', 'darknet' and numerous peer-to-peer networks archived a lot in keeping internet space politically unbiased. however, in order to use such systems, we - the users, still have to be connected to the internet – meaning having to pay our monthly fees, rely on local governmental regulations (e.g. strong encryption limitations), corporate and copyright limitation (e.g. country based access) and so on.

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netless is an attempt to create a new network, alternative to the internet. more precisely – networks within existing city infrastructures, possibly interconnected into a larger network alike the internet. **netless** is not dependent on specialized data carriers such as cables or regulated radio channels. in fact, there is no permanent connection between all of its hosts (peers) at all – it is *net-less*. the network is based on the city transportation grid, where traffic of the vehicles is the data carrier.

borrowing the principals of the 'sneaker-net' concept, the information storage devices are physically moved from point A to point B. numerous nodes of the **netless** network are attached to city buses and trams. whenever those vehicles pass by one another a short-range wireless communication session is established among the approaching nodes and the data they contain is synchronized. spreading like a virus, from one node to another, the data is penetrating from the suburbs into the city and backwards, expanding all over the area in the meanwhile. the signal of any of **netless** nodes can be received and sent to using any wifi enabled device – a laptop, pda or mobile phone. there are no addresses or routes in the **netless** network – any participant can potentially receive all data circulating in the network – all data is broadcast. personal messages and datagrams can be sent using pgp-like personalized keys which ensure that only two people (the original sender and intended receiver) can decipher the message. only such, as it might seem, oversimplified approach for communication allows the network to be completely homogeneous and flat – any node can be replaced by any other without any modification or configuration. in such an environment it is also impossible to trace data flows.