

## **Local networks for local interactions: four reasons why, and one way forward**

Panayotis Antoniadis / ETH Zurich

*Keynote talk for the ADAM Symposium on «Reclaiming the Internet» with distributed architectures: rights, technologies, practices, innovation, October 2-3, 2014, MINES ParisTech, Paris*

The most typical reaction of someone introduced to the idea of a local community wireless network operating outside the Internet is to ask: "Why?". The Internet is robust, fast, ubiquitous, and cheap (at least in the west). Why to invest effort and money to build such alternative isolated network infrastructures, subject to various forms of abuse and failures? And why would anyone wish to interact with strangers in immediate physical proximity anyway? The main objective of this work is to analyze four different reasons, practical, social, political, and scientific, for which I believe it is important to render such technology popular, easy to install and customize even for non-savvy users, even in areas where the Internet is widely available.

First, in terms of resilience and sustainability such networks could be seen as complementary to the Internet infrastructure, which could continue operating in case of failures or disasters. As a recent example, during the hurricane Sandy in NY, the local community wireless network RedHook WiFi in Brooklyn (Baldwin 2011) survived and provided access to the Internet and emergency services<sup>1</sup>.

Second, the recent Snowden affair and the increasingly aggressive profiling strategies of advertising companies have brought the issues of privacy, surveillance, and manipulation, in the front line of the political agenda. However, the stakes are very high and the huge information power accumulated by the key Internet players cannot be challenged only through protests and regulation. We need also to build some viable alternative (or better complementary) options for communication. And community wireless networks are a very interesting such option in cases when communication is meant to be local and thus there is no real need to be mediated by global platforms with servers residing miles away and very damaging policies for our privacy, independence, and self-determination.

Third, at a social level, perhaps less obviously, one could see the use of local networks as a means to encourage and facilitate the communication between people in physical proximity, either in inner-city neighbourhoods toward conviviality and community building or in public spaces where there are opportunities of contact with different others. The reason is that local wireless networks have some special characteristics, (they ensure the de facto physical proximity of their users, they allow for purely anonymous communications, they are tangible objects themselves, and they create a feeling of independence) that can be used by hybrid space designers to enable more inclusive and playful information sharing games.

Finally, there is also important scientific knowledge that can be generated through the deployment of an open

---

<sup>1</sup> <http://techpresident.com/news/23127/red-hook-mesh-network-connects-sandy-survivors-still-without-power>

toolkit for building customized local networks and a corresponding privacy-preserving shared platform for collecting, voluntarily shared, data from their real-life deployment and use. This is perhaps the only option left for the scientific community to collectively gain a deeper understanding of the underlying causal relationships between design choices and human behaviour in different settings, today a privilege of big corporations like Google and Facebook, which exploit this powerful, and private, knowledge for purely commercial or, even worse, political objectives.

Despite the arguably significant benefits of Do-It-Yourself networking, there are many forces that hinder the widespread deployment of such networks. Commercial interests, politics, habits and addictions, technical complexity, the benefits of anonymity in the city, limited free time, and desire for efficiency are only some of them. To go against the mainstream and compete with big corporations like Google and Facebook, and the Internet itself, isolated efforts by activists and hackers (like PirateBox<sup>2</sup> and Occupy.here<sup>3</sup>) might not prove sufficient. For this, I conclude this presentation by sketching a possible strategy for building an inclusive social learning process that can bring together key actors, including institutions, citizens, researchers, and activists. This will help them to join forces beyond political orientations, and support the development of technologies and tools that can empower citizens to build local customized solutions and claim their right(s) to the hybrid city, including access, participation, representation, and ownership.

## References

- P. Antoniadis and I. Apostol, The Right(s) to the Hybrid City and the Role of DIY Networking. *The Journal of Community Informatics*, special issue on "Community Informatics and Urban Planning", forthcoming.
- P. Antoniadis, J. Ott, and A. Passarella (eds.). Do It Yourself Networking: an interdisciplinary approach (Dagstuhl seminar 14042). *Dagstuhl reports*, 4(1):125-151. Available at: <http://drops.dagstuhl.de/opus/volltexte/2014/4538/>
- P. Antoniadis, I. Apostol, A. Unteidig, and G. Joost. CONTACT: Facilitating Information Sharing between Strangers Using Hyper-local Community Wireless Networks, UrbanIXD Symposium 2014, Venice, Italy. Available at: [http://nethood.org/papers/CONTACT\\_UrbanIXD\\_camera\\_ready\\_final.pdf](http://nethood.org/papers/CONTACT_UrbanIXD_camera_ready_final.pdf)
- Baldwin, J. (2011). TidePools: Social WiFi, Parsons The New School for Design: Master Thesis. Available at <http://www.scribd.com/doc/94601219/TidePools-Social-WiFi-Thesis>.
- Gaved, M., & Mulholland, P. (2008). Pioneers, subcultures, and cooperatives: the grassroots augmentation of urban places. In A. Aurigi & F. De Cindio (eds.) *Augmented urban spaces: articulating the physical and electronic city*. Surrey, UK: Ashgate, 171-184.
- Jungnickel, K. (2014). *DIY WIFI: Re-imagining Connectivity*. London, UK: Palgrave Pivot.
- McGregor, S. Can mesh networks and offline wireless move from protest tools to news?, NiemanLab, November 10<sup>th</sup> 2014. Available at: <http://www.niemanlab.org/2014/11/can-mesh-networks-and-offline-wireless-move-from-protest-tools-to-news/>.
- Powell, A. (2011). Metaphors, Models and Communicative Spaces: Designing local wireless infrastructure. *Canadian Journal of Communication*, 36(1).

---

<sup>2</sup> <http://piratebox.cc>

<sup>3</sup> <http://occupyhere.org>