

# The Polippix Project

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The IT-Political Association of Denmark is advocating privacy and freedom of speech.

In the last few years we have seen a number of threats to our privacy: data retention, DNA registers, tracking of mobile phones, CCTV, yellow dots generated by our printers, etc.

The motivation for this is always very vague, e.g., “If you have nothing to hide, you have nothing to fear”. But we all have something to hide. Not something illegal, but just some part of our life, that we want to keep for ourselves.

Or “If it could prevent just one terrible crime, we believe it is worth it”. This reveals a dangerous attitude to privacy, because for any privacy reducing initiative, you can always come up with some hypothetical hideous crime that could be prevented. Better hypothetical questions are: “If this invasion of privacy is causing just one more suicide, is it still worth it?” and “If this invasion of privacy results in a less open society with citizens not trusting their own government, is it still acceptable?”

We use a technical approach to securing privacy, then use the technical results to support our views on the current invasion of privacy. This again enables us to reach a broader audience, debate the privacy issues, and put privacy on the political agenda.

## Polippix

The aim of Polippix project is to produce a live CD (and USB memory stick, memory card, etc) with software that users without expertise in IT can use to protect their privacy.

As a live-CD it requires no installation on the computers of the users, it does not change anything on the computers. When the computer is turned off, it has left no tracks. I.e. users does not have to worry that Polippix will destroy anything on their normal desktop or that an exiting virus on their computer will compromise Polippix. This also makes Polippix ideal for using with untrusted computers when travelling.

Polippix make use of the TOR (onion routing) network to ensure privacy, MAC address manipulation for providing network level anonymity on local area networks (wireless networks in particular) and encryption of disks.

For phone conversations Polippix use Twinkle to provide SIP calls with ZRTP encryption. Combined with the MAC address manipulation both privacy and anonymity can be achieved if both ends use SIP and ZRTP. But even for IP-to-PSTN calls some degree of anonymity can be achieved. In PSTN the tracking of phone calls are based on the billing system. Because the price of phone calls to PSTN land-lines have dropped dramatically, it is possible to sponsor free phone calls for every user. I.e., the originator of every phone call is the sponsor although the phone call could have been made from any of the distributed or downloaded CD's.

## Lessons Learned

The reception of Polippix outside our own environment was overwhelming. 13000 physical CD's were distributed to the members of trade union, PROSA, more than 35000 CD images were downloaded from our homepage and mirrors in a week, after that we lost track of downloads. Polippix have been covered on every major TV- and radio channel and all national newspapers.

### The publics view on privacy and surveillance

In our contact with politicians, media, and even scientists, we have often encountered talking points that expresses that the public have accepted the invasion of privacy, that Big Brother is now a good thing, and that young people do not want privacy.

We disagree. We got in contact with many Danes after the release on Polippix. On September 15. 2007 when the data surveillance was introduced in Denmark, we took to the streets of Copenhagen asking random people questions, that reflected the effect of the introduced surveillance, e.g. "Who is the last 5 persons you phoned or SMS'ed?", "What do you earn a year", "are you a vegetarian", "do you watch porn on the Internet? and what kind?", etc. From this we learned which parts of their lives, people wanted to keep private and it lead to very interesting discussions about privacy.

- Many people actually do want privacy. That is why so many downloaded Polippix. They did not accept Big Brother. But some had accepted their fate of no privacy because they did not know they had a way of avoiding it.
- There is an enormous variation in which parts of their lives, people want to keep private. For example some were very frank about their sexuality, but would not reveal their salary, while others would not tell which organizations and societies, they were a member of.
- Most of the randomly selected people were not at all aware of the extent of the newly introduced surveillance. And after they were made aware of it most of them did not accept it, or at least did not accept substantial parts of it.
- Younger people did seem more willing to expose them self on the Internet. But they were also conscious about making the choice about what to expose.
- Even people that were not worried about the decrease in privacy were changing their behavior because of the surveillance, even if they were not doing anything illegal.

## Conclusion

There is still many technical and user oriented issues that have to be sorted out to regain the lost privacy in everyday use for most people: The TOR network is too slow for many uses. Distribution of keys for e.g. encrypted email is not simple enough for many people. On the other hand there also many technologies with potential for privacy: Mesh networks, cheap and open hardware like Linux-based access-points, PDA's and phones.

Polippix has helped the debate about privacy. Although there is not anything new on the Polippix CD, getting a physical CD that circumvents the surveillance has been an eye-opener for many. It demonstrates that we give up privacy for practically nothing. Although only a small part of the population use Polippix or similar techniques, getting Polippix out tens of thousands of Danes demonstrates that protecting your privacy is a very real concern for others than geeks and hard-core criminals.