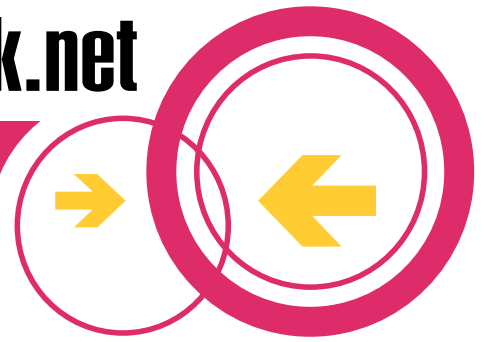


mabb_
medienanstalt_berlin_brandenburg



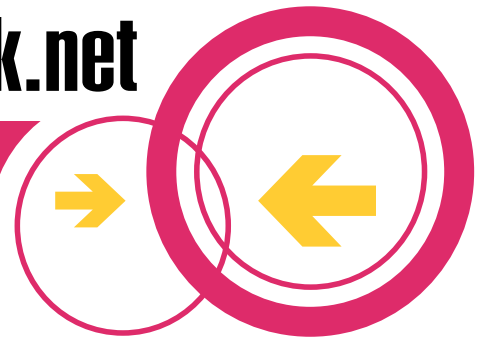
How it started

freifunk.net

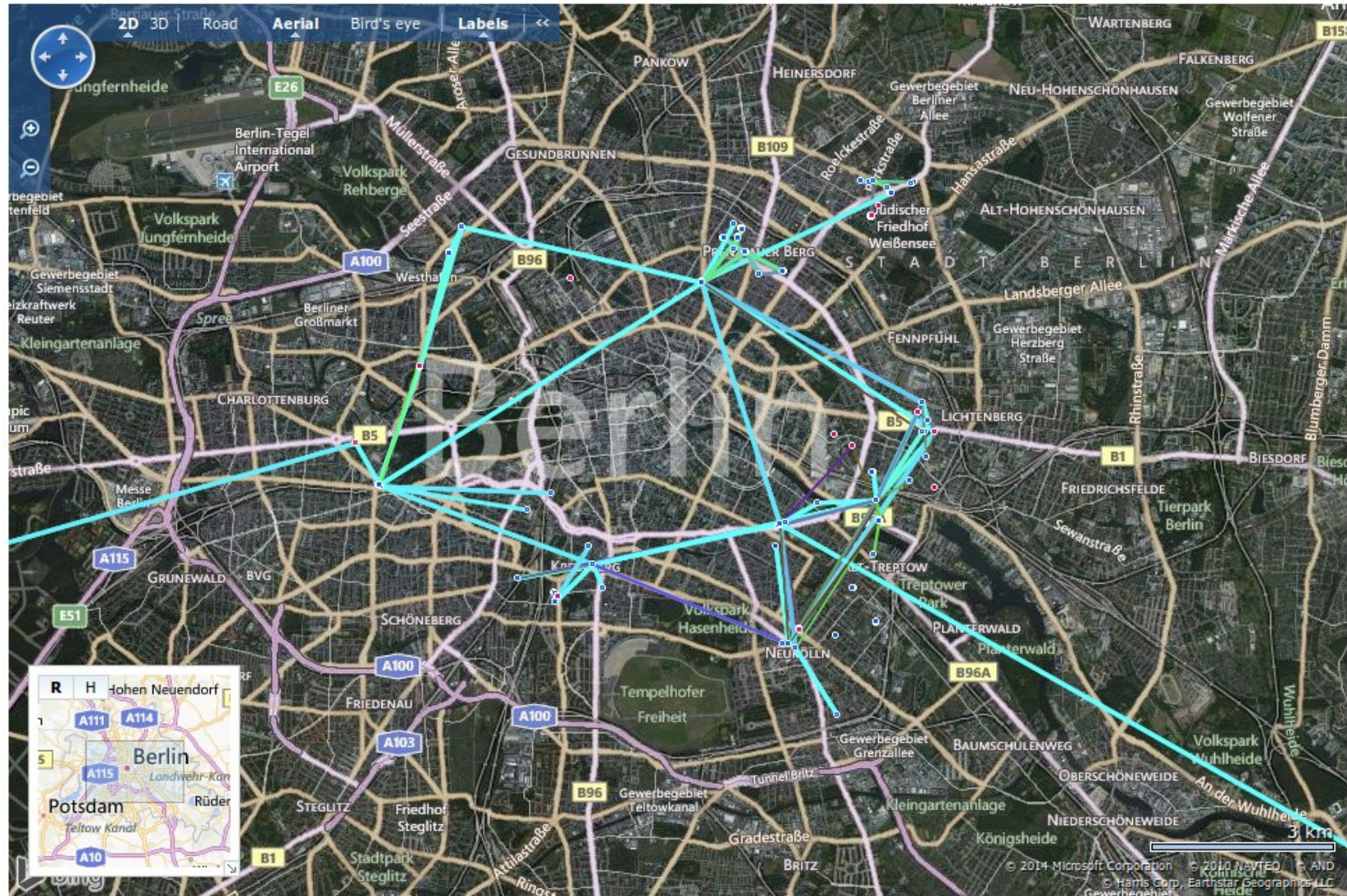


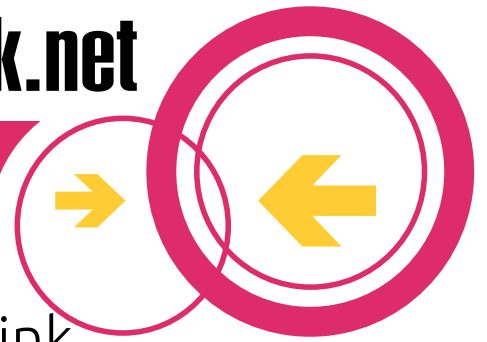
- MABB is the local broadcast operator
 - They run TV and radio stations
 - They have budget for experimental media
- MABB gave 300.000 bucks to KD (a cable provider)
 - For deploying Wifi on top of their DSLAMs
 - City center, focused on tourists and very crowded places
 - City council has a history of blabla on wifi but that never took off
- MABB announced 10% of that budget for Freifunk
 - Seems the former director likes us for some reason :)





- With public money you'll have rules
- 5+ years contract with building owner
 - Sometimes it's difficult to find out who is in charge
- We must do photos / documentation
 - So we now have a Wiki page for every location
 - They also need a report at the end of the project (paperwork!)
 - Their logo on Wiki documentation and maybe on router homepages
- All in all: conditions relaxed enough for community compat
 - Too much money may kill a community. Especially if handled intransparent.



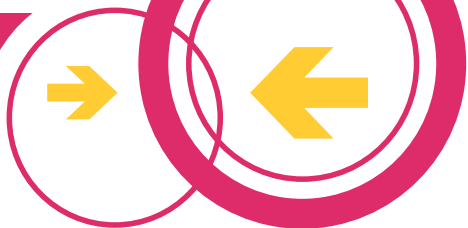


- Build around the city centre
- Batman-Adv (L2) for Station w/DHCP to DSL-Uplink
- OLSR (L3) to inter-connect the Batman-Adv islands
- 20 locations, interconnected by 5 Ghz P2P
 - 2 town halls, 6 churches (some: renovated), a shopping center, a youth center, our housing provider (Freifunk servers), two house projects, a private site, a hack space, a radio station, a culture center, and a provider





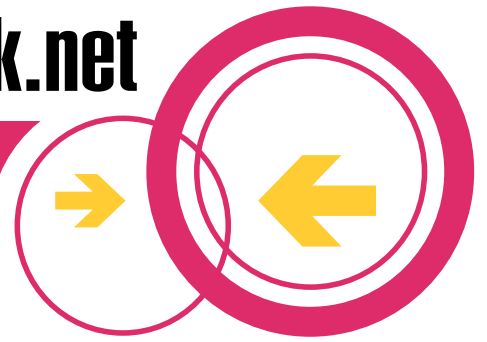




- Ubiquiti NanoStation M2 / OpenWrt / IBSS
- Ubiquiti NanoBridge/Station M5 / AirOS / AP or Sta
 - Because of that DFS feature; probably we switch to OpenWrt one day
- Managed PoE Switch, 802.11af, with 24 or 8 Ports
 - PoE Adapters to convert from 802.11af 42V to Ubiquity-PoE (12-18V)
- Core router with OpenWrt and a VLAN for every M5
- M5/AirOS has MadWifi driver w/ 4 MAC frames
 - WDS aka. Transparent bridge mode (not implemented in Ath9k)
 - Means: source MAC of core router on air (instead of M5-MAC)





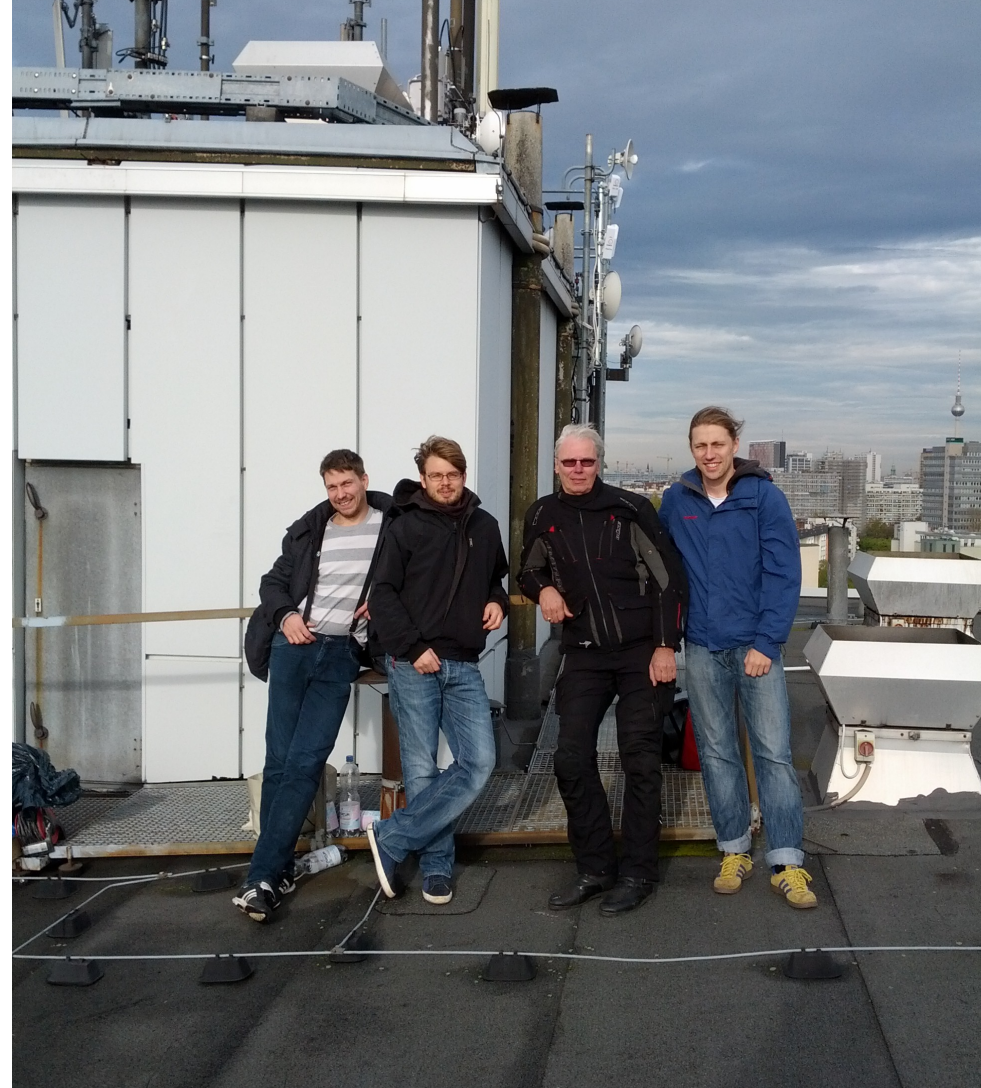


- 2 Town halls (Kreuzberg and Neukölln)
 - Special thanks to local pirates / greens (supporters)
- Kreuzberg: old unused antenna poles and cabling channels
- Neukölln: no antennas allowed outside
 - 12 Windows with chicken wire (1,5cm x 1,5cm grid == no Wifi)
 - Official craftsmanship to change those, around 2000,--
 - Same for cabling channels (metal), dunno but 1000,-- or more
- We tried for years now to convince city council – now it works.

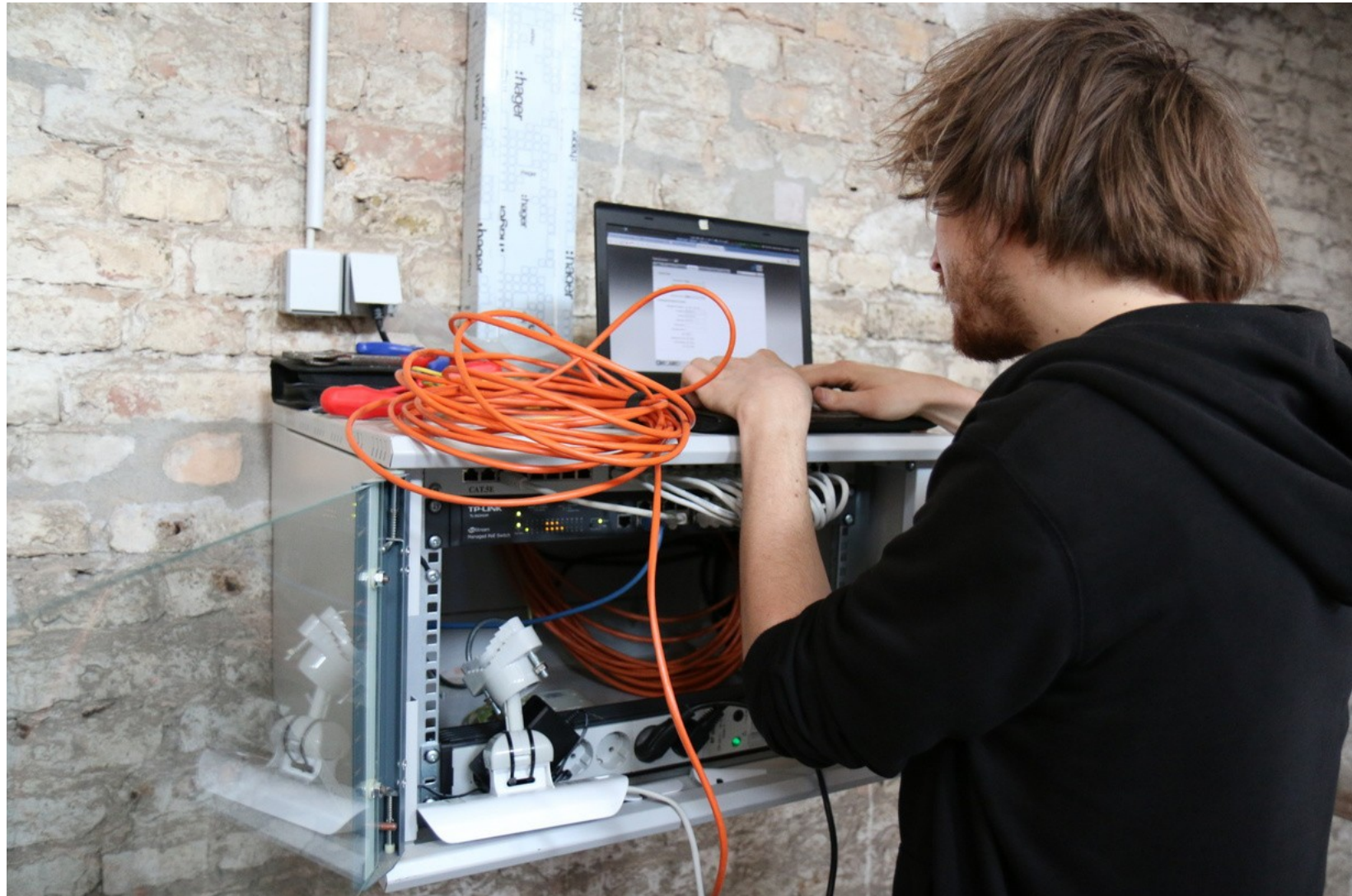






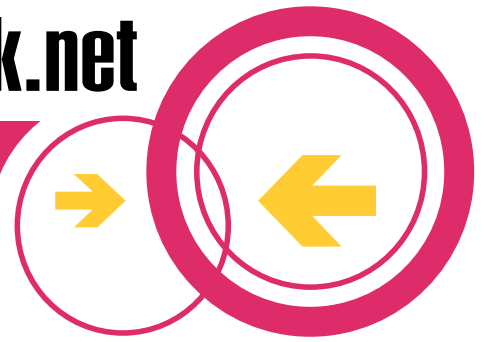












- Book-keeping is a tedious task
 - Needs to be done with reliability.
 - We use public wiki to show who has what stuff for what project
- Project coordination / planning is critical
 - A regulary schedule for meetings is a good thing [tm]
 - Finding a balance between flexibility (...take that 100m Cat5 if you need that, but I cannot hand out 3 more Ubiquity NanoStations without informing / asking the others...)



colt

myToys



DNS:NET
INTERNET SERVICE GMBH

meet^{yoo}
conferencing

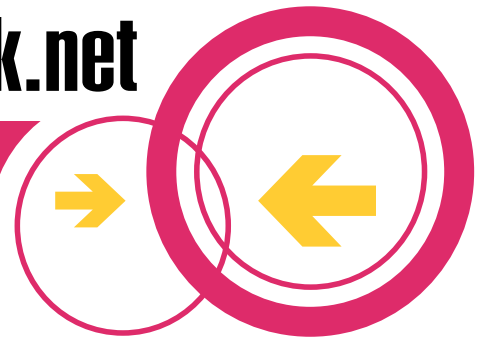


*um
The
unbelievable
Machine
Company

interroute
from the ground to the cloud

Google





- We are now member of a club
- Means: New playground for some of us
- AS44194: 77.87.48.0/21 and 2001:bf7::/32
- BCIX peering partners have locations throughout city
- We can get fiber to that roofs - with unlimited passthrough
- They say: we have 50+ Gbps peerings, so you don't count
 - In other words: they transport anything we can get through air links