
WiFi ∞

be more, do less.

- Karthik Ayyar <karthik@houseofkodai.in>

flash back...

about 15 years ago...
nature proposed,
man accepted

and the rest, as they say
is my story.



**Yes,
this is
where i
live.**



**my
work
space**

A black dog and an orange and white cat are sitting on a balcony. The dog is lying down in the background, and the cat is sitting upright in the foreground. To the left, there is a decorative stone planter with a Buddha-like figure carved into it, containing a green plant. The balcony has a metal railing, and the background shows a lush green landscape.

yes, it's possible.

Internet
comes from
here



What does this have to do with wifi ?

even after 15 years...

- my internet connection is via. a 2 hop (5 km + 10 km) to the closest fiber-backhaul.
- neither simple, nor reliable
 - standards are restrictive
 - Implementations are not open
- #\$\$%^&@*!~

wifio

be more, do less

one protocol for all wireless communication.

- only affordable technology for wireless communication is WiFi
 - 4g/5g/xg technology/spectrum is dictated by _politics_
 - If your feet/tooth is blue, you need to get rid of it before the rot spreads.
 - ...
- needs only one ability
 - the ability to tx/rx IP packets between wireless/wired mediums.

wifio

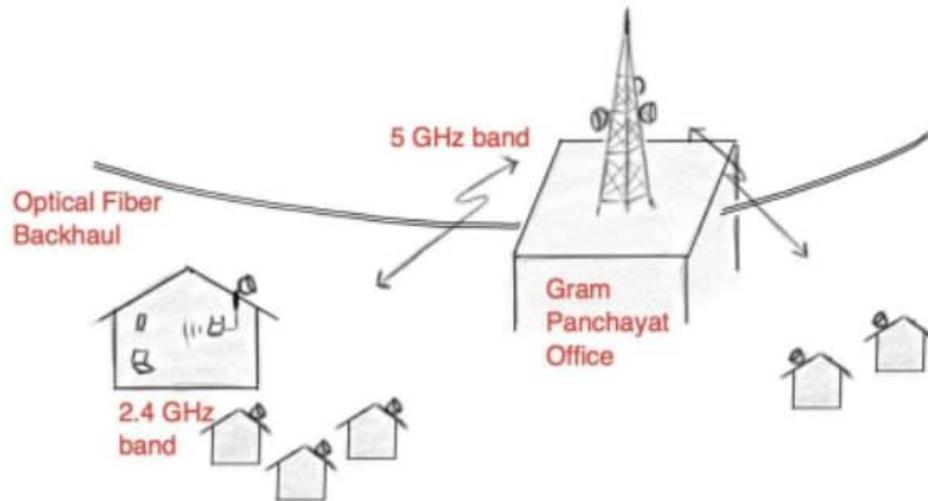
back to basics

- Fixed Access Wireless
 - rx/tx IP packets at fixed rates
- what about airtime/fairness ?
 - a simple protocol
 - group-owner broadcasts availability/capability
 - group-member request/joins
 - group-owner schedules members to talk at specific intervals.

Yes - it is this simple.

BharathNet

for the rest of us: billion villagers



- BharatNet
 - providing fiber-connectivity to ~200,000 Gram Panchayats.
 - Govt is extending this to cover 700,000 villages.
- Last-mile-wireless with wifi0
 - 50 Mbps
 - upto 5 Kms
 - 100 homes per fiber-point

tele-medicine, education, consultation, e-governance

made real.

wifio: open-protocol

being more, by doing less

- when you get lost in the forest
 - broadcast a SOS beacon
- during disasters/first-responders
 - share audio/video/data in real time without access-points
- setup tv/radio stations
 - by transmitting audio/video/data over the air

who are you folks ?

a few grey-haired guys from
IIT-Madras and one mad-rasi in
the mountains.

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...

an ode to WiFi

so im here, to pass some time
tell a story, with some rhyme

they say now, tis not fair
communicating, over the air

wonders of spectrum, not to see
Internet Packets, for all to be

devices, built to communicate
shackled by logic, not operate

do say lets, free them all
unite us ere, oh protocol

time is now, be thy hero
lets nudge WiFi, towards zer0

so say I, still being shy
this here now, do ask me why.