Future Network Innovation

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Central question: What drives technology adoption?

First: discussion around several fields

- IPv4 vs. IPv6
- 5G and UMTS
- SDN

Outcomes

- some technologies stay because they were the first and the predecessors are not ground breaking better -> IPv4 vs. IPv6
- these technologies are "well enough"

- What are the economic promises of 5G?
  - primarily flexibility, it remains uncertain how to economically benefit from this
- But: sometimes technology adoption creates a complete new ecosystem: UMTS + Smartphones

- SDN promised flexibility, too but still misses a "killer app"
- First generation is still too immature for broad adoption
- conservative markets: status quo works "well enough"
  - does a new technology fit into existing setups? can it co-exist?
  - typically, economic incentives are not given in general but in certain fields -> SDN in the data center
- But it is also a paradigm shift which opens up a tremendous new solution space, finding sweetspots is still going on
- Will P4 (2nd gen SDN) hold the promise of cheaper devices and management?

Key Insights

- networking is still pushing/enabling innovation: no digitalization/big data/foobar without connectivity

- If your goal is to see your stuff in the field at some point make sure you understood the economical mechanisms leading to successful technology.

- Two key drivers are:
  - be the very first one
  - be significantly better (aka economical “killer feature“) while being at least as expensive, better cheaper (candidate: QUIC)