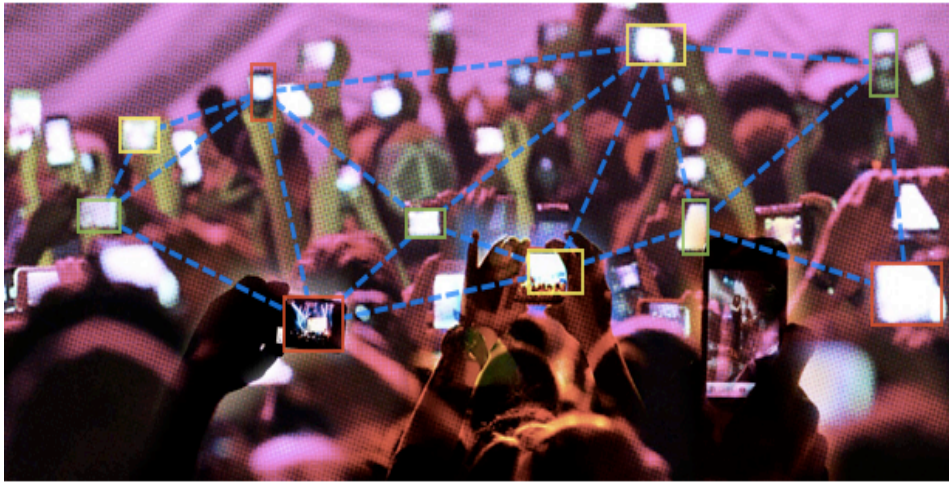


Uepaa! is a ETH spinoff and a multi-award winning startup that is pioneering the next level of wireless peer-to-peer (P2P) communications.

UepaaNet -- Uepaa's core technology transferred from ETH -- turns your phone into an active P2P node able to carry, store and forward content within a wireless opportunistic network of smartphones. It relies solely on P2P communications without the need of any infrastructure or contemporaneous end-to-end wireless path.

Our vision is to become THE NEXT P2P STANDARD!

UepaaNet - Leverage the power of the true Cloud!



100s GFlops

10 TBits/s



10s TBytes

600 sensors



Background

Multiple devices (smartphones, sensors) in proximity form an opportunistic cloud where devices can communicate directly to exchange data or perform computing tasks. Be it on public transport, at work or at a concert, one can be surrounded by up to 100s of devices equalling several TB of storage, tens Tbit/s of wireless capacity and several hundred GFlops of computing power. **The power of the cloud is around us!**

Thesis Goals

The goal of this thesis is to extend and evaluate UepaaNet in high density scenarios and to fully leverage the power of the surrounding crowd to support collaborative networking and/or processing tasks. It comprises of:

- Theoretical evaluation (capacity bounds, interference) and Review of state-of-the-art solutions
- Design of adaptive and context-aware strategies (multi-objective optimization)
- Implementation of these strategies in the UepaaNet Core architecture
- Lab (50+ devices) and Field Tests with Beta testers

Interested and want to know more?

This thesis can either be done externally at Uepaa! Swiss Alpine Technology (Kreis 8) or at the Communication Systems Group Zurich (D-ITET/TIK). If you are interested in working with the Uepaa team in a challenging R&D environment or want to know more about this thesis, please send us an email at info@uepaa.ch. We are looking forward to hearing from you.