

PermaSense

Sensing while there still is permafrost: in June 2006

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NCCR MICS WG2 (sensing and actuator platforms)

Kickoff meeting ETHZ, Dec 2, 2005

PermaSense Mindset

- Mission:
 - a) produce showcase for sensor networking technology
 - b) produce data for permafrost research
 - c) networking research (lowest priority in the next 6 months)

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- Biggest challenges:
 - time** sensor deployment in summer 2006
 - hardware** system integration
 - battery** temperature

I'm here to learn about MICS wide platform decisions, potential shortcuts and synergies.

PermaSense Planning Jan–Jun 2006

- Platform decision based on **comparative testing**: 2 months
 - putting device samples in the fridge
 - stability of SW tool chain
 - HW profile (memory size, electr interfacing of sensors)
- **Hardware**: 2 months
 - rugged shell, sensor integration, GPRS gateway (?)
 - producing 10 to 20 devices
- **Software**: 2 months
 - focus on resilient storage and remote management
 - which OS? Which app programming env?
 - single-task SW, or Maté like retasking?

PermaSense Interfaces: more than just technology

- Personell:
 - PhD student (Igor Talzi) to start Jan 1, 2006
 - pending: 2nd PhD student joining later
- Interdisciplinarity
 - Geo requirements (sampling precision etc)
 - expertise (high precision temp sensors, microseismic/acoustic)
 - actual deployment in alpine environment
- Political:
 - talking with federal admin (PLANAT)
 - PR: take pictures of everything, make movies and web pages