

WIDE AREA COMMUNICATION FOR PROTECTION AND CONTROL

Matthias Herlich, Ferdinand von Tüllenburg, Christof Brandauer / SRFG

Filip Andrén, Friederich Kupzog, Thomas Strasser / AIT

Jürgen Resch / Copadata

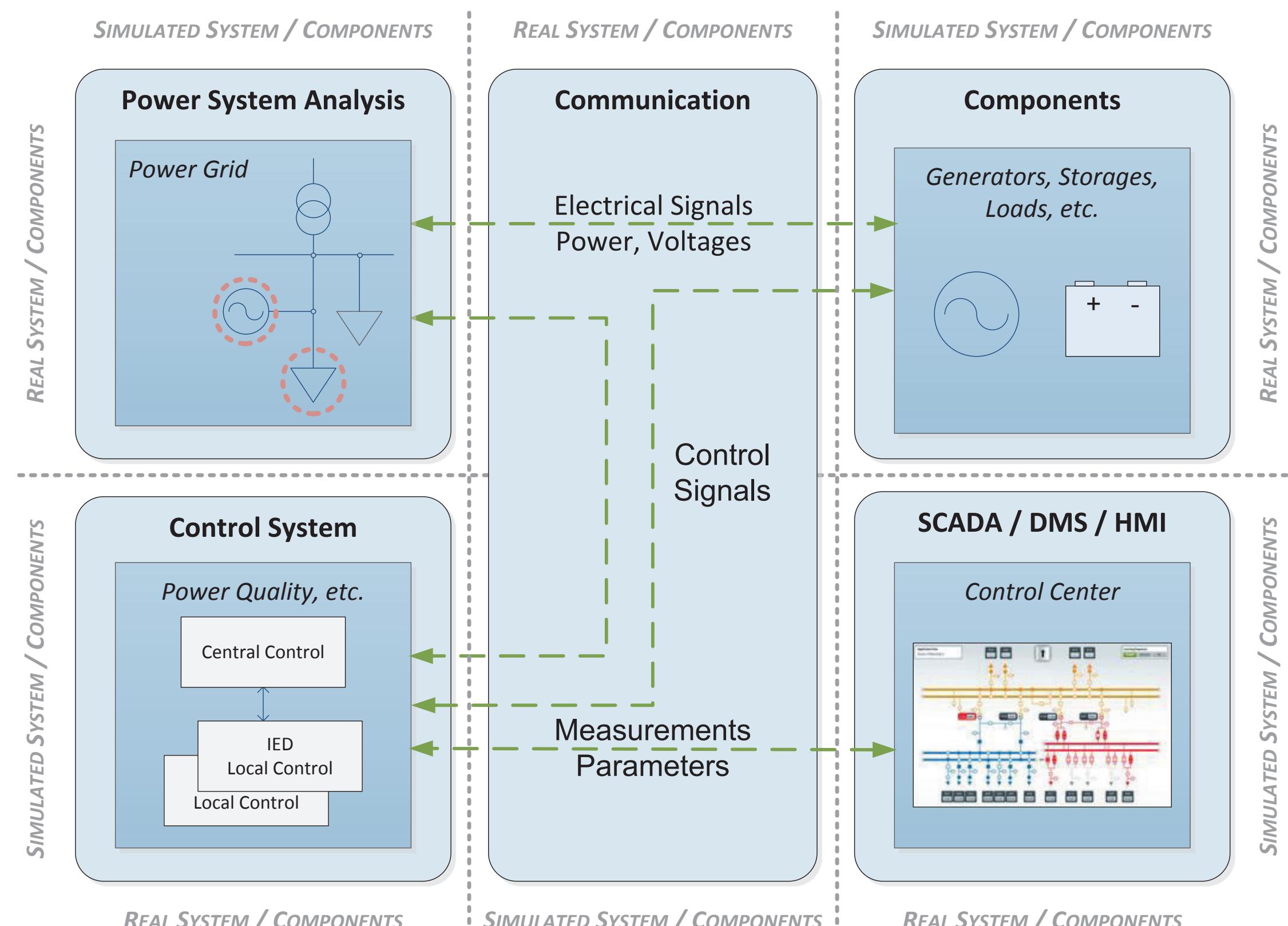
Interdependencies between communication and electrical network

Impairment of communication quality

- degrades performance of energy application's control loop
- degrades power quality

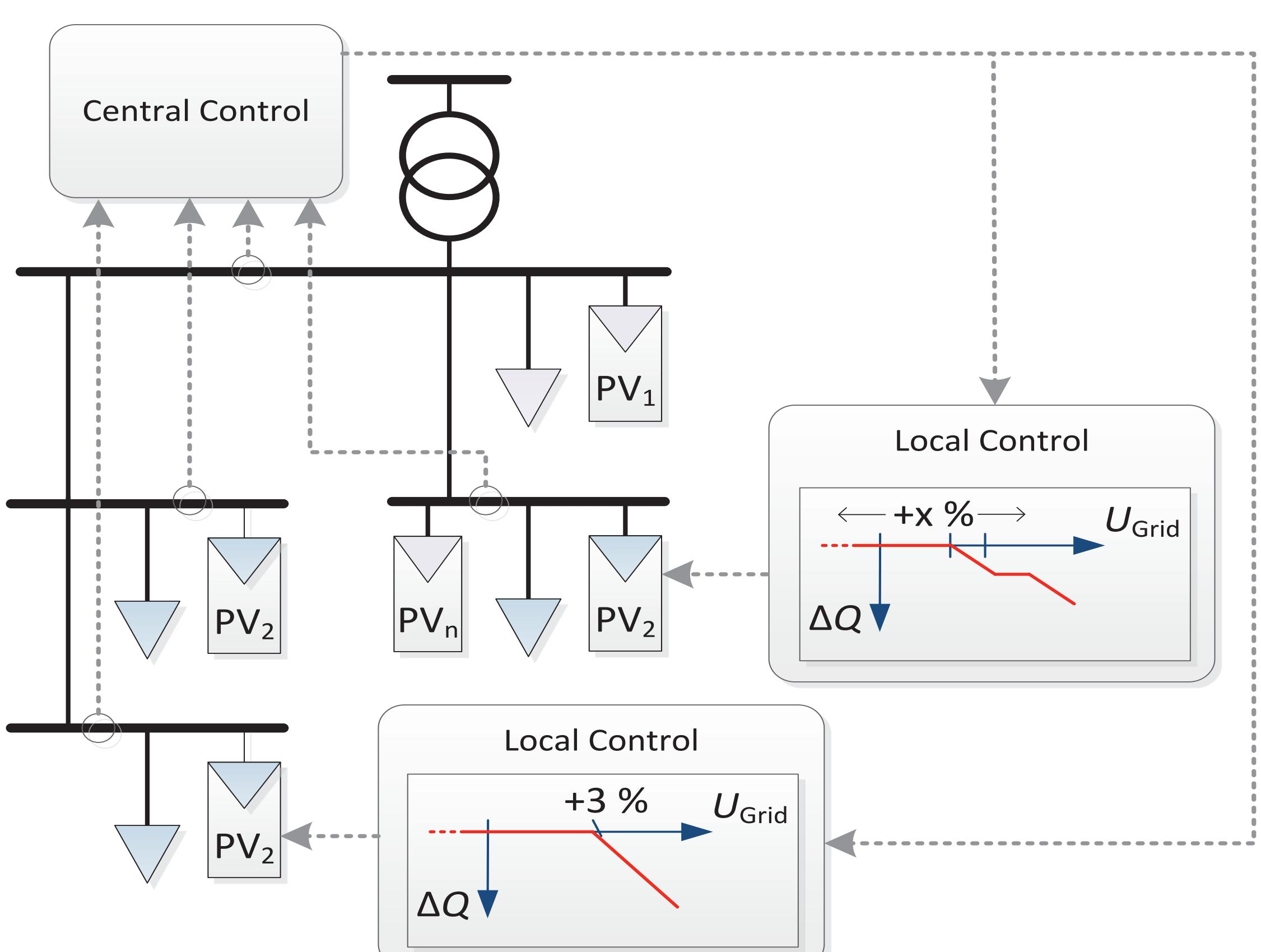
Low power quality

- increased control overhead
- increased load on communication network



Sample use case: Remote tripping

- remote tripping of e.g. PV generator (Italian standard CEI 0-21)
- active distribution network
- reliable prevention of islanding
- low timing requirements



Providing communication quality

- Capacity of wide area links limited
- Best-effort vs prioritization
- Quality of Service through active resource management
- Integrated quality monitoring

