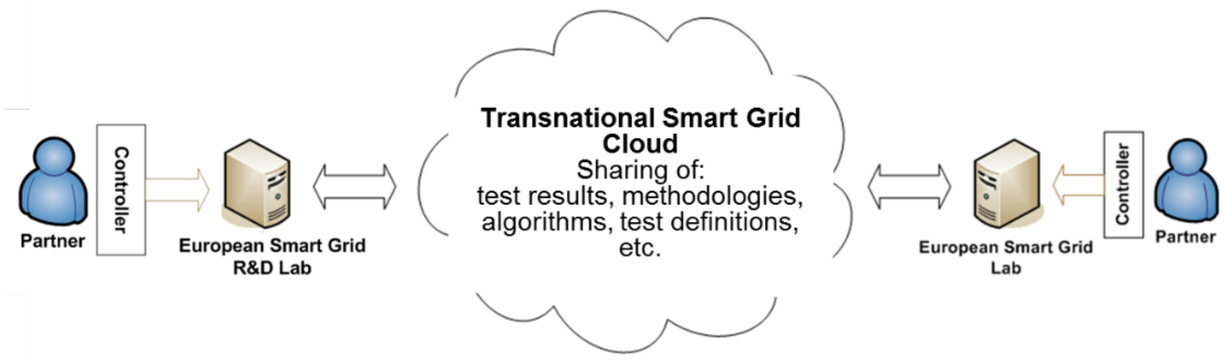
ELKRAFT 2017

Interconnection of Labs in the ”Transnational Smart Grid Cloud”

In order to validate, scale-up the application and widen the research scope the project will connect leading European Smart Grid labs from the consortium members.

Leading Smart Grid labs from four countries



STRI Smart Grid R&D Lab

A flexible platform for testing of smart grid applications under close to real-world conditions.

CTH Power Systems Lab & Gothenburg Wind Lab

The labs at CTH allow for testing of inertia support from wind turbines.

NTNU National Smart Grid Lab

A state-of-the-art flexible infrastructure where multiple machines and converters can be tested in a flexible range of configurations.

IPE Smarthouse Lab

The IPE Smarthouse lab allow for the testing and evaluation of different energy management strategies under real living conditions.

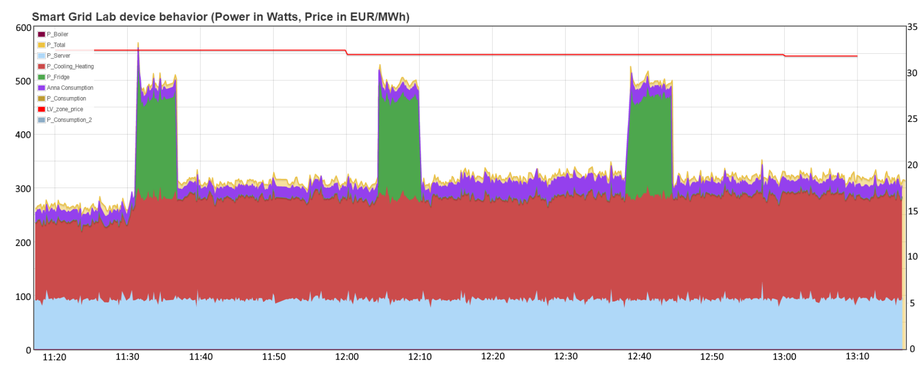
ZHAW Power Systems & Smart Grid Lab

The lab facilities at ZHAW are equipped with several machines, a transmission system equivalent and PMUs.

Three levels of interconnection

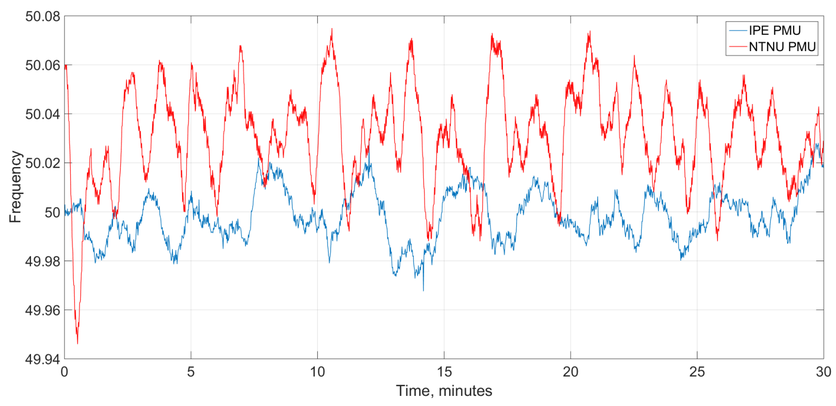
Sharing of measurements and test data

As a first step, measurement data on PV, Wind, etc. is shared through an online database. This includes continuous time series as well as pre-defined test sequences and their corresponding results.



Sharing of PMU data streams

PMU data streams are shared, enabling the development of PMU related applications, utilizing the existing framework developed in the STRONGrid project.



Real time SCADA access and control

As a final step it will be possible to share measurements in real time, using e.g. PV data as input to control a battery storage. Another possibility is remote access to lab resources, making it possible to e.g. test control strategies under different circumstances.

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CloudGrid
STRI - ZHAW - NTNU - CHALMERS - IPE

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