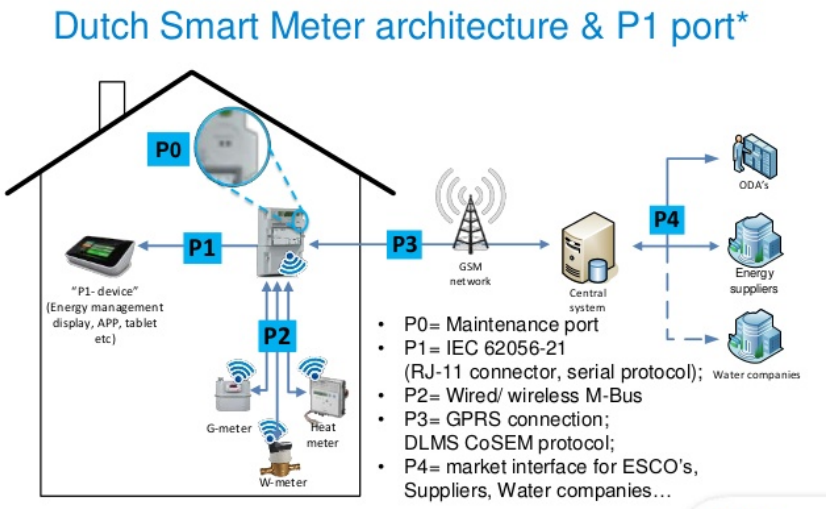
DESIGN OF AN INTERACTIVE DISPLAY APP FOR SMART METERS

The Smart meter is an electronic measuring device of electrical energy, with no mechanical parts. The Dutch smart meters have four communication ports P0, P1, P2, and P3. The P0 is used for communication with external devices during meter installation, or maintenance of the smart meter and hand held devices that energy utilities use to extract data through RF communication. The roll-out of smart meters is one of the important steps toward encouraging the participation of residential customers in the energy supply system. It is expected that residential customers will have access to their energy consumption data via the P1 port of the smart meter. However, accessing the smart meter data requires extra hardware and a good knowledge of data processing. P1 port is a read-only RJ11 interface that links the meter with auxiliary equipment. This port is accessible by customers, and it is intended to provide insight regarding householders' energy consumption, and for retrieval of external information (signals) from the grid.




Smart meter (existing)


User interface App (to be developed)

The Task

P1 port data takes the form of a telegram and it is sent out by the port every 10 seconds. The key task is to design and develop an interactive display app for the Smart Meter P1-port. These include:

- develop a database.
- design an interface to display the power flows and energy consumption profiles on a display (tablets, phone, screens)
- Access control (login) for users
- Web application – to be used on an Android or iOS.

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