GXF Use Cases

Smart Metering

The smart metering domain covers the functions to read smart meters with the DLMS/COSEM protocol. GXF can handle millions of smart meters. The smart metering domain could be a key component in a head end solution.

Features include:

- Reading actual/periodic usage and smart meter alarms and events
- Adding and removing smart meters
- Replacing security keys
- Synchronize time
- Wake-up sms option
- High Level Security (HLS) 3/4/5 that uses
- Support for an external encryption server

Take a look at the developer documentation for all the details.

Distribution Automation

More renewable energy in the grids lead to more diverse electricity flows. To monitor these flows, DNO and DSO companies are installing more sensors to keep track of the electricity (flows). Problems which may occur with a lot of decentralized renewable energy are power quality issues and congestion for example.

GXF can be a part of the IT/OT solutions for distribution automation. GXF distribution automation domain will be an addition to existing SCADA systems to get other data witch are not available via classic SCADA systems. Think of switching times, high frequency measurements (comtrade files) etc.

Technical information can be found in the documentation.

Public Lighting

The public lightning domain is one of the most mature GXF domain. This domain is build to control large scale public lighting.

Existing features are:

- Scheduling
- Extensive user rights management
- Firmware updates
- Ac-hoc switching

You can read more technical features in the documentation.

Load Management

With increasing renewable energy production in the grid. The need arises to control the load in electricity grids with a lot of renewable energy production. The plan of the GXF community is to add a GXF domain. This domain will allow Grid Operators to control the electricity load.

More technical information can be found in the technical documentation.

Microgrids

Microgrids are getting more important in the future of energy supply. A micro grid consists of a combination of several energy related components. Examples are energy storage, energy grids, energy demanders and several kinds of energy. When digitalizing a micro grid, all these energy related components are connected to each other. Owners of microgrids are in control of energy generation without being connected to a centralized grid. This allows microgrid owners to store energy in surplus times, and use energy when their energy generators aren't able to produce energy.

By combining valuable energy related insights with the users needs and ambitions a micro grid will help you towards a more efficient and sustainable energy system.

More technical information can be found in the technical documentation..