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OpenSCD proposal

Open Substation Communication Designer

Sander Jansen

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About Alliander and me

Electricity grid length

92,000 km

91,000 km in 2019

Gas grid length

42,000 km

42,000 km in 2019

Ing **Sander Jansen**
Product Owner virtual substations

CoMPAS TSC member

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The challenge

- 61850 engineering process varies
- Desktop (exe files) oriented
- Limited choice in IED vendor agnostic SCL tools
- Not built for integration
- Vendor lock-in (Tool vendor decides on development)
- Variation in tool implementations
- Limited flexibility (e.g., limited automation)

Solution

- Open-source approach
- Plug-in/flexible architecture
- "Easy" to use
- Browser application
- Ability for local install
- Plug-in architecture

OpenSCD vs CoMPAS

OpenSCD

(Browser) front-end only

Many plug-ins already available (also outside the project)

CoMPAS

Using OpenSCD as front-end

Add's backend services e.g.:

- Databases with SCL files
- IEC CIM import
- Auto allignment (PowSyBl based)

Libary (java) to edit SCL files

We would like to keep the projects seperate (for now) in order to benefit from the OpenSCD promotion and different focus

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Why joining the LF energy?

- Neutral positioning
- Being part of a larger community
- Infrastructure e.g. website,tooling
- Governance
- Promotion support
- Legal infrastructure

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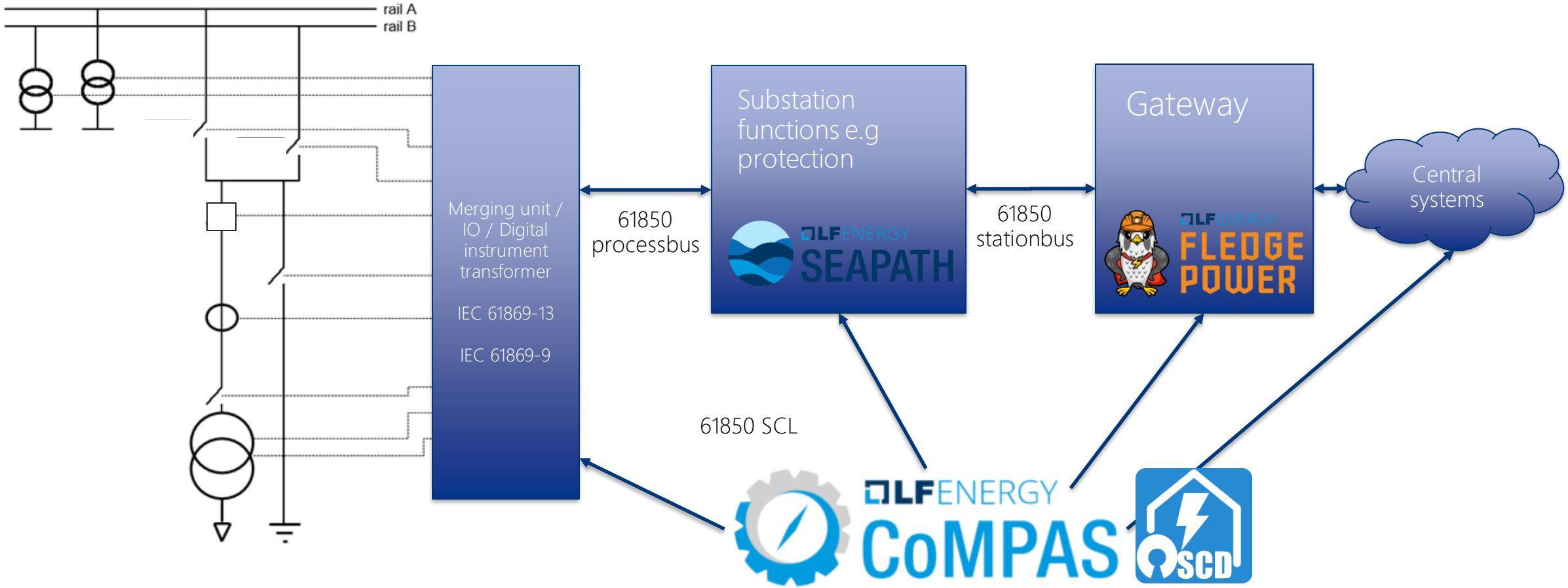
LF Energy substation architecture



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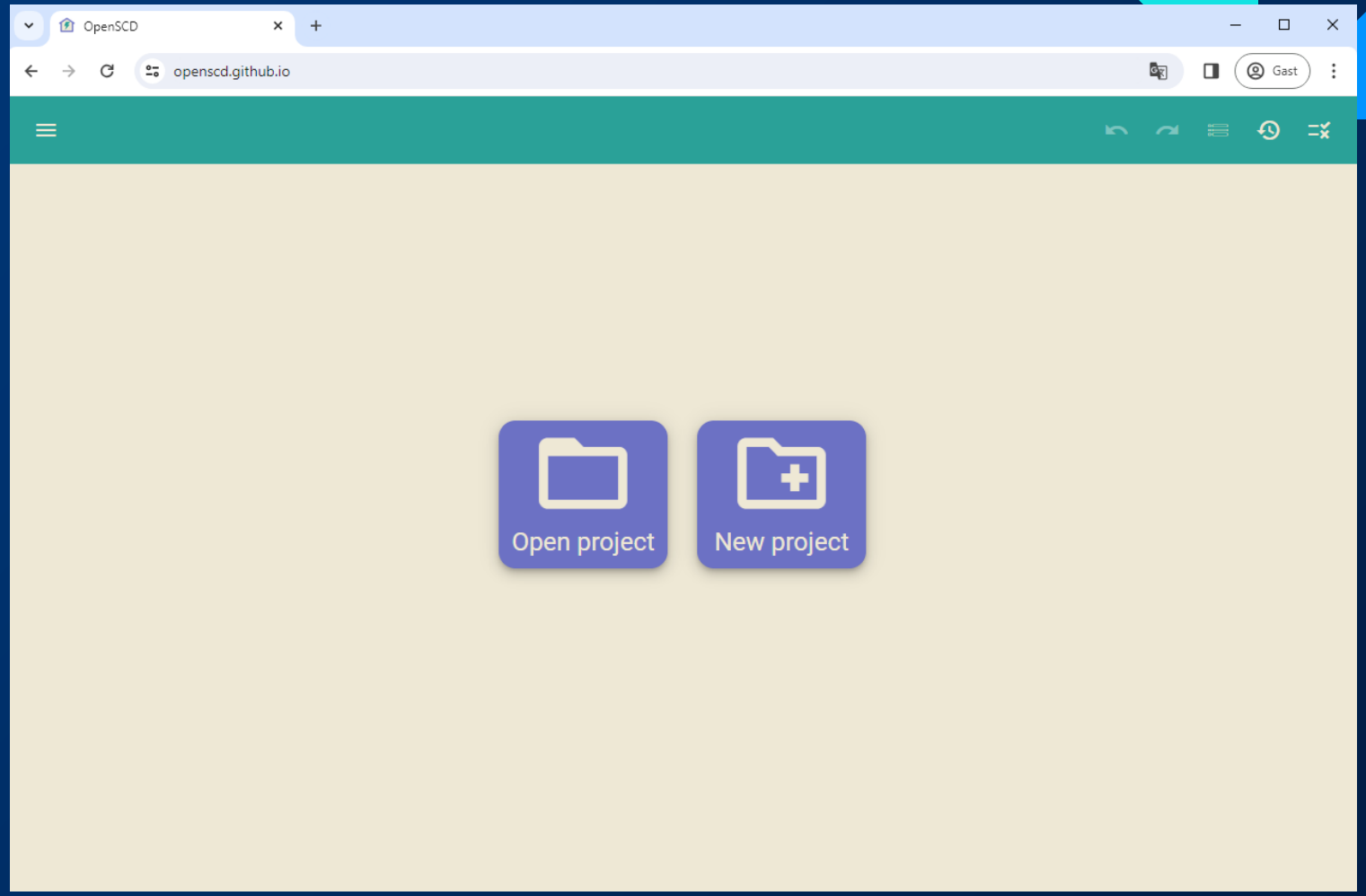
Current features

Current capabilities of LF energy CoMPAS

- Basic SCL editing
- GOOSE/SV
- Reporting
- 104 support (80-1)
- Compare IED's/SCL files
- SCL cleanup
- Library for SCD generation process
- Services section

- Many more..



https://openscd.github.io/

Contributors

Who can contribute?

Who are the potential benefactors of this project?

- DSO's - Distribution System Operators
- TSO's - Transmission System Operatos
- IED Vendors
- Engineering/integration companies e.g. building systems for DSO/TSO etc.
- Other IEC61850 SCL users (e.g. in the DER control domain)

Active contributing OpenSCD:

Where to start?

LF energy slack: #openSCD

Github.com/OpenSCD

lists.lfenergy.org CoMPAS

Youtube tutorials

Thanks for your attention!

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