Cross-LF Edge Collaboration

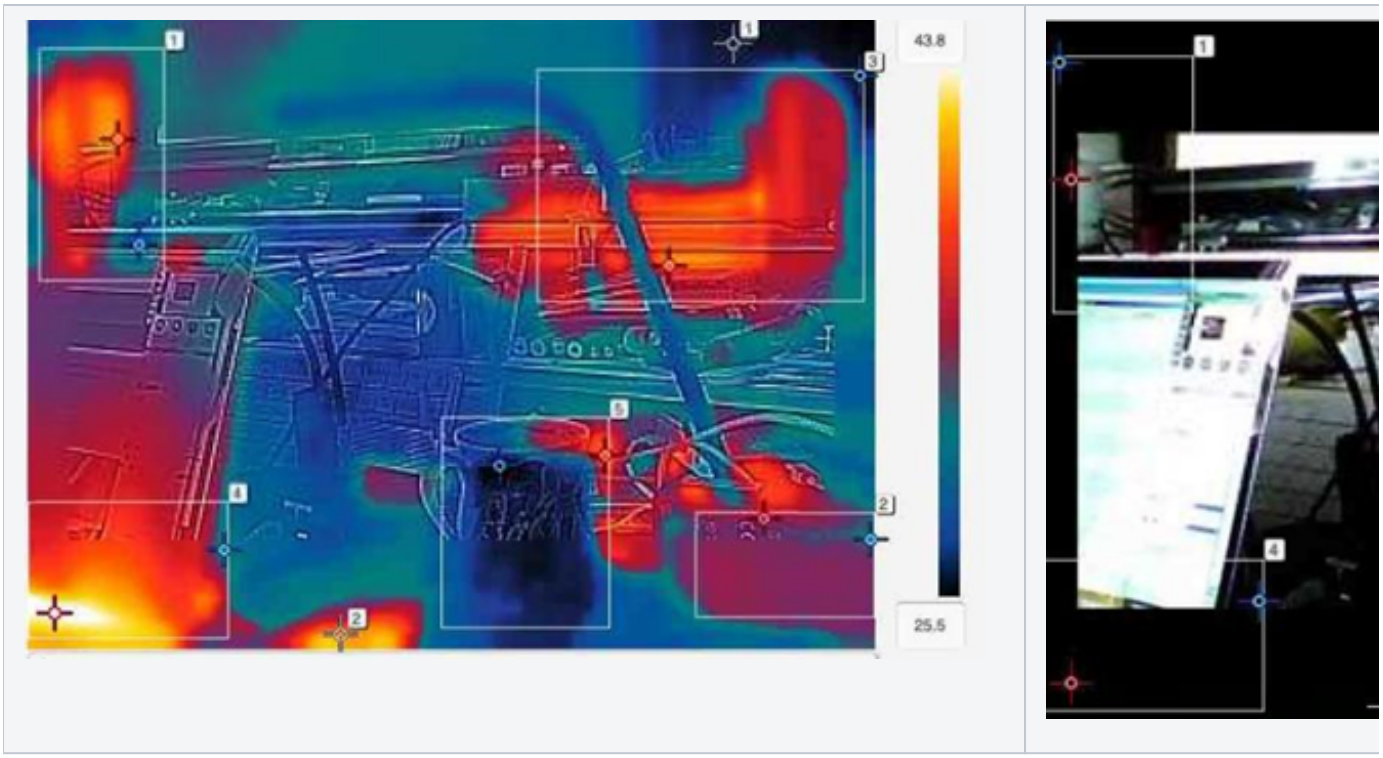
The latest Fledge collaboration includes:

- Open Horizon Smart Agriculture SIG: The Smart Agricultural special interest group is optimizing agriculture with technology, and using Fledge in the following use cases:
  - Milestone 1: Table Garden
  - Milestone 2: Outdoor single sensor

Fledge and Eve were the first two projects to engage in joint interoperability and compatibility engineering and testing. The effort started with FogLAMP in late 2018 before the formation of LF Edge. It was due to the efforts of Zededa and the Linux Foundation that encouraged Dianomic and OSIsoft to become founding board members. During that process, in December of 2019, a request was made to contribute FogLAMP to LF Edge.

When the board asked for its first joint project demo, EVE and Fledge stepped up and produced a model wind turbine.

And an industrial Flir Infrared camera demonstration. Fledge looks forward to more extensions with Akraino, Open Horizon and Intel SDO integrations in 2020.



Fledge has a unique architecture that enables rapid south and northbound protocols and data mappings to be written (w/o a new micro service). The code can be potentially be written in any language. Currently available languages include C/C++, Go and Java (via dynamic linking) and Python (via shim layers). This list can be extended to other relevant languages as needed. Using Python a relatively junior engineer can be very productive (minutes to hours for data mappings, days new protocols). Most industrials have modest development expertise. This feature is a major source of our community activity and addresses a critical pain point in the industrial market.

A recent request was made to leverage southbound connectivity across LF Edge Projects. Fledge is in several PoCs where Fledge has been used to enable commercial platforms south connections. AWS Greengrass being one of them. We could imagine doing a similar northbound integration with the EdgeX Project if desired.

The **Fledge roadmap** also includes the integration and testing with systems and subsystems lower in the stack. This is an immediate opportunity for **cross project cooperation**.

- Life-cycle-management of HW and OS - EVE
- Protocols/projects that enable IIoT "south of diodes" to be managed - Open Horizon
- Easy provisioning and life-cycle-management of emerging network edge technologies and services - Akraino
- HW based key management to create “trusted” processes, devices, networks, communications and data services - Intel SDO