Mosaik (https://mosaik.offis.de ) is a co-simulation framework. Its main goal is to couple existing simulators in a common environment in order to perform a coordinated simulation of a given (Smart Grid) scenario (https://mosaik.offis.de/features/ ).

That means that all simulators (or other tools and hardware-in-the-loop) involved in a simulation usually run in their own process with their own event loop. Mosaik synchronizes these processes and manages the exchange of data between them.

To allow this, mosaik

1. provides an API for simulators to communicate with mosaik,
2. implements handlers for different kinds of simulator processes,
3. allows the modelling of simulation scenarios involving the different simulators, and
4. schedules the step-wise execution of the different simulators and manages the exchange of data (data-flows) between them.

Although mosaik is written in Python 3, its simulator API completely language agnostic. It doesn't matter if your simulator is written in Python 2, Java, C, MATLAB or anything else. Furthermore, mosaik can function as a master for FMUs.

To get started with mosaik, a comprehensive documentation (http://mosaik.readthedocs.io/en/latest/index.html ) including detailed installation instructions, example simulators and tutorials have been provided.

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