DiME

- A high-concurrency, high-volume, and real time messaging environment.
- Utilizes a shared workspace model or data transfer.
- Compatible with MATLAB, Python, and JavaScript clients.
- Clients are maintained in groups.
  - `send()` function sends variables to specified groups.
  - `broadcast()` function sends variables to all clients.
  - There is a variable table for each group.
- Variables are retrieved by clients using the `sync()` function.
- There are additional `sync_r()`, `broadcast_r()`, and `send_r()` functions that send and update variables without updating the table.

AGVis

- A grid-based JavaScript tool for visualizing power system simulations.
  - Runs in browser.
- Works in tandem with ANDES and DiME to animate simulations as they run.
- Can also now be run as an independent program using user-provided data.
  - Referred to as the “MultiLayer” implementation.
- Creates animations using Delaunay Triangulation and heatmapping between nodes on the map.
- MultiLayer provides additional customization options over the initial federated use.
  - Node and line coloring.
  - Node and line sizing.
  - Node and line opacity.
  - Rendering toggles.

FEDERATED USE

- DiME passes simulation data from ANDES to AGVis.
- Allows for convenient and efficient prototyping of power system simulations.