Data Access System   *n*Line, Inc.

nLine's Data Access System is a web-based interface that allows stakeholders to directly interact with data collected by sensor deployments. This system transforms raw data into key insights about the grid and informs stakeholders about those insights with dashboards, outage maps, reports, and real-time notifications. It aggregates key metrics about the grid such as SAIDI, SAIFI, and CAIDI over any customer-specified geographic area. With the Data Access System, stakeholders can directly compare the performance of specific equipment on the grid against similar equipment; observe historic performance metrics for specific equipment; and integrate real-time outage detection and aggregated metrics with existing utility O&M systems.

Outage Detection & Localization

- Collects and verifies raw sensor data
- Detects true outages from raw sensor data streams
- Estimates outage extent

Outage Visualization System

- Displays both real-time and historic maps of outages
- Visually summarizes key metrics (SAIDI, SAIFI) over any time period and geographic area
- Allows for the export of raw outage data and summary statistics

Report Generation

- Generates and emails periodic user-specified reports
- Tracks key performance metrics (SAIDI, SAIFI, voltage frequency)
- Groups metrics by any time period or geographic area
- Lists performance of specific infrastructure

Real-Time Notifications

- Sends SMS, Whatsapp, or email notifications about specific high-confidence outages or the failure of specific infrastructure
- Sends follow-up notification when failure has been restored
- Includes links to dashboards showing the extent and estimated source outages