

# WebFL™

## 1. What does WebFL do?

- Automatically locate faults in multi-terminal lines
- Improve service reliability
- Speed up restorations
- Reduce operation costs

## 2. What is WebFL?

**WebFL (Web-based Fault Locator)** is the Web-based multi-terminal fault location system that automatically calculates fault locations on transmission lines. Based on innovative algorithms, **WebFL** provides fault locations with greatly improved accuracy.

**WebFL** is the most comprehensive fault location system covering

- Multi-terminal lines
- Two-terminal lines
- Untransposed lines
- Transposed lines
- Non-Homogeneous lines
- Tapped lines

## 3. How can WebFL help?

Following a fault on a transmission line, the fault location has to be identified and the damage be repaired before the line can be restored to service. Accurate fault locating is critical in reducing outage time and speeding up restoration process. It is also helpful to quickly identify dangerous spots so corrective actions can be taken to prevent costly power interruptions.

Locating faults can be very time-consuming and costly. This is especially true when foot patrols are relied upon on long lines and in rough terrains. Fault location information provided by substation IEDs can be helpful in reducing the searching areas for faults, but it is not reliable in complicated system configuration such as multi-terminal lines. **WebFL** is designed to solve the challenge by using innovative fault location algorithms and taking advantage of the available data from substation IEDs. **WebFL** can help significantly reduce line inspection time, speed up service restorations, and save costs. With **WebFL**, you

- Never have to spend longer time in patrolling your lines
- Never have to intentionally energize a faulted line to help find fault location
- Never have to worry about difficult situations for fault location: multi-terminal lines, un-transposed lines, non-homogeneous lines, tapped lines, load, fault resistance, mutual coupling

### Security

- User authentication
- Server firewall
- SSL encryption
- Multi-level user groups

### Accessibility

- Web browsers
- 24/7

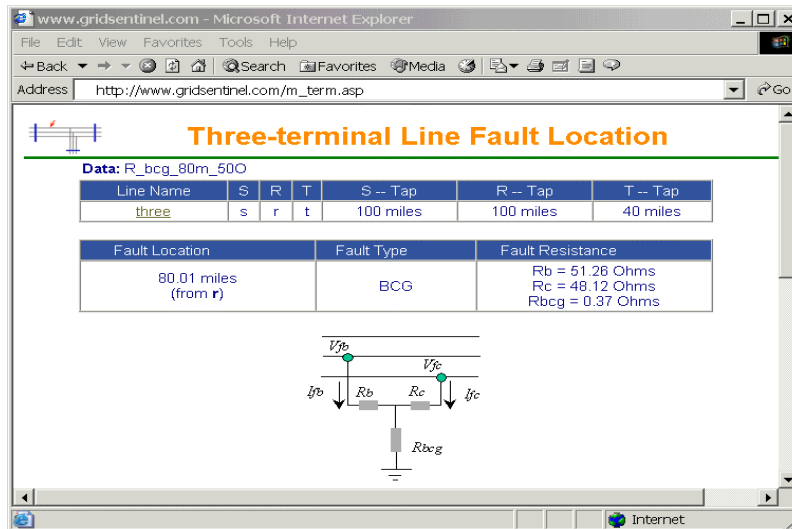
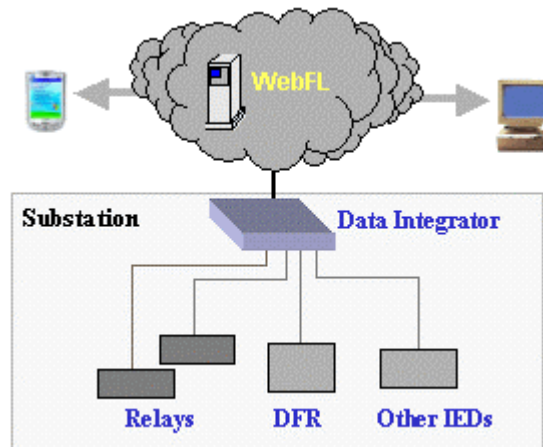
### Open Architecture

- Support for multi-vendor IEDs



#### 4. How does WebFL work?

**WebFL** automatically retrieves disturbance records from data integrators in substations or data servers on your corporate network. Once your data is collected, you can logon to the system via a secure connection, from anywhere at anytime with Internet-enabled devices, to review fault locations and manage your data.



#### 5. Key benefits of WebFL

- Saving operation and maintenance costs
- Improving customer satisfaction -- Faster response to faults; easily accessible to operations and maintenance personnel virtually from anywhere: at headquarters, in a regional office, in the field, in service vehicles or at a substation
- Powerful -- Accurate, multi-terminal, advanced algorithms