Evolution of the **ALVIN® Guard**

Background

Foresight - LV Network Visibility and Fault Recognition Northern Powergrid has worked with EA Technology to develop an d test novel, low-cost pre-fault detection and location techniques. These techniques have been proven to detect and locate developing faults on LV cable networks before a loss of supply event. The data collected from the deployed low-cost pre-fault detection devices is being used to predict when faults will happen and provide a level of prioritisation for proactive intervention on faults before a loss of supply occurs.

The approach

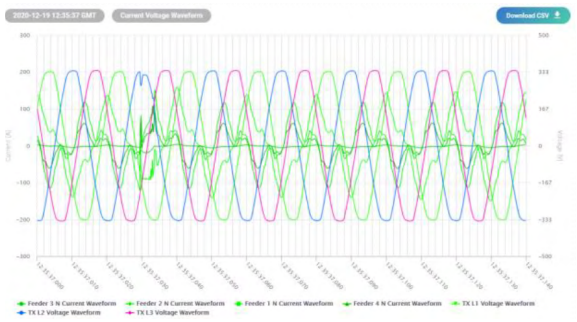
The ALVIN® Guard has been designed to detect developing faults. It does this by identifying pre-fault events before a loss of supply occurs and capturing data on the activity that is later used in the predictive work.

Using the minimum of sensors, the Guard is capable of identifying the feeder way & phase(s) that is the source of the activity, thus enabling further proactive fault management i.e., find and fix before fail.

As part of the development process, several iterations of prototype Guards were produced, building up the learning on what the requirements for a device for widescale deployment should be. The various evolutions of the Guard device formed part of the Northern Powergrid exhibition stand at the LCNI conference in 2019.

LCNI conference 2019

ALVIN® Guard installation



Pre-fault waveform capture

Key benefits

The data gathered by the ALVIN® Guard is aimed at three areas to provide:

- Indication where proactive interventions to improve LV Network performance would provide most benefit such as deployment of auto reclose equipment i.e., ALVIN® Reclose
- Fault location information to support the proactive “find and fix before fail” approach
- A means of determining the relative condition/ health of underground LV network assets i.e., Failure Imminent, Poor Condition through to Healthy

Case Study

Global Footprint

At EA Technology we specialise in asset management solutions for owners and operators of power network assets.

Founded in 1966 we have over 50 years' experience in the industry and 6 regional offices around the world to support our global customer base.

We work with a lot of our clients on a long-term basis to help them safeguard their power networks.

We advise our clients on strategy and implementation of a range of technology solutions to manage power assets, delivering maximum life and minimise cost.

ea technology

Safer, Stronger, Smarter Networks

EA Technology Limited
Capenhurst Technology Park
Capenhurst, Chester CH1 6ES

t +44 (0) 151 339 4181
e sales@eatechnology.com
www.eatechnology.com