PRODUCT OVERVIEW

Model–derived feeder automation solution adapts to any abnormal network configuration in real–time

Works with existing switches and protection schemes

The ACS Feeder Automation and Substation Technology applications platform (FASTapps) is a flexible, powerful solution to the problem facing utilities today: how to improve performance, reliability and efficiency without relying on closed–end solutions or replacing many thousands of dollars worth of installed assets in the pursuit of grid modernization.

Using proven technology, FASTapps leverages your existing infrastructure to:

— Reduce outage durations from hours to seconds through automatic isolation and service restoration, and devising a "return to normal" switch plan—automatically, regardless of the state of your network when the outage occurs

— Dramatically improve—in some cases eliminate—permanent outage statistics: SAIDI, CAIDI and SAIFI

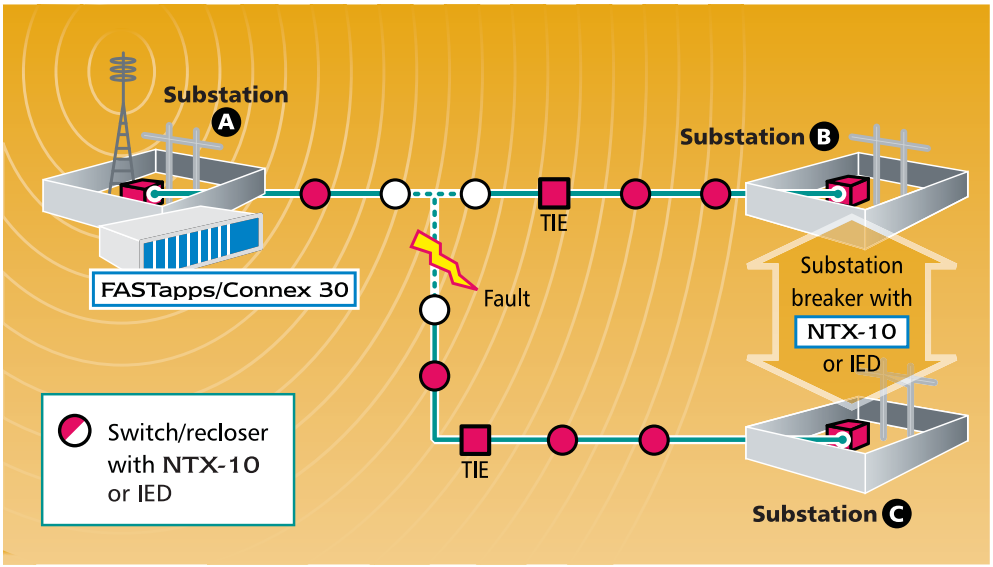
— Balance loads, reduce voltage losses and improve power factor

— Launch your Smart Grid strategy with a program that brings you pragmatic, proven results

FASTapps™

Expands to an unlimited number of feeders or devices

Slashes restoration times to less than 20 seconds, dramatically improving SAIDI, SAIFI, CAIDI



ADVANCED CONTROL SYSTEMS

FASTapps does this by consolidating network intelligence and the power of advanced distribution applications into a substation data concentrator platform. The ACS Connex 30™ substation manager, integrated with the new FASTapps processor in a distributed architecture, gives you command–and–control capabilities, including "self–healing" feeder networks. Optional applications include loss reduction through volt/VAR control and real–time performance index calculation. FASTapps can also support your own applications, as well as those from third parties.

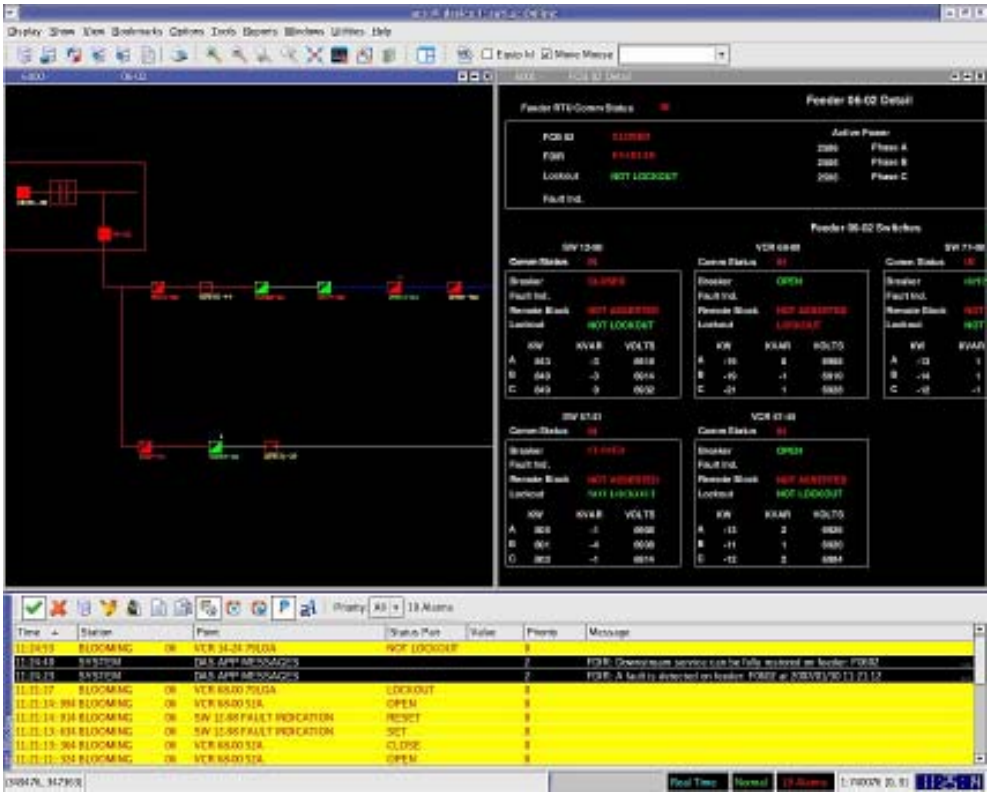
Self–healing feeders

An intelligent, distributed processing platform, FASTapps supports a comprehensive suite of localized automation applications. The most compelling of these applications is fault detection, isolation and restoration (FDIR). FASTapps/FDIR operates autonomously, using its resident contemporaneous network model. It quickly isolates faults, then restores power both upstream and downstream, analyzing switching options and choosing the one that maximizes the restored load. In doing so, FASTapps/FDIR considers a variety of intelligent solutions, including load reduction, load transfer and, if necessary, partial solutions. Since it's always working with an accurate network model, it works straight through storm conditions that precipitate multiple simultaneous faults.

The FASTapps processor uses the network topology model to make informed, real–time decisions, paving the way for new breakthroughs in substation–based feeder automation. The system adapts immediately to changes in the network topology, even if the network is in an abnormal state. This means that optimum restoration solutions are always within reach. Moreover, FASTapps easily accommodates the switches and protection schemes you already have in place. Since the network model and the FDIR application are stored locally in the substation–based FASTapps processor, no specialized switches or proprietary interfaces are needed on the feeder. Where intelligent switch controls are absent, the reliable, low–cost ACS NTX-10 controller can handle fault detection and feeder switch/recloser control.

Unlike other feeder automation schemes, FASTapps is expandable without limitation to the number of feeders, devices or alternate sources. It doesn't rely on pre–defined and scripted solutions that may not suit a particular outage condition. FASTapps can act automatically, or can be configured for semi–automatic or advisory (manual) operation.

Best of all, FASTapps/FDIR is proven technology. It is a full–function version of the ACS control–center based FDIR application that has been deployed successfully worldwide.



Graphical user interface

Substation user interface

FASTapps can be installed with an optional powerful graphical user interface for local control and monitoring. Substation personnel (or control center operators, via network connection) have access to a network diagram with full topology and colorization for the substation and each automated feeder. The interface fully supports user authorization, event reporting, device tagging and essential security and safety functions. Optional applications include temporary "redline" changes to accommodate emergency cuts and jumpers.

FASTapps and the Smart Grid

Building the Smart Grid starts with a distributed approach to automation. FASTapps is an open, powerful substation platform—the industry's first model–based self–healing grid solution. By equipping your substation with intelligence and autonomy, you not only give yourself rapid adaptability to planned and unplanned network dynamics—you meet the needs and objectives of your utility's business.

Specifications

Connex 30: see Connex 30 product overview

FASTapps processor module

— Operating system: Linux®

— Processor: Intel® Celeron® M

— Memory: 1 GB RAM

— Storage: 4 GB CompactFlash

Data connections:

— RS–232; USB, 10/100 Base T

FASTapps applications

— Fault detection, isolation and restoration (FDIR)

— Integrated volt/VAR Control (IVVC) to reduce losses, improve power factor and minimize voltage drops

— Real–time performance index calculations

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