

Low Voltage Outage Management System

Siemens EnergyIP Low Voltage Outage Management System (LV OMS) application is a cost effective mini-OMS

Introduction

Power outage is something that all utility companies have to deal with, regardless of whether it is planned or unplanned. And the tasks involved are wide range of work from detection of the outage situation, handling and responding to customer calls reporting outages, to field restoration crew management and restoration verification.

Outage Management System, OMS, is often used to manage outage related tasks. Full featured 3rd party OMS is powerful tool, but it can be overkill and over budget for some utilities of medium to small customer base.

LV OMS is designed to be used as low cost mini-OMS that fits well to tight budget. While it does not provide features that regular OMS provides, LV OMS utilizes AMI events and data to provide users with intuitive map based visual information to show the power outage status at a glance which helps utilities manage power outage handling and restoration effort.

LV OMS can also be used along with an external OMS, and it provides benefit of having both systems as it incorporates outage status, estimated time to restoration, etc., from OMS and show highly accurate outage status information.

LV OMS Benefits

Outage situation triage assistance

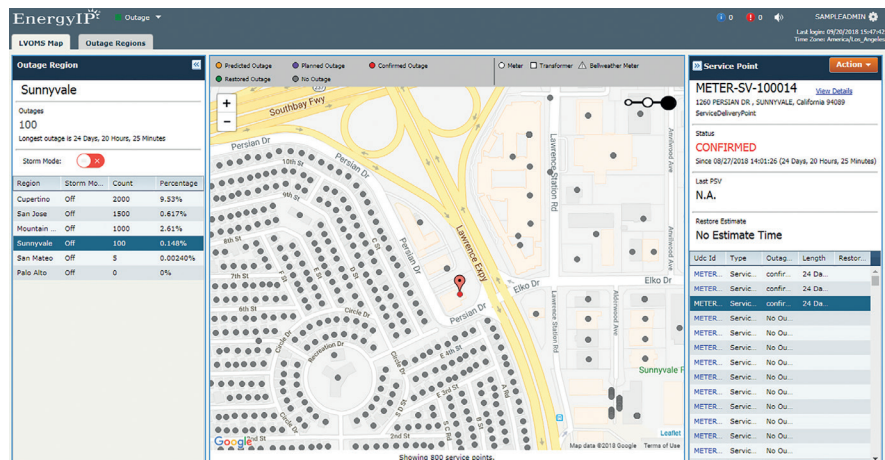
LV OMS provides easy to understand real time power outage status information with level of urgency and geographical location at a glance. This helps the operator to be able to quickly triage the situation to know where to focus their power restoration effort first.

Better customer service

When customer service representatives have access to the information LV OMS provides, they can respond to customer calls quickly and also with better information to satisfy the caller.

For instance, because the status on LV OMS map is updated in real time based on the events from AMI meters at each premise, by the time customer calls about the power outage at their premise, customer service representative can tell them that they already know about the outage and maybe even with the estimated time to restoration if the information is available.

LV OMS also supports the operation called PSV, power status verification, where the operator can send a command from LV OMS user interface to a selected meter or group of meters to get the response with the power status information at the premise.





This can be done in real time while the operator is on the phone with a customer. When a customer called about the power outage at their premise, the operator can send PSV and verify that the power service is working at the premise.

Then the operator may suggest the caller to check their safety breaker based on this real time operation result. This can provide better and quick customer service rather than for the utility to arrange and send out field crew to verify the same result for the cost and time.

Cost reduction

By the effective use of PSV feature, utilities can save unnecessary truck rolls to save cost. Responding to a single customer call to verify that the service is available at premise as mentioned earlier is one of such examples. And other example is the detection and verification of nested outage. When there are multiple locations with power line problems creating outage without outage situation called nested outage, after one of the locations is restored, operator can send PSV to a group of meters and check if there are points that are not yet recovered due to nested outage. Without the real time verification capabilities, restoration crew may have to come back to the site, but avoiding the repeated truck roll will save operation cost.

Restoration effort assistance

LV OMS can generate the report containing the list of SDPs with its detail such as power outage status, how long it's been out of power, address, and more. And this report can be utilized by both operator and field restoration crew to assist their restoration work planning and verification.

Low cost solution

Compared to the full featured OMS solution, LV OMS is available at much lower cost. When AMI is deployed and EnergyIP is employed for MDM usage, with a small addition of cost as well as low overhead for user training,

LV OMS maximizes the value of the infrastructure. LV OMS user interface is powerful but intuitive and simply designed, which eliminates lengthy and costly user training.

Key Features

Outage region list and detail

Outage region is a concept used by LV OMS to allow users to organize service point into manageable size rather than to manage all service points at once. An outage region contains multiple service points of user choices, typically clustered around certain geographical area, and it would correspond to field restoration crew's management territories. LV OMS displays the list of outage regions and outage service point count information at a glance, sorted by the current outage count, or outage percentage for the region, or any other user choice to help triaging the situation. Further detail information about the region will also be displayed such as the longest outage time in the region and storm mode status.

Outage map

Interactive map based on standard map technologies such as Google map or ESRI map shows information such as outage region location and its outage service point count, outage percentage level, service point location and outage status as well as service point type. Map view can be displayed in different zoom level, and different and appropriate information will be displayed at each zoom level.

Navigation of the map is well integrated with other parts of the user interface such as outage region list and service point list. When an entry in these list are selected, corresponding location will be marked on the map, and when a outage region or service point is selected on the map corresponding item will be highlighted on the list.

Service point list and detail

List of service point shows all the points that are experiencing power outage in the selected region in the middle zoom level.

Points that are listed will be limited to those that are in the map, and this serves as the filter to narrow down the list. When the zoom level is the most detailed level, all the points will appear on the list regardless of outage status.

Detail pane shows further detail information including service point address, hyper link to further detail information

on EnergyIP SDP detail screen, when the power outage started, PSV result, estimated time of restoration, etc.

Service point search

From the service point list pane, service point search can be initiated. This allows the operator to look up service point information of interest which would be useful in case of responding to a customer phone call. After a point is searched and selected, it will bring the user directly to the corresponding service point location and information on the map and service point list to show all necessary information related to outage and take further actions such as sending PSV and check its result.

Power Status Verification

Power status verification, PSV, can be sent to single or multiple service points of user's choice from the main screen. This is extremely handy for users in day to day operation. Response from the meter will be reflected on the screen in real time.

Export service point list

List of service point can easily be exported to a file from the main screen. Operator can take a snapshot of outage status in the service point list and use it for checking the outage restoration progress or print or sent to be used by the field restoration crew.

Published by
Siemens AG 2018
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Printed in Germany

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