The Solutions Provider

QOMS
OUTAGE MANAGEMENT SYSTEM

Automation & Supervisory Control for Electric, Transit & Water Utilities since 1960

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1. INTRODUCTION

Typical outage management system lies in having efficient networking of distributed systems, like a GIS system by recording the location of all the support calls made for outages, with this data OMS can predict future outages more efficiently, and reduce outages duration. Trouble Call System (TCS) and the Interactive Voice Response (IVR) are also important elements of a typical OMS system, where consumers call and accounts can be tracked and recorded. In order to streamline the operations of OMS, an automated system must be established for consumer-end communication and real-time alert generation. In most systems, SCADA can be also another important ingredient which provides automated monitoring and management of electrical systems.

The QOMS is an integral solution that provides utilities with the necessary tools for management of its distribution network, identifying and recording all the operations carried out in the network. QOMS allows utilities to reduce the duration of the outage, locating the fault location rapidly and giving enough information for making accurate decisions about the operation of the network.

QEI offers the entire ADMS system (Advanced Distribution Management System) platform, which includes the integrated systems SCADA, DMS, OMS, and GIS.

2. QOMS Benefits

- A single network model that is easy to maintain
- Real-time two-way communication with SCADA.
- Easy and fast element localization in the distribution system.
- Improved identification of type and affectation of events.
- Efficient communication with customers
- Optimization of human resources (crews)..
- Very fast performance for better decision making.

3. Graphical Interface of QOMS

Provides an easy-to-read, real-time overview of the network's status and displaying outage data. The graphical user interface offers fully customizable tabular and graphical displays, including configurable map layers for visualizing the connectivity model, and an option to load cartographic maps previously stored in the database or from the Google platform through Google Maps™.

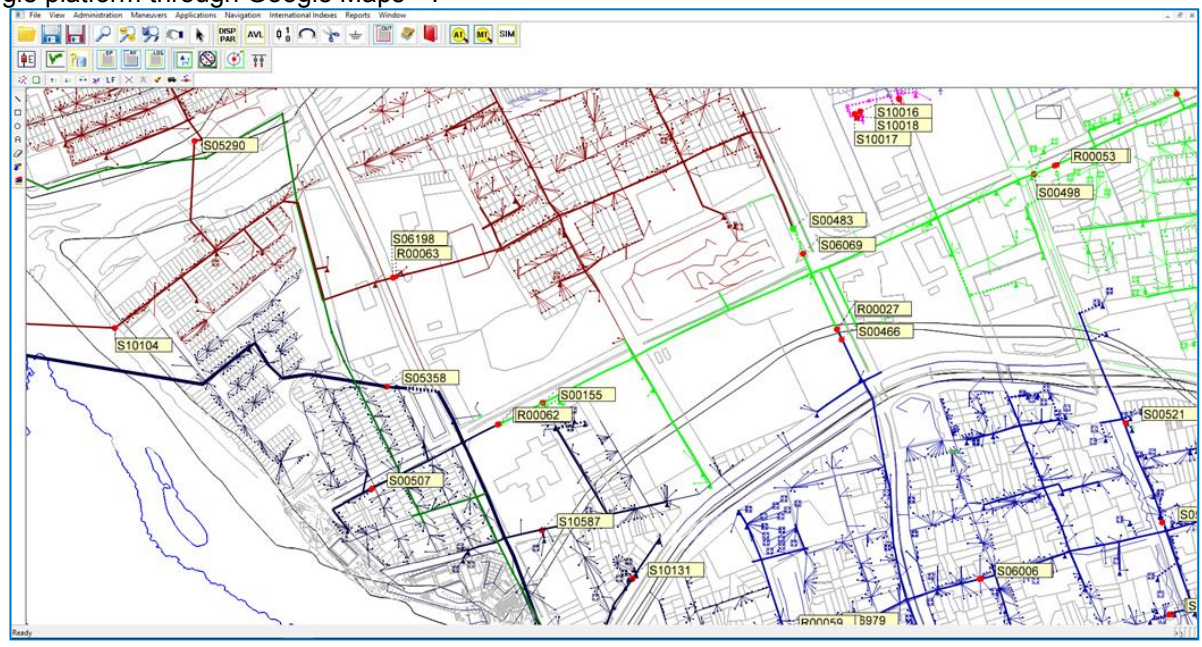

Figure 1 Graphical interface QOMS

4. Power Edition

With Power Edition module, utilities can visualize and operate the High Voltage (normally upstream of the substations) elements of the electrical system. The user can draw nodes, transmission lines, power transformers, current transformers, capacitor banks (parallel and series), generators, breakers, relays protection, fuses, reclosers, etc. The Power edition is synchronized with QOMS, allowing the user to observe the changes of the transmission network.

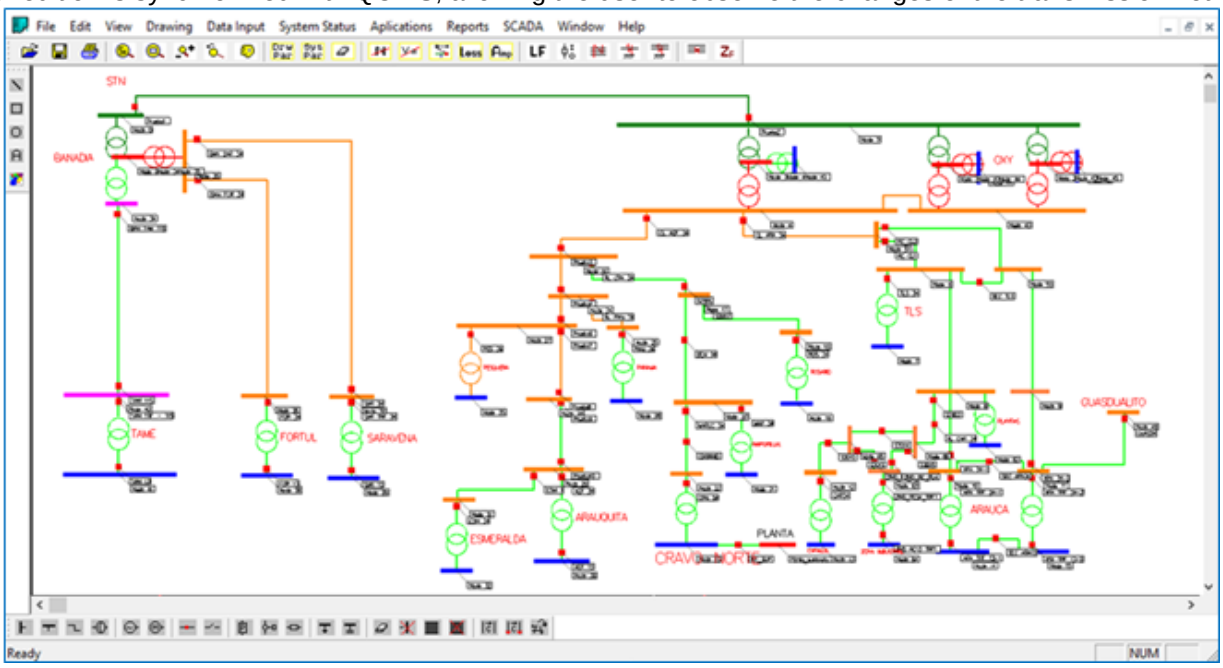

Figure 1 Example of a high voltage network

5. Call Manager

QOMS has a complete system for the reception and identification of client's calls, through two modules for client service, the Trouble Call System (TCS) and the Interactive Voice Response (IVR). The Interactive Voice Response is a powerful management tool minimize administrative costs, it is tightly integrated and synchronized with the rest of the system in real–time, for instantaneous feedback to call center functions.

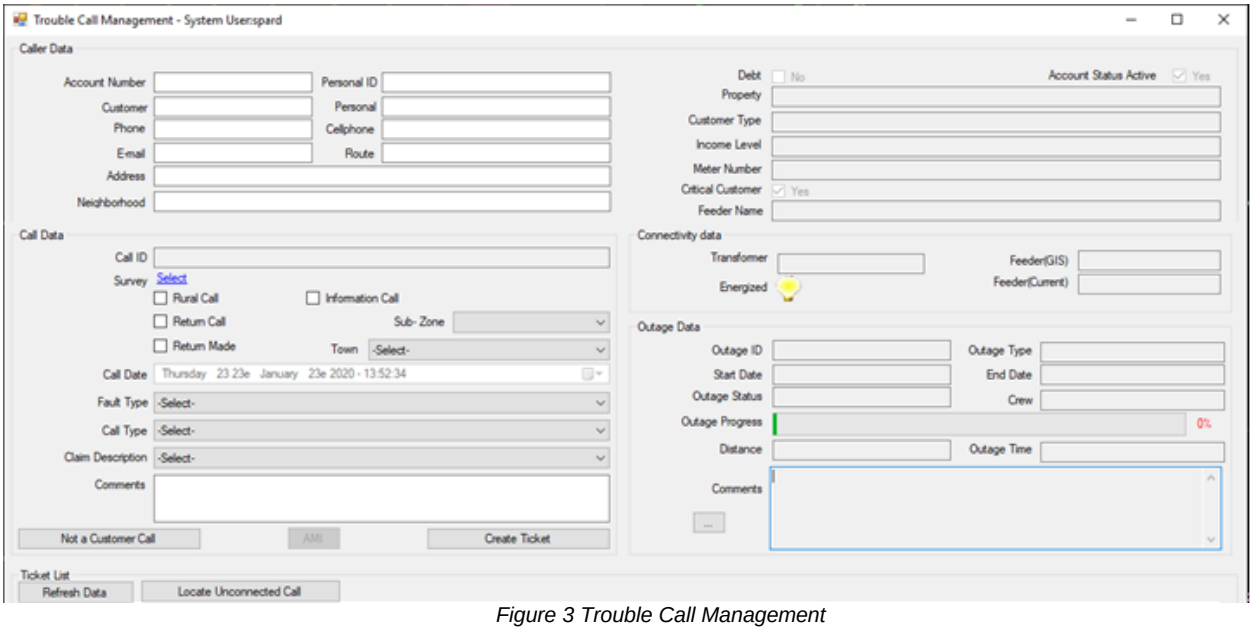

Figure 3 Trouble Call Management

6. Event Manager

QOMS considers an EVENT as the energization or de-energization of a certain sector or area, events can be created based on SCADA operations that are recorded immediately, and clients calls through the TCS-Trouble Call System. Through TCS, the powerful program will predict the probable location of the fault based on one or more calls, the field crew will confirm the location of the predictive events and reports that to the operator via their tablets/ laptops or by radio. Events are terminated by closing the breaking device. Dispatchers can review call records and create tickets to follow up on work as required, and for each ticket important data is displayed allowing the dispatcher to prioritize the event assignment to crews

7. Calculation of Service Quality Indicators

QOMS saves important information such as the number of clients without service, amount of energy not supplied, time between operations, among other data, this recorded information allows to perform the calculations of indicators, this module is summarizing the restoration effort, including how an outage affects your performance indices (e.g., SAIDI, CAIDI, SAIFI, DES, FES, FMIT, TIC and ITAD). These measures are displayed with each fault or restoration procedure, so you can optimize resources (field crews) and maximize performance ratings.

8. Reports

QOMS has various methods for generating reports, the first is the generation of predefined reports. These reports are generated automatically and are exportable to Excel ™, XML or CSV according to the preference of the operator. To generate advanced reports, the operator can create a report form with a SQL query or by using Data Analytics Tool.

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