Voltex Systems & Integration

We provide Advanced Power Management and Simulation for the growing demand for “smart” Substation Automation Systems with HV Networking, such as IEC61850 with GOOSE messaging.

Capability Statement

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Locations

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Sydney
Melbourne
Perth
Darwin
Santiago

etap Powering Success
SYSTEM INTEGRATOR
31-13-02 REGISTERED

Licence No: 72239

VOLTEX
systems & integration

HV Systems & Integration

As yur trusted HV System and Intergration Consultants, **Voltex Systems & Integration** utilise most of your previous Power System Studies as a basis for Power SCADA Management design, to avoid duplication in design!

For higher-level Power Systems Management and Simulation, we integrate ETAP Energy Management Software, a Commercial-off-the-shelf (COTS) system verified and validated to the strict US Nuclear Industry standards.

Substation Automation Systems

Voltex Systems & Integration (VSI), together with their sister company Voltex Power Engineers (VPE), provides consulting and commissioning services for Substation Automation Systems. Our engineers have extensive experience and understanding of power systems operation and protection, reducing your risk of catastrophic failure.

IED Networks

A critical component of effective SAS is the network design and architecture selection. VSI favour High-Availability Seamless Redundancy – Parallel Redundancy Protocol (HSR – PRP), which has proven to be reliable and generally prevalent among leading manufacturers.

VLANs (Virtual LANs) are usually preferred on multiple substations systems to mitigate potential latency issues, with communication paths limited to those necessary for operation. VLANs require “smart” switches which can be programmed to forward messages to the correct addresses.

IEC 61850

IEC 61850 is intended to provide interoperability between a variety of devices (IEC 61850-7-2). VSI are very familiar with the Conformance Statements required by Annex A, and ensure all network philosophy or IED programming, especially in networks combining more than one brand of equipment, will conform.

Schneider Electric EcoStruxure

Schneider Ecostruxure is at the heart of their IoT systems architecture. Digitally connected power systems products such as protection relays, RTUs and other sensors can be securely integrated into Engineering and Maintenance systems, with Edge Control equipment to facilitate power systems management.

Voltex Systems & Integration is a SE Registered EcoXpert Partner in Power Automation systems, and together with Voltex Power Engineers can provide complete solutions from HV design to substation automation systems commissioning.

AVEVA Electrical & Instrumentation

If your plant is utilising the benefits of AVEVA Engineering platform for design, we can integrate it seamlessly with ETAP for detailed calculations and 3D for cable routing. Reducing modelling time, with shared engineering data, and eliminate errors in equipment sizing, cable lengths and capacity. ETAP’s AVEVA Data Exchange allows:

- Bi-directional project data exchange & synchronisation.
- Auto-creation of single-line diagrams in conjunction with the electrical data.
- Quick identification of design changes & merging of the project data.
- Options to globally accept or reject synchronisations.

AEMO Power SCADA

The Voltex Group’s familiarity with AEMO, NSP (utility) operations and the National Electricity Rules (NER) support VSI’s capabilities with AEMO RME / RCE and SCADA End to End testing.

ETAP Energy Management Software

VSI & VPE are authorised to implement ETAP Electrical Power Systems software. Its modular functionality can be customised to fit the needs of any company’s power systems.

ETAP is the most comprehensive analysis platform for the design, simulation, operation, and automation of generation, distribution, and industrial power systems. Offering Electrical Engineering software solutions including:

- Load Flow & Short Circuit Analysis,
- Arc Flash Analysis,
- Transient Stability,
- Relay Coordination,
- Cable Ampacity,
- Optimal Power Flow and more.

ETAP Digital Twin Platform

ETAP’s Digital Twin Platform for Design, Operation and Automation has been around since 1992, so as a true Commercial-off-the-shelf (COTS) system, there is no bespoke design and endless hours and iterations of re-coding and commissioning – just connection through our protocol-agnostic OPC Servers and configuration by our VSI engineers.

ETAP Real Time

VSI will implement ETAP RealTime allowing you to validate your model and theoretical simulations with Real-Time data, and benfit from accurate scenarios including actual configurations and loads, that may not have been presented during design simulations. ETAP Real-Time, also provides:

- Optimisation & Automation.
- Operator Training Simulation.
- Switching Management.
- Automatic Generator Control.
- Predictive Load Shedding
- Fault Location, Isolation & Service Restoration.