SIMS

Substation Interrogation Monitoring System

an integrated solution for utilities world wide

- Productivity Tool For Administrators
- Remote Access Capability
- Centralised Setting Tool
- Multiple Site Manager
- Multi-Tier Security
- Audit Trailing

OVERVIEW

Substation Interrogation & Monitoring System (SIMS) is the central operating console for software functions relating to a particular substation be it electricity, gas or water.
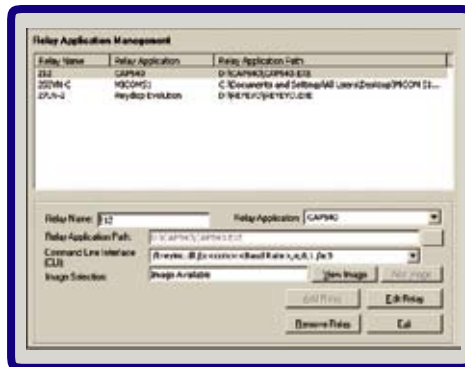

It serves as the control point to manage substation operations including management of engineering configuration and maintenance requirements, management of ALL third-party software used for control of relays and other substation equipments, as well as the repository of engineering knowledge and documentation including standards, practice and guidelines.

This industrial grade software becomes the main operational dash-board whenever a substation is commissioned and operational. All engineering and maintenance operation is undertaken from here and it secures the computer systems to avoid malicious or unauthorized access to all software controlling equipments in the substation. Engineers also have access to all documentation (technical and general) pertaining to the equipments there and also the setting tools that are provided by all the vendors who have supplied software tools for management of their individual equipments. All operations are also audit-trailed and a logged.

SIMS has employed unique ways to make use of technology including;

CENTRALISED CONTROL

Unique Relay Program Master Controller SIMS provides the full interface control capability to manage all third party software products provided by vendors of a substation. It takes it one step further by then managing these software independently and restricting unauthorized access to the programs externally.

The CLI feature enables users to edit information like the com addresses and port number within SIMS prior to relay launching.
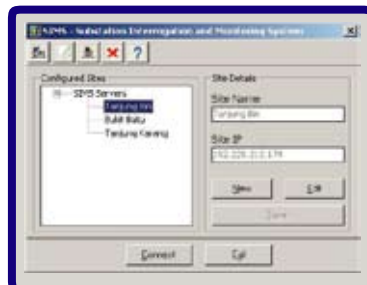
SIMS picks up the necessary values accordingly and passes it to the relay application so that it initializes at the correct com address. On top of that, a single relay can have more than one CLI formats saved in SIMS which is accessible in a simple to use, drop down list.

COMPUTER ACCESS LOCKING

The server's desktop is locked the moment it is switched on and the screen that is visible after logging into Windows is the SIMS client log in screen. Unlocking of the desktop will depend on the user logging in. If the user logging in is that with administrator privileges, then the desktop is released for the user to access the server files. Otherwise, the desktop will remain locked and the user is only granted access to SIMS client. This feature highlights our commitment in ensuring security is never compromised and our aim in always having a tightly integrated SIMS with the Operating System.
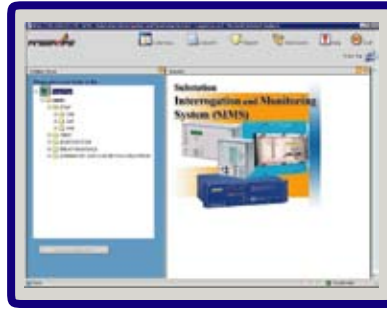
SITE MANAGER

This utility is incorporated into the solution to assist the administrators in maintaining a list of SIMS Servers that has been deployed and provides an easy method of initializing the WEBSIMS. It helps the administrators by removing the need of remembering the various IP addresses of different SIMS Servers. It grants a seamless startup of the WEBSIMS via Terminal Services.

REMOTE ACCESS (WEBSIMS)

WEBSIMS allows users to connect to the SIMS Server remotely to either view the relay documentation or launch the relay application itself. Access is granted via multi-tier security access and the application is launched via Terminal Services. Upon entry to the server, the user will only be allowed to utilize WEBSIMS and exiting will cause the entire Terminal Service session to expire. Therefore, users will not be able to access anything in the server apart from WEBSIMS itself.

POWERFUL SEARCH

Powerful search engine to sieve through engineering and technical manuals The entire content search engine was developed into a Microsoft .NET web service. This web service, called SIMS Search Service runs on a Microsoft IIS Server and encapsulates the entire logic for the content search, including interfacing with the Indexing Service. It can bypass firewall and proxy restrictions often present in corporate networks, thus allowing a flexible intranet/extranet level search to be carried out on information residing in the substation or anywhere else on the network.

AUDIT TRAILING

SIMS monitors all actions taken by the user beginning from logging in till the user logs out. Actions like adding relay applications into SIMS, modifying information pertaining to the relays, structure creation, and data entry into profile values are all recorded alongside with information on the user responsible for making them. Activities like which relay was accessed and at what time it was accessed are also noted. Reports can be generated as and when required once some parameters are selected. They can then either be printed or exported as html files.

OTHER FUNCTIONS

Engineering Drawing Manager

This plug-in integrated into SIMS from AutoCAD gives you the same plotting engine that AutoCAD® 2000 uses, 2D measuring capabilities, plus markup using ActiveShapes® technology for intelligent drawing objects.
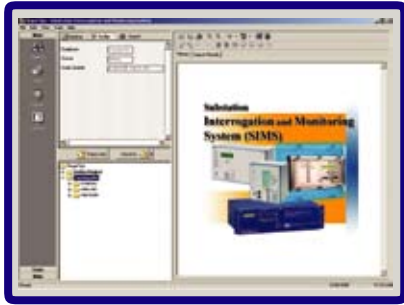
Features include View DWG/DXF™, View DWF, 3D Orbit/shaded view, File filters, Print, To-scale plotting, Measure, Lightweight sketch and text markup, Full ActiveShapes® markup and Object Enabler support.

Document and Email integration

Provides the ability to create new documents without ever having to leave SIMS. New Ms Word, Excel and Powerpoint documents could be created without needing to open the corresponding Ms Office application. Ms Word documents can also be created based on predefined templates stored in SIMS template feature. - Once the Office documents (Word, Excel, Powerpoint) are created, it if fully editable within SIMS with all the features one would expect from Office available right within SIMS.
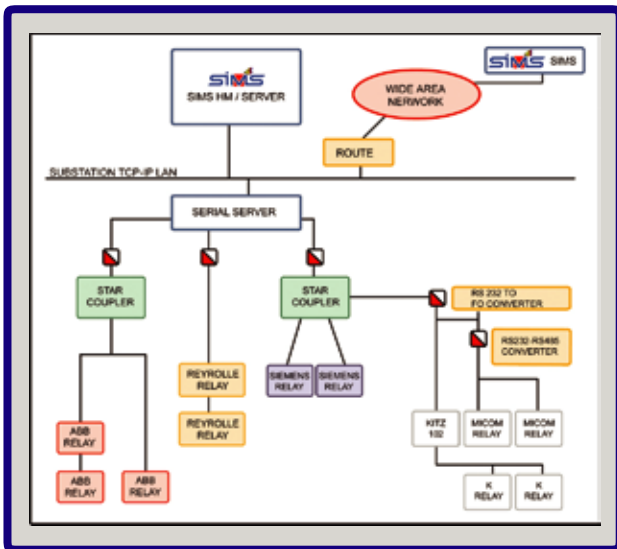
UNIQUENESS

Utilities worldwide are requiring effective operational monitoring tools that allow a common interface for their software solutions which can be used to enforce authorisation control, parameter setting, decision-making and maintenance operations.

The ability to ensure such compliance is the missing link in productivity and efficiency at the moment is the myriads of operations that are required in substation management.

Different vendors supply utilities like Tenaga Nasional, Indah Water, etc and usually in every substation, there will be equipments from each of these vendors (eg. ABB, SIEMENS, REYROLLE, etc) and the relating technical specs and maintenance schedules.

Apart from that, the systems are located on a central PC that can be accessed by anyone who is in the room and no tracking system is available to control access as well as log the activities performed. Engineering and maintenance personnel also have a difficult time finding the software tools that are required for each equipment and the relating documentation and technical specifications and SIMS is aimed at bringing order to this chaotic and confusing information and tool sets and create a central console that manages the substation activities.

To make the product effective and unique, we have created an easy to use and powerful interface. With SIMS, we have maximized the use of screen real-estate with innovative program management, file and schedule management, searching, viewing and results display all in a compact and easy to use environment.

Beyond that, SIMS has moved beyond just substation monitoring by including information management system where users are totally independent to work in a seamless environment within SIMS.

RECOGNITION

SIMS is currently installed and used in substations in South East Asia through our partnership with INCONTROL TECH SDN. BHD. The knowledge management portion of SIMS is powered by the award winning FingerTips KM System and is fully integrated into the substation module.

SYSTEM REQUIREMENTS

- Intel Pentium III 1.0 GHz or higher.
- Windows 2000 Server or higher.
- 512 MB RAM or higher.
- MS Office XP and above.
  (required for Email archiving and Office Plus module).
- Screen resolution (800 x 600) monitor or higher recommended.

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