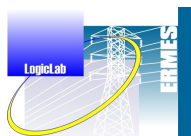# ERMES
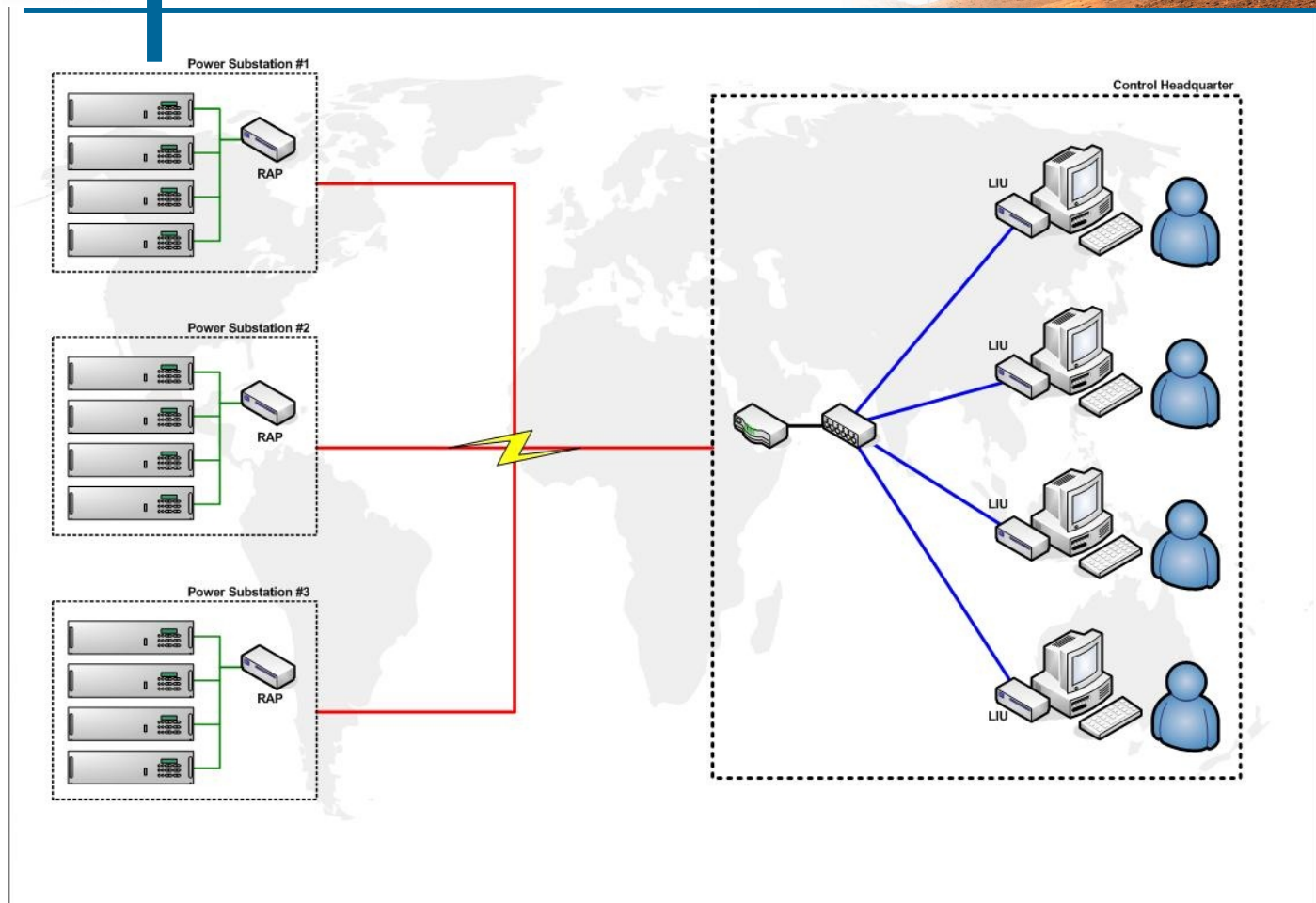*Extended Remote Management for Electrical Substation*

E.R.M.E.S. (Extended Remote Management for Electrical Substation) is the new system that LogicLab realizes to manage all control and protection devices installed in the electrical substations. Through any remote connection you can make a direct access to any device, of any type and any manufacturer, present in the substation, using the original program released with the device.

The necessity to exchange information from substation to Control Headquarter has brought LogicLab to develop a project called Extended Remote Management for Electric Substation (E.R.M.E.S.).

Through a owner technology it is possible to manage any device equipped with a serial interface (RS232, optical fiber, RS485) or device with Ethernet connection.
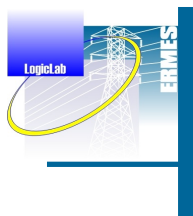
ERMES uses a single access point and does not require any modifications, or hardware or software, on existing devices in the power substation.

This solution involves considerable advantages in terms of costs and installation time and it is safe-guarded the set of protections already in place. In addition, the installation of ERMES not require an "out of order" procedure of the substation.
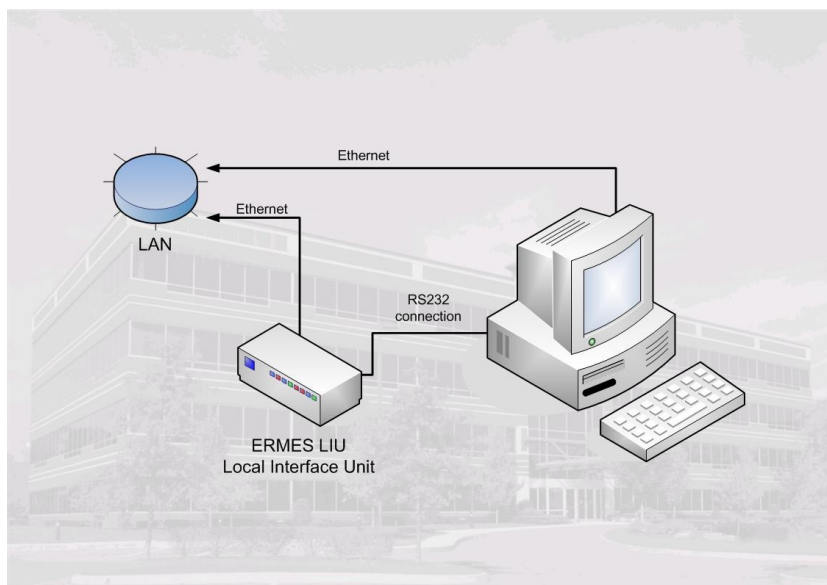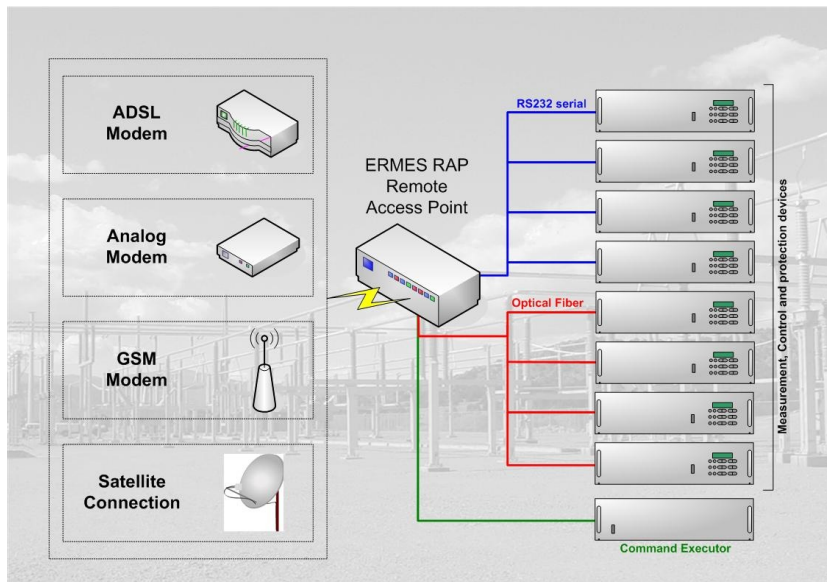
ERMES system is composed by:

- Local Interface unit (ERMES LIU)
- Remote access point (ERMES RAP)
- Command executor (optional)
- A LogicLab Software to manage system (SpySys)

ERMES
Extended Remote Management for Electrical Substation

At substation you simply install ERMES RAP (Remote Access Point) that must be connected to the available network near substation; you can use any modem device (ADSL, analog, GSM or satellite). ADSL or satellite connection are preferable to ensure additional services and wide bandwidth. RAP will be connected to your devices by mean of the serial interface available on your devices[1]. Completed installation and configuration ERMES is already in service and substation can be reach by remote site.
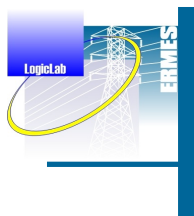
To allow command function (as Open/ close switch, breaker, etc) LogicLab developed "Command Executor" a special device that can directly sent a wire command (relay) to switch, breaker, Petersen coil, etc. and this allow operator to reconfigure your substation remotely and fast. Executor is equipped with digital output and digital input that can be setup by the user. The number of input and output can be factory configured on client demand.

Near your remote control headquarter had to be installed one ERMES LIU for each Personal Computer that you want use as remote controller. LIU is a little device (as a table modem) connected by RS232 and Ethernet to your PC.

Once installed our manager software "SpySys", you can achieve remote connection with any protection in the substation, using the software supplied by the manufacturer of protection device that can be started directly from SpySys. Data sent by remote device will be collected by RAP, sent to LIU and finally will be available to your PC. Data from your PC will be collected by LIU sent to RAP and than to your device. RAP will be set to sent correctly your information to the device that you require. Communication is bi-directional and transparent to the user that will operate as in front of device/protection in substation.

[1]If you need LogicLab can realize custom solution on client demand

ERMES advantages

- Save your devices and protections and allow remote management.
- Quickly and easy installation without to put out of order your substation.
- Time reduction to configure/reconfigure your field devices.
- Quickly command to your switch, breaker, coil with LogicLab Executor.
- Cost reduction and time safe for your staff.
- Fiscal advantages. ERMES can be rent year to year and all cost can be tax deduced.
  Our contracts foresee:
  - hardware rent
  - Installation services
  - Maintenance
  - SW/FW upgrading

Our customer can forget ERMES and use its resources effectively to solve problems occurring on the lines.

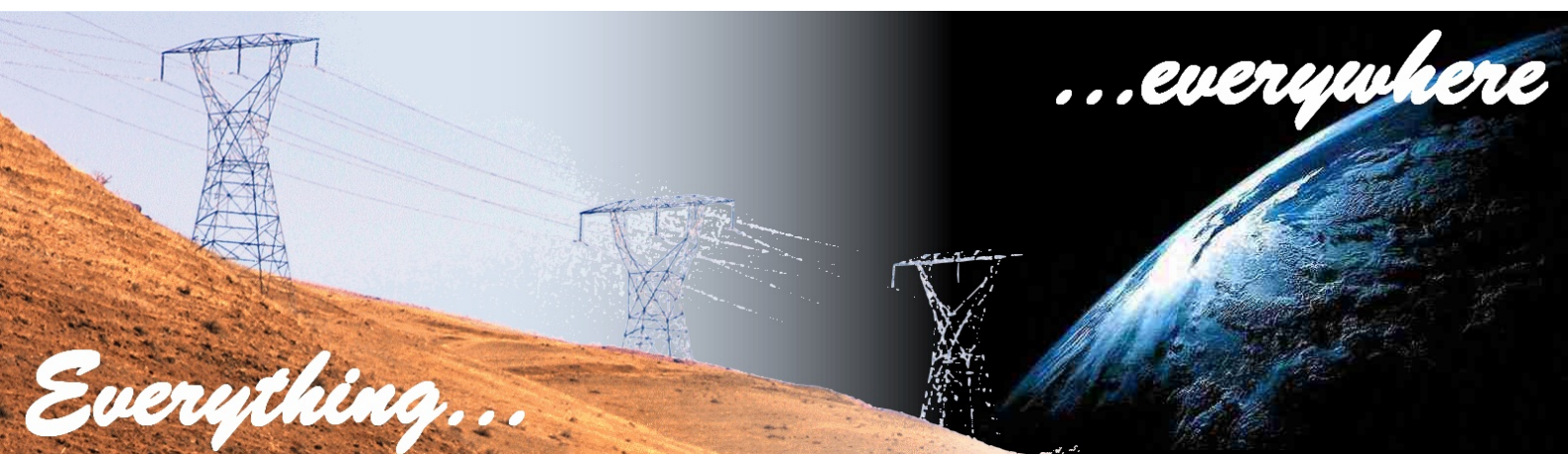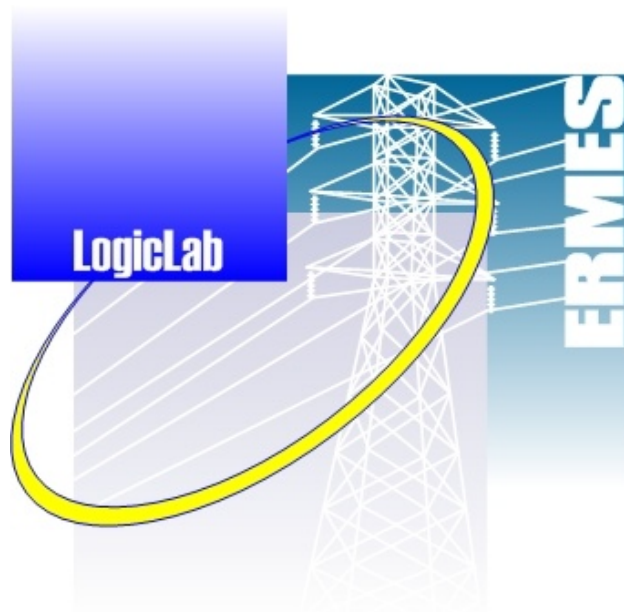## A investment that repays in one year

Using ERMES the maintenance cost will be reduced to zero and by the first year your investment will be repaid. Without intervention on protection devices at substation, ERMES transform your old protection in a last-generation. ERMES allow low-cost remote control, high security level and reliability, and transform your remote control concept.

ERMES

...everywhere

Everything...

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