1 – Introduction

HMI 500 application corresponds to the most recent Efacec solution for the Human Machine Interface implementation of SCADA systems, assigned to manage locally, via Web, automation, supervision, control and protection complex distributed systems. The application fits into the SUBSTATION+ and POWERPLANT+ concepts, concerning the systems conception, based on the object oriented paradigm, on Web technologies usage for the Human Machine Interface implementation, as well as on specific industrial standards.

HMI 500 implements important requirements defined in the SUBSTATION+ and POWERPLANT+ concepts, assuring with effectiveness their application in several industrial contexts, such as substations or power plants, for example.

2 – HMI 500 Presentation

The application is of the Web server type and can be used in different types of hardware platform, running under the WINDOWS XP operating system when installed in conventional hardware, or under the WINDOWS XP Embedded operating system when installed in diskless and fan-less hardware which is characterized by the lack of mechanical parts.

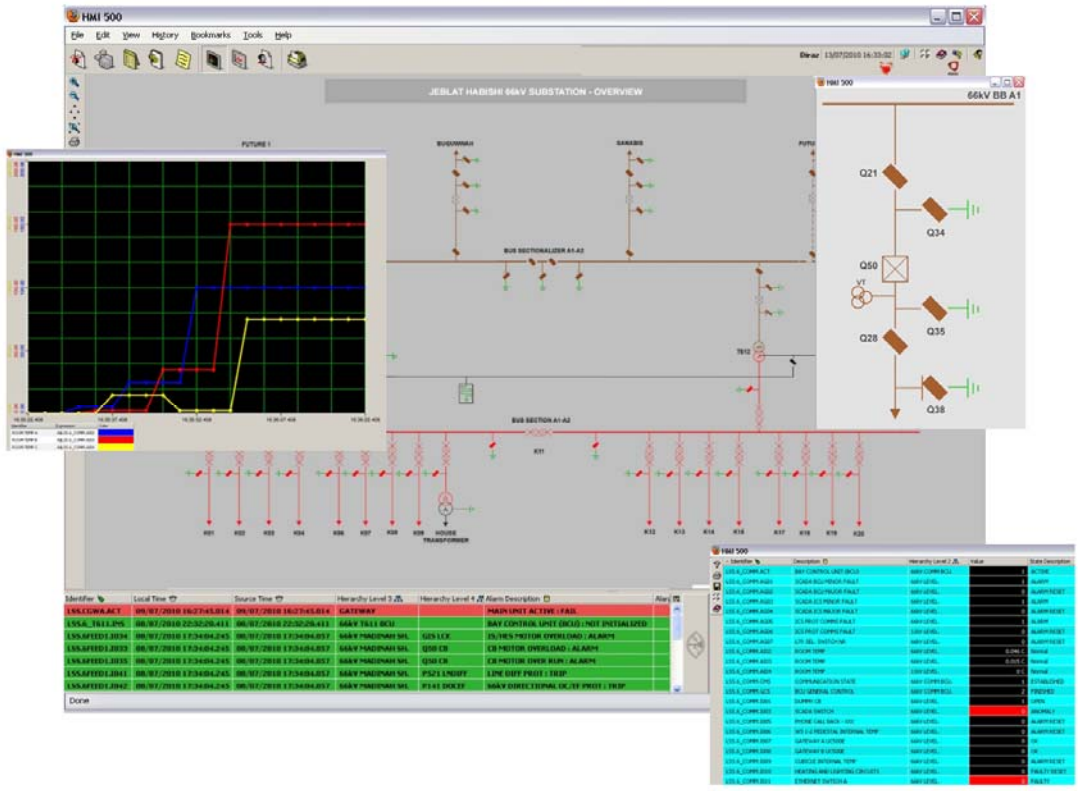
The HMI 500 Web server is installed in the same hardware of the CLP 500 platform's station server (UC 500, UC 500E or DUAL 500E). It is also the base solution for the Human Machine Interface of the SPS 500 system, the system server in the perspective defined in the SUBSTATION+ and POWERPLANT+ concepts.

HMI 500 corresponds to a modern and flexible solution, using technology according to the state of the art, adequate to be acceded by commercial browsers, from any type of compatible external platform (PC, PDA, etc.) connected to a network (Ethernet, via TCP/IP).

The software applications executed in these external platforms are of the rich client type. During the web access to the HMI 500, each client application transparently loads the software modules that shall be executed locally (plug-in), in order to complete the browser execution.

In a three levels structure (System, Process and Field), such as defined in the SUBSTATION+ and POWERPLANT+ concepts, HMI 500 occupies a primordial place at the System level. From this interface, locally at the Operator Stations, or remotely, the system supervision and control are carried out.

HMI 500 solution plays also an important role at the Process level, being the preferential platform for the local Human Machine Interface of the process.



3 – Technical features of the HMI 500 application

Software	Description
Type	Web Server for rich client type applications
Scope	SCADA
Function	Human Machine Interface
Client Applications	Rich Client

Interfaces	Description
Network	Ethernet
Protocol	HTTP(S)

Operating System	Description
Producer	Microsoft
Versions	WINDOWS XP WINDOWS XP Embedded

Application	Equipment	Platform
HMI 500	• SPS 500	
	• UC 500 • UC 500E • DUAL 500E	CLP 500

Functions	Description
Login and *Logout*	• Yes
Alarms	• Alarm Lists • Alarm Summary • Priorities • Filters • Sorting • Printing • Acceptance
Events	• Event Lists • Timetag • Filters • Printing • User and System Event Recording
Trend Displays	• Real Time • Archives
Reports	• Configurable • Table formats • Bus-bar charts • Pie Charts
Schematic Displays	• Configurable • Single Data Display • Device Animations • Bus-bar Charts • Panning • Decluttering • Zooming • Navigation • Poke Points
Controls and Setpoints	• Yes
Tags and Notes	• Yes

The following central units and respective platform, and the system server, presented in this document, have a specific literature:

UC 500 UC 500E DUAL 500E
CLP 500
SPS 500

The following concepts, presented in this document, have a specific literature:

POWER PLANT
SUB STATION

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