

Viewing ahead

TopKapi

vision



SCADA Software
Process Control
& Monitoring



Viewing ahead

TopKapi vision

Supervision

FOR ENHANCED PRODUCTIVITY

How can you respond promptly to gain performance?
How can you ensure control over your process at all times?
How can you have real-time access to all the information on your industrial facility?

A genuine productivity enhancer, the TOPKAPI supervision software handles the tasks requested to process information, letting you focus on priorities: the operating strategy of your process.

Know-how & Durability

Through over 20 years of innovation, AREAL has constantly perfected its TOPKAPI software, turning it into one of the most advanced industrial SCADA software in the world: high processing power, reliability, easy implementation.

With thousands of copies installed, TOPKAPI is used both by direct operators as well as engineers and automation specialists designing and developing industrial applications.

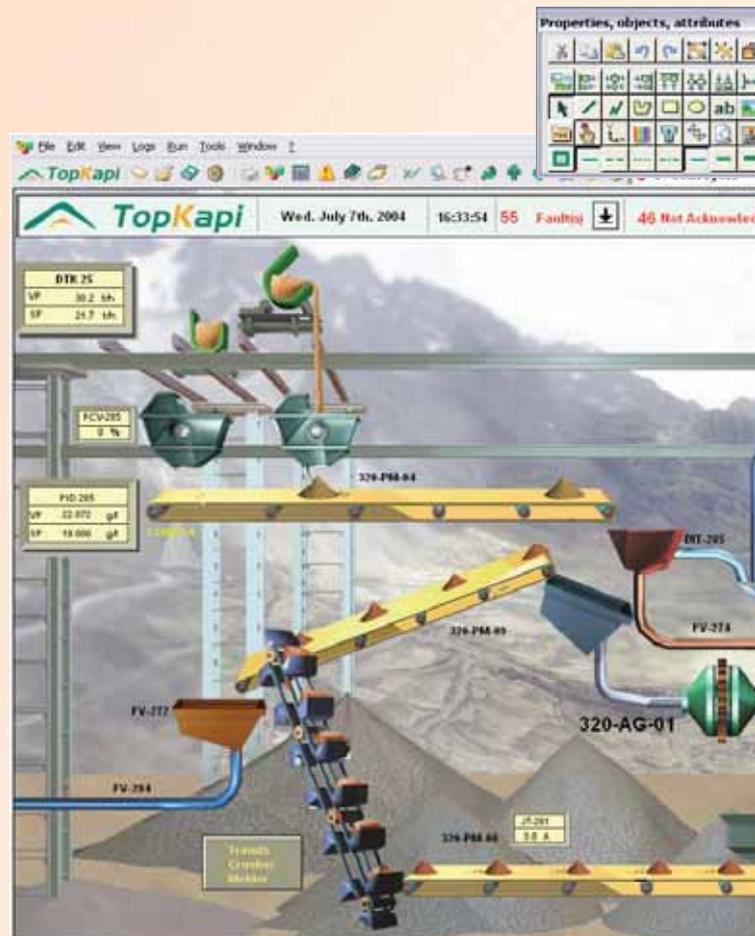
Running on the Windows® operating system, the de facto standard, TOPKAPI extends beyond fashionable concepts, providing users with means to integrate supervision into the global corporate information processing chain: shared databases, MES and ERP systems, Web access, etc.

Sylvain Starck, Development Manager, in charge of global design, explains: «The added value offered by TOPKAPI is not on screen, but extends far beyond: we ensure that regardless of their power, functions and processes are seamless to the user, who mostly requires a result.»

Solutions

The range of TOPKAPI software offers a solution to all user needs, from a basic graphic display for workshop control to redundant applications and architectures controlling several dozens of interconnected stations.

- COMMUNICATION, local or remote, through field controllers and devices
- ALARM and FAULT processing
- CALCULATION and data formatting
- LOGGING events and measurements («black box» function)
- DISPLAY with GRAPHIC EDITOR
- OPERATING STATIONS, local and remote



Highlights

TOPKAPI is particularly appreciated for its high-quality graphics (synoptic diagrams) and programming interfaces (SOFTLINK concept), its client/server and redundancy mechanisms, and for remote communication management.

Thanks to its calculation power and built-in functions, it can be used to create applications by easy parameters setting, without the need for laborious programming.



Mimic diagrams

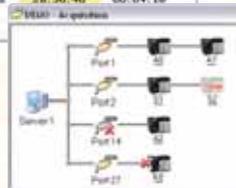
View in the blink of an eye

- Built-in editor (vector and bitmap)
- Multiwindow
- Online configuration
- Object oriented
- Object library with inheritance
- Simultaneous opening of several applications
- Objects with a «faceplate» detail window
- True color (24 bits) animations
- 256 layers, with visibility management and operator locking
- Advanced zoom features - Panning - Decluttering



Time	Alarm	Event	Label	Status	Unit/Value	Unit/Value
18/02/2004 17:28:55	Detected	Cracking Reactor	CR	Off		
18/02/2004 17:28:12	Pumping	Water 1 Header	W1	On		
18/02/2004 17:11:36	Detected	Feed Tank	FT8	Normal	1000000	177.31
18/02/2004 17:11:36	Detected	Feed Tank	FT9	Normal	1000000	177.31

	A	B	C	D
1	MILLS			
2	05/001.1	PUMP 2	PUMP 3	
3	Mode	Auto	Auto	Mano
4	Control	Auto	Auto	Man
5	Status	Run	Stop	Run
6	Feed	Normal	Stop	Normal
7	Speed Sign	1789.0	0.0	1825.0
8				
9				
10	COLLECTIVE	NO LOCK	AUTOSTOP	PAUSE
11	Running Time	47:56:27	75:43:07	
12	Start Time	02:00:58	20:36:40	00:04:16
13	Min Faults	17		
14				
15				



Graph trends

View the history

- Integrated to synoptic diagrams
- Access performances
- Easy operation: no interface to configure, modifiable on line.
- Zoom, comparison, etc.

Alarms - events

Prioritize information

- Views created and modified «on line»
 - Selection
 - Presentation
- Modes: show faults, log, constant
- Powerful summarising functions
- Filter-based selection on any criteria, based on DBMS engine
- Distributed views merging data from several server stations.

Real-time database

Process and Compute

- Acquisition
- Spreadsheet views
- Calculations by basic formulas - no programming
- Over 150 calculation and system functions
- Remarkable calculation performance thanks to precompiling process
- Alarm and archive management
- Fully configurable reporting, HTML support, fax, and email distribution
- Link to databases

Configuration

Implement efficiently

- Simple and intuitive configuration, accessible to all
- Online configuration.
- SOFTLINK Wizard, a concept invented by AREAL:
 - Unique automation database
 - Self-configuration
 - Reduced development and test costs
 - Automation of application parameterizing
 - Specialty customisation of the interfaces
- Simulator to test applications offline

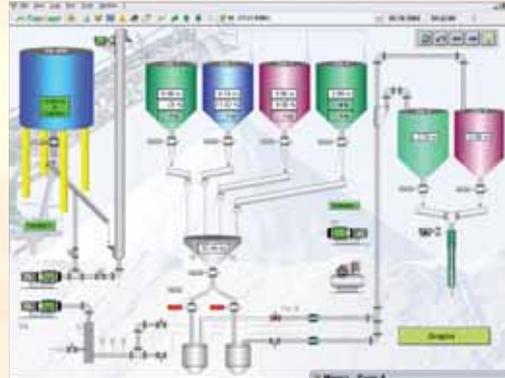
Recipes

Topkapi does not require using a separate software package to handle recipes or any coordinated processing of a set of manufacturing parameters (ingredients):

- Value groups (composition)
- Execution sequences - succession of procedures and phases
- Batch processing

Use Topkapi in the following processes, without complex scripting languages:

- Enter and record recipe parameters
- Embed separate functional elements (subrecipes)
- Send manufacturing orders to the controllers
- Get and record manufacturing data (traceability)
- Use SFC to control the processing tasks



PRODUCT Engine Oil	
Recipe	Values
Step 2 Flaming	
Extending	0.5
Adjustment	1.000
Exhaustion	1.000
Flaming	Max 114
Net Temp. °C	217
Moisture	10.5
End	

Recipe under process: View	
Record	23
Recipe Name	Engine Oil
Step	2 from 13
[Reset] [Start] [Load] [Save]	
Latest error: 13	
Comment	Break
Recipe	Flaming
Step	13 from 13

Remote notification of alarms

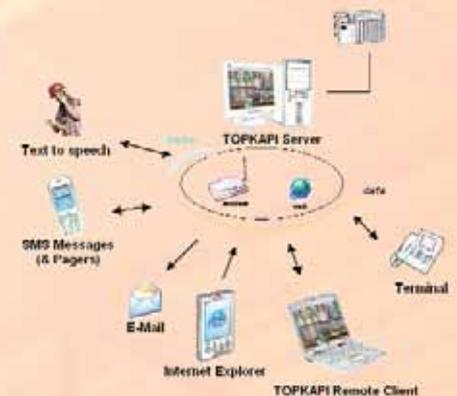
In the absence of a local operator, this module forwards alarms to remote operators.

The operator acknowledges the call cycle, then operates remotely (viewing and command) or goes to the plant.

The calendar handles the schedules, replacements, derogations, and the processes attached to the various natures of the faults.

Unlike add-ons, full integration of the on-call function into TOPKAPI provides very easy configuration and maintenance, without repeating the information entered or changed.

All the information for following up the transmission of messages is accessible within TOPKAPI.



Summaries

Production reports, Overall Equipment Effectiveness, pace, quality monitoring and objectives, availability and faults, operating time, number of starts, maintenance, etc.

In TOPKAPI, a few mouse clicks are enough, without programming nor testing many counters, to produce summarised calculations from supervision logs and transfer the results into EXCEL® spreadsheets, HTML or other tools. Amazingly easy to use, it enables you to focus your attention on presenting and analysing data.

Synopsis functions over time, time and event counting, averages, min, max, integer, typical deviation. Automatic consolidation over time on periods of your choice, from hour to year, over time ranges, validity ranges, etc.



Remote management

For RTUs or any equipment not connected permanently (telephone or GSM network, Internet, etc.), TOPKAPI handles data which is time-stamped at the source without specific setting, transparently as if acquired in real time.

Integrated management of modems and periodical connections, and self-configuring capability also contribute to justify its reputation as a reference product in all remote management applications.

Architecture

A tool for each need

Total openness to networks inside and outside the factory

High security

Server Station

(Acquisition, Processing, Operator Interface) 

Client Station (Display and Control by connection to server stations):

Permanent Client 

Thin Client  
(downloadable)

Web Server 

Internet Explorer Thin Client  

Terminal Services Thin Client 

Redundancy, distributed applications 

Workshop control panel 

Remote management Master Station 

Network

True application client/server

Data is unique and always provided by the server hosting it. Changing an application requires no intervention on other stations (client, web server, ...)

A few mouse clicks are enough for a TOPKAPI client to log onto a server's application. It is optimised for all networks, and supports PSTN or GSM modem links (synoptic diagram displayed in less than 2 seconds through a modem link).

With 100% TCP-IP compatibility, TOPKAPI is designed for seamless integration into the global architecture of forward-looking companies, i.e. IT, production, MES, ERP...

Redundancy

Fully integrated, reduced parameter setting

Automatic hot switchover

Distributed processing

Complete uniqueness of data, logs, context, internal variables, acknowledgments, etc.

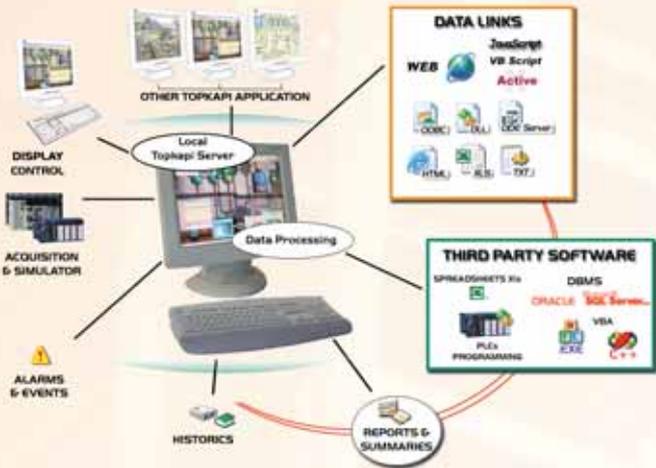
Webserv

Currently the best means to deploy an animated graphics application over the Web, supervision or ordinary portal.

- Installation within a few minutes without any modification of the basic application
- No Web skills required for implementation (network specialist advice recommended only for architecture and security)
- All TOPKAPI applications are compatible



Openness - connectivity



Characteristics

Hardware

PC type computer, standard configuration for Microsoft Windows®. Detailed information on www.arel.fr/PC/

Communication

Several hundreds of protocols available over Ethernet, TCP-IP, RS232-422-485 serial links, modem with standard or specialised hardware, communication drivers specific to TOPKAPI, or OPC, DLL, DDE, etc.

Development

- Development tools not copy protected. Therefore, they can be installed on both the development site and operating site without additional licence (except MMI version).
- Dynamic link with controllers' development / configuration software through the SOFTLINK wizard.
- Limited versions from a few dozen to unlimited number of variables (several hundreds of thousands).
- Ascending compatibility with all previous versions.
- Ability to develop communication drivers
- Dynamic language selection.

Applications

Manufacturing: manufacturing, conveying, handling, palettisation

Processing: heavy and fine chemistry, manufacturing, storage, conveying, handling

Agro-food: handling, storage, process, records, cold chain

Water and sewerage: drinkable water production, treatment stations, pumping stations, telemetry, remote supervision

Infrastructure - Transport: river navigation, train, subway, airports, luggage handling, air and sea navigation beacons, highways, remote management, lighting, lifting.

Energy:

Production: thermal plants, nuclear, hydroelectric, windmills, transport, co-generation control, networks.

Consumption: monitoring, analysis, summaries, load shedding.

Building: technical management, Hvac, fire, intrusion and access control, water, lifts.

Energy, lighting.

Home automation, parking lots. Remote management.

Local authorities, hospitals, hotels: building, boiler rooms, public lighting, water and sewerage, waste.

Environment: quality control of water and air, hydrology, meteorology, data collection.



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