# TOPKAPI Achievements

## SETNE : 1 200 MW termal plant

SETNE, a subsidiary of Charbonnages de France (CDF) operates the electrical energy production thermal plant Emile Huchet in the Moselle area, in Eastern France. With an output of 1,200 MW electric, the equivalent of one nuclear plant generating unit, it uses pulverized coal as its primary energy.

As early as 1994, it was fitted with a *TOPKAPI* system with full hot redundancy for all coal handling and feed operations, and comprised 9 operating stations under Windows (PCs with 486 type processors at the time), 13 controllers, 8,000 variables.


Centrale Emile Huchet (Lorraine)

Since then, *TOPKAPI* redundancy has been installed over more than 100 stations in France and abroad, in fields as diverse as the industry, water and water treatment, building facilities management, transport. Today, it is recognized as a genuine reference(2) in terms of simplicity of implementation.

Over eight years of operation, the system evolved regularly. It now includes 16 stations; the Ethway over Ethernet protocol was chosen to replace Modbus in the redundant controller network; a fibre optic network was installed in this large and electrically highly unstable industrial site (about 2 km x 2 km). This network (redundant, of course) enables transporting the controller data and inter PC links over a same media, but also enables programming controllers and configuring *TOPKAPI* stations centrally (notion of single application with shared and redundant processing).

All operations are now supervised from the control room, including the facilities commissioned in 1994: ash drying and UPPC (Unite de Preparation de Produits Composes, Composed Products Preparation Unit). The latter unit is used to upgrade combustion ash (capacity 800 tons/day) for preparing cement, road construction products, calcareous fertilizer for agriculture, and other products. In this facility, *TOPKAPI* manages the equipment used for mixing, weighing, storing, and shipping. Specific applications were implemented to meet the particular requirements specific to reception and shipping: the open architecture of *TOPKAPI* enables it to receive add-ons very easily.

Today, supervision in this plant is perfectly maintained and phased with recent systems. A fact that is often overlooked, choosing software operating at a given time is not sufficient. Subsequent maintenance costs must be integrated ('cost of ownership') and the upgrading ability, without wasting former investments (ascending compatibility). Despite the fact software does not wear out like mechanical equipment, it does age very fast …