

ONS - National Electric System Operator

Lot 3 of SINOCON - National Observability and Controllability System

Context

In October 2004, after competing with large multinational companies in the IT market for the electricity sector, STD - Technical Systems Digital S/A, in partnership with Spin, ELTMAN Systems and Engineering, was selected to supply the lot three emergency stage of SINOCON (National System of Observability and Controllability). The numbers involved in this project, lasting four years (two years of implementation and two warranty), were:

- Total of automated substations: 31;
- Total automated power plants: 7;
- Total local stations with Spin SCADA software: 38;
- Total cabinets: 90;
- Total digital inputs: 31.181;
- Total digital outputs: 4.557;
- Total analog inputs: 3.934

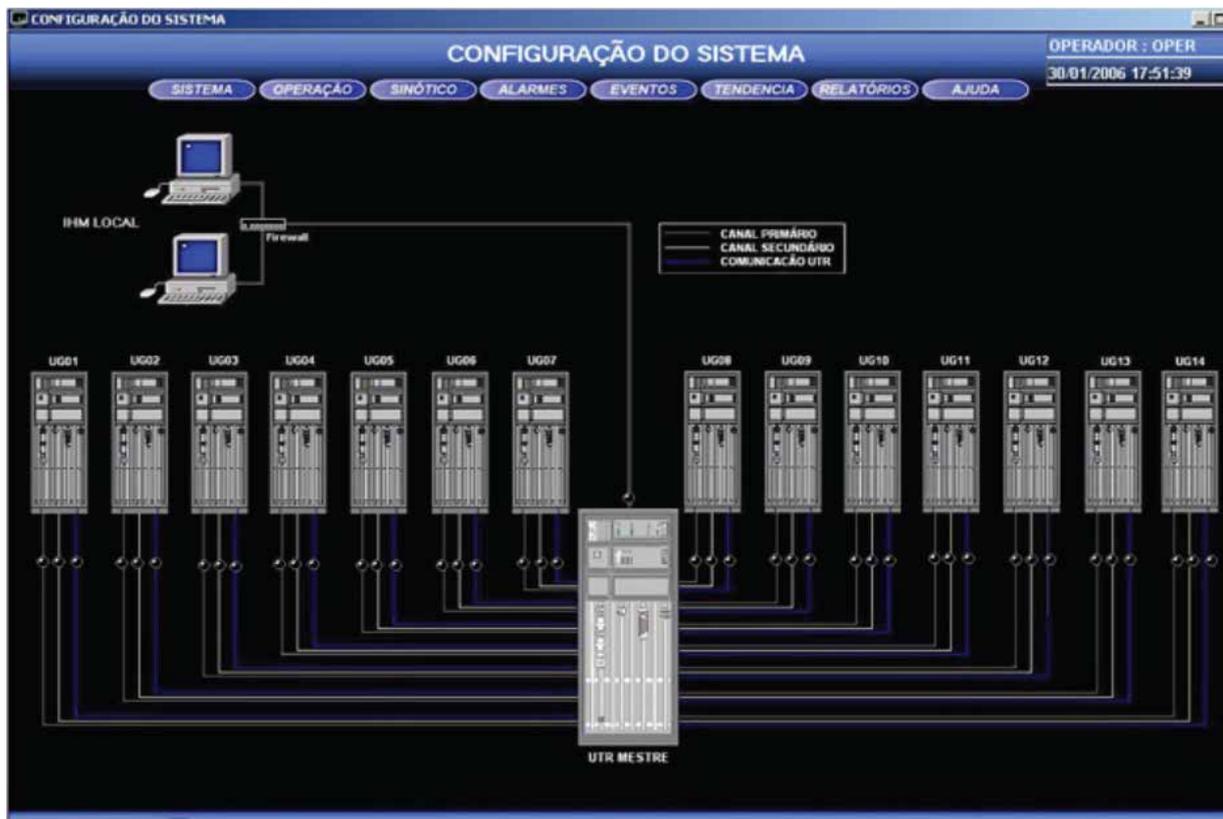
Challenges

Lot three contemplated the main power plants and substations of the basic network (230 kV, 345 kV and 440 kV), located in São Paulo, covering the following utilities generation and transmission companies: AES, CESP, CTEEP, DUKE and EMAE totaling 38 facilities. The competition, the greatest in the sector in Latin America between the years 2003 and 2004, was divided into four lots, lot three being the only one with a national solution using remote STD with the Spin software SCADA.

The system implementation in 24 months, considering that the first six months were for surveys and planning of the project, required the automation of about two sites per month. As these were high and extra strain sites, all commissioning was at night, between 23h and 5h.

Implanted Solution

The following shows the typical architecture of a plant (Jupiá):



For the implementation of the project, a complete integration between the companies was required. Initially, Eltman did the analysis of the substation, raising all the necessary services to be done. Next, Spin and STD configured SCADA and remote, respectively, and participated in the factory test and commissioning of substations/plants. The factory test checked the entire system from contacts of remote boards to the screens of SCADA while Eltman in the field, laid the cables of the equipment for the interconnection boards with RTUs and performed the continuity test.

The system commissioning boiled down to connecting the terminals of the remote to the terminals of the interconnection boards.

Results

This bid was the largest in the sector in Latin America, between 2003 and 2004, divided into four lots where the only nationwide solution was lot three, using remote STD with the software SCADA ActionView, from Spin Engineering.

