



A new GIS in New Caledonia will set high standards for GIS operators in the utility space in the Asia-Pacific region

Smallworld GIS and SAP-Integration in the Pacific

Smallworld has been one of the most prolific systems for power supply networks in the Asia-Pacific region for a number of years now. This software is among the market leaders in Australia, New Zealand and parts of Southeast Asia. A new exciting GIS facility in the region is being implemented at Enercal in the French overseas territory of New Caledonia. The introduction of Smallworld GIS over a large area for the documentation of electricity as a primary working resource took place simultaneously with the introduction of two SAP modules, SAP IS-U for customer care and SAP PM for network maintenance. Integration of the two systems has played a prominent part in the project plan as a result of these parallel activities. The well-established NRM-EIS integration procedure has taken center-stage in this process.

Enercal is a subsidiary of the French EDF group, which is owned by the French government. It delivers power to 27 councils among 33 in New Caledonia and to the world's third largest nickel producer, Société Le Nickel and the Goro Nickel facilities. It operates three hydroelectric power stations and several oil and diesel electric power stations. Enercal operates a power network with a length of 3832 km in the low and medium voltage sectors as well as 471 km of 150 kV line.

Well-established concept

Awareness of specialists from the French overseas territory was awakened by one of the world's largest GIS projects that had been carried out by GE Energy in central Europe. In this case, Mettenmeier GmbH successfully supported the project management, introducing Smallworld GIS with its Electricity and Gas Network Resource Managers (NRM). Much of this experience has been used in New Caledonia, where

Mettenmeier is once again involved, in association with the Melbourne Smallworld system integrator we-do-IT and a local service-provider company, Theome in Noumea. Theome brings expertise in local geo-data management.

The establishment of the GIS calls for the creation of a fundamental geo-database equipped with a French user interface as country-specific localisations "NRM Électricité", including data collection,

scanning of hardcopy and the geo-referencing of existing network plans. The project team is also charged with training and the integration with the SAP business solution. The site will support a web mapping application and will implement Smallworld's mobile application called Smallworld Field.

New Caledonia

The French overseas territory, New Caledonia is a group of islands in the south-west Pacific Ocean, about 1500 km east of Australia. New Caledonia is the world's largest nickel, it produces about a quarter of the world's needs producer. It is home of the Malanesian native population, descendants of the original French and German settlers and the Metropolitans, who are expatriates from metropolitan France who work in the territory, usually on government service, for a few years. Like Australia, New Caledonia was used as a penal colony. The official language is French and although part of the French Republic the official currency is still the Pacific Franc.

Project Plan

At present, complete system installation is being carried out in cooperation with Mettenmeier, we-do-IT and Theome. System introduction takes place in three essential stages:

1. System initialization

- Client adaptation
- Downloading the geo-basis data
- Hardware and software installation
- Training

2. Data collection

- Scanning
- Geo-referencing the network plans
- Determination of the MV scheme plan
- Digitalization of the network plans

3. Integration and application

- System integration with SAP
- Introduction of the SIAS/XGIS Web application
- Introduction of the mobile Smallworld Field offline solution

Creation of a Greenfield GIS

The creation of a greenfield GIS is uncommon these days, and the integrators are taking full advantage of the fact that there are no legacy issues to be confronted. The introduction of Smallworld GIS, SAP PM and SAP IS-U is proceeding in parallel – providing enormous design scope: The data structures and processes involved can be modelled from the beginning to provide frictionless interaction between SAP and GIS using Mettenmeier's latest, service-oriented integration technologies. SAP integration technology comes into play together with the well-established NRM-EIS connector from Mettenmeier. This SAP certified integration solution opens up Smallworld GIS via the



so-called Enterprise Integration Services (web services) and permits full use of the integration functionality of SAP. In the first instance, system-integration at data-level is being put into effect for connections to individual premises, switch control cabinets and transformer stations.

Enercal's GIS will be a small but vital tool to ensure efficient operation of the network and the reliable electricity supply of the population of New Caledonia, mining assets and shortly of the Goro mine. The efficient operation of the mine, will, in turn go a long way towards economic self sufficiency for the country.

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