Linux Within Onboard Systems

Until recently, Free & Open Source Software was often being ignored by industry because of the gaps between strict industrial constraints and Open Source development practices. From a technical point of view, key features were missing, such as real-time functionality. Some of today's applications require real-time solutions, ranging from simple communications cards to critical distributed systems for the aeronautics and defense domains. Now, this functionality has been implemented and is operational.

Open Wide describes itself as a technology provider of onboard IT, specialized in Open Source. Linux and Free & Open Source software are perfectly able to meet the most-severe constraints and criteria laid down by industry, and give you proven reliability, cost control (no license fees) and performance.

Open Wide is now supplying solutions for the development and optimization of real-time system able to cater to its clients' precision and high-reliability requirements in the aeronautical (EADS, Airbus, Dassault), defense (Thales,

Sagem) and, more recently, automobile (PSA Peugeot Citroen) sectors. Today's real-time software produced by Open Wide's teams offers a performance level that will satisfy your demands for reliability, failure-tolerance and open-endedness for future development. Open Wide has excellent experience in the provision of real-time solutions, whether for the formulation of industrial standards or for the development of complex real-time software.

Pierre FICHEUX, Engineering Director at Open Wide, explains: *"During the RTEL4I*

project, we deployed an environment for the development of real-time programs for onboard Linux. Today there is a range of tools available on the Internet as Open Source, in keeping with our economic model, and our clients can take advantage of a common platform, at no cost, and buy services from us to adapt them to our needs."

▶ ABOUT OPEN WIDE

Company set-up in **September 2001** by 5 people

Now employs **120 people**, including around 100 engineers

The head office is in **Paris**, with branch offices in **Lyon** and, more recently, **Toulouse**

Big **20% rise in turnover** in 2009 after the RTEL4I project, with regular growth today

Recent penetration of the **onboard automotive systems market**

CHAMPION
Pôle Systematic
Paris-Region 2011

Smart Grids, Smart Buildings, Same Quest!

A smart building is a direct extension of the smart grid, and the development of smart buildings is closely following that of smart grids. They'll be prominent innovations in tomorrow's world, and their goal is to improve energy efficiency.

Home automation[1], building automation[2], the Internet of things… these three terms are all linked to the work going on to instill intelligence in buildings' power networks (houses, condominiums and office blocks), with the aim of facilitating and improving the management of energy and of electrical appliances connected to the network. The keystones to such intelligent management are programming, communications and integration, through the introduction of computerization and other new technologies.

DotVision is a company that provides expertise and development services around the 'Internet of Things', and produces technological modules, software and other innovative and open-ended solutions in the domain of smart power management, with extensive means devoted to in-house R&D. Through the **Energy Positive IT** collaborative project, Dotvision works with Embix and Alstom Grid on developing smart grid management systems adaptable for smart buildings. Better energy efficiency in buildings is going to be an important issue in the years to come, and requires the introduction of new tracking,

control and optimization systems as we work towards a 'smart building' approach that consists in endowing buildings with intelligence and communications capabilities, to achieve improved global energy performance and be ready for the future deployment of power networks that are themselves intelligent (Smart Grids).

"As a member of the Smart Energy Management Working Group's steering committee, we're very closely involved in the Systematic Paris-Region cluster. This participation gives us access to a whole ecosystem, and allows us to work alongside the key players involved in smart grids and energy optimization," explains **Guillaume PELLETIER**, CEO of DotVision.

First tangible results
- Creation of an electronic research laboratory addressing the issues of smart grids and the recovery of energy data. The facility enables DotVision to offer very short lead times for the development and integration of its solutions, giving its partners and clients the advantage of very quick market launch times.
- Stronger team: with strong in-company resources in

engineering, marketing and finance, DotVision leverages unique expertise in cloud computing (software), onboard electronics (hardware) and the development of innovative applications and products.
- Creation of an innovative product called 'Spoony', now marketed on a B2B basis. It's an energy sensor directly connected to the power switchboard that measures energy consumption and generation and gives end users a real-time view of their power consumption via the Internet.

1 - When these technologies are applied to a house, we talk about 'home automation'. Home automation is all the engineering and technologies (physics of the building, information technology and telecommunications) allowing the automation and betterment of tasks within a house, apartment or set of offices. It came into being in the eighties, and enhances our comfort and our management of energy, safety and communications.
2 - When these technologies are applied to a larger building, we talk about 'building automation'. The term covers the intelligent management of the power, heating and lighting systems, but also the other amenities and systems usually found in bigger buildings, such as security systems.