



# PISE Project

## Smart and Secure Internet Gateway for M2M services

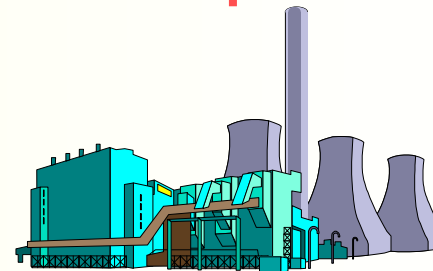
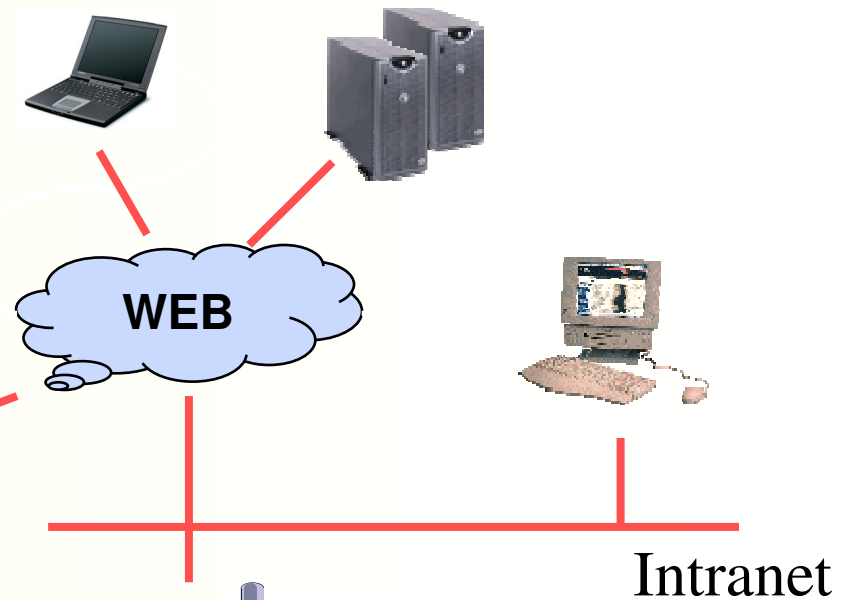


# Issues: M2M services are the next wave of the e-Business

JavaOne2006

Business concern of embedded data

- to provide value-added services
- (secured, agile developed)
- with standardized technologies
- through an existing infrastructure





# PISE Goal

JavaOne2006

Develop a middleware  
to build and to host M2M services  
on industrial gateways  
in power distribution domain



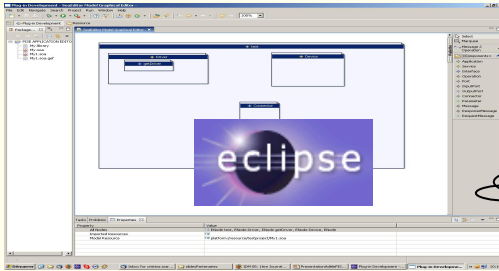
Software engineering  
methods and tools  
to develop,  
to deploy  
and administrate  
business services

Runtime environment  
on the top of OSGi™ platforms  
Compliance with standards  
Flexibility  
Security



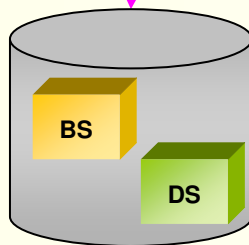
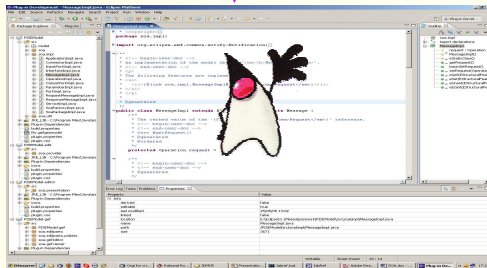
# Development Environment

## Model Editor

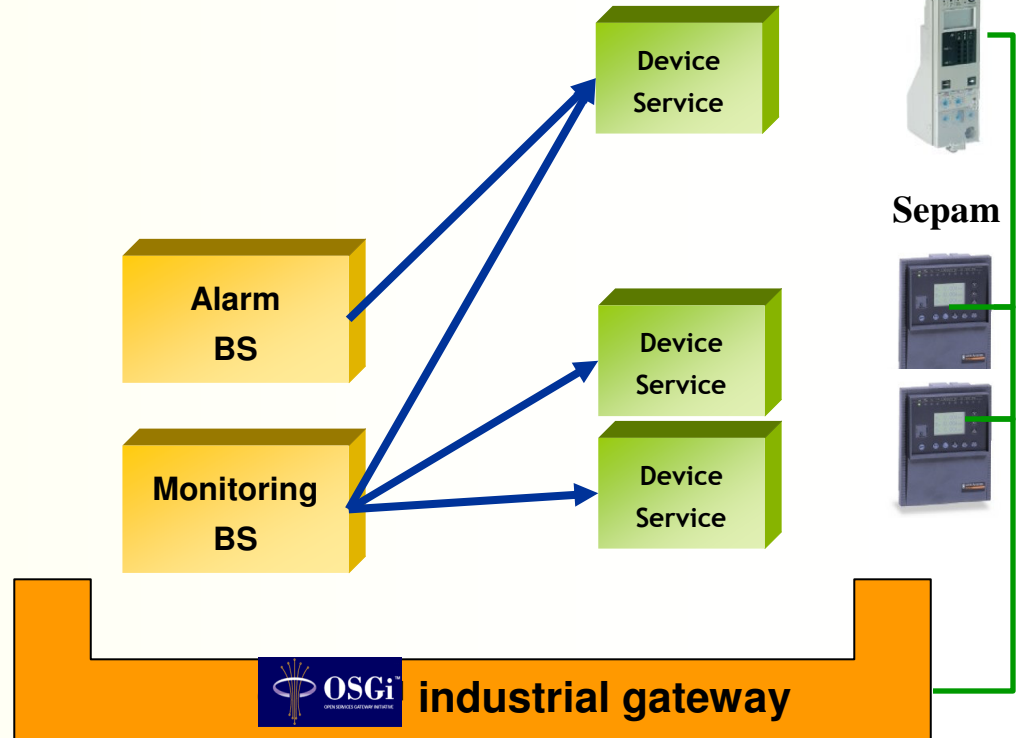


**Description of an application model**  
*Functional Aspects : Device Services and Business Services*  
*Non-functional Aspects : Security, Distribution, Trace (log)*

## Code generation



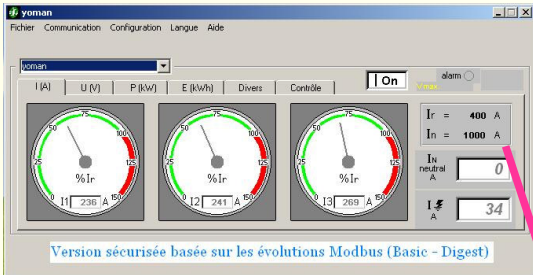
**Secure Deployment**



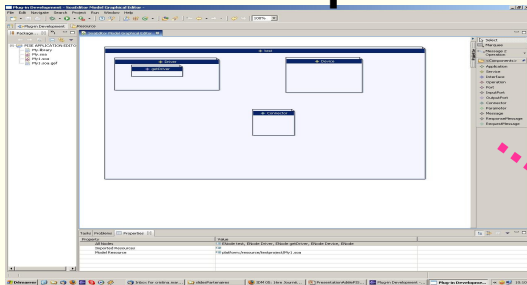


# Runtime Environment

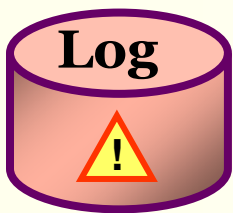
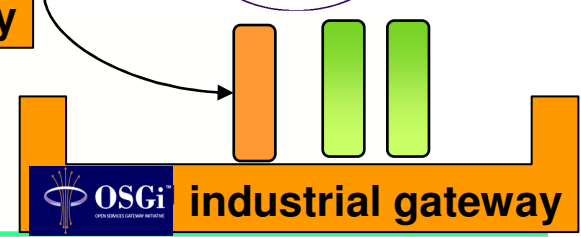
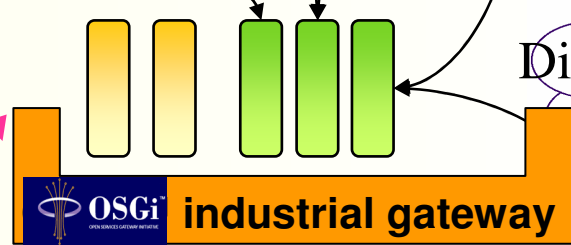
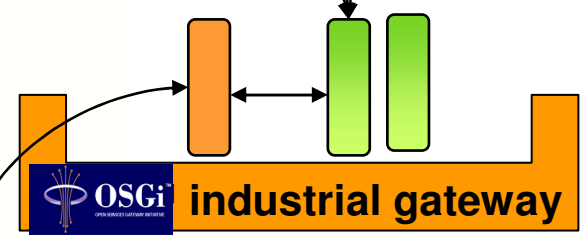
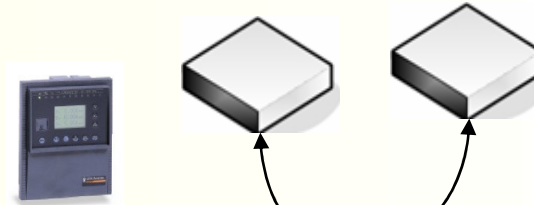
## Monitoring - Administration



## Supervision Declarative queries



Standard devices





# PISE Summary

- French gov. funded project (RNRT program)
- Project consortium
  - 3 French companies
  - 2 French research labs



- Schedule : Sept 2004 to Dec 2006
- Involved methods and technologies

MDE



JMX

ProActive

Modbus®

- Results: some will be transferred to OSS communities
- Contact : [Jean-Michel.Brun@schneider-electric.com](mailto:Jean-Michel.Brun@schneider-electric.com)

