# The Model is the Code Test before Implementation

## **xUML Starter Kit**

### **Executable UML**



Today, the Unified Modeling Language (UML) is the de-facto standard for developing software systems. It provides a common and understandable language to describe functional requirements of a software system as well as its technical architecture and implementation.

However, today standard UML is not formal enough to precisely specify functional requirements without the help of (informal) natural language. By closing this gap, we endup with a variant of UML with precise semantics, also called **Executable UML** or **xUML**.

By applying xUML, we are able to program and debug on a **much higher level of abstraction** than before: Instead of writing thousands of lines of code, we draw UML diagrams such as use case, class or state diagrams and execute them immediately. In other words: "**the model is the code**".

Does this sound like a miracle to you? That's exactly the reason why we created this Starter Kit: to prove that xUML is reality today!

### **Customer Benefits**

What benefits does xUML provide to its user?

- Functional requirements may be stated very precisely.
- There is no need to implement the functionality before it can be tested.
- By means of the mechanisms provided by a CASE tool, the requirements are automatically kept consistent, which is especially important on changes.

What benefits does the xUML Starter Kit provide to a customer?

- The xUML technology may be tested on an own project example.
- A precise UML specification is delivered at minimal cost and without risk.
- After completion of the xUML Starter Kit, the customer owns an executable and demonstrable model of the specification.

### **Application Areas**

Following the intention of UML to support **any** kind of software system, the xUML approach is suitable for **any** type of system, too. However, it is especially well suited, if the **functional complexity of the system is non-trivial**. Typical examples of such systems are:

- Technical systems requiring complex control behavior, such as
  - Embedded systems
  - Implementations of complex communication protocols
  - Safety-critical systems.
- Information systems showing complex behavior, such as
- business object lifecycles, such as
  - Contract management and product management systems showing a complex business object life cycle
  - Systems with complex temporal requirements
  - Systems affected by complex business rules or complex calculations



### **Service Description**

The xUML Starter Kit includes the following services:

- A half day introduction to the xUML approach
- Installation of all required tools at the customer's site (optional, otherwise KnowGravity's infrastructure will be used)
- Identification of a suitable example application area from the customer's domain
- Development of the xUML model for the example application
- Development of a simple user interface simulating the system's environment (for technical systems)
- Testing of the resulting xUML model
- Generation of the complete functional specification as Word- and PDF document
- Demonstration of the results and discussion of further steps.

# Terms and Conditions

### General:

- The selected application must fit into one of the application areas listed on the first page.
- The customer will provide a contact person acting as a knowledge resource for the selected domain.
- The overall duration of the project is limited to 3 calendar months.
- Any customer-specific business knowledge acquired by KnowGravity consultants will be treated as confidential.

### Technology:

- The customer shall provide a PC running Windows 7/ Windows Server 2008 or higher as the runtime platform.
- In case of continuation of the project, there is no obligation to stay with the technology/ products used for the Starter Kit.

Costs

The xUML Starter Kit is available as a fixed-price offer for the following unbeatable price:

Either CHF 9'000.-- or €uro 8'400.--

This special price includes:

- up to 8 days labor for consulting and implementation
- a 30 days demonstration license of PTC Integrity Modeler
- all expenses, if work is carried out in Switzerland. For work in other countries, expenses will be charged at cost.

If the work is carried out in Switzerland, the price is subject to VAT at 8.0%.

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