

# UI Prototyping with Smalltalk at THALES

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## **Pierre LABORDE**

- UI Design Manager
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- UI Solutions Architect
- Software Expert in Prototyping Languages

# AboutUs

# THALES

- Defense Mission Systems
- Embedded
- Long life products

## Our users

- Stressfull environment
- Complex job and tasks

AboutUs

## Speed MOCKup

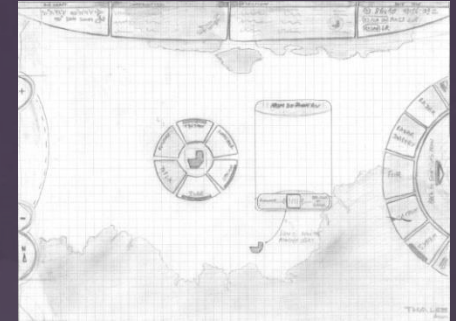
- **Process** to capture user needs
- **Framework** to quickly prototype innovative UI

More than 12 years of **Smalltalk**





1. Observe *in situ*



2. Collaborative Design



3. Specifying speed prototyping

4. Industrial cost estimation



# CaptureUserNeeds

## Dynamic UI

- Live conception
- Manipulate real samples of data

## Like a real system

- Multi-user role playing game
- Representative mission scenario
- Representative user environment

## Bridge to industrial development

- Similarity with industrial architecture
- Software complexity evaluation
- Assets generation

# PrototypingUI

## Best properties for prototyping UI !

- Live modifications
- Intuitive modeling language
- Easy to learn, simple syntax
- Multi platform
- Everything in one file

# WhySmalltalk?

## Component Model

- Lightweight CCM impl.

## UI Tools

- 2D Graphical Engine
  - Design Job Oriented
- UI Widgets & UI Editor
  - Create and save graphic parts
  - Without code
  - Assets import/export

## User Environment Simulation

# SMOCK Overview



Georeferenced Interactive Views

Network tools

Innovative Device support

- Multi-touch
- VR headset
- Game Pad, Joystick
- Eye-trackers
- Etc.

# SMOCKOverview

SOME UI...

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## Architecture Component Model

- Lightweight CCM reimplementation
- Using Traits in Pharo
- Open Source MIT licence

## UI Modeling language

- To model and define UI from user needs
- To generate UI for any kinds of gfx technologies
- Collaborating with Alain Plantec (UBO), Olivier Grisvard (THALES, IMT), Nolwenn Fournier (THALES)
- Open Source MIT licence

# FuturWork

# VR DEMO...

{ Pharo **Woden**  
{ Special thanks to Ronie Salgado



Thank you for  
your attention!

{ Do you have any questions ?