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makes your home smart

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Smart home

It‘s more than just an outlet controlled by an App…

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Central functions

Climate control

Heating

Access control

Remote access

Multiroom Audio/Video

Media

Light Scenes

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Window contact

Energy savings
- Turn off A/C

Security
- Trigger alarm

Comfort
- Info on open windows

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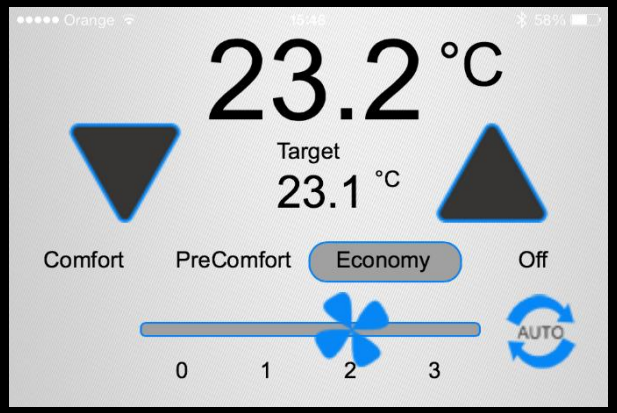
The 3 secret keys to a successful Smarthome project

1. Easy to use
2. Simple to use
3. Ease of use



Example – Bedside control on iPod

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A current Project…

- House
  - 1.200 sqm living space
  - 300 sqm guest house
  - 8 bedroom / 10 baths
  - Wellness, bowling, cinema
- 900m RGB LED stripes
  - 180 groups
- 43 Audiozones
- 600 lights in 156 groups
- 2 swimming pools (total 160sqm)

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>50 Projects

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Einfamilienhaus in Pto Andraxt

Einfamilienhaus in Zürich

Gallery Beleuchtung GB. in Palma

Dental Clinic in Palma

Büro NS in Sa Cabaneta

Einfamilienhaus in Cabaneta

Wohnung in Llucmajor

Einfamilienhaus in Sa Rapita

Einfamilienhaus in Manacor

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VBus

KNX/EIB

M-Bus

Dali

DMX

Digitalstrom

Sonos

Dreambox

Revox

Squeezecenter

uPnp

irTrans

Denon

>30 Protocols

WebSocket

Ajax

Miele@Home

Wake-On-Lan

Serial

Text-to-speech

HTTP

Capi

SMTP

Syslog

Servlets

serve@home

SNMP

GPIO

Stiebel-Eltron

Growl

Weather Underground

iBeacon

SIP

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Visualization

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Why Smalltalk?

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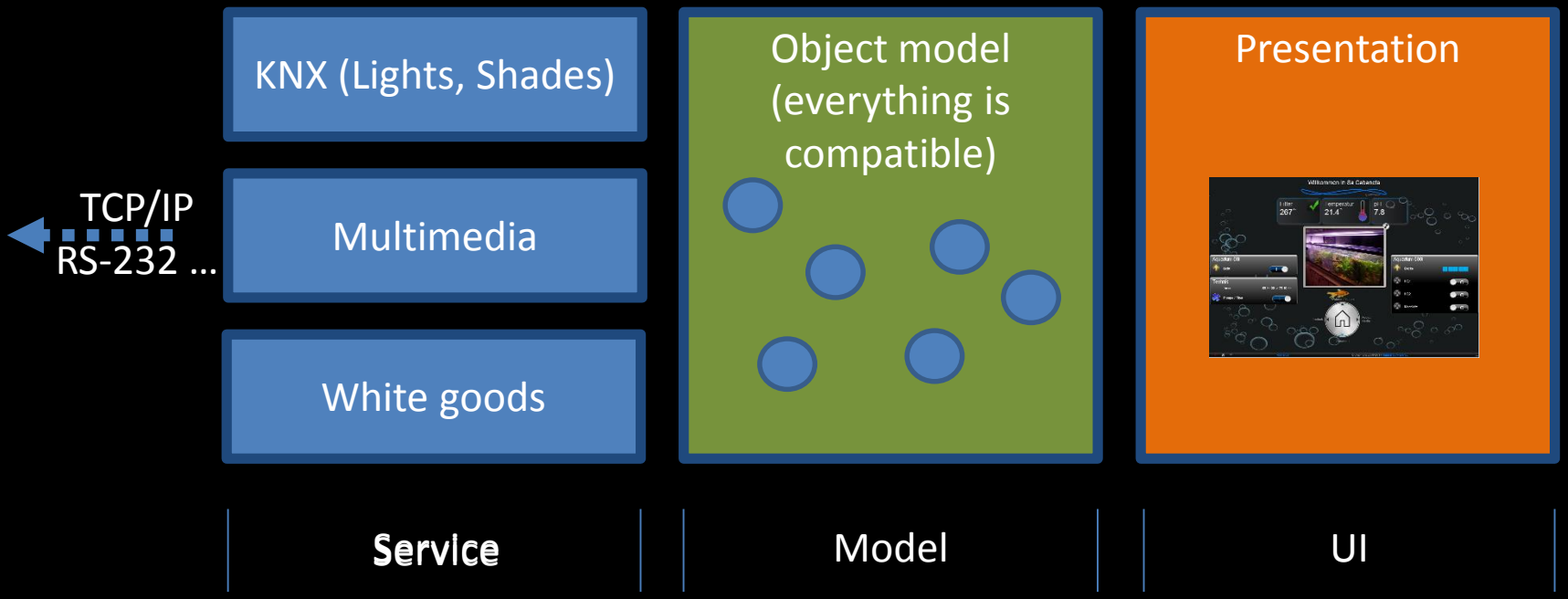
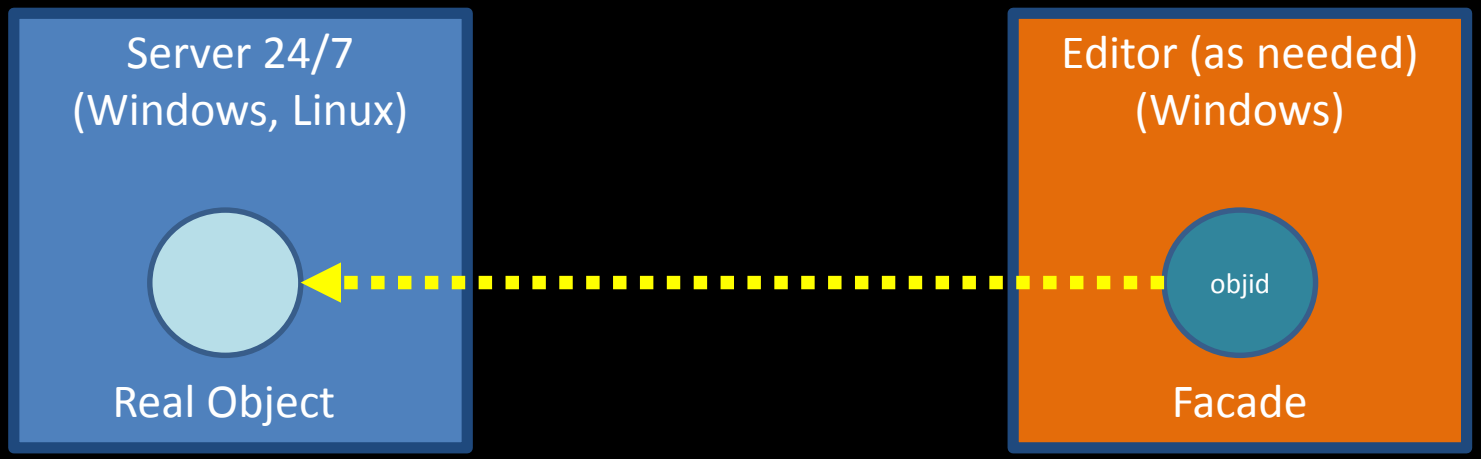
Advantage 1: 3-tier architecture



Advantage 2: Facade concept



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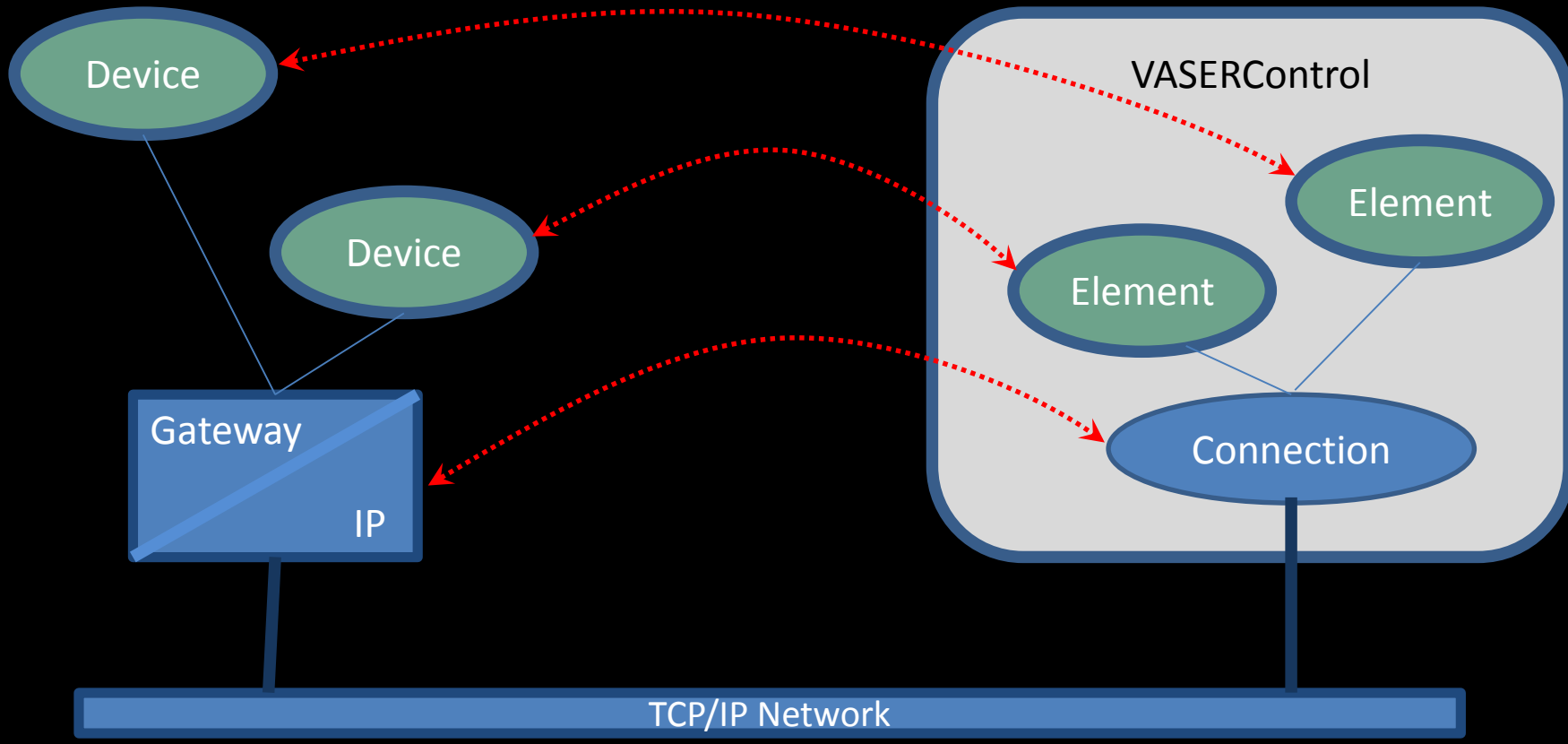
Advantage 3: Modeling the real world



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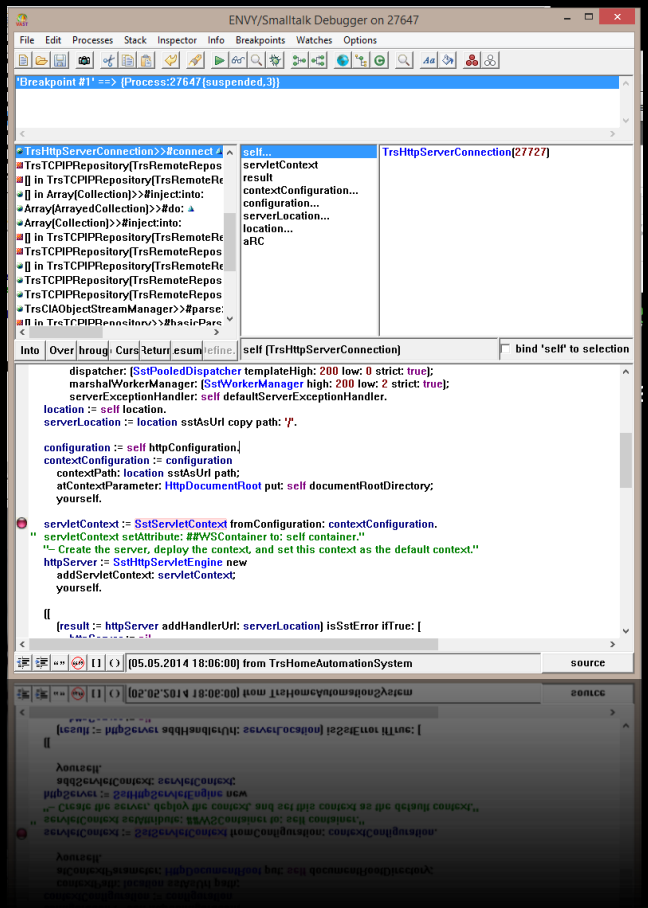
Advantage 4: Working in the debugger



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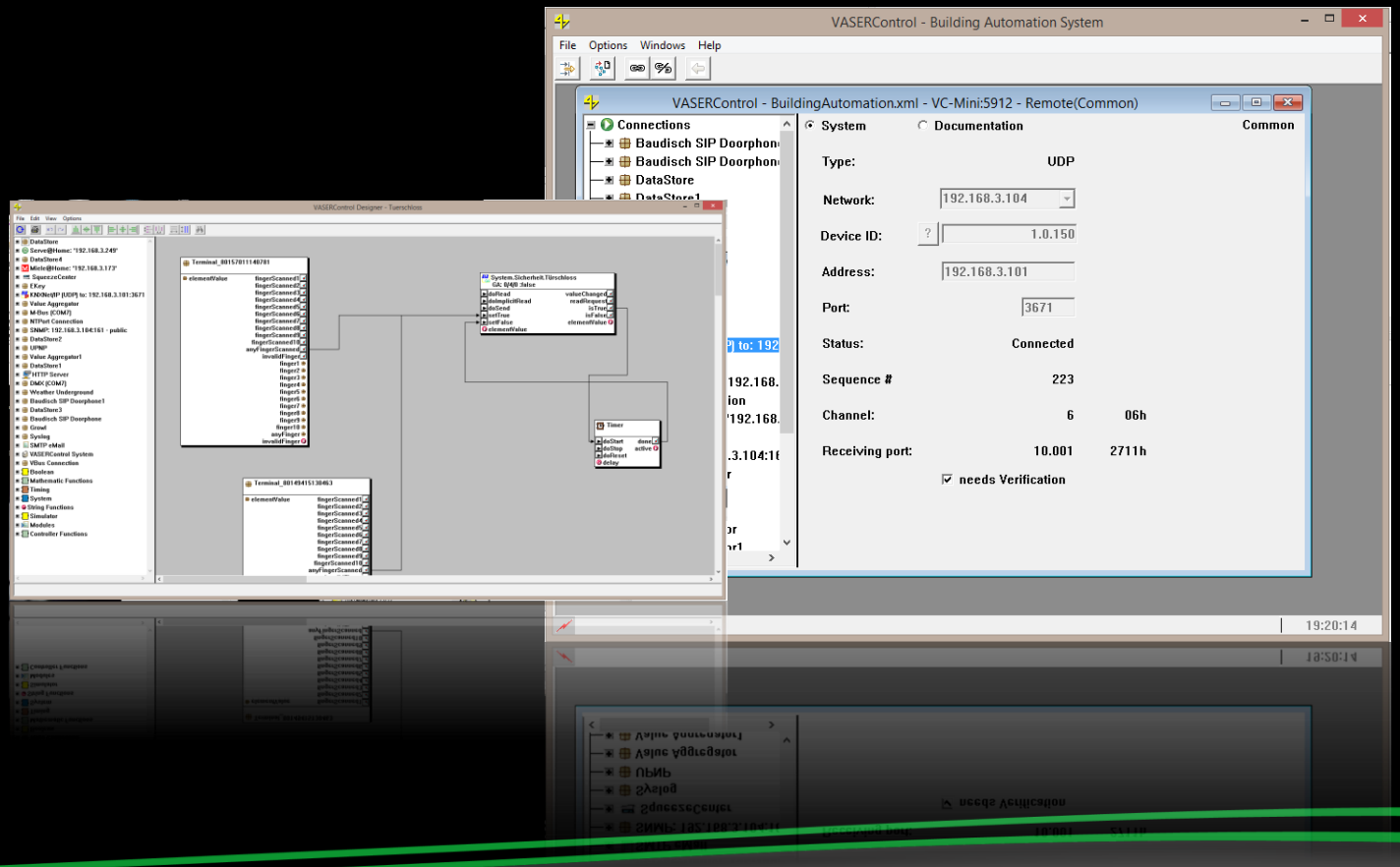
Advantage 5: Remote editing



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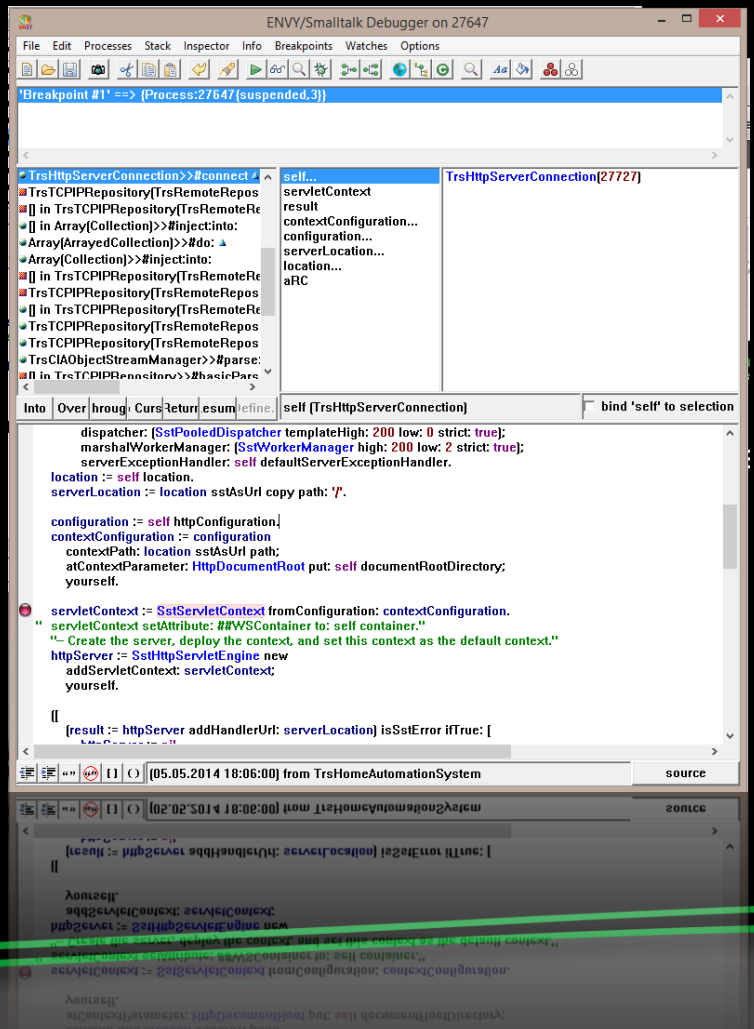
Advantage 6: Remote debugging



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Other key facts

Technology

- frameworks, patterns, know-how
- „Open-heart“ coding

Stability

Performance

- VM, development time

Distribution

…

The most important fact

It‘s fun

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Summer project 1

Natural Aquarium Lighting

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„Normal“ fish tank lights

- **Manual switch**
- **Timer**
  - **Every day at exact the same time**
- **0% to 100% in fractions of a seconds**

Problems

- Pupils are fix
- Stress for the fish
- No seasons
- No twilight
- Constant colour scheme
- No moon cycle

Goals

- **Natural environment for fish**
- **Better breeding results**
- **Longer lifespan**

- **„Make fish happy“**

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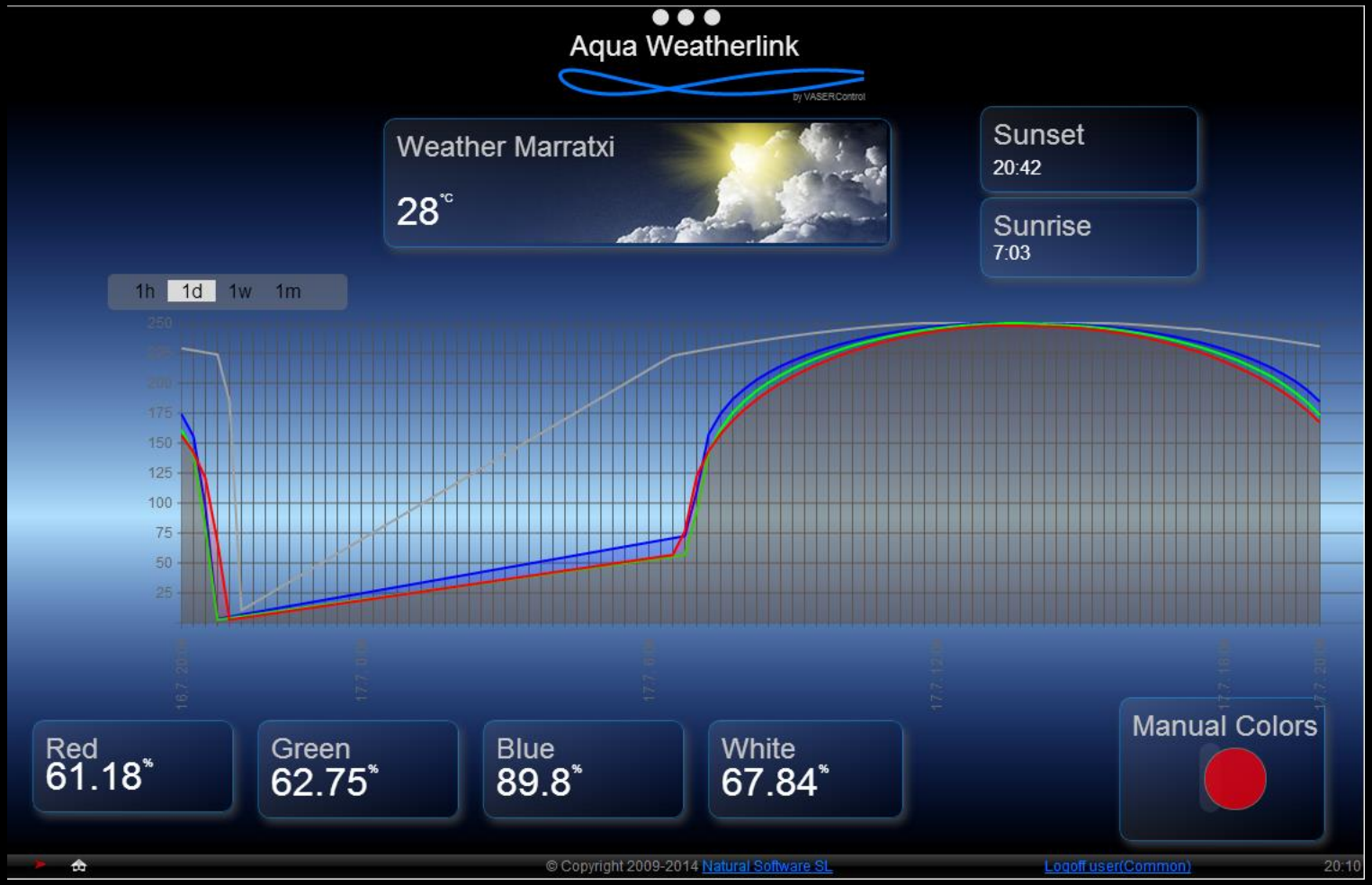
Aqua lighting

- RGB(W) Lights
  - Simulate different colours during day/night time
- Linked with Weather Webservice
  - Simulate seasons
  - Simulate light levels due to clouds

Some impressions

Twilight

Midday



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Summer project 2

Zen Garden Robot

VASERControl/Lego EV3

It all started with Moonbots…

Unfortunately we didn‘t make it into phase 2

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Interfacing EV3 with Smalltalk

- **Ported Jannik Lavals code to VA/Smalltalk**
- **Created Parts for VASERControl**

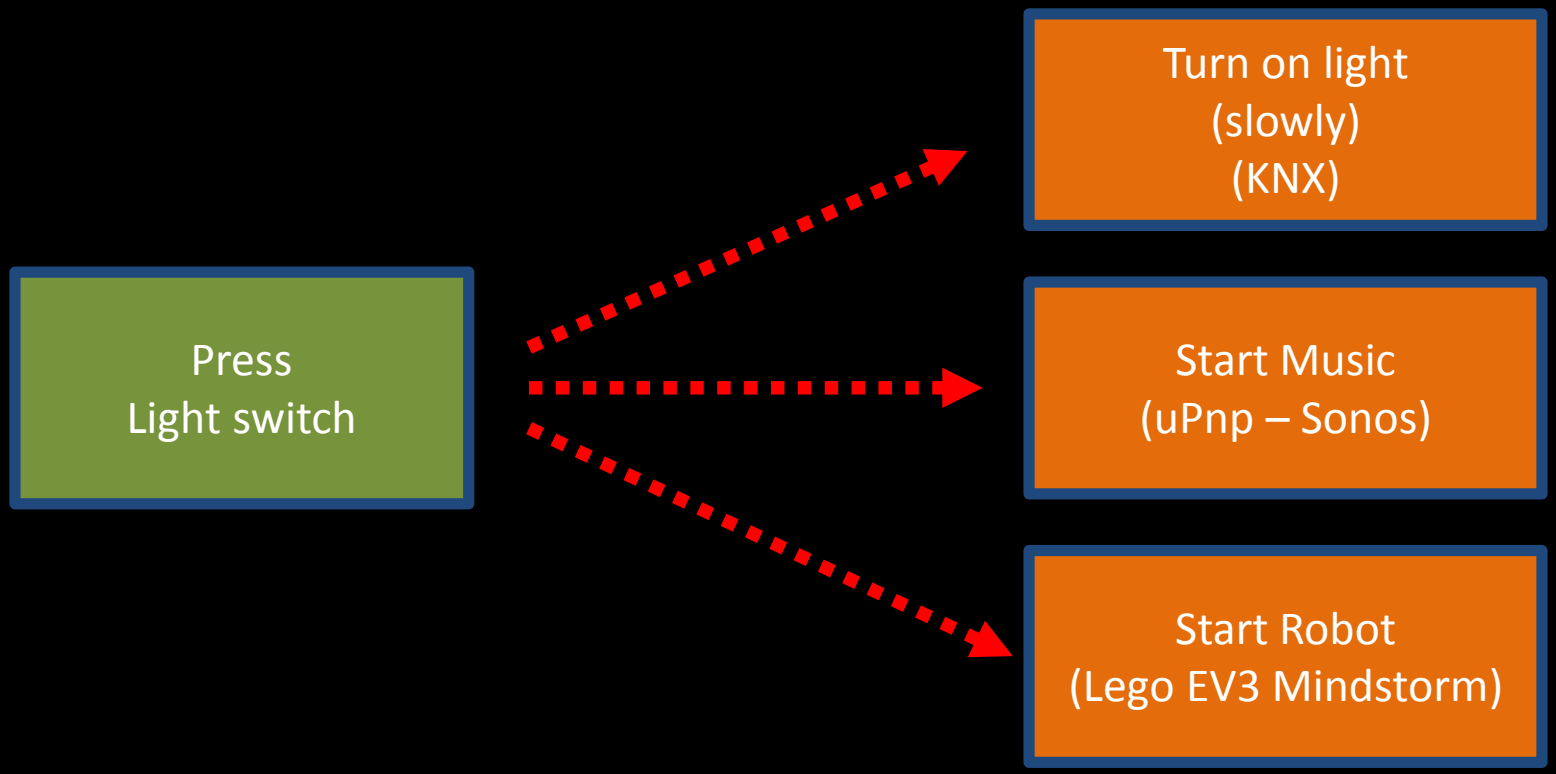
- **Now Lego EV3 functionality can be linked to home automation events**

New challenge

Instead of a moon robot…

Implement a ZEN Robot

What we want to do



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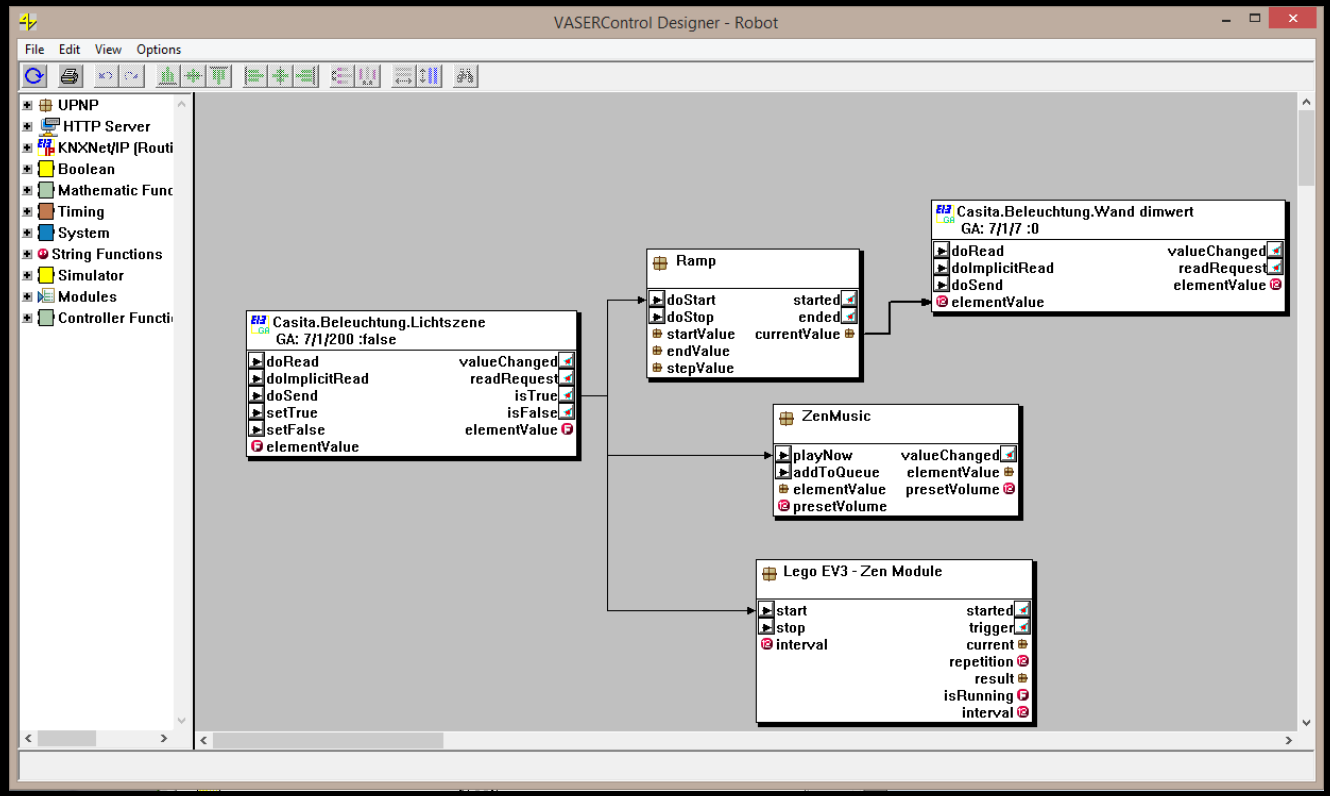
Implementation



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