Abstract

Software and System Architects frequently use the building architecture as metaphor. The maturity and visibility of building architecture makes it an attractive vehicle for illustrations.

This presentation at the formal opening of the new IST (Information and Software Technology) building, identified by ”WDC”, shows the similarities between building architectures and product architectures. One of the main areas of research of the IST is architecture, ranging from Silicon architectures to Software architectures.
The product

WDC
What is Architecting?

Understanding Why

Describing What

Guiding How

Do the right things

Do the things right

Stakeholders with Needs and Concerns

Requirements

Construction Constraints and Opportunities

Architecture; the building as a product

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March 6, 2013
Philips management objectives w.r.t. Campus

Campus Doelstellingen
* Stimulerende werkomgeving voor synergie en innovatie
* Duurzame ontwikkeling van de organisatie
* Efficiënte huisvesting

Sub-doelen:
+ Open relatie met omgeving
+ Innovatieve werkomgeving
+ Bevorderen van synergie d.m.v. gemeenschappelijke faciliteiten
+ Integratie van werken en privé
+ Blijvende positie van Philips onder de eerste elektronica concerns
+ Versnelling van innovatie-processen
+ Aantrekkingskracht toptalent
+ Opheffen versnippering
+ Versterken imago
Objectives (English translation)

- Stimulating working environment for synergy and innovation
- Enduring development of the organization
- Efficient accommodation
Subgoals (English translation)

- Open relation with environment
- Innovative working environment
- Encouraging synergy by sharing facilities
- Integration of professional and private life
- Consolidation of position of Philips as one of the leading electronic companies
- Acceleration of innovative processes
- Remove fragmentation
- Improve image
The architects vision

open
spacious
flexible

mind mapping rooms
Wishes and concerns of the inhabitants

- Comfortable
- Concentration
- Communication
- Practical
After user amendment

Room for 2 persons

Concentration

Open

Spacious

Room for 2 persons

Concentration
Space impression
The technical side of the architecture

**infrastructure**
- power
- telecom and computer network
- climate control
- light
- fire detection and prevention

**facilities**
- sanitary
- catering
- meeting

**design aspects**
- maintenance
- safety
- security
- flexibility
- campus style

**construction aspects**
- legislation
- material properties
- weight, size, strength
- cost, effort
- tools
WDC architecting mapped on "CAFCR"

- **What** does Customer need in Product and **Why**?
- **Product** **How**
  - **What**
    - Conceptual
    - Realization
  - **How**
    - Functional
    - Application
    - Customer
  - **What**
    - Product
    - Customer
      - Objectives
    - Application
      - Philips Management objectives
      - Philips Research way-of-working
    - Functional
      - Facilities Infrastructure Quality requirements
      - Design aspects
      - Construction aspects

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WDCannotatedCAFCR
Example product: Digital Video Recorder

20:00
- start movie
- view
- phone rings
- pause viewing

21:00
- broadcast
- record
- talk
- finish conversation

22:00
- record
- play

23:00
- end movie
- view
- resume viewing

Architecture; the building as a product
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ETexampleTimeShifting
Consumer Objectives

- **Time independent** entertainment and other video content
- Convenience, no hassle
- Fits in family environment
The technical side of the architecture

features
- recording
- play
- programming (EPG?)
- navigation

design aspects
- reliability
- safety
- security
- content protection
- brand style

infrastructure
- power
- analog and digital network

construction aspects
- performance
- physical properties
- weight, size
- cost, effort
- tools
Product architecting mapped on "CAFCR"

**What** does Customer need in Product and **Why**?

- Customer **What**
- Customer **How**
- **Product What**
  - Conceptual
  - Realization

- **Product How**
  - Functional
  - Design aspects
  - Construction aspects

- **Customer objectives**
- Application
- Features Infrastructure Quality requirements

- Time independence
- Home environment
Architecting dynamics

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WDCarchitectingDynamics