Abstract

Architecture is a term that is used with various meanings. This presentation shows the broader view on architecture as used at Gaudisite.nl. This vision includes customer value proposition and business proposition as part of the architecture.
Architecture Top View

- Customer value proposition
- Business proposition
- System requirements
- System design

Drives and Enables relationships.
Market and Business Context

- continuously changing competitive landscape
- fast changing needs
- variation in needs

consequence: uncertainties and unknowns

Objective of Architecture is to achieve Technical Leadership (e.g., a winning competitive position)

A good architecture facilitates fast creation of solutions, fitting the needs, and coping with uncertainties and unknowns
Our Primary Interest

- developing organization
  - architect
- system of interest
Context, Zoom-out and Zoom-in

customer organization

developing organization

architect

supplier organization

super system

system of interest

subsystems
Adding the Time Dimension

past  current  future

customer organization

past super system  super system  future super system

developing organization

past system of interest  system of interest  future system of interest

architect

knowledge

innovation

supplier organization

past subsystems  subsystems  future subsystems

based on TRIZ
Vision on Architecture
Gerrit Muller

version: 0.1
January 30, 2015
SEMABArchitecting
Example Context
Example Aspects in Office Lighting

- **Customer Value Proposition**: Energy star compliance, proper lighting, information for facility management.
- **Business Proposition**: Standard solution, ease of installation and commissioning, broad application.
- **System Requirements**: Compliance with network standards, compliance with green star, integrated in IT and facility management, secure against intruders, respecting privacy, form compatible fixtures, light quality and stability, presence sensing.
- **System Design**: Network topology, function allocation, network protocol, power supply, electronics integration, presence sensors, light sensors, intelligent control, LED lighting, authentication, encryption, location information, persistency, synchronization, lighting performance.
Architecture = Structure + Dynamics + Quantification

- **characteristics**: prime interest of customer
- **dynamics**: functionality
- **interact**: prime interest of organization
- **parts**: prime system responsibility

Vision on Architecture
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SPFpartsDynamicsCharacteristics
Structure = Parts + Interfaces + Configuration

**ultimate goal:**
- modular component catalogue
- well-defined interfaces
- independent testable

to facilitate:
- fast creation of solutions
- concurrent engineering
- logistics and production
- variations and changes
Designing Desired Qualities and Behavior

- How do parts interact to create desired dynamic behavior?
  - allocate functions

- How do desired qualities and performance emerge from the interaction?
  - dimension and configure parts and functions