Abstract

Information about the course System Architecting for management teams.
Abstract
This article describes the condensed version the course System Architecture by the Center for Technical Training CTT. Trainer is the author of this article Gerrit Muller. At this moment this course is only accessible for Philips Employees.

The course is set up to make the art of system architecting more accessible. The course will address a wide spectrum of issues in relation with system architecture, such as: processes, business, role and task of the system architect (team), generic Developments (re-use, platforms) requirements, roadmapping, skills, and psycho social factors.
<table>
<thead>
<tr>
<th>session</th>
<th>subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>day 1 morning</td>
<td>positioning the System Architecture Process</td>
</tr>
<tr>
<td></td>
<td>Product Creation Process</td>
</tr>
<tr>
<td></td>
<td>product families, generic developments</td>
</tr>
<tr>
<td>day 1 afternoon</td>
<td>role and task of the system architect</td>
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<tr>
<td></td>
<td>profile of the system architect</td>
</tr>
<tr>
<td></td>
<td>documentation, reviewing and other supportive processes</td>
</tr>
<tr>
<td>day 2 morning</td>
<td>requirements capturing, roadmapping</td>
</tr>
<tr>
<td>day 2 afternoon</td>
<td>HRM aspects; selection, appraisal, career path, etcetera</td>
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<tr>
<td></td>
<td>wrap up, expectations, how to continue, evaluation</td>
</tr>
</tbody>
</table>
Exercises

• 1 Make a map of the operational organization, from portfolio down to components, with specific products, names and roles; Discuss the relations in one of the core teams.

• 2 Role play, marketing manager + projectleader + system architect + observer; prepare initial product definition (=business relevance+specification+critical design issues+plan indication)

• 3 Determine Requirements and key drivers and show the relationship

• 4 Show the roadmap as far as known now
Theory
- dull
- passive

Insight

Practical Illustration
- vivid
- passive

Interaction
- vivid
- active

Spin-off:
- cross-fertilization

Abstraction

Exercise
Timing Template of one subject

<table>
<thead>
<tr>
<th>Time</th>
<th>Interactive Exploration</th>
<th>Broadcast</th>
<th>Break</th>
<th>Broadcast</th>
<th>Interactive Discussion</th>
<th>Break</th>
<th>Groupwork</th>
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<td>16:00</td>
<td>17:00</td>
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Rules of the Interactive Parts

• Your contribution is essential.

• Don’t monopolize the time, everyone also the quiet people should have the opportunity to contribute;

  The facilitator will intervene if the contribution is limited to a small group of participants.

• Respect the contribution of others;

  Opinions can’t be wrong, difference of opinion is normal and called pluri-formity.

• The course format is highly experimental and based on improvisation, constructive proposals are welcome;

  it is your course! Regular evaluations will give the opportunity to influence the rest of the course.
Rules of the Broadcast Parts

- Please write your questions/remarks/statements on yellow stickers and attach them at the end on the P-flip.

  *These will be used in the interactive section for discussion and to increase insight.*

- Short clarification questions are welcome,

  *discussion will take place in the interactive part.*

- Stupid questions don’t exist. Learning is based on safe and open interaction.

  *Very individual oriented questions can be referred to a break or after the session.*
The Gaudí Project

by Gerrit Muller Buskerud University College
e-mail: gaudisite@gmail.com
www.gaudisite.nl

Abstract
The Gaudí project is described. The goals of the project, the way of working, and an outline for the period 2001 to 2003. The deliverables in terms of documents are positioned by means of a two-dimensional map. Courses based on the Gaudí material are described. The current status of the courses is given.

Distribution
This article or presentation is written as part of the Gaudí project. The Gaudí project philosophy is to improve by obtaining frequent feedback. Frequent feedback is pursued by an open creation process. This document is published as intermediate or nearly mature version to get feedback. Further distribution is allowed as long as the document remains complete and unchanged.

July 31, 2014
status: draft
version: 3.0
Goals of the Gaudí Project

• Consolidate existing Systems Architecting Methods
  evaluate, reflect, generalize

• Make the Systems Architecting art more accessible
  case descriptions

• Enable the education of (future) System Architects
  curriculum, course material

• Research new or improved Systems Architecting Methods
  industry as laboratory
Modular approach

- course all slides
- module
- presentation
- book
- reader
- paper or chapter
- section
- figure
Show Early to Get Feedback

leading principle:
show documents under construction
but clearly show their status

idea
planned
preliminary
draft
usable
draft
concept
stable
but still alive
finished
Growth of the System Architect

- Root technical knowledge
- Generalist technical knowledge
- Business, application insight
- Process insight
- Psychosocial skills
Positioning Courses

The Gaudí Project
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PEVOCposition
Positioning Books

- root technical designer
- technical generalist
- business, application insight
- process insight
- psycho-social interests

Gaudi books

- Architecting System Performance
- System Modeling and Analysis: a Practical Approach
- CAFCR PhD thesis
- CAFCR Architectural Reasoning
- Systems Architecting
- Supporting Processes
- Composable Architectures
- Human Measure

version: 3.0
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Productivity: number of new entries

SARCH
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

CAFCR
Modeling
Evolvability
Research
Reflection

average productivity

Philips
BUC
ESI

version: 3.0
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GPproductivity
Concurrent Incremental Approach

Exploration:
What
How
For whom
By who
When

Infrastructure:
Tools
Website
Contacts

Contents:
Generation
Publication
Courses
Feedback

Infrastructure:
Improvements
Visibility

Evaluation

Contents:
second wave

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GPmasterPlan
# Outlook 2010-2012

<table>
<thead>
<tr>
<th>Education</th>
<th>Research</th>
<th>SE Networks</th>
<th>Tools, website</th>
<th>Book publication</th>
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<td>INCOSE academic forum, symposium, CSER, SEANET</td>
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<th>Reflective Practice yr 3</th>
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<th>Systems Engineering for other masters</th>
<th>staffing</th>
<th>research model</th>
<th>PhD Projects</th>
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<td>Reflective Practice yr 3 Reflective Practice yr 3 System Design</td>
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*ideas are welcome!"
Gaudí Process

- frequent releases
- early accessibility (in infancy stage)
- encouragement of further distribution
- aimed at maximum feedback
Positioning Gaudí Documents

<table>
<thead>
<tr>
<th>Map of Papers</th>
<th>Business</th>
<th>Product Creation</th>
<th>System architecture</th>
<th>Supporting means</th>
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<tbody>
<tr>
<td>Who</td>
<td>Function Profiles; The sheep with 7 legs</td>
<td>The Arisal of a System Architect</td>
<td>Role and Task of the System Architect</td>
<td>bundled as preliminary book: Supporting Processes</td>
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<td>What</td>
<td>Process Decomposition of a Business</td>
<td>The role of roadmapping in the strategy process</td>
<td>Product Families and Generic Developments</td>
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<td>What is a Process?</td>
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<td>The Importance of Feedback for Architecture</td>
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<td>Design Meeting</td>
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<td>Pitfalls</td>
<td>How to</td>
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GaudiMapPapers
## Courses based on Gaudí Material

<table>
<thead>
<tr>
<th>Course</th>
<th>Abbreviation</th>
<th>Duration (in days)</th>
<th>Participants per course</th>
<th>Target audience</th>
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<td>System Architecture</td>
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<td>Embedded Systems Architecting; Stakeholders</td>
<td>ESA</td>
<td>3</td>
<td>16</td>
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<td>12-18</td>
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<tr>
<td>Execution Architecture (with Ton Kostelijk)</td>
<td>EXARCH</td>
<td>4..5</td>
<td>16</td>
<td>SW designers, architects</td>
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<tr>
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<td>System Modeling and Analysis</td>
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<td>3..5</td>
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## Status of Courses

<table>
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<th>Abbreviation</th>
<th>Number of courses upto March 2008</th>
<th>Approx. total participants</th>
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# Course Modules

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