Abstract
The Masters Course The Context of Embedded System Design is a course for students following the masters “Embedded Systems”. The course material is based on the SARCH course *Systems Architecting*. However, more and shorter exercises are added, and a common case is used throughout the course.

The course addresses 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, and skills.
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Case: Intelligent Greenhouse

Teams of 3 to 5 students

Describe the context of the Intelligent Greenhouse, one subject/section per week. Every lecture one subject will be discussed. Send the resulting section within one week to the teacher. Filename: Team<Teamnumber>Subject<subjectnumber> Filesize <100 kB prevent mailbox overflow :-(

At the end: present an overview to the Management Team. Send complete description within two weeks to the teachers: gerrit.muller@esi.nl; joris.van.den.aker@esi.nl
Exercises Requirements

• 1 Describe a “Intelligent Greenhouse”: What does it look like, what can it do?
• 2 Identify Stakeholders and concerns
• 3 Discuss the technological opportunities and challenges
• 4 Make a key driver map
Exercises Story Telling

● 1 Create a story
● 2 Improve the story, with the criteria for stories in mind
● 3 Derive a case description from the story
● 4 Make a design to satisfy the case description
Exercises Product Creation

• 1 Identify the processes within your own company.
• 2 Make a design of the product
• 3 Make a work breakdown structure
• 4 Propose an organizational structure, quantify the size of the groups.
Exercises Roles and Tasks

- 1. Determine the most critical system functions and performance aspects
- 2. Propose an integration plan
- 3. Perform a risk assessment
- 4. Improve the organizational structure
Exercises Documentation and Presentation

- 1 Analyse the costs of the product creation, manufacturing and sales
- 2 Analyse the income
- 3 Make multi-year business forecast
- 4 Make a presentation outline for the presentation to the Board of Management
Exercises Roadmapping

- 1 Identify Market trends
- 2 Identify Technology Trends
- 3 Make a product roadmap proposal
- 4 Integrate Market, products, technology into 1 roadmap and identify Process and People issues
Exercises Product Families

• 1 Identify the members of the product family
• 2 Identify the synergy between the members of the family
• 3 Identify the member specific functionality
• 4 Propose a balanced product family approach
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 pluriformity.

• 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.*