CRC TRANSREGIO 29
Industrial Product-Service Systems – Dynamic Interdependencies of Products and Services in the Production Area

IPS²-GAME DAY
(March 13th, 2013 in Bochum)

Thomas Süße, Michael Herzog
Ruhr-Universität Bochum
Three Simulation Games about IPS²

Customer utility orientation

„Battleships“
Playful teaching IPS² concept generation ➔ CRC TR29

„Holistic“
Business Game for Total Lifecycle Management ➔ Prof. Herrmann

Integration of product and services

Industrial Product-Service Systems

„EDIPS“
Edutainment for Designing Integrated Product-Service Systems ➔ Prof. Shimomura

Lifecycle orientation

Development and delivery IPS²-networks

06.02.2013
TR 29 | Games Day @ CIRP 2013 Bochum
Three Simulation Games about IPS²

Customer utility orientation

„Battleships“
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Business Game for Total Lifecycle Management
→ Prof. Herrmann

Integration of product and services

• Understanding customer problems and utilities during the whole lifecycle
• Boundary Object for knowledge sharing among multiple domains and hierarchies
• Identification of innovative IPS²-ideas
• Integrative thinking about products and services

Industrial Product-Service Systems

Development and delivery IPS²-networks

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Lifecycle orientation

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Three Simulation Games about IPS²

Customer utility orientation

- **“Battleships“**
  - Playful teaching IPS² concept generation
  - [CRC TR29](#)

Integration of product and services

- **“EDIPS“**
  - Edutainment for Designing Integrated Product-Service Systems
  - [Prof. Shimomura](#)

Lifecycle orientation

- **“Holistic Business Game for Total Lifecycle Management“**
  - [Prof. Herrmann](#)

Development and delivery IPS²-networks

- **“Industrial Product-Service Systems“**
  - Support for thinking about the whole lifecycle
  - Understanding the IPS² network
  - Advantages and disadvantages of being an IPS²-provider

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Three Simulation Games about IPS²

Customer utility orientation

- Sustainable lifecycle strategies evaluating eco-efficiency, business profit and customer attractiveness
- Encouraging communication and understanding certain departments supporting the linkage within the company
- Understanding holistic decision-making

Lifecycle orientation

„Holistic“ Business Game for Total Lifecycle Management ➔ Prof. Herrmann

Integration of product and services

„EDIPS“ Edutainment for Designing Integrated Product-Service Systems ➔ Prof. Shimomura

Development and delivery IPS²-networks

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Objective: Integrative Sharing + Learning

- Objective/Research question:

  "Which kind of benefits are contributed by the certain games related to the transfer of IPS²-knowledge?"

- Grouping of participants into heterogeneous teams:

Examples...

<table>
<thead>
<tr>
<th>Profession / Background</th>
<th>4 Participants per team</th>
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<tbody>
<tr>
<td>&quot;Controlling&quot;</td>
<td>Participant A</td>
</tr>
<tr>
<td>&quot;Engineering&quot;</td>
<td>Participant B</td>
</tr>
<tr>
<td>&quot;Marketing&quot;</td>
<td>Participant C</td>
</tr>
<tr>
<td>&quot;Applied work science&quot;</td>
<td>Participant D</td>
</tr>
</tbody>
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Knowledge sharing

Discussion
## Agenda IPS² Games Day

### Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>08:00 – 09:00</td>
<td>Pretest &amp; grouping of participants</td>
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</table>
| 09:00 – 11:30 | Board Game “EDIPS” (by Prof. Shimomura)  
→ Group A1 and A2  
Game Storming Session (by CRC TR29)  
→ Group B1 and B2 |
| 11:30 – 13:00 | Lunch                                                                    |
| 13:00 – 17:00 (several rounds) | Board Game “Holistic” (by Prof. Herrmann)  
→ Group A against Group B |
| 17:00 – 18:00 | Summary, Debriefing, Feedback Questionnaire                              |