IT is not what it used to be. It is far better.

Mads Tofte, October 16, 2006
Teaching: The ITU triangle of IT

IT is for everyone who thinks!
Master of Science in IT (cand. it.)

Five study programmes:

- Digital Design and Communication
- Software development and -technology
- Media technology and games
- Electronic Business
- IT for organisations
M.Sc. Graduates (accum.)

<table>
<thead>
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<th>Year</th>
<th>cand. it.</th>
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<tr>
<td>2003</td>
<td>229</td>
</tr>
<tr>
<td>2004</td>
<td>467</td>
</tr>
<tr>
<td>2005</td>
<td>699</td>
</tr>
<tr>
<td>2006</td>
<td>1051</td>
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A few numbers (2005)

- Number of M.Sc. graduates: 265
- 40% of our graduates are women
- 95% employment
- Around 100 bachelor degrees represented among our students
- Enrolled M.Sc. Students (two enrollments a year): 381 for the year
- Additional guest students: 174
The Life-cycle of ITU Study Programmes

- Develop/revise competence description and curriculum
- Collect data from students and employers
- Teaching
The IT University aspires towards Pasteur’s quadrant (Stokes 1997):

<table>
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<tr>
<th>Quest for fundamental understanding?</th>
<th>Consideration of use?</th>
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<tbody>
<tr>
<td>yes</td>
<td>Bohr</td>
</tr>
<tr>
<td>no</td>
<td>Pasteur</td>
</tr>
<tr>
<td>no</td>
<td>Edison</td>
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<td>yes</td>
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Implications for hiring and promotions

• Influential research contributions
• Strong academic record (as judged by peer communities)
• Ph.D. supervision
• Teaching and curriculum development
• Obtaining external funding and
• Cooperation with external partners in particular industrial partners or institutions
ITU’s seven research groups

• **The Image Group**  
  *headed by* Mads Nielsen

• **Programming, Logic and Semantics**  
  *headed by* Lars Birkedal

• **Software Development Group**  
  *headed by* Peter Sestoft

• **Computational Logic and Algorithms**  
  *headed by* Henrik Reif Andersen

• **Center for Computer Games Research**  
  *headed by* Espen Aarseth

• **Design of Organizational IT**  
  *headed by* Finn Kensing

• **Innovative Communication**  
  *headed by* John Paulin Hansen
Research in all parts of the triangle

Science

The arts

Business
Facts about ITU (2005)

• Independent university, created in 1999
• Income: 20 million euro
• Expenditure: 19 million euro
• Full-time faculty: 45 FTE
• Ph.D. students: 38 FTE
• Part-time teachers: 14 FTE
• Total number of staff: 166 FTE
• Only one faculty, only one research department
Experiences gained

• Students (of both sexes and in considerable numbers) generally like the idea of IT being a very rich field, even though they can only specialize in a tiny part of it.

• Essential to bring together staff from different subjects (computer science is only one of them!)

• The ideas that require the most leadership (and management) are (in order of difficulty, most difficult first):
  – Pasteur’s quadrant
  – The life-cycle of ITU study programmes
  – The ITU triangle

• Still, we believe we are on to a good thing. 😊
Next steps for ITU

• Establish collaboration with non-Danish universities about teaching

• Establish collaboration with non-Danish universities about measuring quality and impact of IT research (as distinguished from CS research)