International Distributed Computer Science Degree

EU/CANADA Cooperation Programme in Higher Education and Training (10.04 – 09.07)

R. Herpers

Bonn-Rhein-Sieg University of Applied Sciences
Department of Computer Science, Sankt Augustin, Germany
and
York University, Department of Computer Science and Engineering, Toronto, Canada

Fachhochschule Bonn-Rhein-Sieg

Outline

- Objectives
- Partner institutions
- Obstacles / legal aspects
- Statistics
  - outgoing/incoming
- Summer School initiative
- Conclusions

Objectives

- International Computer Science Curriculum
  - Identify modules for a study term abroad
  - Work on credit transfer
  - Double / joint degrees
- Student exchange (full term)
  - 27 incoming and outgoing (3 per year and partner)
- Faculty exchange
  - 3 faculty exchanges (2-3 weeks, one per year)

Fachhochschule Bonn-Rhein-Sieg

European Partners

- Warsaw University of Technology, Warsaw, Poland
  Faculty of Electronics and Information Technology
- University of Crete, Department of Computer Science
  Heraklion, Crete, Greece
- Bonn-Rhein-Sieg University of Applied Sciences (lead)
  Dep. of Computer Science, St. Augustin, Germany
- DLR German Aerospace Center, Institute of Aerospace Medicine, Cologne, Germany
- Foundation for Research and Technology - Hellas, Institute of Computer Science, Heraklion, Crete, Greece

Fachhochschule Bonn-Rhein-Sieg

Canadian Partners

- York University, Department of Computer Science and Engineering, Toronto, Ontario, Canada (lead)
- University of New Brunswick, Dep. of Computer Science
  Fredericton, New Brunswick, Canada
- Dalhousie University,
  Faculty of Comp. Science
  Halifax, Nova Scotia, Canada
- IBM Laboratory
  Toronto, Canada
- Memo: Selection of partners is important

Commitments

- On all departmental / institutional levels:
  - Dean / Chair
  - Executive committee (e.g. budget)
  - Graduation board (e.g. transfer of credits)
  - Administration (intern. office, enrollment office)
  - Co-operation partners
  - Student bodies

Fachhochschule Bonn-Rhein-Sieg

Obstacles

- 6 Curricula have to match *table*
  - Different mandatory courses / requirements
- 3 year BSc in CS and 4 year BSc Honours (Crete/Poland old 4 year CS programmes)
  - How is a 1st year Master's student from FH-BRS is considered at York/Dal/UNB ?
  - Try to solve the problems directly but keep a workaround in mind

Fachhochschule Bonn-Rhein-Sieg

Legal Aspects

- Memorandum of Understanding (all partners) (takes more than a year)
  - No tuition fees
- Financial agreement (Leading -> EU partners) (Administrative guidelines, who is getting what when)
  - Transatlantic student mobility
  - Travel and subsistence
  - Other costs / Subcontracting
  - General costs (7%)

Fachhochschule Bonn-Rhein-Sieg

Summer School Initiative or Motivation by Soft Exposure

- Motivate for individual exchange terms
- Ice breaker idea:
  - Expose students to a different University system
  - within a well known group of class mates
- Personal experiences in an international environment → improved self confidence

Structure of Summer Schools

(at York U., Toronto, Canada)

- Intensive course (3-4 weeks)
  - Regular Computer Science course
  - English as a second language (ESL)
  - Series of special topic talks from faculty and grad students of the Centre for Vision Research (CVR)
  - One day out, Canoe trip at Mc Crae lake
- Undergrad students (2nd/3rd year)

Video

Duties of Participating Summer School Students

- Individual organisation of the 3-4 week trip
- Flights/Transfer, (Visa)
- Accomodation (recommendations are given)
  - Individual application
- Living
- Participation at all Summer School activities

Fachhochschule Bonn-Rhein-Sieg

Summer Schools 2006

- Dalhousie, Halifax, Canada
  - CSCI 4150 Introduction to Artificial Intelligence
- York University, Toronto, Canada *
  - CSE 3301, Progamming Language Funda.
- Warsaw, Poland (mainly for Canadian Stud.)
  - Database
- Crete, Greece (mainly for Canadian Stud.)
  - Biomimetic Robotics

* No direct supervision by a home faculty member

Fachhochschule Bonn-Rhein-Sieg

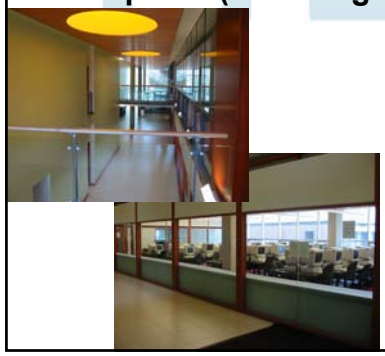
Statistics Summer School Participants (outgoing EU -> CAN)

year	part.
2000	26
2001	28
2002	17
2003	21
2004	20
2005	32 (G + P)
2006	13 (G-D) + 6 (P-D) + 6 (P-Y) planned
Total	144 + 25_{2006}

Department of Computer Science and Engineering

Fachhochschule Bonn-Rhein-Sieg

Statistics Summer School Participants (incoming CAN -> EU)



year	part.
2003	7 + 5 (G)
2004	11 (G)
2005	8(P) + 10(C)
2006	6(P) + 11(C) (planned)
Total	41 + 17_{2006}

Fachhochschule Bonn-Rhein-Sieg

Statistics Student Exchange (outgoing EU -> CAN)

- 2005
  - # 13 + $8_{s\text{-}fund}$ P 7, G 6 + $8_{s\text{-}fund}$ (York, Dal, UNB)
- 2006
  - # 7 + $6_{s\text{-}fund}$ P 4, G 3 + $6_{s\text{-}fund}$ (planned)
- Problem of synchronisation with the start / end of terms -> exchange (from P,G to CAN is only possible during fall term, Sept-Dec)
- End of funding in fall 2007

Fachhochschule Bonn-Rhein-Sieg

Statistics Student Exchange (incoming CAN -> EU)

- 2005
  - # 1 (York -> FH)
- 2006
  - # 2 (York -> FH, one from 2005 stayed)
- Problem of motivation
- However, good summer school participation

Fachhochschule Bonn-Rhein-Sieg

Reasons for the „unbalanced“ Numbers

- Low Canadian interest for exchange terms
  - Most of the Canadian students do have international experiences (in their families)
  - Language of instruction (lectures in English)
  - Funding
    (York is paying an extra stipend, exchange term / summer school participation)
  - Summer school particip. from York Stud. is high
  - Summer school particip. from Dal and UNB Stud. is low

Fachhochschule Bonn-Rhein-Sieg

Reasons for the „unbalanced“ Numbers (cont.)

- Low Greek interest for exchange term and summer school
  - Language of instruction
  - Most of the Greek students do have international experiences (in their families)
  - Funding
  - No active participation from students
- Descending numbers in Germany and Poland
  - Limited total number of students available for exchange activities

Fachhochschule Bonn-Rhein-Sieg

How to Convince Students ?

- Include industrial partners:
  - Hunt for companies which are located in both countries
- Build up an „exchange student community“
  - Support group dynamics
- Integrate alumni
- Work on success stories!
- For all potential exchange students you have to evoke an individual vision!

Fachhochschule Bonn-Rhein-Sieg

Motivation Strategy

- There is no success if you are not able to motivate your students
- Push into the cold water works only for few students
- Key objective:
  - Open their minds
  - Work hard to bridge barriers
- Offer funding opportunities
- Apply well known psychologic tricks e.g. group dynamics

Fachhochschule Bonn-Rhein-Sieg

Decision Process

- Joint degrees / double degrees
  - Added value / additional motivation (Problem: „double dipping“)
- If the decision for an exchange term is made the destination becomes second order (for 50% of the students).

Personal Monitoring / Supervision

- Never forget: You always deal with individuals
- Potential interested students need to see real faces (need to get in touch with real people)
  - Invite partners (arrange meetings between potentially interested students and representatives of partner U)
- Socialization
  - Desire to know that „somebody“ they know well is taking care (just in case) (somebody at home U **and** at partner U) → Mentor / Tutor

Fachhochschule Bonn-Rhein-Sieg

Conclusions

- Don‘t underestimate the language barrier (even if it is English)
- Consider different cultural backgrounds
- Work on self confidence (typical German prob.)
- Differentiate between the different study areas (e.g. It is ***harder*** to motivate an engineering student than a student studying humanities)
- Differentiate between female and male students
- Monitoring is a full time job
- Expect set backs

Fachhochschule Bonn-Rhein-Sieg

Online Information about Exchange Prog. and Summer Schools

- http://users.cs.dal.ca/~eem/admin/service/ecMobility/EU-Canada-Exchange.htm
- http://www.cv-lab.inf.fh-brs.de/ -> Summer School or http://www.toronto2005.de/
- Incoming:
  http://vgr.cs.yorku.ca/~vgrlab/Events/2003/germanytrip
  http://www.dragonsofts.com/germany/Sidrah_Germany/Germany _Project/main.htm

Fachhochschule Bonn-Rhein-Sieg