

10 October 2007

## **Internationalisation at ITU: Challenges and possibilities Results from survey among ITU researchers**

**Lone Malmberg, Yvonne Dittrich and Leni Schroll**

### ***The project "Knowledge sharing on internationalisation"***

ITU started the project "Knowledge sharing on internationalisation" in the spring of 2007 in order to collect and share students' and staff's international relations and experiences, and ideas on international collaboration. This report presents results and reflections from the survey on internationalisation carried out among ITU researchers in June 2007.

The basis for establishing the project is a belief that students and staff at ITU already have considerable knowledge about the global status of IT research and education. Therefore, it is important to collect, share and organise as much as possible of this information and make use of it when discussing how ITU can become a globally interactive university with regard to teaching and research, as well as when identifying potential international partners and ways of collaboration.

As part of the survey each research group was invited to a brainstorming meeting to discuss international "best practice" and "dream projects". After this all researchers were asked to fill in an online questionnaire on internationalisation.

Whereas not all ITU researchers were able to take part in the brainstorming sessions, everybody has answered the subsequent online questionnaire and registered their international relations and shared their ideas and proposals with regard to internationalisation at ITU. It should be noted that all contact information is kept confidential.

### ***Internationalisation as part of ITU's strategic development***

Being a globally interactive university is part of both ITU's mission<sup>1</sup> and ITU's vision<sup>2</sup>. Reflections on internationalisation are an important part of ITU's strategy for 2006 – 2010<sup>3</sup> and play an important role in the development contract for 2006 – 2008 that ITU has signed with the Danish Ministry for Science, Technology and Innovation<sup>4</sup>.

ITU believes that global interaction is a key instrument for achieving a ranking among the best universities in the world. It is important for both students and staff that ITU attracts gifted international students and staff, that ITU offers internationally relevant study programmes and research projects, and that ITU students and staff acquire internationally relevant competences, which make them attractive to foreign institutions and organisations.

### ***Analysis of the survey results***

The answers to the survey have been analysed along different dimensions. Specific problems pointed out in the answers to the survey e.g. regarding administration and support for foreign visitors were communicated directly to the administration. This section sum-



marises the results of the analysis. The specific proposals are available in enclosure 1 to the report.

Unsurprisingly, the subjects of the proposed projects mirror the scientific interest of the researchers. We clustered the proposals according to the type of international connection that was proposed. The most basic distinction is between what we call the strategic alliances approach and the networking approach to internationalisation.

We clustered the teaching related proposals along the same categories as used in the research related proposals and adapted the categories as we went along. This way both categorisations make a number of similarities visible that can inspire the alignment teaching and research initiatives.

### ***Our world map of international relations***

Based on the researchers' listing of international contacts it is very clear that USA and UK are very well represented (see diagram below, and see also enclosure 2 to the report). Most West European and Scandinavian countries have some representation, while Asia is sparsely represented. East European countries, the South American and African continent and economically underdeveloped countries are not represented at all.

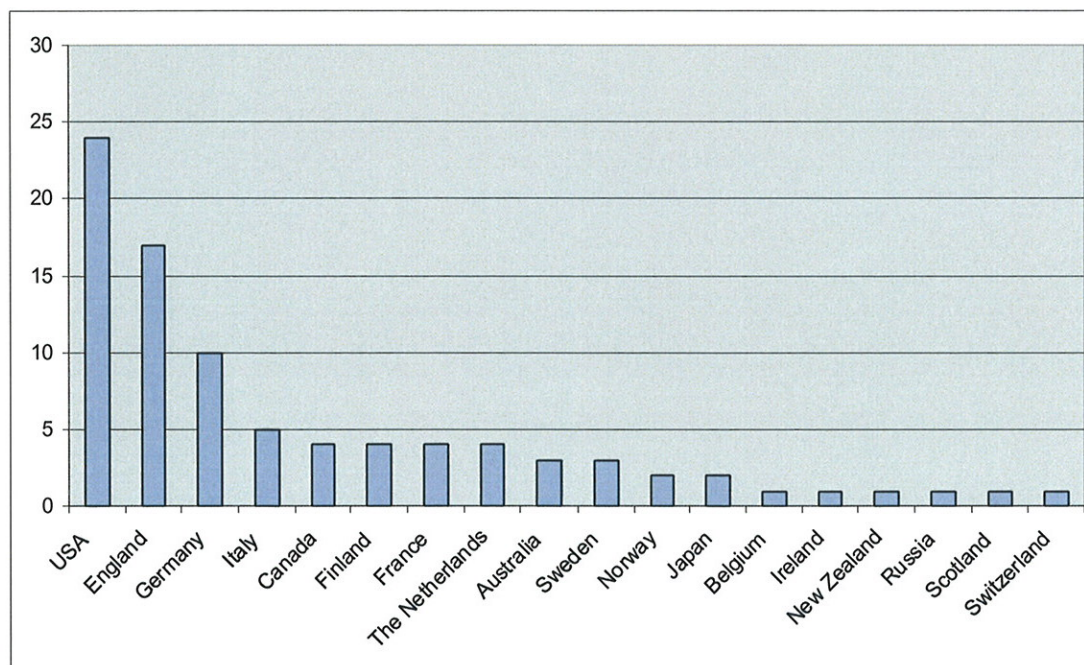
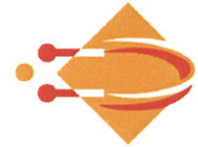


Diagram: ITU researchers' international contacts

If we just map 'strong' international contacts of ITU researchers, this picture becomes even clearer. Here it is exclusively North America, Australia / New Zealand, strong Asian and West European countries with one exception (Russia).

The map confirms the impression that ITU's researchers have a strong international network. But the observations on distribution of contacts also raise certain concerns and new possibilities.

We should be concerned that our representation in the 'new economies' in Asia, Eastern Europe and the Baltic countries is very weak. These areas are currently experiencing a very interesting development economically as well as academically. As such there is a



very attractive potential for setting up international collaboration, which could be mutually beneficial.

In terms of building prestigious research networks most universities would usually turn towards the well established academic environments in typically North America and Europe, but if we think in terms of 'exporting' education initiatives or cultivating new research projects there may be much more to gain by turning towards these 'new economies'. In terms of research funding we see substantial industrial as well as European economical interest in development of these areas.

### ***Proposals for international research cooperation***

Many proposals address better possibilities for *Individual exchange*. In our opinion, *Individual exchange* should be part of any international project. Similarly *International events at ITU*, aiming to place ITU on the national and international map as an internationally interactive university, can and should accompany any large-scale internationalisation project. Such high profile events might not only be inspiring for researchers and students but will provide high visibility of ITU if marketed in the right way.

As two major and very different strategies for internationalisation, the strategic alliances strategy and the network strategy became visible during the analysis of the material.

#### *Strategic alliances*

A number of proposals for high profile strategic alliances with a rather small number of partners are easily identified as one category. Partly these proposals address specific institutions, like cooperation with the Interactive Institute in Sweden, partly they are expressed in more general terms, e.g. establishing a 'branch of an international university at ITU'. Such strategic alliances require commitment from more than one research group theme and a long-term commitment from the involved partners. *Subject-specific projects and Subject-specific projects with specific partners* describe projects that do not have any proposal for the form of cooperation, but propose topics either with or without a specific partner. They can be regarded as a small-scale strategic alliance.

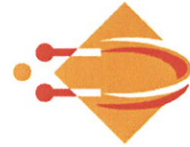
#### *Network based cooperation*

Another cluster addresses strategic networks rather than cooperation with one or with a small number of partners. The proposals again range from specific networks e.g. around healthcare IT to very general proposals. Such network-based cooperation needs a different kind of contract, support and organisation than the cooperation with one or a few strategic partners. *EU projects* can be partly regarded as concretisation of the above-mentioned network based cooperation. EU projects provide specific organisational framework and financing and require a specific focus for the research work to be implemented. Most of these proposals address a specific research area.

Proposals for cooperation involving *Developing countries*, both regarding teaching and research cooperation, provide a different set of challenges and can be expected to result in a different set of returns when handled in a serious manner. Not surprisingly the cluster is small both regarding research and teaching.

*International Cooperation involving industry* is another interesting cluster, which needs special attention in order to develop into strong and long-term cooperation.

One major concern which the results give occasion for is that very few proposals or researchers mention the need for having a strong 'home-platform' for establishing international cooperation. In our opinion internationalisation initiatives must be grounded in strong local research groups / profiles. It seems that not a single research proposal is



grounded in initiatives including more research groups and even that most research proposals are based in individual research interests. In order to be considered an interesting international research partner, ITU must create strong research profiles with critical mass.

There are different steps towards this, but at least two issues should be discussed among faculty. First, we must discuss how better collaboration among individual researchers and research groups can be established in order to form stronger profiles towards our international environment. This discussion is not only a matter of identifying themes where different research interests can meet but also a matter of providing an organisational structure supporting cross cutting and to cope with the physical layout of ITU with 'hidden researchers' corners', which do not invite for collaborative activities and insight in colleagues' research activities. Next, we must discuss our current organisation of research groups; whether these have the right profiles and the right size. In order to be attractive for other universities and to not be too vulnerable in an international exchange situation we need a strong profile as well as critical mass.

### ***Proposal for international cooperation in teaching activities***

In line with 'individual exchange' *Student and teacher exchange* should be an intrinsic part of most of the proposals for teaching related cooperation. However, student and teacher exchange requires an adequate infrastructure and support, and can draw on specific resources e.g. through European funding. *More courses in English* is a condition sine qua none for most of the international teaching cooperation projects proposed. Again, a number of the proposals address the arrangement of *International events at ITU*.

### ***Strategic alliances***

Also here a number of proposals address cooperation with one or few strategic partners. In the teaching related proposals, we also find a small scale equivalent to the strategic alliances: *Teaching cooperation projects*, equivalent to the subject-specific project cluster for the research proposals, addresses teaching cooperation around a specific topic in some cases with interesting didactical ideas. Proposals include e.g. joint master degrees and online courses, use of video-taped lectures / pod-castings from other universities, and student internships at research studios / labs at other universities.

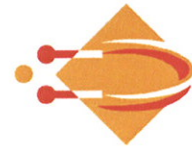
### ***Network based cooperation***

The *Joint degree programmes* cluster can be seen as the teaching version of the 'network-based cooperation' and the 'European projects' clusters if restrained to European universities.

### ***General opinions on internationalisation***

In general ITU researchers have a very positive and creative attitude towards internationalisation. Most researchers have a variety of interesting international experience, of which long term sabbaticals and longer stays abroad in general, or just the possibility of changing professional environment, are mentioned as the most positive experiences. Along this reflection, many researchers mention that better possibilities for arranging such long term stays also after the PhD period would be important in an internationalisation perspective. Other important international experiences mentioned are participation in big European research projects, conferences, workshops, international journal work and discussion groups, and networking in general.

There is also a wish to create a more international atmosphere at ITU, and a number of suggestions for how this could be established. Some proposals are about teaching initiatives like international grad schools, master classes, PhD schools, teacher exchange, student competitions etc. It is even suggested that ALL teaching should be in English. Other



proposals regard having 'hot-shots' coming to ITU, to make better use of our international guests, re-establishing an artist-in-residence program, having a yearly international week at ITU etc. More ambitious proposals regard establishing a Centre of Excellence, and to cluster with other universities creating a web of satellites.

In general the positive attitude is followed by a strong requirement for having better support and conditions for internationalisation administratively, economically, and in relation to law regulations. These issues are described in the following.

### ***Challenges and problems in internationalisation***

Most challenges and problems mentioned during the workshops were structural, practical or economical. In some respects this is positive, since these kinds of problems are relatively simple to identify and in some cases even to find solutions for. Very few expressed worries related to radical changes in teaching structures, didactical issues etc., which might be consequences of becoming more international.

Many researchers mention lack of money and / or time as an important problem both when you want to go abroad yourself but also when you want to attract top international researchers to ITU. Several researchers mention that having PhD students makes it very difficult to go abroad for a longer period of time. This calls for alternative strategies for internationalisation that do not necessarily imply faculty travelling physically for longer periods of time. We suggest that this challenge is addressed in order to come up with proposals that are based on new – but still attractive – ways of 'exchanging knowledge' in research and teaching.

Structural and practical problems like the preventive Danish immigration laws, accommodation problems, structure of the academic year, and – mentioned very often – family matters are important challenges for as well ITU researchers who want to go abroad as international researchers whom we want to attract to ITU.

Some comments touch upon the fact that ITU needs to build an image or a brand, must be able to offer something unique, and to ensure quality before we are able to 'go international'.

Language and culture differences are only mentioned by very few.

### ***Next steps***

Many interesting ideas for international research projects and initiatives have been put forward by ITU's researchers during this process. It will be natural and obvious to anchor these initiatives with the UNIK initiative, which aims at identifying cross cutting project ideas. The UNIK initiative most likely needs to have an international profile in order to qualify in the competition. Therefore the results of the internationalisation survey will be part of the platform from which to establish ITU's UNIK proposal(s). Our world map of international relations as well as the pool of ideas for international collaboration initiatives will be a strong resource in the further development of the UNIK proposals, and in the further process of working out a research and internationalisation strategy for ITU.

### **Enclosures:**

1. Internationalisation: Proposals from ITU academic staff
2. Internationalisation: List of ITU academic staff's personal relations



---

<sup>1</sup> Mission: "The mission of ITU is to deliver internationally leading teaching and research which enable Denmark to become exceptionally good at creating value with IT. Teaching and re-search in information technology include all academic activities, which involve computers."

<sup>2</sup> Vision: "ITU is an outstanding example of how a small university by being innovative and globally interactive can achieve a ranking among the best in the world, both in terms of academic standards and in terms of creation of value."

<sup>3</sup> Please find ITU's strategy 2006 – 2010 here: <http://www1.itu.dk/graphics/ITU-library/Internet/Ledelse/Strategidokumenter/strategi%202006-2010/itustrategy2006-2010%202007-06-26.pdf>

<sup>4</sup> Please find ITU's development contract 2006 – 2008 here: <http://www1.itu.dk/sw13682.asp> (Only available in Danish)

Internationalisation: Proposals from ITU academic staff		
Yvonne Dittrich, Lone Malmberg and Leni Schroll, 31 August 2007		
Cooperation in regard to research		
Theme	Proposed project	Further description
Strategic alliances	Branch of international university at ITU	-
	Intercontinental research lab	Intercontinental research lab (applied new/unfamiliar research topic to another continent)
	Nordic centre of excellence / network (Programming, logic, FIRST)	Nordic centre, since it is easier to get post.doc.'s to move within the Nordic region
	Cooperation with Interactive Institute, Sweden	A privately held research institution which have much highly rated experience in interaction design
	Cooperation with Interactive Telecommunications Programme (ITP), NYU	An interaction design programme (both research and education) with an interesting portfolio
Cooperation with 3rd world countries	Establish permanent partnership agreements with institutions with matching research unities, and have regular exchange (not just one visiting researcher)	-
	Outsourcing of research to India and China	Leverage research by more people for the same price
EU projects	IT in a third world context	Multidisciplinary IT research applied to tackle pressing social AND technical problems.
	EUD tailorable systems	-
	EU project in mobile interaction	-
	EU project in augmented physical devices	-
	EU project on healthcare and IT	EU project, also involving colleagues in US and Canada
	Programming languages and software infrastructures for ubiquitous and service oriented computing	EU projects and/or collaboration with international companies and research centres (HP, Nokia, IBM, Microsoft Research)
	ITU should find partners to bid for more international projects funded by EU or similar	-
Industry-related cooperation	Motivate ITU researchers to participate in at least one EU project	-
	Collaboration with industry research, contact to leading industry labs	Since there is no industry research within IT in Denmark, it would be huge step forward to have close ties to some of the leading industry labs
	Programming languages and software infrastructures for ubiquitous and service oriented computing	EU projects and/or collaboration with international companies and research centers (HP, Nokia, IBM, Microsoft Research)
Subject-specific projects	Help young researchers sell their research ideas to business world	To help young researchers selling their research idea to business world
	Interregional project in interaction design	-
	Ethics of online worlds	What are the ethics of online communities, and how do they differ from offline communities? What are the possible values embedded in the design of interactive worlds?
	Design of newsgames	What are the practices, methods and concerns that the design and development of games for news corporations create
	Ethics of computer game design	Is it possible to apply the object-oriented framework of information ethics to the design of computer games?
	Model-driven development, generative programming	-
	Bigraphical programming languages	Researching how to use bigraphs for implementing programming languages
	Digital rights management	-
	Security	-
Guidelines in healthcare	development of IT implementable guidelines, to be integrated as part of the hospital information systems	

(Subject-specific projects)	Health care and technology	Technology adoption in health care and impact on the quality of care
	Participatory design in global software development	Building on previous good experiences with engaging users in open design dialogues that cut across usual phase-divided development processes
	Patients' self monitoring	Students are generally not in much substantial contact with the research activities at ITU, which is a problem for natives as well as foreign students coming to ITU. One reason is the physical layout of the building, where research departments are restricted areas with little visibility. Visitors (students and researchers alike) quite literally does not SEE the research taking place. The areas outside individual offices (kitchens, meeting tables ect) does not facilitate interaction across department divides and across student-researcher divides. The principal problem for internationalization is that it is difficult to engage with many of the research activities of ITU unless you know the involved people in the first place
	IT support for mobile work	CSCW vha. lokationsspeifikke, mobile teknologier
	Calculi for mobile ad hoc networks	Develop calculi to help model and analyse MANETS
	Security and performance in networked embedded systems	Model-based simulation and verification of networked embedded systems
	Data bases and string matching	-
	Computational biology	-
	User-centred design	-
	Location based services	-
	Universal access to information technology	-
	User interface history	-
	More common research projects (not EU-projects but smaller projects with partnering universities, e.g. on healthcare)	not EU projects, but smaller projects, dependent on the cooperation between more than one country - but some more aid for funding this kind of project, that should be made together with partnering universities
Financial incentive from ITU or government to apply for international group research funds since EU applications seem cumbersome	-	
Subject-specific projects with specific partners	Logistic optimisation	Logistic optimisation (Tokyo Univeristy)
	Configuration	Configuration (4C Center in Cork, Ireland)
	Constraint solving	Constraint solving (CMU, USA, KTH, Sweden)
	Computer vision	Computer Vision (San Fransico State University)
	Eye tracking	Eye Tracking (University of Navarra)
	Programming languages and software infrastructures for ubiquitous and service oriented computing	EU projects and/or collaboration with international companies and research centers (HP, Nokia, IBM, Microsoft Research)
International events at ITU	Ph.D. summer schools at ITU	ITU should try to host more Ph.D. summer schools and workshops since it provides Ph.D. students with a great opportunity to talk to prominent people in their field
	Summer interns at ITU	Set up at summer intership program and thereby attracting students from all over the world to learn about ITU
	Annual workshops at ITU based on international students' network	using international students' network
	Invite high-profile researchers to ITU	Invite high-level researchers regularly for talks, thus establishing closer contacts between ITU researchers and them, and thus making ITU visible locally due to them
	Make challenges within key research areas (e.g. a competition with prizes). This is almost free and often spawns a lot of interest	-



(International events at ITU)	Open research seminars at ITU	Starting a tradition for more open research seminars. When internationally distinguished scholars visit us, it is discouraging to see them invited to exclusive research seminars only. The buzz-talk could perhaps work well as a standardized format, where Fridays are set aside for a) an informal and intense research seminar during the day around a theme central to the guest (providing ECTS for Ph.D. students who present, and open to graduate students with relevant interests), followed by b) the public and formalized buzz-talk in the afternoon, plus c) optional hang-around with the perhaps-prominent guest in the scroll-bar
Networks	Open source software development	Research-based programming languages and libraries
	Specialised working groups, supported by video/online infrastructure	Supported by video-streaming and on-line conferencing infrastructure
	Cooperation with medical informatics institutes	In several universities institutes for medical informatics/Health It have been established, it would be nice with a more stable contact
	Collaboration in regard to STS (Science, Technology and Society)	ITU needs to collaborate with people and institutions, which have knowledge about the relationship between science, technology and society
	Network on health care studies	ITU needs to collaborate with people and institutions, which have knowledge about the relationship between society, technologies and citizens/patients. Research in health care IT at ITU needs to be informed by people who have done substantial studies within the field. Not just health care professionals and IT-people are required for a succesful undertaking of health care IT research area at ITU.
	Joint work on "big problems"	Make ITU a part of "grand" projects (with potentially high impact), that put ITU "on the map" and stimulates extensive collaboration
	European Research Training Networks	Take advantage of the EU Research Training Networks (Ph.D. training network)
	Networks	-
Individual exchange	Policy for research sabbaticals abroad	ITU needs a clear sabbatical policy. Having sabbaticals is one of the key ways to foster cooperation and create deep international relations. Sabbaticals should be institutionalised, more to emphasise that it is in ITU's interest that faculty members go on sabbaticals abroad.
	Long term (6-12 months) exchanges with a number of relevant universities	-
	Sabbatical leaves for 6 months every 3 years	-
	Set up funds for sabbaticals (both for incoming and outgoing faculty)	International visitors are often here for only short stays. It would be good to set funds for outside faculty to take sabbaticals here, and vice versa.
	Free period every term to be used on internationalisation aspects (conferences, guests etc.)	-

(Individual exchange)	Encourage "micro leaves", i.e. periods of no more than one month in which a researcher is freed from administrative tasks so she can go to any other country with a specific goal in mind, for instance write a paper, or collaborate in a research project.	Such "micro leaves" could be funded by travel money, and could expand our network with other universities in a very dynamic fashion. Also, they require less previous work than larger leaves, and they are also significantly cheaper, both for the institution and for the researcher.
<b>Cooperation in regard to teaching</b>		
<b>Theme</b>	<b>Proposed project</b>	<b>Description</b>
Strategic alliances	Branch of international university at ITU	-
	Closer collaboration with Lund or Chalmers or IT-universitetet i Gøteborg	-
	Arctic IT: Help Greenland and Iceland / the arctic area develop IT study programmes	Help Greenland and the arctic area to develop IT educations, it seems that Søren Duus Østergaard has provided "sponsors" to support the initiative
	Icelandic IT in cooperation with Reykjavik University	Cooperate with Reykjavik Univ., it's a small univ. that can't offer many exciting study programs
Industry-related cooperation	Computer game design and development: Internships at game studios	The idea would be to cover those aspects that ITU cannot cover by partnering with other universities and game developers. The idea, quite vague at the moment, would be to partner both with a university and with a game studio, so our students could take an internship at a game studio, that would complement their studies at ITU, while at the same time it would give us a solid network with the game industry. Similarly, these internships can take place at other media, like newspapers or game-related websites, given the breadth of our students' backgrounds and our academic programme
	Exclusive master in Interaction Design for companies / Sweden + DK	-
	Internships abroad for BSc or MSc students	Help student find internships abroad
Joint degree programmes	Joint degree programme on Computer Game Design and Development	The idea would be to cover those aspects that ITU cannot cover by partnering with other universities and game developers. The idea, quite vague at the moment, would be to partner both with a university and with a game studio, so our students could take an internship at a game studio, that would complement their studies at ITU, while at the same time it would give us a solid network with the game industry. Similarly, these internships can take place at other media, like newspapers or game-related websites, given the breadth of our students' backgrounds and our academic programme
	Joint MSc degree on Social Informatics	Joint master's degree
	Erasmus Mundus programme on PLS	Erasmus Mundus programme on PLS with Birmingham and other EU institutions
	Exclusive master in Interaction Design for companies / Sweden + DK	-
	Joint MSc degree	one education, two (or better, one international) diploma
	Teaching cooperation projects	Business or Software Engineering (groups interact internationally)
	Case work/consultancy with students from abroad	2 week preparation, 1 week seminar, 1 week reporting
	Organisational IT and CSCW	Students/teachers from different countries
	General courses with internationally recognised curriculum	Show lectures video-taped at e.g. Stanford at ITU with teacher assistance, e.g., Ph.D. students
	Joint on-line courses on any subject	-
	Digital rights management	-
	Security	-

(Teaching cooperation projects)	Networks	-
	Systems development	-
	Location based services	-
	Organisational IT and CSCW	Students/teachers from different countries
	Art projects which use televisuality and link places together, using them for courses etc.	-
	Produce teaching materials which are used internationally	-
	ITU students working on a project with students at another university	-
Student exchange	Computer game design and development: Student exchange	The idea would be to cover those aspects that ITU cannot cover by partnering with other universities and game developers. The idea, quite vague at the moment, would be to partner both with a university and with a game studio, so our students could take an internship at a game studio, that would complement their studies at ITU, while at the same time it would give us a solid network with the game industry. Similarly, these internships can take place at other media, like newspapers or game-related websites, given the breadth of our students' backgrounds and our academic programme
	Exchange students with SIIT Institute of Technology, Bangkok	Exchange of BSc and MSc students between ITU and SIIT, Thailand
	Student exchange network including all continents	-
	Organisational IT and CSCW (students/teachers from different countries)	-
	Short-term (1 or 2 weeks) exchange of master students (e.g. in regard to Healthcare and IT)	Could be one or two weeks of exchange of health IT students to a foreign health IT project
	Case work/consultancy with students from abroad	2 week preparation, 1 week seminar, 1 week reporting
	Set up student exchange opportunities in USA	At the moment, if students want to study for half a year in the States, they have to make their own contacts or go through their supervisors/lecturers. With a more formalised agreement with some chosen universities this process would be made easier
	Exchange of students	-
	Fund studies for extremely good applicants	-
Teacher exchange	Teacher swaps with other institutions	An ITU teacher goes to another university for a term, and one of theirs comes here to teach
	Long-term (6 months) teacher exchange programmes	
	Short-term (1 - 2 weeks) exchange of senior staff	One to two weeks of exchange with the purpose of giving lectures and holding workshops, as well as establishing stable contacts
	Have guests for a long period of time, and have time to cooperate with them, e.g. Ph.D. courses, joint articles etc.	-
	Make better use of guests, e.g. artist in residence (superflex in DIAC)	-
	Organisational IT and CSCW (students/teachers from different countries)	-
	Teaching/exchange between ITU and Gøteborg	-
International events at ITU	Exchange of teachers	-
	Copenhagen Summer School on HCI offered by HCI researchers in the CPH area	Make a "Copenhagen Summer School in HCI" together with other HCI researcher in the Copenhagen area - several people here has a pretty strong international reputation here.
	Competitions in key areas	-
	International Grad Schools	No description - proposed during brainstorming sessions

More courses in English	Having all courses in English would make it easier for foreign students to take courses here	-
	All teaching should be in English	-

<b>Internationalisation: List of ITU academic staff's personal relations</b>				
Yvonne Dittrich, Lone Malmberg and Leni Schroll, 31 August 2007				
<b>Country</b>	<b>Institution/Organisation</b>	<b>Subject area / Research area</b>	<b>Reason for relation</b>	<b>Strength of relation</b>
Australia	Curtin Technical University	Games	Houst for my stay abroad	Strong
	Department of Computing at Macquarie University	Games	Arranged my stay there	Weak
	Macquarie University	Games	We've co-written papers	Strong
	Melbourne University	Games	Friend	Good
	Queensland University	Games	Research and teaching collaboration	Good
	Queensland University of Technology	Games	Meet at conference	Weak
	Queensland University of Technology / Creative Industries	Rhetorics and writing	Research and teaching collaboration	Good
Austria	Technical University of Vienna	Games, culture	Research partner	Good
	Vienna University	Information ethics	EU-project, Org of conferences, Network for many years	Strong
Belgium	Université de Liège	Media studies	EU Research training network	Good
Canada	Carleton University	Computer Games	Conference acquitant/work on joint paper	Weak
Canada	Centre for Policy Research on Science and Technology (CPROST) and the Applied Communication and Technology (ACT) Lab at Simon Fraser University	Ethics and Information Technology	Research interest overlap	Good
	Concordia	Digital humanities		
	McGill University	Game development		Weak
	McGill University, Montreal	Digital culture		Strong
	McGill University, Montreal	Games/Literature		Strong
	McGill University, Montreal	Rhetoric	joint research, co-author	Strong
	NSF	Electronic literature	special issue editing	Good
	School of Communication, Simon Fraser University	Ethics and Information Technologies	Research interest overlap	Good
	Toronto University	Game design	Network for many years Network for many years	Strong
Vancouver University	Computer Games	Org of conferences, Network for many years	Strong	
Denmark	DHI	Business process Management	Current research collaboration	Strong
Finland	Helsinki University of Technology	Functional programming		Good
	Oulu University	Program analysis, embedded systems	Projects	Good
	UIAH, Media lab	C# design	Collaboration partner	Good
	University of Jyvaskyla	Water & Environment		Good
	University of Tampere	Standard ML implementation	EU project	Weak
France	Ecolo Polytechnique	Intelligent textiles		Strong
	LIX, Ecole Polytechnique	ERP systems	Future cooperation	Good
	Thales Avionics	ERP systems	EU project	Weak

	Université Toulouse III Paul Sabatier	Design science	EU Research training network	Good
	University of Orleans	Intelligent textiles	Friend from stay abroad	Good
Germany	Dortmund University, Fraunhofer Dortmund	Qualitative software engineering research	applying for EU project	Good
	Fraunhofer, ISESE	Taylorable systems	special issue editing	Good
	Freiburg University	Model Driven Development		Good
	Fruenhofer	EUD Tailoring	Visits	Good
	Institute of Medical Informatics, Dortmund	Informatics	former colleague	Good
	Saarland University, Saarbruecken	Software engineering and use orientation		Strong
	TU Berlin	EUD/tailoring	research	Weak
	TU Darmstadt	Informatics		Strong
	University of Dresden	Software development processes, tools and modeling	Partner in European network	Good
	University of Hamburg	Qualitative software engineering research	Short visit	Good
	University of Hamburg	software engineering and use orientation, informatics	have been there, joint conference organisation	Strong
	University of Lubeck	ERP systems and modeling	Partner in european network	Weak
	University of Paderborn	ERP systems and business process modeling	EU Research training network	Good
	University of Paderborn	Qualitative software engineering research	joint NoE, Dagstuhl seminar	Good
	University of Siegen	If you want to find about people's network, I recommend that you use linkedin, many ITU employees already have an account there!	joint NoE	Good
	University Siegen	Software engineering and computer science	Projects	Strong
Iceland	Reykjavík University		research	Strong
	Reykjavík University		research/teaching	Strong
India	IIT Bombay		Acquaintance from US	Weak
Ireland	Coláiste na hOllscoile Corcaigh (University College Cork)		EU Research training network	Strong
	Cork Constraint Computation Centre	Process calculi	Potential post-doc employer	Weak
	University of Limerick	Process calculi	EU-project	Strong
	University of Limerick		projects	Strong
	University of Limerick, Interaction Design Centre	Logics	Research mentor	Good

Israel	University of Haifa	Concurrency theory and global ubiquitous computing	Workshop organization	Good
Italy	Consiglio Nazionale delle Ricerche, Pisa		EU Research training network	Good
	IRS	Concurrency theory and global ubiquitous computing		Strong
	Milano University	Concurrency theory	projects	Good
	uni. of Genoa	Workflow management systems, Petri Nets, Formal Models	research	Good
	Università degli Studi di Milano-Bicocca	Concurrency theory, automatic verification	EU-project, Org of conferences, Network for many years	Strong
	Universita' di Firenze	Automated theorem proving	research	Weak
	University of Bologna	Service oriented computing, coordination models, programming language theory	applying for EU project	Strong
	University of Bologna		research	Good
	University of Genova	Concurrency theory		Weak
	University of Trento	Games	joint EU application	Weak
	University of Trento	Open source business process management systems	EU-project, Org of conferences, Network for many years	Strong
	University of Venezia	Service oriented computing, coordination models, concurrency theory	Friend from stay abroad	Good
	University of Verona	Algorithms and complexity	research	Strong
Japan	Keio University	Logical frameworks		Good
	Kyoto University			Strong
	Tokyo Institute of technology		research collaboration	strong
	Tokyo University			Good
Many	Many		International Women's University	Weak
	Many		joint NoE	Weak to good
New Zealand	Independent	PL	Jounal co-editor	Strong
	University of Waikato		Research interest overlap	Good
Norway	Intermedia	Programmings semantics, cat. theory	Visit	Weak
	Norway Tech Uni	Jean Krivine	Network for many years	Good
	Norwegian University of Science and Technology	Category theory, logic	Visiting PhD student	Strong
	Norwegian University of Science and Technology	Programming semantics	Projects books etc	Strong
	University of Oslo	Theorem proving	Org of conferences, Network for many years	Strong
	University of Oslo	Program analysis		Strong

	University of Bergen			Strong
	University of Bergen		special issue editing	Good
Russia	Russian Acad Sciences	Robin Milner	Colleagues and friends	Good
Spain	Public University of Navarra	Philosophy	Supervisor in my master thesis	Strong
Sweden	Anoto AB	CSCW/HCI	Research partner	Strong
	Den Kongelige Tekniske Højskole, Stockholm	Computer science	Research interest overlap	Good
	Göteborg universitet	Mathematics		Good
	Högskolan i Borås	User interface design	met at ISWC06	Weak
	Högskolan Trollhattan	Clinical guidelines in IT	Visits	Good
	Interactive Institute, Sweden	Guidelines in Health IT	co-supervisor	Strong
	KHT	CSCW	networking	Weak
	Lund	IS		Weak
	Lund University	Computer science	Former external lecturer at ITU (Algorithms)	Strong
	Malmö University, K3	CSCW	Former colleague	Strong
	University of Ronneby	Mathematics	joint ongoing research	Strong
Uppsala University	CSCW	research	Strong	
Switzerland	ETH Zurich	Syst. dev./HCI	research	Good
	IBM	CSCW/HCI	common interests	Weak
The Netherlands	Delft University of Technology	Interaction design	EU Research training network	Good
	Erasmus University	Modular software verification	Visits/PhD eval	Good
	Technische Universiteit Eindhoven (TU/e)	IS	collaboration on workflow languages	Good
	TU Eindhoven	CSCW		Good
	University of Amsterdam	Databases		Weak
	University of Twente	CSCW	similar research interests	Weak
UK	Birmingham University	HealthcareIT/CSCW/PPD	joint papers and interest	Strong
	Cambridge University	CSCW/PPD/Ethnography		Strong
	Cambridge University	hci		Good
	Cambridge University	HealthcareIT	Joint paper	Weak
	Cambridge University	HealthcareIT/CSCW/PPD		Good
	Kings College, Work, Interaction and Technology Research Group	Planning / Control	Research partner	Strong
	LSE	.NET implementation	Projects etc	Strong
	Manchester Metropolitan	Spreadsheet research	Project	Strong
	Microsoft Research	HealthcareIT/CSCW/PPD	Stay in Cambridge	Strong
	MSR Cambridge	HealthcareIT/CSCW/PPD		
	Newcastle University	Program generation, partial evaluation	EU Research training network	Good
	NHS	Social informatics	corresponded with in relation to the topic	Weak
	Oxford University	HealthcareIT/CSCW/PPD		Good
	Oxford University	HealthcareIT/CSCW/PPD	joint applications for ph.d.-projects	Good
	Oxford University	Interaction design	research	Good
Pervasive Interaction Lab	Standard ML implementation		Good	
QMW London	CSCW/PPD/Ethnography			



	Sheffield University	HealthcareIT/CSCW/PDCSCW/PD	joint writing, joint EU application	Good
	St Martin School of Design, Smart lab	Planning	Teaching collaboration	Good
	UCL/Bartlett School of Architecture	Media study	organizing a workshop together	Good
	University of Bristol	Programming languages		Good
	University of Cambridge	CSCW/PD	Collaborating in current research projects (BPL, CosmoBiz)	Strong
	University of Cambridge	CSCW/PD	joint research, co-author, former supervisor	Strong
	University of Cambridge	HealthcareIT	conf. and meetings	Weak
	University of Cambridge	IS/Design studies	supervisor on stay abroad	Strong
	University of Lancaster	General AI	EU-project	Strong
	University of Lancaster	Planning	Network for many years, Org of conferences, Host for sabbatical	Strong
	University of Manchester	Verification	networking	Weak
	University of Oxford	Professional teaching		Good
	University of Salford	Programming languages	Meet at conferences, has been a guest at ITU	Good
	University of Southampton	CSCW / Interaction Design	research	Strong
	University of Southampton	CSCW/PD/Ethnography	Host of my visit in Sussex	Good
	University of Southampton	HealthcareIT/CSCW/PD	joint research, co-author	Good
	University of Sussex	Interaction design	research	Good
	University of Sussex	Symbolic methods	EU-project	Strong
	University of Wales	Organisational factors	met at ISWC06	Weak
	University of Warwick	Constraint satisfaction	networking	Weak
	University of York	Program generation, partial evaluation	EU Research training network	Good
UK, Scotland	Heriot-Watt University	Computer science		Strong
	University of Edinburgh	Computer science		Strong
	University of Edinburgh	Computer science		Strong
	University of Edinburgh	Ethnography/PD		
	University of Edinburgh	HealthcareIT	He visited ITU and his input was very useful to my work	Strong
	University of Glasgow	Technology management department	EU Research training network	Good
UK, USA		Mobile ad hoc networks	Standardization	Strong
USA	Arkansas State University	Human-computer interaction in information systems	We've co-edited an anthology	Good
	AT&T Labs	Accident analysis		Good
	Boston U	Interaction design		Strong
	Brown University			Good
	Carnegie Mellon University	Ethnographic studies		Strong
	Carnegie Mellon University	User interface history	PhD visit	Good
	Chicago University	Security	Stay at AT&T Bell Labs	Good

City University NY	user interface history	Org of conferences, Network for many years	Strong
Clemson University	Video games		Strong
CMU	Artificial Intelligence		Strong
CMU	Operations research		Strong
CMU	Operations research/Constraint programming		Strong
CMU	Process algebra		
CMU	Video game audio		Strong
Crystal Dynamics (game developer)	Design and evaluation of interactive systems	Former ITU student	Good
Georgia State University	CSCW, interaction design	Publication, Network for many years	Good to strong
Georgia State University	Interaction and media design	Several visits	Good
Georgia Tech	Human factors		
Georgia Tech	Process algebra	similar research interests	Strong
Georgia Tech	Virtual worlds		Good
Harvard University	Process algebra		Good
Harvard University	Process algebra		
IBM Almaden Research Center	Interactive movies	Publication, Network for many years	Strong
Indiana University	CSCW, interaction design	Org of conferences	Good
Indiana University, Department of Telecommunications	Cognitive ergonomics	Research interest overlap	Good
Microsoft Corp	Ad hoc networks	Standardization	Strong
Mississippi University	Algorithms and complexity theory		Strong
MIT	CSCW, design	organizing a workshop together	Good
MIT	Human factors		
MIT	User interface history		Good
North Carolina State University	Eye tracking		
Oregon State University	Verification	Acq from stay in Cambridge	Strong
Oxford University	Modeling	similar research interests	Strong
Princeton	Virtual worlds		Strong
SRI	Children and new media		Strong
Stanford	Process algebra	similar research interests	Good
Stanford University	Ambient mobile intelligence	Former ITU student	Good
Stanford University	Interaction design, digital media	Publication, Network for many years, Host for sabbatical	Strong
Stanford University	Video game culture		Good
Syracuse University	Digital art and design	Network for many years	Good
UC Santa Cruz	Eye tracking		
UCSC	Video game culture		Good
UIUC	Video games		Strong
UIUC	Virtual worlds		Strong
USC	Eye tracking		
Wright State University	User interfaces design and evaluation	mentor	strong

	WUSTL	Augmented paper		Strong
	Yale	Virtual worlds		Strong
USA, Germany	Novell, Mono project	Algorithms and complexity theory		Strong
USA, Texas	University of Texas at Austin	IS / CSCW		Weak
USA/France	Intalio	Data mining	open source software used in teaching and research on business process management	Good