



Université de Fribourg ■ Universität Freiburg

international institute of management in telecommunications

A world of opportunities



# iimt - Annual Report 2003

international institute of  
management in telecommunications  
University of Fribourg  
avenue de Tivoli 3  
CH-1700 Fribourg  
Phone: +41 (0)26 300 84 30  
Fax: +41 (0)26 300 97 94  
info@iimt.ch

[www.iimt.ch](http://www.iimt.ch)



UNIVERSITAS  
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## Editorial

Ladies and Gentlemen,

The most precious good of a company are the employees. Every interaction inside or outside the firm is done by humans and therefore employees are the key to success for a firm. How to enhance human power? Retain good personnel, attract and recruit qualified people or empowering employees through education and further studies, those are the possibilities for a firm.

In 2003 still restructuring, reorganisation, changes and consolidation affected firms of the ICT sector. Smaller financial resources do not allow firms to invest large amounts in further education and training. The iimt was also affected by this market situation. Convinced that top quality education should be of high priority to assure the future of a firm, we continued to improve our executive programmes in order to offer highest quality education for ICT managers. The new study regulations allow great flexibility in the curricula of the participants. The educational programmes became customised and each participant has the possibility to arrange the course schedule according to his individual needs.

Beside the executive programmes, our work has taken in other remarkable activities:

- The Information Security Brush-up Workshop in Münchenwiler.
- The fourth annual Award Ceremony for Executive MBA and Diploma in Management in Telecommunications.
- The Social Event of the whole iimt world to cultivate active networking.
- Broadening of the range of publications by iimt University Press.

iimt is a recognised international centre of excellence in academic, interdisciplinary research and education in the field of ICT management. As market niche focus remains the ICT sector (firms and departments). This niche orientation forms the unique selling proposition of iimt and guarantees high quality education for ICT managers and increases their ICT network. This international network includes participants, lecturers, alumni's, partner organisations, ICT firms and associations. This well established networking is a key success factor for the iimt and brings added value for the whole iimt world especially the participants.

Participants from 19 countries and working in 69 different companies share their experience with 75 lecturers (60% academic persons and 40% business persons) with 12 different nationalities. The exchange of know-how and experience is invaluable.



A special thank goes to our partners for their strong support and collaboration. Again a number of common activities were successfully carried through with a win-win situation for everybody participating.

The iimt staff contributed a lot to all accomplishments and successes in 2003. Best thanks for this valuable support given throughout the year.

Finally, we would like to thank all the participants and the lecturers for the confidence shown to us.

We look forward to a further year of fruitful work together.

Many thanks to everyone!

President of the Institute Council  
Mr. Walter Frei

Director  
Prof. Dr. Stephanie Teufel

## Organisation

### **iimt Consultative Council**

Dr. Heinrich Rohrer  
Laureate of the Nobel Prize for Physics, Richterswil

Mr. Felix Rosenberg  
lic. iur., Member of the Board, Swisscom AG, Bern

Dr. h.c. Bernhard Schneider  
Givisiez

Dr. Pekka Tarjanne  
Special Advisor on ICT, United Nations, New York

## **iimt Institute Council**

Mr. Walter Frei (President)  
Beratung in Personalfragen, Urtenen

Mr. Jacques Macherel (Vice-President)  
Sales Director, eb-Qual, Villars-sur-Glâne

Prof. Dr. Hans Wolfgang Brachinger  
Seminar für Statistik, University of Fribourg

Mr. Stefan Büschi  
Chief Human Resources Officer, Orange Communications SA, Lausanne

Prof. Dr. Rudolf Grünig  
Vice-Rector, Seminar für Unternehmensführung, University of Fribourg

Mr. Daniel Hallen (Participants' Representative)  
Director Security and Risks, Orange Communications SA, Lausanne

Mr. Peter Schöpfer  
Chief Executive Officer, T-Systems Schweiz AG, Zollikofen

Mr. Martin Steinert (Assistants' Representative)  
international institute of management in telecommunications (iimt),  
University of Fribourg

Mr. Philippe Voirol  
Head of Xperience Unit, Siemens Schweiz AG, Zürich

Prof. Dr. Reiner Wolff  
Seminar für Mikroökonomie und Empirische Wirtschaftsforschung,  
University of Fribourg

## **iimt Scientific Council**

The Scientific Council comprises 12 co-ordinators for the iimt's 10 Subject Areas.

In 2003 the co-ordinators were:

### **Environment and Technology Development**

Prof. Antoine Delley

Ecole d'Ingénieurs et d'Architectes de Fribourg, Director ICTnet

Prof. Dr. Stephanie Teufel

Director iimt, University of Fribourg

### **Strategic Management**

Prof. Dr. Rudolf Grünig

Seminar für Unternehmensführung, University of Fribourg

### **Marketing and Communication**

Prof. Dr. Jean-Emile Denis

HEC, Management Studies, University of Geneva

### **Organisational Behaviour and Human Resources Management**

Prof. Dr. Norbert Thom

Institut für Organisation und Personal, University of Bern

### **Financial Management**

Prof. Dr. Christoph Kaserer

Lehrstuhl für Internationales Management und Internationale Kapitalmärkte,  
Technische Universität München

Prof. Dr. Alfred Mettler

Department of Finance

Georgia State University, J. Mack Robinson College of Business, Atlanta (USA)

### **Controlling**

Prof. Dr. Linard Nadig

Fachhochschule Zentralschweiz, Zug

### **Quality and Process Management**

Dr. Lothar Natau

CEO and Founder Natau Management & Beratungs GmbH, Wittenbach

Chairman Board of Directors Glessmann AG Maschinenfabrik, Rüthi

### **Information Management and Decision Support**

Prof. Dr. Heinz Gröflin

Institut für Informatik, University of Fribourg

### **Economics and Social Sciences**

Prof. Dr. Philippe Gugler

Chaire de politique économique et sociale, University of Fribourg

### **Law**

Prof. Dr. Pierre Tercier

Chaire de droit des obligations, University of Fribourg



## iiimt Staff

Director	Prof. Dr. Stephanie Teufel
Vice-Director and Studies Coordinator	Dr. Jocelyne Imbach-Rakotomalala
Marketing and Communication	Kirstin Stadelmann Christian Etter (since September)
Accounting	Judith Berger
Administration	Elisabeth Boschung Marlise Scherwey Laeticia Tajouri
Research Assistants	Andreas Erat Thomas Schlienger Martin Steinert
External Ph.D. Students	Désiré Karyabwite Ralf Müller
Course Assistants	Alexandra Frei (until May) Carolin Gehlert (until May) Dennis Kipphardt Josef Künzli Stéphane Marmy Michael Matousek (until September) Claudius Unterberger (since March) Martin Zbinden
System Administration	Patrick Sinclair Merten

## Activities

### Executive Programmes in ICT-Management

#### Programme & Participants

The following events marked the iiimt executive programmes in ICT management in 2003:

- The new study regulations allow great flexibility in the curricula of the participants.
- A new class EMBA and Executive Diploma in ICT Management 2003 was launched.
- The course programme for the 3 levels of the EMBA / Executive Diploma in ICT Management was successfully carried through.
- The rate of participation of Executive Specialised Courses is very high.
- The participants from the third annual intake for the executive programmes were awarded their academic titles after successfully completing their studies.
- Best Paper Awards were attributed for the finest research projects.

The **new study regulations** (Règlement du 20 juin 2002 sur l'octroi de l'Executive Master of Business Administration (Executive MBA), de l'Executive Diploma et des certificats pour des Cours Spécialisés de Management en Télécommunications) approved in 2002 by the University authorities, became effective. Also in order to adapt the iiimt statutes to the new university regulations and the new study regulations of the iiimt, a working group with the task to revise the statutes was active. In 2003 the working group finished its proposition of the new statutes to be approved by the concerned instances at the beginning of 2004.

Due to the greater flexibility in the regulations and the compatibility with the existing university regulations the propagated flexibility in the programme by the iiimt was practised. The majority of the participants still choose the option to fulfil the programme in 3 years with 5 weeks per year. Some participants took the opportunity to fulfil the programme according to their work commitments. Thus the educational programme became customised and each participant has the possibility to arrange the course schedule according to his individual needs.

Even though the difficulty to acquire participants, due to structural changes in the ICT industry sector persists, a new class was launched in 2003. There is no female participant in this class, which reflects also the market situation regarding management level positions. The smaller number of participants allows the integration of participants interested in specialised courses and focusing on specific

modules out of the executive programme. This has the positive effect in offering a more interactive and convivial educational environment. The educational background is balanced between engineering and management education.

The second level with 29 participants and the third level with 25 five participants have followed their programmes in line with the course schedule. The quality of all courses is monitored closely. While students have taken the prescribed examinations, each course, each lecturer, and each examination have been subject to evaluation.

The number of participants on the iimt EMBA and Executive Diploma in ICT management programmes in 2003 stood at 89 of which just two are women. These participants represent different nationalities and more than 60 companies active in the information and communication technology.

On December 5, 2003 the iimt awarded **Executive MBA degrees and diplomas** for the fourth time. In accordance with the study regulations, the candidates followed thirty modules of taught classes (twenty modules for the Executive Diploma), passed successfully thirty examinations (20 for the Executive Diploma) and submitted an EMBA or Executive Diploma project which was approved by their project supervisor. These graduates now belong to the iimt alumni association instituted in October 2000.

The **Best Paper Awards** Committee in 2003 was composed of Mr. J. Macherel, Vice President of the iimt Council, Prof. Dr. S. Teufel, Director of the iimt, Prof. Dr. R. Wolff representing the Faculty and C. Etter representing iimt's partner organisations. The criteria for the choice of Best Papers are the current relevance of the project, the quality and interest of the academic work, the ICT interest (in particular innovation), the attractiveness of the potential target audience for the paper and the overall interest of the publication.

The Best Paper Awards Committee designated three winners of the Best Paper Awards 2002:

- Mr. Harry Moser for the EMBA project entitled 'eTax am Beispiel der Steuerverwaltung des Kantons Bern'.
- Mr. Gianni Traglia for the EMBA project entitled 'Use of real options analysis for management decisions in the telecommunication industry. Applicability for decisions in network infrastructure investments'.
- Mr. André van Tuinen for the EMBA project entitled 'Methods, Instruments and Critical Success Factors for Release Management illustrated by Practices in the Telecom Industry'.

The iimt rewards these candidates by publishing their work, and by presenting each of them with an official certificate as winners of the Best Paper Awards 2002. This was distributed on the occasion of the iimt Awards Ceremony on 5<sup>th</sup> of December 2003.

In 2003 the **accreditation** process of the whole institute and the executive programmes was initiated. Meetings with AMBA and OAQ were held in this matter.

The iimt gives great importance to the human dimension and social environment. Where possible the iimt can offer individual counselling and study support while at the same time organising social events to create team spirit and facilitate networking amongst participants, iimt staff, lecturers and alumni's.

### Lecturers

The iimt Executive Lecturers carry out teaching and activities to support the iimt's four executive programmes in ICT management (Executive MBA, Executive Diploma, Executive Specialised Courses, Customised Company Courses).

In the year 2003, 75 lecturers from 12 different countries took actively part in the iimt Executive Programmes. 60% of all lecturers are based in academic institutions (9 swiss and 10 international universities) and the remaining 40% work in industry (31 enterprises, consultancy or international organisations).

Worthy of mention is the participation of iimt alumni's as lecturers in the executive programmes. These special lecturers coming from the ICT sector have the following double advantage: They know the iimt spirit for the requirements needed in terms of quantity and quality of the teaching and they bring in the classes proofs of practical relevance of the iimt curricula.

Considering the regular evaluation of the participants concerning the quality of the courses and their lecturers, the satisfaction rate is on a high level and shows a continual improvement compared with previous years.

## Executive Programmes 2003 in Statistics

1. Executive Programmes in ICT Management  
A total of 65 participants (63 men and 2 women) attended the EMBA and Executive Diploma Classes Level 1 to 3 in 2003. Furthermore 43 persons participated in Executive Specialised Modules or Specialised Courses.
2. Award of EMBA and Executive Diploma degrees  
24 participants received their Diploma in 2003. 21 participants (all men) graduated in the Executive MBA degree and 3 participants (1 men and 2 women) in Executive Diploma degree.
3. Statistical results from the entry survey  
An entry survey in 2003 was done for the intake 2003. This entry survey gives information about personal and professional data of the new intake. The average age of the new participants was 38 years. The average number of years of experience was at a high rate of 16 years. 71% had a higher education in engineering and 29% in administration and commerce.

### Position in the company

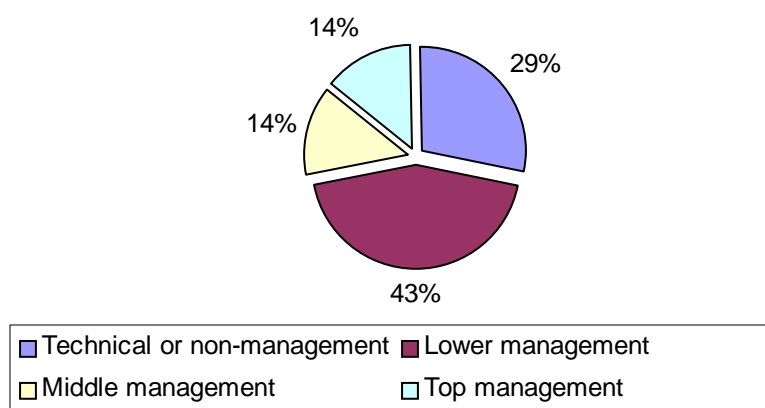


Fig. 1: Position in the company at the beginning of the studies at iiimt

At the beginning of their studies the position of the participants in their company was up to 28% in upper management, 29% in technical or non-management and 43% in lower management. The fields of work the participants were working in is for 57% 'marketing and sales', for 29% 'network management and support' and for 14% 'information management and software applications'.

### Reasons and motivation for further studies

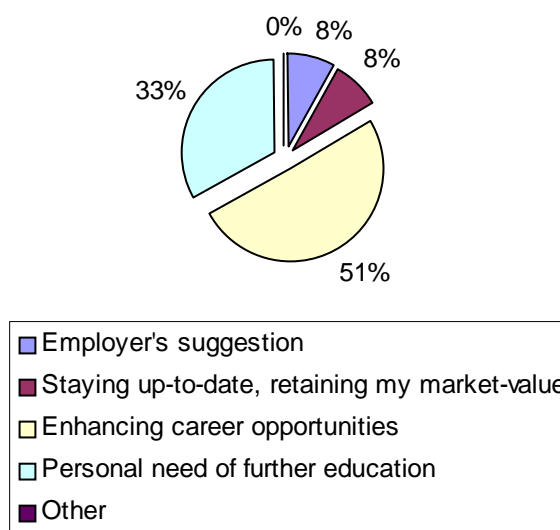


Fig. 2: Reasons and motivation for further studies in ICT management

Asking the participants why they begun further studies in ICT management, the answers were that 51% want to enhance their career opportunities, 33% had a personal need of further education, 8% did further studies because their employer suggested it and 8% wanted to stay up-to-date and retain their market value. The reasons why they choose the iimt were the strong focus on telecommunications and information technology, the content of the study courses, the modular course structure and the networking possibilities.

4. Statistical results from the final survey  
A final survey conducted after the graduation of the students was done for the intake 2000. The final survey provides information about changes in the personal and professional environments of the new iimt graduates. Since the beginning of their studies at iimt 65% of the graduates changed their professional position.

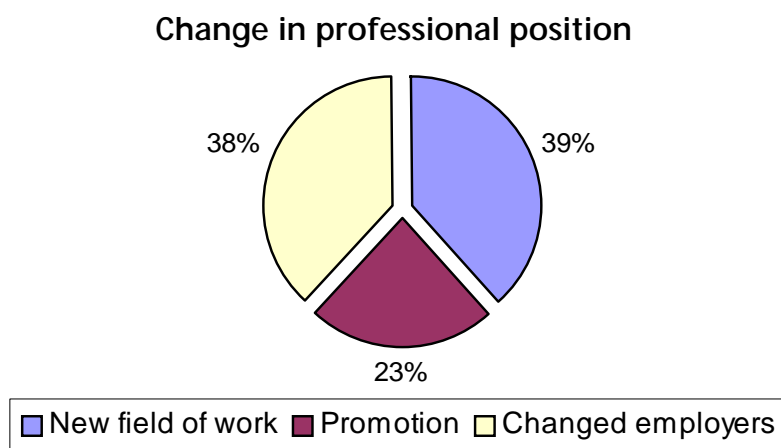


Fig. 3: Change in professional position since the beginning of the studies

Out of this subset 39% have their job in a new field of work, 38% changed their employers and 23% got a promotion. 77% answered that the iimt contributed to this change.

60% rated the importance respectively relevance of iimt for their professional position as important, 15% as very important and 25% as less important.

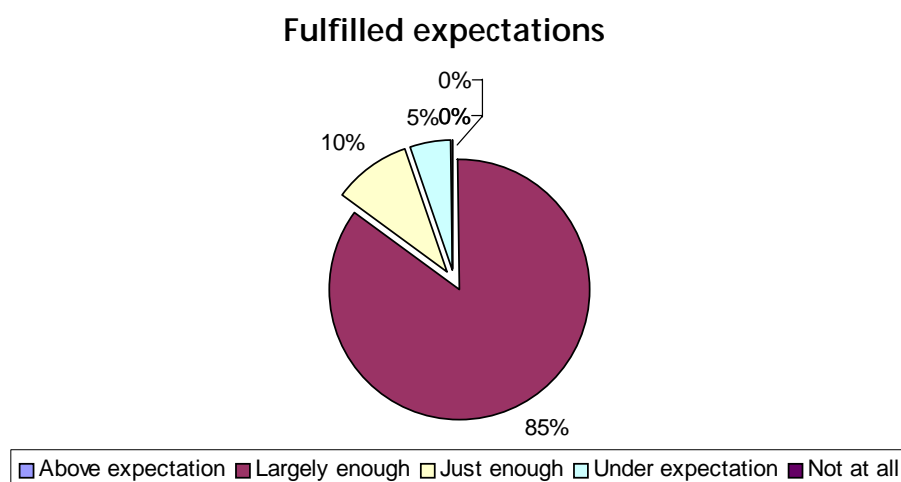


Fig. 4: Fulfilling of expectations concerning the iimt studies.

Considering the extent of the fulfilled expectations regarding the iimt studies, 85% replied that the expectations are largely fulfilled, 10% said that the expectations are fulfilled. Only 5% answered that the expectations were not fulfilled.

Looking at the contribution by iimt to life, the major part of the graduates answered that they got a larger overview, some mentioned the networking they expanded and the managerial skills they learned.

### Diploma Projects and Publications Executive Programmes

In 2003 following diploma projects were written by the Executive MBA and Diploma participants (Projects with an asterisk will be published in iimt University Press in 2004):

**Ajilian, S.:** Analysis and Simulation of a Customer Care and Billing Services for IT Products & Services.\*

**Andreani, L.:** Verschmelzung der IT- und Telekom-Branchen und die Auswirkungen auf ein Unternehmen des Telekom-Sektors.\*

**Arnet, W.:** Total Cost of Ownership (TCO) von Softwarelösungen in der Mobilkommunikation.

**Bord, P.:** Optimisation d'un système de buts pour une organisation de vente auprès des clients commerciaux dans le secteur des télécommunications.\*

**Dileme, N.:** MIS in a virtual Contact Center.\*

**Franzen, P.:** Etude technico-commerciale de la signalisation SS7 internationale.

**Frossard, P.:** i-set – internet solution set – D'un concept produit vers un concept client.

**Geiser, B.:** How Tele2 in Switzerland has to conceive and to improve its communication mix in order to achieve a higher brand awareness and to diffuse an image corresponding to its core values.

**Hahn, L.:** IP est-il le futur de la téléphonie? «Is IP the future of the telephony? Or, is IP telephony the future?».\*

**Heiss, J.:** Mögliche strategische Allianzen zwischen Regionalen Telekommunikationsnetzbetreibern, Kabelfernsehtznetzbetreibern und Systemherstellern.

**Imboden, S.:** Excellence im Bildungsbereich – Qualitätsmanagement vor dem Hintergrund eines ganzheitlichen Führungsverständnisses.\*

**Kohler, M.:** «Der Innovationsbroker» - ein strukturierter New Business Development Plan.\*

**Liechti, H.:** Investitionscontrolling in der Telekommunikation – Überblick, Analyse und Lösungsvorschlag für Swisscom Mobile AG.

**Meier, G.:** Introduction of Service Monitoring at Orange CH.\*

**Monney, C.:** Mobile ad hoc wireless networks.

**Pelosi, G.:** «Die Bewertung von intangiblen Ressourcen im strategischen Management» - Beschreibung und Beurteilung des IO Modells unter Anwendung der Aktionsforschung.\*

**Rüedi, D.L.:** Risk Management in der Akquisitionsphase in der ICT Branche.\*

**Ruoff, S.:** Jobsharing und Teilzeit auf Managementebene – Situation in der schweizerischen IT- und Telekommunikationsindustrie.

**Strauss, I.:** Skill Kernels in Swisscom Innovations.



**Tchalakian, H.:** Strategic Outsourcing – A Case Study in Hewlett Packard.\*

**Trotsky, R.:** Legal Aspects of Internet B2C Interactions – Consideration of the Law with regard to Online Telecommunications and Commerce from the Consumer's Standing.

**Zehnder, M.:** Valuing and Managing Risky Telecom R&D Projects – A Real Options Approach.

**Zürcher, M.:** Extraction of a set of roles, activities and tools used in a process from a case study as tool to support change – a jigsaw puzzle piece in the framework of ITIL.\*

## Marketing Activities

In 2003 the iimt undertook a large number of activities to strengthen its image as an academically based supplier of postgraduate education in ICT management. These activities included partner activities, information evenings, roundtables, workshops, award ceremony, social event, presentations, web site and media presence.

## Partners & Associations

In 2003 collaboration with the partners Orange Communications SA, Siemens Schweiz AG, Swisscom AG and T-Systems Schweiz AG was further strengthened and a broad series of events took place, including roundtables, visits, workshops and forums. It remains iimt's goal to continually improve the collaboration with the partners and to create fruitful new partner- and sponsorships wherever possible.

In 2003 the iimt was also member of important associations in the field of ICT such as:

- |                  |   |
|------------------|---|
| • asut           | An Swiss Association of Telecommunication Users         |
| • ICTnet         | Information and Communications Technologies Network     |
| • Efmd           | European Foundation for Management Development          |
| • SICTA          | Swiss Information & Communication Association           |
| • Münchner Kreis | an international association for communication research |
| • IT-Valley      | Realization of the positioning of IT-firms in Fribourg  |

One of the targets in 2003 was the cooperation with these partners, and this has been continually strengthened. Close collaboration has allowed to enlarge the internal and external network and made possible effective and fluent exchanges of knowledge and other important information.

On 11<sup>th</sup> of December 2003 the World Summit on the Information Society in Geneva was place of signing of the Memorandum of Understanding between International Telecommunication Union (ITU) and iimt. Hamadoun I. Touré, Director Telecommunication Development Bureau at ITU, Walter Frei, President Institute Council iimt and Prof. Dr. Stephanie Teufel, Director iimt signed this paper. The objective of this memorandum is to organize training programmes in management of information and communication technologies for ICT senior managers from developing countries. The international orientation of iimt provides a highly qualified educational platform to reduce the digital divide between developed and less-developed countries. The iimt know-how combined with the network of ITU guarantees a valuable contribution to bridge the gap between northern developed countries and southern respectively developing countries.

## **Events**

### **iimt Information Evenings about the Executive Programmes in Switzerland**

Through advertisements and mailing activities, attention was attracted to the Information Evenings for the Executive Programmes. The iimt organized 6 Information Evenings in Bern, Fribourg, Lausanne and Zürich.

### **iimt Information Evenings about the Executive Programmes in Germany**

For the first time the iimt organized 2 Information Evenings in Germany. In order to expand the market towards Germany Information Evenings took place in Stuttgart and Düsseldorf. This idea aroused through the fact that several german students visit iimt Executive Courses.

### **Orange-iimt B2B Roundtables**

The first B2B Roundtable in 2003 was organised in Fribourg the 13<sup>th</sup> of March with the subject 'Crisis Management'. The second one took place in Bern on the 5<sup>th</sup> of June with the theme '(Electronic) Bill Presentment and Payment Systems'. The third roundtable with the topic 'Wireless Workforce – Services and Sense' was held in Fribourg on the 11<sup>th</sup> of September. The fourth and last roundtable of the year with the subject 'e-Learning' was organised in Lausanne the 27<sup>th</sup> of November 2003. All roundtables were a big success and a lot of attendants became regular participants to the B2B Roundtables.

### **Information Security Brush-up Workshop**

The annual Information Security Brush-up Workshop with the topic 'Measuring Information Security – State of the art and best practices' took place in Schloss Münchenwiler the 11<sup>th</sup> of February 2003. With Prof. Dr. Jan Eloff from the University of Pretoria, South Africa as keynote speaker 29 participants could benefit from a good mixture of theory and practical experience.

### **iimt Award Ceremony**

On 5<sup>th</sup> of December 2003 the iimt had the great pleasure of presenting 24 participants as graduates at a ceremony in the Aula of the University of Fribourg. At the same time the best papers were awarded with the 'Best Paper Award 2002' and published in the series 'Best Paper Award' of the iimt University Press. Keynote speaker was Carl Wich, Senior Executive Vice President, Siemens Switzerland Ltd. Guests throughout the iimt world such as alumni's, lecturers, subject area coordinators, staff, employers, relatives and friends of the newly-graduates attended the Award Ceremony which took place in a convivial ambiance in Fribourg.

### **iimt Social Event**

The iimt had the great pleasure to invite the whole iimt world including students, lecturers, subject area coordinators, staff, alumni's and their family to the annual iimt Social Event which took place the 21<sup>st</sup> of June 2003. 95 persons spent a beautiful afternoon visiting the Castle of Chillon near Montreux and cultivated active networking.

### **Presentation Telecom Guide 2003**

The iimt had the possibility to present the yearly revolving publication of the telecom guide to a large public. The first opportunity to present the results out of the study was the 'IT-Meeting', of IT-Valley Fribourg, held on the 27<sup>th</sup> of October 2003 in Fribourg. At the 7<sup>th</sup> Euroforum Conference 'Telekommarkt Schweiz 2003' Prof. Dr. Teufel was chairperson of this conference and had the second opportunity to present the study during this conference in Zurich (4<sup>th</sup> – 5<sup>th</sup> of November 2003).

### **Web Site**

On the iimt web site are running different applications to reach a multitude of goals. Four separate parts can be differentiated. The four parts are distinguished through their primary goals in information, service support platform (iimt Secure Area), iimt University Press Shop and iimt Alumni Network.

As a project the iimt web site was used to allow the stakeholders of the iimt database to update their profile. This was necessary to guarantee the privacy and up-to-dateness of the iimt address base. In 2004 the iimt web site will be migrated to a new server.

### **Information**

The layout on the e-information part has been stable throughout the year 2003. The following activities have taken place:

- The frontpage has undergone some changes for better support of marketing activities. Different elements of content and navigation in the information about the courses have changed as well. For example, each subject area coordinator has now a pdf-file linked with her/his curriculum vitae.

- The usability was improved implementing a search engine.
- For the iimt research team the possibility to conduct online surveys, namely the iimt telecom guide, was introduced.

On average the iimt web site had 80 external visitors per day. Planned for 2004 is the evaluation and, if possible, the implementation of a web content management system (CMS) in relation with a partly redesign.

### **Service Support Platform (iimt Secure Area)**

For the university courses the platform was experimentally extended with new features like link lists and the possibility to upload papers. In addition it is now used for cooperation with other external stakeholders, namely with Orell Füssli during a book publication project.

The platform has about 500 users, which are composed of participants in the executive courses, alumnis, lecturers, university students and the iimt staff on-site.

### **iimt University Press Shop**

A search engine extended the press shop. The goal was to improve the navigation, despite of the growing number of publications. The navigation and presentation throughout the shop was adapted to more a visual design paradigm. The iimt University Press Shop has now 73 registered customers.

### **iimt Alumni Network**

A web page for the iimt Alumni Network (including a member area) was introduced in 2003. The alumni have now the possibility to post news or to announce events. In addition there is a separate page for every award ceremony, including photos, press articles and the schedule of the event. In the member area the alumni have access to their network, especially the e-mail-addresses and names of other alumni.

Planned for 2004 is a true networking platform where the alumni can establish and manage their personal networks.

### **Media Presence**

The iimt, its educational programmes and the Telecom Guide Schweiz were presented in following newspaper and magazine articles:

- 'EMBA@iimt - The iimt path leads you almost everywhere', in: asut-Bulletin, 10.09.2003, Nr. 04/2003, S. 58-60.
- 'Executive MBA in ICT-Management', in: ALPHA Kadermarkt, Tages-Anzeiger and Sonntagszeitung, 22./23.11.2003.
- 'Telecom Guide Schweiz 2003', in Unireflets, 27.11.2003, Nr. 02/2003, S. 4.
- 'Executive MBA in ICT-Management', in: Handelszeitung, 17.12.2003, Nr. 51/2003.

The iimt with its Executive MBA in ICT management was listed in following newspapers and magazines:

- Personalentwicklung, 01/2003
- SonntagsZeitung, 14.09.2003
- HandelsZeitung, 01.10.2003

Advertisements regarding Executive Programmes and Information Evenings were placed throughout the year in following newspapers and magazines:

HandelsZeitung (11x), L'AGEFI (1x), NZZ (5x), Der Bund (1x), Comtec (3x), Telekommunikations Perspektiven (1x) and Swiss Engineering (2x).

## Chair of ICT-Management

### Telecom Guide 2003

The Telecom Guide Schweiz 2003 is based on the Telecom Rating Switzerland studies of the years 2000 until 2002. This time the study has been, both textually and methodically, completely adapted. Therefore it is not possible to compare the results of this study directly with those from the last year. The Telecom Guide Schweiz primarily appeals to business customers of telecommunication services. The achieved intentions of this study are, the enhancement of transparency concerning the telecommunication providers and telecommunication services within the Swiss market and the point out of any initiating shifts of the market. Euroforum/HandelsZeitung as conference and media partners enable the distribution of the questionnaire and the publication of the results.

### Teaching Activities

In accordance with the changes due to the signing of the Bologna Declaration by the Swiss Federation, the Chair of ICT-Management offers the following courses:

#### **Master of Arts in Management**

Winter Semester

Management der Informations- und Kommunikationstechnologie (IKT)

This course treated the challenges of the information and communication technologies based on the technical and economical conditions of this sector. In particular the linkage between innovation and technology management was considered.

Summer Semester

Internationales Telekommunikationsmanagement

Current topics of the ICT sector were treated and discussed in this course. For this several ICT firms were involved in that course. The objective was to deepen the knowledge by experience, presentations and group work.

#### **Bachelor of Arts in Information Systems and Information Management**

Summer Semester

Telekommunikationsmanagement II (3<sup>rd</sup> year)

Based on the course 'Telekommunikationsmanagement I' the participants learned about the importance of information and communication systems in firms and the methods respectively techniques to manage and optimise these systems.

The new ECTS / Bologna era has started with the first course in 'Management der Informations- und Kommunikationstechnologie (IKT)' and 'Internationales Telekommunikationsmanagement' (see above). Special thanks go to the iimt partners from Orange, Siemens, Swisscom and T-Systems for their kind support, whether as hosts, or as providers of guest speakers or of vivid case studies.

### **Seminars for Graduands and Ph.D. Students**

Parallel to the lectures at the University, a series of inhouse seminars for Ph.D. students has been organized in regular interval by Prof. Dr. Teufel. Participants are recruited from the internal and external assistants as well as from connected institutions and organisations.

### **Colloquium in Economic Sciences**

In this colloquium leading national and international researchers present their research projects twice a month. Prof. Dr. Tung Bui from the University of Hawaii at Manoa was invited by the Chair of ICT-Management to present his project 'Can we duplicate the success of Silicon Valley? - Towards the Concept of Global Silicon Network' in this colloquium.

### **Examinations and Projects**

As usual, the regular University courses were concluded by oral exams of which around 100 were held in 2003. This translates into a more than 200 percent increase in the number of examinations taken, further proof of the increased demand of ICT management courses at the University.

Additionally 7 seminar and 4 diploma projects were supervised. Matching the development of the courses, the output of supervised Master Thesis and Seminar Papers increased significantly in 2003.

### **Diploma Projects and Seminar Papers, M.A. in Management, M.A. in Information Systems**

Following diploma projects were written at the Chair of ICT-Management:

**Zosso, S.:** Die Reorganisation der Kommunikation der Armee im Rahmen der Armee XXI (published in the series 'Institute Reports' of iimt University Press).

**Jauch, R.:** Outsourcing der Telefoninfrastruktur von Unternehmen aus Anbietersicht.

**Schwarz, M.:** Das Promotorenmodell im Innovationsprozess.

**Matousek, M.:** Metriken und Konzepte zur Beurteilung der Informationssicherheit.

As seminar papers, following topics were treated:

- PKI - Status Quo
- Nachrichtendienstliche Informationsbeschaffung
- Kreativitätstechniken
- VoIP
- Die UMTS Story in der Schweiz 2003 - UMTS Quo Vadis?

## Research Activities

### Dissertations

In 2003 following new dissertation project is done at the Chair of ICT-Management:

*Strategic Approach and Management of Info-Communication Network Migration, the Rwanda Case up to 2020* (Désiré Karyabwite)

The great and anarchic expansion of traffic in the Internet network and the development of national policies based on New Information and Communication Technologies as engine of knowledge-based economy and development are such that the strategies to be adopted are not well understood at the deployment, quality of service, security and economic models levels integrating as well as the rural areas, environmentally safe for the socio-economic development. The Telecommunication and Information operators in developing countries are the main basis to implement such projects and policies based on ICTs (Information and Communication Technologies) and need therefore clear and efficient strategies. In this context, and taking into account the ICTs / telecommunications sector reform and new policies in developing countries, the aim of this project is to propose strategies as conducting lines for decision makers in the Info-communication area at the level of project management and implementation in order to cross the digital divide which exists between developing and developed countries (e.g. Rwanda) and as well as the digital divide that exists between cities and rural areas.



## Publications

The results of research are published in articles, case studies and books (by iimt university press). Below are mentioned articles in journals, proceedings and chapters in books:

**Erat, A.; Teufel, S.:** Personalisierung im Freiburger ICT-Management Framework. Conference Proceedings. Uhr, W., Esswein, W., Schoop, E. (Hrsg.): Wirtschaftsinformatik 2003. Band I, Seiten 510-526, Physica-Verlag, Heidelberg.

**Schlienger, T.:** Sicherheitskultur: der Mensch in der Informationssicherheit. In: SWITCH Journal, Issue 1/03, S. 34-37, Zürich, Schweiz, 2003.

**Schlienger, T.; Meyer, H. et al. (Hrsg.):** Netzguide E-Security. Sonderheft Netzwoche, Netzmedian AG, Basel, Schweiz, 2003.

**Schlienger, T.; Teufel, S.:** Analyzing Information Security Culture: Increasing Trust by an Appropriate Information Security Culture. International Workshop on Trust and Privacy in Digital Business (TrustBus'03) in conjunction with 14th International Conference on Database and Expert Systems Applications (DEXA 2003), September 1-5 2003, Prague, Czech Republic, IEEE Computer Society.

**Schlienger, T.; Teufel, S.:** Information Security Culture - From Analysis to Change. In: Eloff, J.; Venter, H.; Labuschagne L. and Eloff, M., Eds. Information Security South Africa - Proceedings of ISSA 2003, 3rd Annual Information Security South Africa Conference, 9-11 July 2003, Sandton Convention Center, Johannesburg, South Africa, ISSA, 2003 and South African Computer Journal, No. 31/2003.

**Steinert, M.; Teufel, S.:** Beyond e-Business, Proc. 3<sup>th</sup> IFIP Conference on e-Commerce, e-Business and e-Government I3E2003, Sao Paulo, Brazil, Kluwer, 2003.1.1.

**Teufel, S.:** EMBA@iimt - The iimt path leads you almost everywhere, in: asut-Bulletin, 10.09.2003, No. 04/2003, S. 58-60.

## **iimt University Press**

In 2003 iimt University Press has published 19 new books. 1 book was published in the series iimt Institute Reports, 3 in the series iimt Best Paper Award, 1 Telecom Guide Schweiz and 14 new books in the series iimt Executive MBA and Executive Diploma Papers. A total of 642 books were distributed. The iimt web shop was continuously improved through the integration of a search engine, better navigation and better presentation (visit online: [www.iimt.ch/catalog](http://www.iimt.ch/catalog)). The bigger part of the orders are done through the web shop, making a fast and easy order process possible.

### **Teufel S. (ed.), Series on Management in Telecommunications** *Serie 'Best Paper Award'*

**Moser, H.:** eTax am Beispiel der Steuerverwaltung des Kantons Bern.

**Traglia, G.:** Use of real options analysis for management decisions in the telecommunication industry. Applicability for decisions in network infrastructure investments.

**van Tuinen, A.:** Methods, Instruments and Critical Success Factors for Release Management illustrated by Practices in the Telecom Industry.

### *Serie 'Telecom Guide Schweiz'*

**Schlienger, T.; Steinert, M.; Unterberger, C.:** Telecom Guide Schweiz 2003.

### *Serie 'Executive MBA and Executive Diploma Papers 2002'*

**Aadach, L.:** Performance of Telecom-oriented Mutual Funds in Europe and the U.S.

**Ecoffey, A.:** Evaluation of Training and Competency - A comprehensive approach and analysis of GoodCo a large consumer goods company current practice.

**Etter, C.:** Marketing-Konzept Telecom Rating Schweiz.

**Hänni, J.:** Outsourcing of IT Desktop Management - The Customer's Perspective.

**Hayoz, E.:** Beitrag der Informations- und Kommunikationstechnologien am Unternehmenserfolg – Entstehung und Bewertung des Erfolgs.

**Kaufmann, H.:** Controllingsystem für den Regierungsrat des Kantons Luzern.

**Mayor, P.:** Customer Relationship Management. Etude des besoins du segment de la clientèle d'affaires: Une proposition de réponse adaptée.

**Meile, B.:** Dokumente der Unternehmenskultur und ihre Auswirkungen auf das Human Resource Management.

**Niggli, B.:** Der Nutzwert von Beratern in der Telekommunikationsbranche.

**Poffet, M.:** Projektcontrolling für Sun Professional Services.

**Rossat, C.:** L'évolution des réseaux d'accès sur le marché suisse des télécommunications - Une approche orientée fournisseur-opérateur.

**Rüfenacht, U.:** From Traditional to Electronic Government.

**Schläfli, J.:** Erfolgsfaktoren des Outsourcing - Drei Praxisbeispiele aus dem Telekommunikationsbereich.

**von der Weid, E.:** Calculation of profitability per destination in the international telecommunication industry.

#### *Serie 'Institute Reports'*

**Zosso, S.:** Die Reorganisation der Kommunikation der Armee im Rahmen der Armee XXI.

### **Lectures at Academic Conferences**

In addition a number of lectures were given at different conferences:

#### **iimt Information Security Brush-up Workshop**

Münchenwiler, 11.02.2003

Measuring Information Security - Sozio-kulturelle Sicherheitsmessung, Projekt MEFIS:

Der menschliche Faktor in der Informationssicherheit

Thomas Schlienger, Lecturer

Prof. Dr. S. Teufel, Convener

#### **Orange-iimt B2B Roundtable**

Fribourg, 13.03.2003

Crisis Management

Eva Maria Thür, Lecturer

Prof. Dr. S. Teufel, Chair & Convener

### **Orange-iimt B2B Roundtable**

Bern, 05.06.2003

(Electronic) Bill Presentment and Payment Systems

Markus Hornburg, Lecturer

Prof. Dr. S. Teufel, Chair & Convener

### **3<sup>rd</sup> Annual Information Security South Africa (ISSA 2003)**

Sandton (Gauteng), South Africa, 9.-11.07.2003

Information Security Culture - From Analysis to Change

Thomas Schlienger, Lecturer

Prof. Dr. S. Teufel, Conference Proceedings

### **TrustBus'03 workshop in conjunction with 14<sup>th</sup> International Conference on Database and Expert Systems Applications (DEXA 2003)**

Prague, Czech Republic, 1.-5.09.2003

Analyzing Information Security Culture - Increasing Trust by an Appropriate Information Security Culture

Thomas Schlienger, Lecturer

Prof. Dr. S. Teufel, T., Conference Proceedings

### **Orange-iimt B2B Roundtable**

Fribourg, 11.09.2003

Wireless Workforce – Services and Sense : What services are offered and how help these services to improve efficiency or effectiveness for business users

Antonio Anecchiarico, Lecturer

Prof. Dr. S. Teufel, Chair & Convener

### **6. Internationale Tagung Wirtschaftsinformatik 2003**

Dresden, Gemany, 16.-19.09.2003

Personalisierung im Freiburger ICT-Management Framework

Andreas Erat, Lecturer

Prof. Dr. S. Teufel, Conference Proceedings

### **Euroforum, 7<sup>th</sup> Annual Conference**

Zürich, 4.-5.11.2003

Telekommarkt Schweiz

Prof. Dr. S. Teufel, Chair & Lecturer

### **Orange-iimt B2B Roundtable**

Lausanne, 27.11.2003

e-Learning - Promises new possibilities to fulfil the necessities of the information society

Dr. Rolf Brugger, Lecturer

Prof. Dr. S. Teufel, Chair & Convener

## Membership of Organisations

Prof. Dr. Stephanie Teufel was active in 2003 in below-mentioned organisations:

### **IFIP TC11**

Representative for Switzerland (since 2002)

### **ICTnet**

Founder Member (since 2001)

### **IT Valley Fribourg**

Founder Member (since 2000)

### **Kuratorium OFFIS e.V.**

Member of Academic Council (since 2000)

### **Fachgruppe Security (fg sec)**

Member of the Board

Other memberships include: GI, SI, ACM, Münchner Kreis, CH21, Schmalenbach-Gesellschaft für Betriebswirtschaft, SGB, IFIP.

## Programme Committee for Conferences & Academic Review

Prof. Dr. Teufel was also very active as a member of various programme committees for different national and international academic conferences and as academic reviewer.

### **Programme Committee**

#### **Euroforum – Telekommarkt Schweiz**

Zürich 2003, Chair

#### **Orange-iimt B2B Roundtable: e-Learning**

Lausanne 2003, Convener

#### **Orbit/Comdex 2003 – Congress Mobile & Wireless**

Basel 2003, Member of the Advisory Board

**Orange-iimt B2B Roundtable: Wireless Workforce – Services and Sense**

Fribourg 2003, Convener

**DEXA 2003 – 14<sup>th</sup> International Conference on Database and Expert Systems Applications**

Prag 2003, Reviewer and Member of Programme Committee

**Trustbus'03 – International Workshop on Trust and Privacy in Digital Business**

Prag 2003, Reviewer and Member of Programme Committee

**WEBS 2003 – International Workshop on Web Semantics**

Prag 2003, Reviewer and Member of Programme Committee

**EC-Web 2003 – 4<sup>th</sup> International Conference on Electronic Commerce and Web Technologies**

Prag 2003, Reviewer and Member of Programme Committee

**iimt Information Security Brush-up Workshop – Measuring Information Security**

Münchenwiler 2003, Convener

**D A CH Security**

Erfurt 2003, Reviewer and Member of Programme Committee

**3<sup>rd</sup> IFIP I3E Conference – e-Commerce, e-Business and e-Government**

Brazil 2003, Member of Steering Committee

**Orange-iimt B2B Roundtable: Electronic Bill Presentment and Payment Systems**

Bern 2003, Convener

**Bis - Business Information System**

Poznan 2003, Reviewer and Member of Programme Committee

**Telematik Tage>Bern**

Bern 2003, Member of Scientific Council

**IRMA 2003 International Conference**

Philadelphia 2003, Reviewer and Member of Programme Committee

**Orange-iimt B2B Roundtable: Crisis Management**

Fribourg 2003, Convener

## **Academic Review**

Examiner for dissertations and diploma thesis at the Faculty of Economics and Social Sciences, University of Fribourg

Reviewer for the Swiss National Science Foundation (Schweizerischer Nationalfonds)

External examiner for dissertations at the Faculty of Economics and Social Sciences, University of Bern

External examiner for dissertations at the Faculty of Economics, Institute of Informatics, University of Zurich

External examiner for dissertations at the Technische Universität Darmstadt, Germany

External examiner for dissertations at the Carl von Ossietzky Universität Oldenburg, Germany

External examiner for master thesis at the University of Southampton, United Kingdom

External examiner for dissertations at the University of Cape Town, South Africa

External reviewer for dissertations at Rand Afrikaans University, Johannesburg, South Africa



## Accountants Report





## Contact

international institute of management in telecommunications (iiimt)

University of Fribourg

Avenue de Tivoli 3

CH-1700 Fribourg

Switzerland

Phone: +41 (0)26 300 84 30

Fax: +41 (0)26 300 97 94

[iiimt@unifr.ch](mailto:iiimt@unifr.ch)

[www.iiimt.ch](http://www.iiimt.ch)