Second International Workshop on the

DESIGN OF RELIABLE COMMUNICATION NETWORKS

DRCN 2000

"Reliable Networks for the Information Age"

Program

April 9 - 12, 2000
Technische Universität München
Munich, Germany

In cooperation with:

Sponsored by:

Workshop Venue

Technische Universität München (TUM)

DRCN 2000 will be held at the Technische Universität München (Munich University of Technology) in Munich, Germany. The roots of the TUM date back to the year 1823, when a "polytechnic establishment to serve as a college for all technical studies" has been set up. In the year 1868 the famous King Ludwig II officially founded the TUM. Since then a large number of important scientists and engineers arose from it. The Department of Electrical Engineering and Information Technology has 1500 students, 20 institutes, 32 full and associate professors and 250 research and teaching assistants. For more information about TUM visit www.tum.de.

Bavaria and the City of Munich

Bavaria is a state with an impressive cultural and political heritage, right in the heart of Europe. It has many areas of outstanding natural beauty. The nearby alps, many beautiful rivers and lakes and world-famous sites like Neuschwanstein castle offer many possibilities for recreational and cultural experiences. Munich is the capital of the German state Bavaria. It is an 800-year-old city with 1.2 million inhabitants and is well-known as one of the major industrial and cultural centers in Germany. Munich hosts the headquarters, major research and development departments and other facilities of many German and international high tech companies.

Workshop Organization

Workshop Chair

Jörg Eberspächer   Munich University of Technology   Germany

Co-Chair

Piet Demeester   IMEC - University of Gent   Belgium

International Scientific Committee

Harmen van As	Vienna University of Technology	Austria
Bernhard Edmaier	VIAG Interkom	Germany
Pedro Falcao	GTS / Network Services	Belgium
Wolfgang Fischer	Cisco	Germany
Andreas Gladisch	Deutsche Telekom	Germany
Wayne Grover	TRLabs	Canada
Manfred N. Huber	Siemens	Germany
Andrzej Jajszczyk	University of Mining and Metallurgy	Poland
Dave Johnson	British Telecom	United Kingdom
Adam Kapovits	EURESCOM	Germany
Ulrich Killat	Technical University of Hamburg-Harburg	Germany
Ralf Lehnert	Dresden University of Technology	Germany
James Manchester	Lucent Technologies	USA
Mauro Ravera	CSELT	Italy
Erik Salo	Nokia	Finland
Paulo de Sousa	ACTS Central Office	Belgium
Toshitaka Tsuda	Fujitsu Laboratories	Japan
Tsong-Ho Wu	AT&T	USA

Organizing Committee

Achim Autenrieth	Munich University of Technology	Germany
Andreas Iselt	VIAG Interkom	Germany
Dominic Schupke	Munich University of Technology	Germany

Secretariats and Mailing Addresses

Registration

VDE
Tagungs- und Seminarorganisation
Stresemannallee 15
60596 Frankfurt am Main
phone: +49 69 6308-202 or -275
fax: +49 69 96 31 52 13

Technical and Scientific Organization

Phone: +49 89 289-23500
Fax: +49 89 289-23523
Postal address:
Munich University of Technology
Institute of Communication Networks
Building 9, 1st floor
Arcisstr. 21
80290 Munich
Germany

Workshop Email Address

drcn2000@lkn.ei.tum.de

Workshop Homepage

http://www.lkn.ei.tum.de/drcn/

Workshop Scope

Providing reliable and fault-tolerant network infrastructures is a key factor for the development of the information society. Globalization, increasing competition and a fast evolution of network-based applications and markets make reliable networks more than ever an important requirement for success. On the other hand, new network architectures, transmission and switching techniques (e.g. WDM, IP) are introduced. Therefore a careful design for reliability is required in every part of the network.

The 2nd DRCN workshop is a follow-up of the highly successful 1st DRCN workshop held in Brugge (Belgium) in 1998. It provides a platform for presentations and discussions of recent developments and future trends in communication networks and network subsystems focusing on reliability aspects.

Topics

- Network Planning (Topology, Routing, Dimensioning, Spare Capacity)
- Network Evaluation (Analytical, Simulation, Experimental)
- Survivable Networks (Architectures, Performance)
- Resilience in Optical, SDH, PDH, ATM, IP, Access and Core Networks
- Multilayer Interaction
- Interaction with TMN
- Reliable Network Nodes and Subsystems (Switches, Routers, Gateways)
- Tool Development

Tutorial

Broadband Network Planning
by Thomas Bauschert, Senior Consultant (Network Planning and Design), Siemens, Germany

For today's broadband networks, careful network engineering and design is of key importance for the economical success of the network operator. It is not sufficient to simply „throw bandwidth at the problem", even if the cost of bandwidth drastically decreases. This is due to the fact, that a thorough network design has to take into account – beside costs – several other objectives and constraints, like robustness, reliability, scalability and service-specific levels of Qos/GoS.

This short course will focus on the design of ATM and IP based broadband networks to meet above goals. All key aspects of network planning are covered: topological design, traffic models and basic teletraffic theory as well as traffic routing and network dimensioning. Special focus will be given on IP traffic planning and interworking aspects (Voice over ATM, Voice over IP, IP over ATM, FR over ATM). Moreover a selection of practical network design examples is included.

The course provides network planners and consultants as well as academic network researches with an insight of today's most challenging broadband network planning topics and their respective solution approaches.

Speaker Biography
Dr. Thomas Bauschert received his Diploma degree in electrical engineering from the Munich University of Technology in 1990. He then joined the Institute of Communication Networks (Prof. Eberspächer) where he worked as a member of the research staff in the field of broadband and next-generation network planning and engineering. In 1997 he received his Dr.-Ing. degree with a thesis about new planning methods for ATM networks. Since 1997 he is with Siemens AG, Information and Communication Networks Group (ICN) where he currently holds a position as a Senior Consultant for network planning and design. His key research interests include architectures for broadband and next-generation (ATM/IP based) networks as well as the development of new planning methods. He is also member of the VDE ITG expert group 'System Architecture and Traffic Engineering'.

Tool Exhibition

The DRCN2000 workshop features an exhibition of advanced network planning and development tools.

Tools both commercially available and under development are welcome. Interested exhibitors are invited to contact the DRCN2000 Organizing Committee (drcn2000@lkn.ei.tum.de) for booking. We may reject a tool exhibition, if no more space is available or if the exhibit is out of the scope of the DRCN2000.

The exhibition will be held at the workshop venue, directly in front of the lecture auditorium. Each exhibition booth is 2 m by 2 m and equipped with a moveable wall, a table, two chairs and a 220V, 50Hz a.c. socket. The equipment can be stored in a locked room overnight or upon request. It is strongly suggested that exhibitors remain with their equipment at all other times.

The cost of exhibiting is DM 500. Non-commercial tools are exempt from fees.

The exhibiting fee has to be on the following bank account not later than March 31, 2000:
    Account holder: DRCN2000
    Account number: 90632507
    Bank: HypoVereinsbank Muenchen
    Bank Code: 70020270
    S.W.I.F.T.-Code: HYVEDEMM

Please note to take care of the money transfer time. According to the bank where the account is held the transfer may take approx. 10 days in Europe and approx. 20 days outside Europe.

Conference at a glance

Time	Sunday April 9, 2000	Monday April 10, 2000		Tuesday April 11, 2000		Wednesday April 12, 2000	
8:00		Workshop Registration					
8:30				Workshop Registration		Workshop Registration	
9:00		S1: Plenary	Welcome Address	S5	Invited Talk 3	S11	Invited Talk 4
			Keynote Speech		OTN 2		Multilayer Networks
			Invited Talk 1				
10:30		Coffee Break		Coffee Break		Coffee Break	
11:00		S2	Invited Talk 2	S6	SDH	S12	IP
			OTN 1				
12:30							
13:00	Tutorial & Workshop Registration	LUNCH Tool Exhibition		LUNCH Tool Exhibition		LUNCH Tool Exhibition	
14:00	Tutorial	S3	Planning 1	S7 ATM	S8 Availability Analysis 2	S13	Planning 3
							Closing Remarks
15:30	Coffee Break	Coffee Break		Coffee Break			
16:00	Tutorial	S4	Availability Analysis 1	S9 Planning 2	S10 Network Operation		
17:30							
19:30	Welcome Reception			Banquet 19:30			

Program

Sunday April 9, 2000

14:00   Session T1 - Tutorial Part 1

Tutorial on Broadband Network Planning (Part 1)
Thomas Bauschert
Siemens, Germany

15:30   Coffee Break

16:00   Session T2 - Tutorial Part 2

Tutorial on Broadband Network Planning (Part 2)
Thomas Bauschert
Siemens, Germany

Monday, April 10, 2000

09:00   Session 1 - Plenary Session   Chair: Jörg Eberspächer, Germany

Welcome Addresses
Arndt Bode, Vice President, Munich University of Technology, Germany
Jörg Eberspächer, Workshop Chair, Munich University of Technology, Germany

Keynote: Providing Resilience in Optical Transport Networks
Jost A. Spielvogel
Member of the Group Board, Information and Communication Networks, Siemens, Germany

Invited Talk 1: Evolution of Broadband Internet
Juha Heinänen
Telia, Finnland

10:30   Coffee Break

11:00 Session 2 - Optical Transport Networks 1   **Chair: Andreas Gladisch, Germany**

Invited Talk 2: Canada's Optical Research and Education Network: CA*net3
Sam Mokbel
University of Toronto / ONet Networking, Canada

Cost and Availability Comparison of WDM Mesh and Ring Network Architectures
Peter Arijs [1], Wim Van Parys [2], Piet Demeester [1]
[1] University of Gent, [2] Comsof, Belgium

Cost Minimization by Improving Structures and Elements in All-Optical Metropolitan WDM-Networks
Tim Welsch(1), Detlef Stoll [1], Klaus Jobmann [2]
[1] Universität Hannover, [2] Siemens AG, Germany

Architecture and Survivability of Optical Metropolitan Networks
Kris Struyve, Paolo Casaschi, Pedro Falcao
GTS Network Services, Belgium

12:30 Lunch Break

14:00 Session 3 - Network Planning 1   **Chair: Harmen van As, Austria**

A Techno-Ecomomic Study of Broadband Access Network Implementation Models
Milan Jankovic [1], Zoran Petrovic [2], Miroslav Dukic [2]
[1] Community of Yugoslav PTT, [2] Faculty of Electrical Engineering, Yogoslav

Designing Internet Networks
Walid Ben Ameur, Eric Gourdin, Bernard Liau, Nicolas Michel
France Telecom, France

Controlled Shared Backup Paths for Real-Time Communications
Jim M. Ng, Chor-Ping Low
Nanyang Technological University, Singapore

Application of the Dual Benders' Decomposition to the Design of Multi-Layer Robust Telecommunication Networks
Michal Pióro [1,2], Michal Szcześniak [2]
[1] Lund University, Sweden, [2] Warsaw University of Technology, Poland

15:30 Coffee Break

16:00   Session 4 - Availability Analysis 1   **Chair: Andreas Iselt, Germany**

IP Backbone Network Reliability and Performance Analysis
Leonard L. Lu [1]), Zhuang Bo Tang [2])
[1] AT&T Laboratoris , [2] Tellium Inc., USA

Availability Model of WDM Optical Networks
Branco Mikac, Robert Inkret
University of Zagreb, Croatia

Availability Analysis and Comparison of Different Transparent Optical Architectures
Tivadar Jakab [1], Dávid Arató [2], Endre Kállay [1]
[1] Technical University of Budapest, [2] Hungarian Telecommunications Co., Hungary

Tuesday, April 11, 2000

09:00   **Session 5 - Optical Transport Networks 2**   **Chair: Piet Demeester, Belgium**

Invited Talk 3: Bridging the Ring - Mesh Dichotomy with P-Cycles
Wayne D. Grover, D. Stamatelakis
TRLabs / University of Alberta, Canada

Tools for the Design of Meshed WDM Networks Using Optical Cross-Connects
W. Van Parys [1], P. Achten [1], P. Arijs [2], P. Demeester [2], E. Iannone [3], F. Bentivoglio [3]
[1] Comsof, Belgium, [2] University of Gent, Belgium, [3] Pirelli Cavi, Italy

Location and Suitable Time for Introduction of Optical Architectures in a Medium Term Plan
Marco Bettin
CSELT, Italy

Survivability in Optical Transport Networks: Standardisation and Requirements from a Pan-European Carriers' Carrier Perspective
Kris Struyve, Nicolas Lemaitre
GTS Network Services, Belgium

10:30   **Coffee Break**

11:00   **Session 6 - SDH Networks**   **Chair: Bernhard Edmaier, Germany**

Reliable Transport for Future 3G Mobile Networks
Juha Wiljakka, Ari Toivonen
Nokia, Finnland

Comparison of Architectures for Stacked Ring Networks Featuring Compact Add/Drop Multiplexers
D. Colle [1], P. Arijs [1], P. Demeester [1], K. Struyve [2]
[1] University of Gent, [2] GTS Network Services, Belgium

Designing Radio-Mobile Access Networks Based on SDH Ring Structures
Leila Grouz Djerbi
France Telecom, France

Influences of the Switching Strategy on the Introduction of a Resilient Optical Layer in a SDH Network
Roberto Clemente
CSELT, Italy

12:30   **Lunch Break**

14:00   **Session 7 - ATM Networks (parallel session)**   **Chair: Manfred N. Huber, Germany**

Resource Allocation to Back-Up VPs in ATM Survivable Networks with Service Differentiation
Meir Herzberg [1,2]), Evgeni Weinerman [1], Gil Brodesky [1], Tomer Shaked [1]
[1] Tel-Aviv University, [2] ECI Telecom, Israel

Application of ATM VP/VC 1+1/1:1 Linear Protection Switching Mechanisms in Physical Ring Topologies
Joachim Klink
Siemens, Germany

An Integrated Approach to Switched VC ATM Restoration in the REFORM system
Yves T'Joens [1], Panos Georgatsos [2], David Griffin [3], Per-Thomas Huth [4], Leonidas Georgiades [5], George Pavlou [6], Dimitris Manikis [7], Eleni Mykoniati [7]
[1] Alcatel, Belgium, [2] AlgoSystems, Greece, [3] University College London, UK, [4] Telenor, Norway, [5] University of Thessaloniki, Greece, [6] University of Surrey, UK, [7] NTUA

Planning of Survivable ATM Networks based on the Virtual Path Concept
Dirk Beckmann, Ulrich Killat
Technical University of Hamburg-Harburg, Germany

14:00   Session 8 - Availability Analysis 2 (parallel session)   Chair: Toshitaka Tsuda, Japan

Reliability Models of WDM Self-Healing Rings
Dominic A. Schupke
Munich University of Technology, Germany

Computational and Design Studies of the Unavailability of Mesh-Restorable Networks
Matthieu Clouqueur, Wayne D. Grover
TRLabs / University of Alberta, Canada

Pareto Analysis Approach to Reliability Improvement
Victor A. Netes
Scientific & Technical Centre "KOMSET", Russia

15:30   Coffee Break

16:00   Session 9 - Network Planning 2 (parallel session)   Chair: Wayne Grover, Canada

Dimensioning All-Optical Dual-Homing Hierarchical Multi-Ring Networks with Various Connectivities
Aikaterini Proestaki, Mark C. Sinclair
University of Essex, UK

Cost and Resilience Penalty Issues when Planning Long Distance Ring Transport Networks and Applicability of Standardised Protection Schemes
A. Antonopoulos, Noel Parnis, Bruno Cotta, Elias Drakopoulos
Lucent Technologies, UK

Planning of Protected WDM Optical Networks
Andrea Garavaglia, Marco Trubian
Politechnico di Milano, Italy

Planning of Optical Networks
Roberto Clemente, Giuseppe Ferraris, Raffaele Girardi
CSELT, Italy

16:00   Session 10 - Network Operation (parallel session)   Chair: Pedro Falcao, Belgium

Loadsharing - A Key to the Reliability for SS7 Networks
Klaus D Gradischnig [1], Stefan Krämer [2], Michael Tüxen [1]
[1] Siemens, [2] Teles NetConsult GmbH, Germany

Test and Monitoring Aspects of Survivable Networks
Wolfgang Grupp
Wavetek Wandel Goltermann, Germany

Automatic search for Correlated Alarms
Klaus-Dieter Tuchs, Peter Tondl, Markus Radimirsch, Klaus Jobmann
Universität Hannover, Germany

Wednesday, April 12, 2000

09:00   Session 11 - Multilayer Networks   **Chair: Piet Demeester, Belgium**

Invited Talk 4: Terminal Pair Availability Calculation Algorithms for Communication Networks
Andreas Iselt
VIAG Interkom, Germany

Implementing a TCP/IP Aware Survivable Transmission Infrastructure
Claudio Coltro
Alcatel, Italy

Resilient Optical and SONET/SDH-Based IP networks
Yves T'Joens [1], Gary Ester [2], Marc Vandenhoute [2]
[1] Alcatel, Belgium, [2] Alcatel, USA

Evaluation of Network Architectures for the Integration of IP over Optical Networks
Monika Jaeger[1], Hans-Martin Foisel[1], F.-Joachim Westphal[1], Jamil Chawki[2], Knut Ovsthus[3], Jean-Claude Bischoff[4]
[1] T-Nova, Germany, [2] France Telecom, France, [3] Telnor AS, Norway, [4] Swisscom AG

10:30   Coffee Break

11:00   Session 12 - IP Networks   **Chair: Adam Kapovits, Germany**

Provisioning of Services in Tomorrows IP Networks
Hartmut E.Weik
Alcatel SEL, Germany

A Reliable Switch Fabric for a High Capacity IP Router
Bart Pauwels
Alcatel, Belgium

Internet Routing and Topology Problems
Walid Ben Ameur, Eric Gourdin, Bernard Liau
France Telecom, France

Fault Tolerance and Resilience Issues in IP-Based Networks
Achim Autenrieth [1], Andreas Kirstädter [2]
[1] Munich University of Technology, [2] Siemens, Germany

12:30   Lunch Break

14:00   Session 13 - Network Planning 3   Chair: Jörg Eberspächer, Germany

Optimized Design of Ring-Mesh Hybrid Networks
W. D. Grover, Randall Martens
TRLabs / University of Alberta, Canada

Stochastic Algorithms for Design of Thrifty Single-Failure-Protected Networks
Tibor Cinkler, Tamás Hank, Géza Gordos
Technical University of Budapest, Hungary

Design of Reliable Transport SDH Networks
Tatiana P. Sergeheva, N.N.Tetekin
Central Science Telecommunication Research Institute, Russia

Closing Remarks
Jörg Eberspächer, Workshop Chair
Munich University of Technology, Germany

Workshop and Hotel Registration

This program contains mailers for registration and hotel reservation. Please use a separate mailer for each delegate. Use copies, if necessary. Registration forms can also be found at the DRCN2000 homepage. Please mail or fax the information to the respective addresses as soon as possible.

For hotel reservation, email booking is recommended. Use the Keyword 'DRCN2000' to identify yourself as a conference delegate to benefit from the conference rates. Due to other conferences and fairs in Munich, the number of available rooms is limited and early hotel registration is recommended.
Further information about the hotel booking can be found at the Munich Hotel Association Homepage:
http://www.muenchen-hotel.de/

Fees and Payment Methods

	Before March 20, 2000	After March 20, 2000
VDE and IEEE members	DM 550	DM 590
Non-members	DM 680	DM 720
Tutorial	DM 170	DM 200
Extra banquet ticket	DM 100	DM 100

Registration includes proceedings, welcome reception for delegate and accompanying person, one ticket to the banquet. Further information on the workshop and hotel payment methods will be supplied by the workshop registration secretariat and hotel registration secretariat respectively.

For the registration of the commercial Tool Exhibition the booking before March 10, 2000 and the fee transfer of DM 500 before March 31, 2000 is required.

Cancellation

The conference secretariat must be notified in writing of cancellations of registration.
For cancellation received before March 20, 2000, DM 50 administration costs will be charged.
For cancellation after March 20, 2000, no refund can be given.

Proceedings, Badges

Proceedings and badges will be available at the registration desk of the DRCN2000.

Extra copies of the proceedings can be purchased at the registration desk.

Social Program (included in registration)

Sunday, April 9, 2000, 17^{30}
Welcome Reception
Accompanying persons of conference delegates are welcome to attend the welcome reception at no extra charge.

Tuesday, April 11, 2000, 19^{30}
Banquet
Augustiner Restaurant, Neuhauser Straße 27, München, phone 089/2 31 83 - 257
Extra tickets to the banquet may be ordered on the attached registration form or may be obtained at the on-site registration desk.

General Information

Location of the Conference

The conference will be located at:
Munich University of Technology
Arcisstr. 21
Munich
The entrance to the workshop is in the "Theresienstrasse" between the bridges of the university.

How to get to the DRCN2000 by Public Transportation:
From airport to "Hauptbahnhof" (Central Station):
Take any S-Bahn (S1 or S8).
Travelling time: 40 minutes to "Hauptbahnhof".

From "Hauptbahnhof" to DRCN2000:
You can either go by taxi or with the underground. With the underground take from the "Hauptbahnhof" the U2 or U8 to "Feldmoching". Leave at "Theresienstrasse" (2 stations after "Hauptbahnhof"). Exit the station in the direction of the "Technische Universität"/"Pinakotheken" (Theresienstrasse). Walk the "Theresienstrasse" direction east (=against the one way street) until you reach two bridges which span the buildings on the two sides of the street. The entrance to the DRCN2000 is located between the two bridges (see maps).
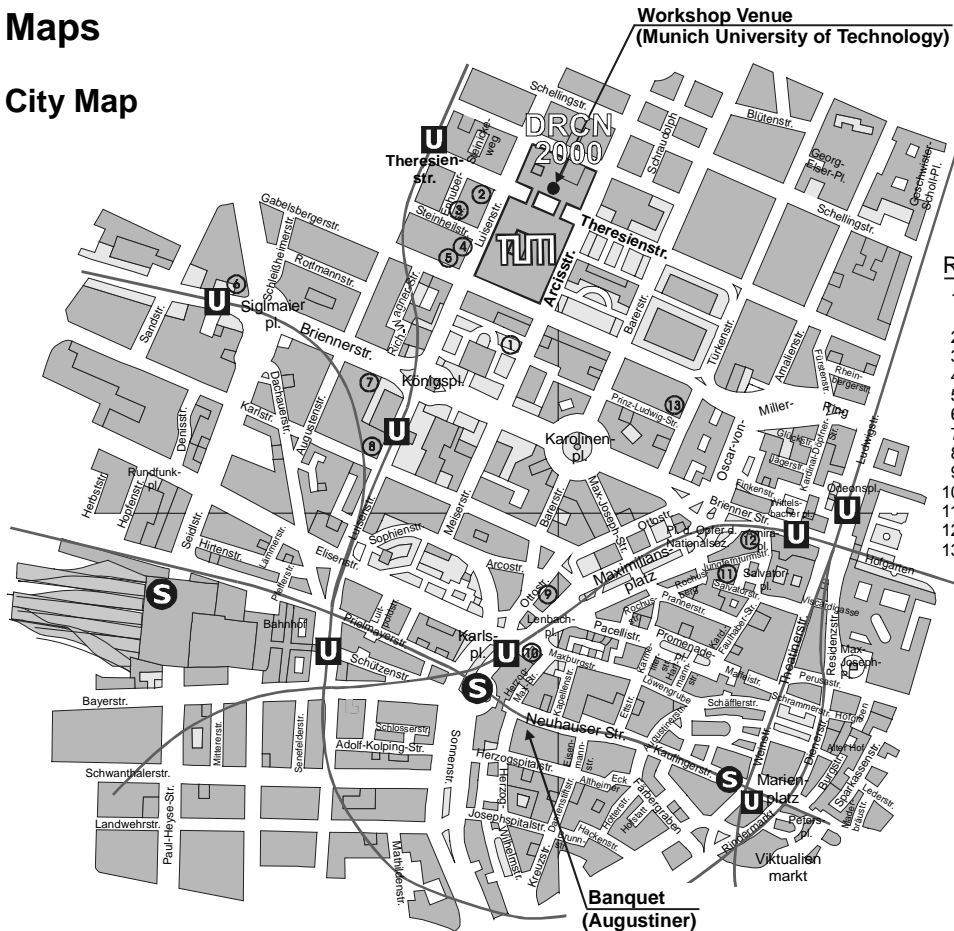
Online information is available at:
http://www.munich-tourist.de   Munich Tourist Office
http://www.stadtplandienst.de   Munich Maps
http://www.mvv-muenchen.de   Munich Public Transportation (only German)

Maps

City Map

Workshop Venue
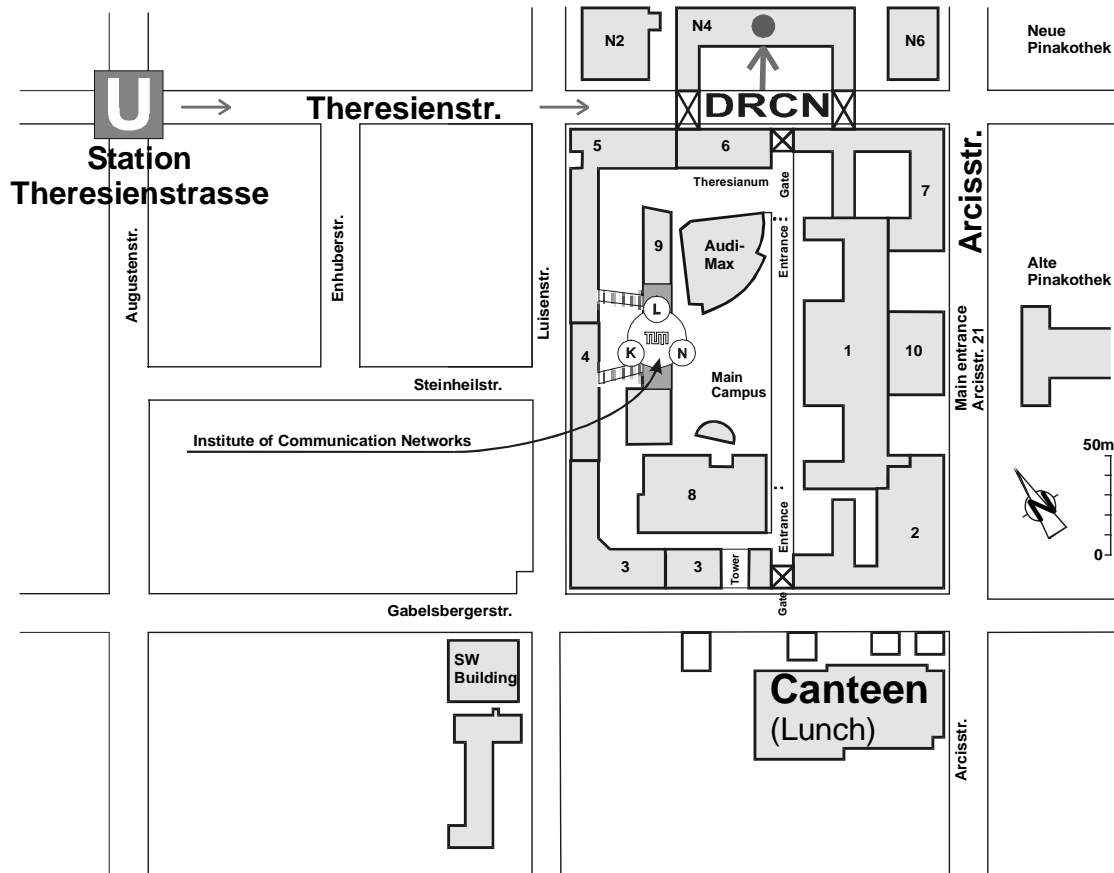**(Munich University of Technology)**

DRCN 2000

Banquet
(Augustiner)

Restaurants

1 Mensa (University Canteen), Arcisstr. 17
   (coupons available at the registration desk)
2 Bei Raffaele (Pizzeria),Luisenstr. 47
3 Incontro (Pizzeria, Bistro), Steinheilstr. 6
4 Stehcafe (Snacks), Luisenstr. 43
5 La Grimace (Creperie, Restaurant), Gabelsbergerstr. 24
6 Löwenbräukeller (Brauhaus), Nymphenburger Str. 2
7 Opatija (Restaurant), Brienner Str. 41
8 Cafe-Bistro-Naumann's, Luisenstr. 25
9 Lenbach (Restaurant), Ottostr. 6
10 Mövenpick Künstlerhaus (Restaurant), Lenbachplatz 8
11 Literaturhaus Kaffee Dukatz (Restaurant), Salvatorplatz 1
12 Cafe Luitpold (Restaurant), Brienner Str. 11
13 Chao Khun (Thai), Türkenstr. 9

Munich University of Technology

Map of the Munich University of Technology campus showing Station Theresienstrasse, Theresienstr., DRCN, N2, N4, N6, Neue Pinakothek, Theresianum, Audi-Max, Main Campus, Institute of Communication Networks, buildings 1–10, K L N, Arcisstr. (Main entrance Arcisstr. 21), Alte Pinakothek, SW Building, Canteen (Lunch), and surrounding streets (Augustenstr., Enhuberstr., Luisenstr., Steinheilstr., Gabelsbergerstr., Arcisstr.).

DRCN2000 Registration Form   April 9 - 12, 2000 in Munich, Germany

Please type in blockletters and write names as they are to appear on your name badge

❑ Prof.   ❑ Dr.   ❑ Mr.   ❑ Mrs.   ❑ Ms.

Last Name _____ First Name _____

Institution/Organization _____

Address _____

Country _____ Zip code _____ City _____

Phone _____ Fax _____ Email _____

		After March 20
Registration Fees VDE and IEEE Members	☐ DM 550,-	☐ DM 590,-
Member Registration Number _____		
Non-Members	☐ DM 680,-	☐ DM 720,-
Tutorial	☐ DM 170,-	☐ DM 200,-
extra banquet tickets: _____ (DM 100,-)		

Please remit the conference fee after the receipt of your reservation. Pay to the order of the account mentioned in the reservation confirmation. Please don't forget to give the name of the participant.

_____   _____   _____
     city   date   signature

Please send the registration form to following address

VDE
Tagungs- und
Seminarorganisation

Stresemannallee 15
60596 Frankfurt / Main
Germany

Tel.: ++49 69 6308-202 or -275
Fax: ++49 69 96315213

Munich Hotel Association   Fax: 0049 / 89 / 30 77 50 55

DRCN2000 Hotel Booking, April 9 – 12, 2000

Category	Single room incl. buffet breakfast		Double room incl. buffet breakfast	
Standard	DM 190,00 to DM 230,00	EUR 97,15 to 117,60	DM 220,00 to DM 290,00	EUR 112,48 to 148,27
Comfort	DM 230,00 to DM 290,00	EUR 117,60 to 148,27	DM 290,00 to DM 360,00	EUR 117,60 to 184,07
Prestige	DM 300,00 to DM 390,00	EUR 153,39 to 199,40	DM 360,00 to DM 430,00	EUR 184,07 to 219,86

All rooms are equipped with bath/shower, wc, phone, tv, radio as minimum. „Technische Universität München" can be reached by public transportation system easily.

☐ **date of arrival:** _____   **date of departure**: _____   nights: _____   ☐ non-smoking room

☐ **single room**   quantity: _____   category: _____   ☐ **double room** quantity: _____   category: _____

☐ **twin room**   quantity: _____   category: _____

☐ **guest name/s**   as far as known: _____

Payment: ☐ via creditcard at hotel   ☐ via pre-payment until 4 weeks before arrival

After receipt of this form you will get a confirmation (with a replay sheet) from us which becomes valid only in case you reconfirm the booking. For bank transfers from foreign countries we charge a bank fee of DM 50,00. If the requested category is not available any more we book the next higher one. All bookings are subject to our Conditions of Business and Accommodation Agreement which you get with our confirmation and will be accepted by you in case you reconfirm the booking. 1 modification of the hotel booking is free of charge, further changes are charged with each DM 40,00.

Company _____   Person to contact _____

Street _____   Zip code/city _____

Phone _____   Fax _____   Email _____

City/Date _____   Signature/Stamp _____

Münchner Hotel Verbund GmbH ● Karl-Theodor-Str. 81, 80796 München ● persons to contact: Ms. Tina Beyer
phone: 0049-89-30 77 50 50 ● fax: 0049-89-30 77 50 55
use email for booking: info@muenchen-hotel.de ● www.muenchen-hotel.de

Extend your stay: special low weekend rates for the nights 07.04.–09.04.00   **DEADLINE FOR BOOKING: March, 20th 2000**