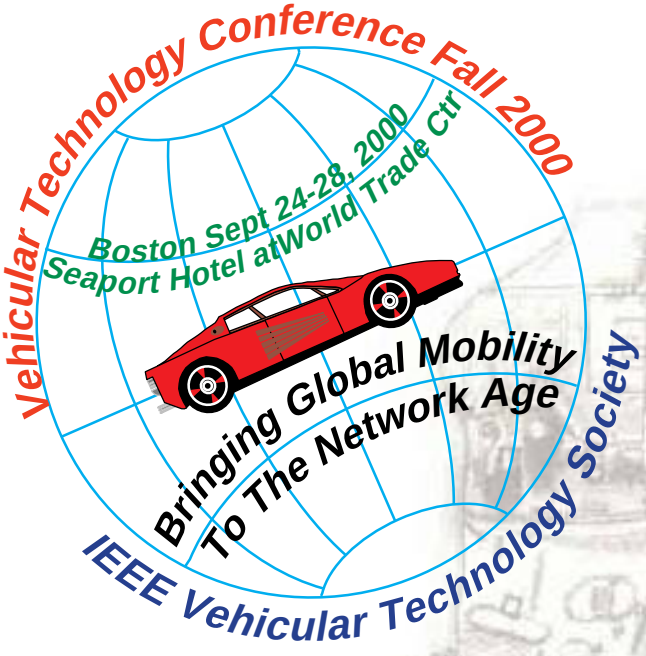
Conference Digest and Final Program



Boston, Mass USA
Seaport Hotel & World Trade Center
September 24-28, 2000

IEEE
Networking The World

Sponsored by IEEE Vehicular Technology Society and IEEE Boston Section

Sponsors

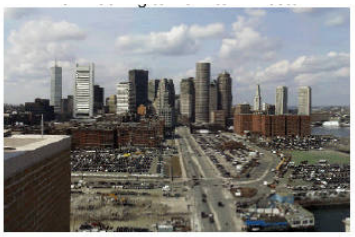
Anritsu Corporation is the leading global manufacturer of hand held test and measurement instruments, a leader of information and communications, test and measurements products and services recognized for technological innovation and quality. Anritsu will be showing their hand held cable and antenna analyzer, their new spectrum analyzer and a radar test system. Anritsu Products are sold in over 90 countries worldwide.

Analog Devices, headquartered in Norwood, Massachusetts, is a premier provider of advanced signal processing solutions that enable today's and tomorrow's wireless communications applications. Millions of GSM, CDMA, and TDMA cellular phones today use Analog Devices chips and chipsets, from DSP to mixed-signal to RF to battery/power-management, and including the award-winning Othello(TM) multi-band GSM direct-conversion radio chipset. And Analog Devices leads the way with Wireless Infrastructure solutions for all global air standards. ADI's Antenna-to-DSP portfolio enables 2G and 2.5G cost reductions, while enabling innovative 3G platforms. For more information, go to www.analog.com.

Motorola is creating an Internet Protocol (IP) based architecture for integrated voice, data and multimedia communications networks that will enable a broad range of wireless Internet access solutions for both fixed and mobile networks. The Aspira™ communications architecture will enable faster, easier to maintain and less expensive solutions for operators worldwide. Based on an open platform, the architecture enables innovative third-party companies seeking to create new services, the opportunity to expand communications networks. Motorola, along with alliance partners, will offer a strong mix of creativity and innovation to fundamentally change the way people communicate.

Program Notes

Sessions	• All technical sessions begin at 8:30am in World Trade Center
Authors	• Author's breakfast at 7:00am in World Trade Center Cityview Ballroom on the morning of the day of your paper
Keynotes	• Keynote speechs at Tuesday morning openning plenary and also at Wednesday Awards Lunch
Awards Lunch	• Tickets for Wednesday Awards Lunch available for purchase at the registration desk
Evening Banquet	• Tuesday evening banquet at 6:30pm in Seaport Hotel Plaza Ballroom (tickets included in basic registration and spouse registration, tickets for students available for purchase at the registration desk)
Evening Panel	• Wednesday evening informal discussion panel at 7:30pm in World Trade Center Cityview Ballroom
Spouse Lunch	• Special hosted lunch for registered spouses/guests Tuesday at 11:30am in World Trade Center Cityview Ballroom
Conf Record	• Hard copy of Conference Proceedings available for purchase at the registration Desk
Posters Exhibits	• Coffee breaks, exhibits, poster sessions, and lunch available in World Trade Center Harborview Ballroom
Audio Tapes	• Audio tapes of technical sessions available for purchase



IEEE VTC2000 Fall

September 24-28, 2000
World Trade Center, Boston, MA USA

Program Highlights

TUTORIALS

		TRACK 1 Federal WTC ML	TRACK 2 Backbay WTC ML	TRACK 3 Cambridge WTC LL	TRACK 4 Northend WTC LL	TRACK 5 Beaconhill WTC LL	TRACK 6 Waterfront2 WTC LL	
MONDAY September 25th	Morning Sessions 8:30am-12:00noon	Smart Antennae Jack Winters *AT&T Labs*	GSM-R Walter Grethe & Dirk Muenning *DETECON*	Mobile Ad-Hoc Networks Nitin Vaidya *Texas A&M*	OFDM-1, Basic Principles & Applications Leonard Cimini & Geoffrey Li *AT&T Labs*	EDGE Kambiz Zangi *Ericsson*	Turbo Codes Christian Schlegel *Univ of Utah*	
	Lunch Break 12:00noon-1:30pm	Served in the Session Rooms						
	Afternoon Sessions 1:30pm-5:00pm	High Speed Wireless Data for Internet Applications Justin Chuang *AT&T Labs*	Automotive Electrical Systems: Status & Trends Mehrdad Ehsani *Texas A&M*	TCP over Wireless Farooq Khan *Lucent*	OFDM-2, Implementation Issues Marc Engles *IMEC*	Wireless E-Commerce Kundan Das *Compaq Computer*	Interference/ Noise Supression Peter Stavroulakis *Telecomm Systems Institute*	

Special Event/Tickets Available at Registration Desk
Wednesday Awards Luncheon at 12:00Noon Plaza Ballroom Seaport Hotel

3G is not just the technology as understanding the applications is vital

Applications Keynote Speaker: Josepth Ferra
Senior Vice President Fidelity Personal Investments
InstantBroker: FPI's Wireless Personal Investment Management Service

PAPER SESSIONS

		TRACK 1 Federal WTC ML	TRACK 2 Backbay WTC ML	TRACK 3 Cambridge WTC LL	TRACK 4 Northend WTC LL	TRACK 5 Beaconhill WTC LL	TRACK 6 Waterfront2 WTC LL	TRACK 7 Waterfront3 WTC LL	POSTERS Harborview WTC UL
TUESDAY September 26th	Time Slot 1 Early Morning 8:30am-10am	**Opening Plenary Session** Keynote Speaker: Dale N. Hatfield Chief of the Office of Engineering and Technology Federal Communications Commission Perspectives on the Next Generation of Communications *Harborview Ballroom World Trade Center Upper Level*							
	Coffee Break 10:00am-10:30am	Lobby Outside Harborview Ballroom World Trade Center Upper Level							Exhibitor & Poster Setup
	Time Slot 2 Late Morning 10:30am-12noon	Indoor Propagation	Adaptive & Advanced Antenna	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	
	Lunch Break 12:00noon-1:30pm	Harborview Ballroom World Trade Center Upper Level							
	Time Slot 3 Early Afternoon 1:30pm-3:00pm	Indoor Propagation	Adaptive & Advanced Antenna	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	Posters Session A (30 papers)
	Coffee Break 3:00pm-3:30pm	Harborview Ballroom World Trade Center Upper Level							
	Time Slot 4 Late Afternoon 3:30pm-5:00pm	Channel Improve-ment	Adaptive & Advanced Antenna	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	
	Banquet 6:30pm-9:00pm	Cocktails and Dinner Buffet Plaza Ballroom Seaport Hotel							

PAPER SESSIONS

WEDNESDAY September 27th	TRACK 1 Federal WTC ML	TRACK 2 Backbay WTC ML	TRACK 3 Cambridge WTC LL	TRACK 4 Northend WTC LL	TRACK 5 Beaconhill WTC LL	TRACK 6 Waterfront2 WTC LL	TRACK 7 Waterfront3 WTC LL	POSTERS Harborview WTC UL
Time Slot 1 Early Morning 8:30am-10am	Propagation & Channel Models	Multimedia	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	Posters Session B (30 papers)
Coffee Break 10:00am-10:30am	Harborview Ballroom World Trade Center Upper Level							
Time Slot 2 Late Morning 10:30am-12noon	Propagation & Channel Models	Multimedia	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	
Lunch Break 12:00noon-1:30pm	**Awards Luncheon** Applications Keynote Speaker: Josepth Ferra Senior Vice President Fidelity Personal Investments InstantBroker: FPI's Wireless Personal Investment Management Service *Plaza Ballroom Seaport Hotel*							
Time Slot 3 Early Afternoon 1:30pm-3:00pm	Propagation & Channel Models	Multimedia	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	Posters Session C (30 papers)
Coffee Break 3:00pm-3:30pm	Harborview Ballroom World Trade Center Upper Level							
Time Slot 4 Late Afternoon 3:30pm-5:00pm	Propagation & Channel Models	Multimedia	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	
Discussion Panel 7:30pm-9:30pm	**Advanced Technologies for 3G & Beyond** **Organizer & Moderator** Dr. William C.Y. Lee VP & Chief Scientist of Global Technology Vodafone AirTouch Plc Cityview Ballroom WTC UL				**Panel Members** Francis O'brien Lucent John Chatter Nortel David Douglas Ericsson Hakan Eriksson Qualcomm Pulin Patel Cisco Chuck Wheatley Sun			

Special Event

Wednesday Evening Panel Session 7:30PM Cityview Ballroom World Trade Center UL

Organized and Moderated by:

Dr. William C.Y. Lee
VP & Chief Scientist of Global Technology
Vodafone AirTouch Plc

Panel Members	Title	Organization	Topic Focus
Francis O'brien	Director	Lucent	Cdma2000 development
John Chatter	Director, Radio System Technology	Nortel	3G Radio Access Technology Development
David Douglas	CTO, NSP Division	Sun	JAVA and 3G
Hakan Eriksson	VP and General Manager, Ericsson Research	Ericsson	WCDMA development
Pulin Pate	President	IPmobile/Cisco	Wireless IP
Chuck Wheatley	Senior VP	Qualcomm	Wireless Data

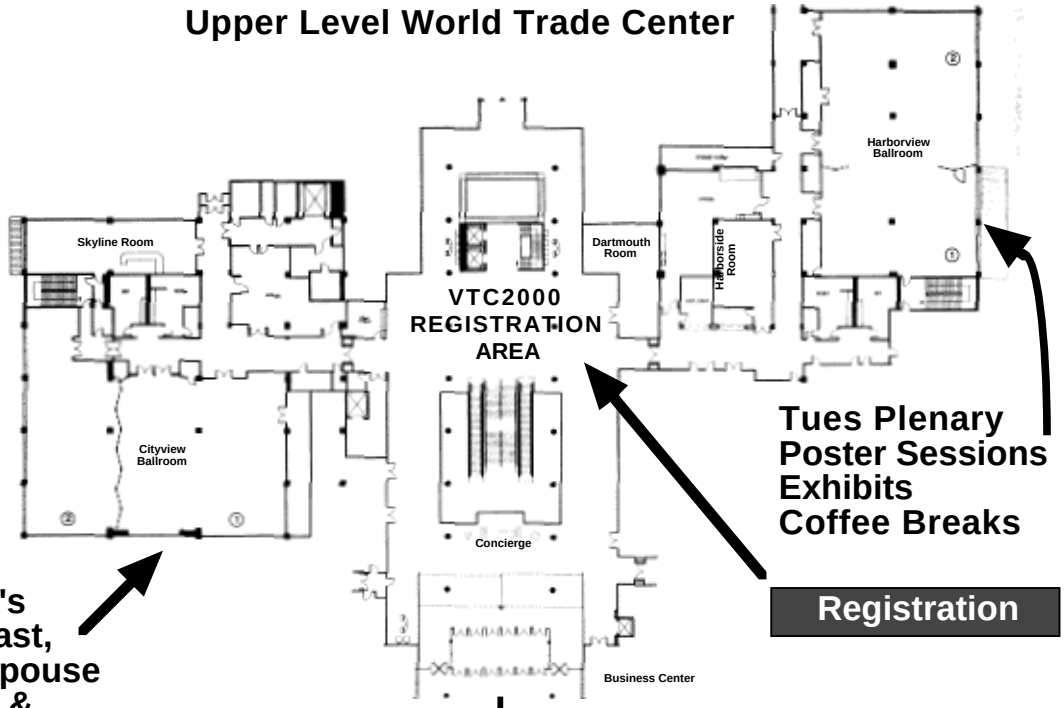
Beverages & Light Snacks will be served

PAPER SESSIONS

THURSDAY September 28th	TRACK 1 Federal WTC ML	TRACK 2 Backbay WTC ML	TRACK 3 Cambridge WTC LL	TRACK 4 Northend WTC LL	TRACK 5 Beaconhill WTC LL	TRACK 6 Waterfront2 WTC LL	TRACK 7 Waterfront3 WTC LL	POSTERS Harborview WTC UL
Time Slot 1 Early Morning 8:30am-10am	Mobile Satellite	Trans-portation	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	Posters Session D (30 papers)
Coffee Break 10:00am-10:30am	Lobby Outside Harborview Ballroom World Trade Center Upper Level							
Time Slot 2 Late Morning 10:30am-12noon	Mobile Satellite	Trans-portation	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	
Lunch Break 12:00noon-1:30pm	Harborview Ballroom World Trade Center Upper Level							
Time Slot 3 Early Afternoon 1:30pm-3:00pm	Applications	Trans-portation	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	Posters Session E (30 papers)
Coffee Break 3:00pm-3:30pm	Harborview Ballroom World Trade Center Upper Level							
Time Slot 4 Late Afternoon 3:30pm-5:00pm	Applications	Trans-portation	Wireless Access	Trans-mission Technology	Trans-mission Technology	Wireless PCS	Wireless PCS	

Floor Plans Registration & Events

Upper Level World Trade Center



Tues Plenary
Poster Sessions
Exhibits
Coffee Breaks

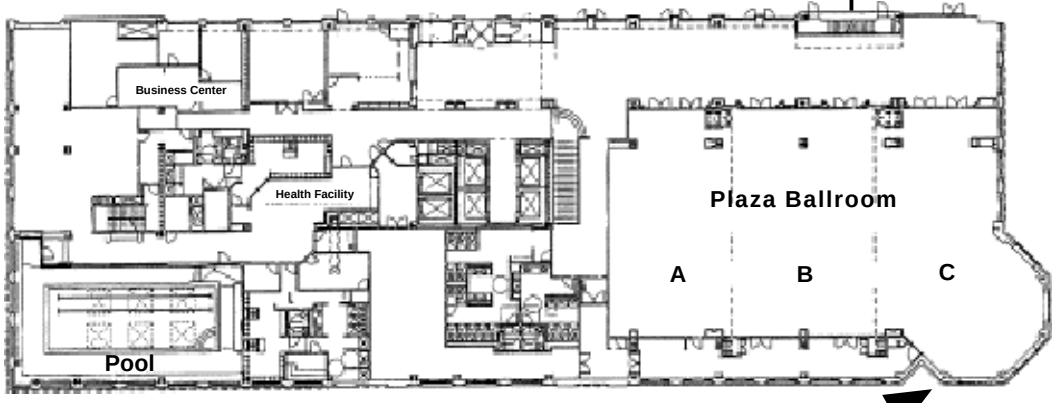
Registration

Daily Author's Breakfast, Tues Spouse Lunch, & Wed Evening Panel Session

Wallway to Seaport Hotel

Plaza Level Seaport Hotel

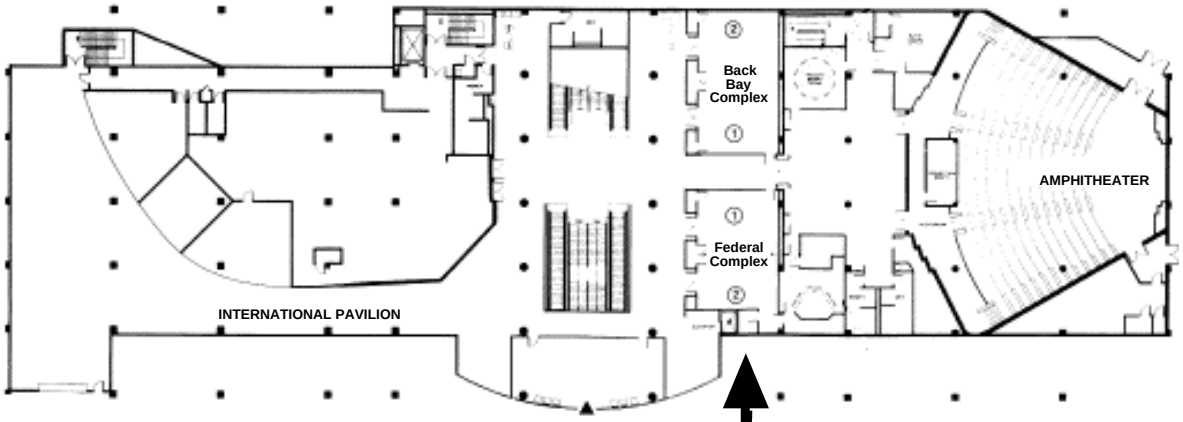
Walkway to World Trade Center



Tuesday Evening Banquet & Wednesday Awards Lunch

Floor Plans WTC Technical Sessions

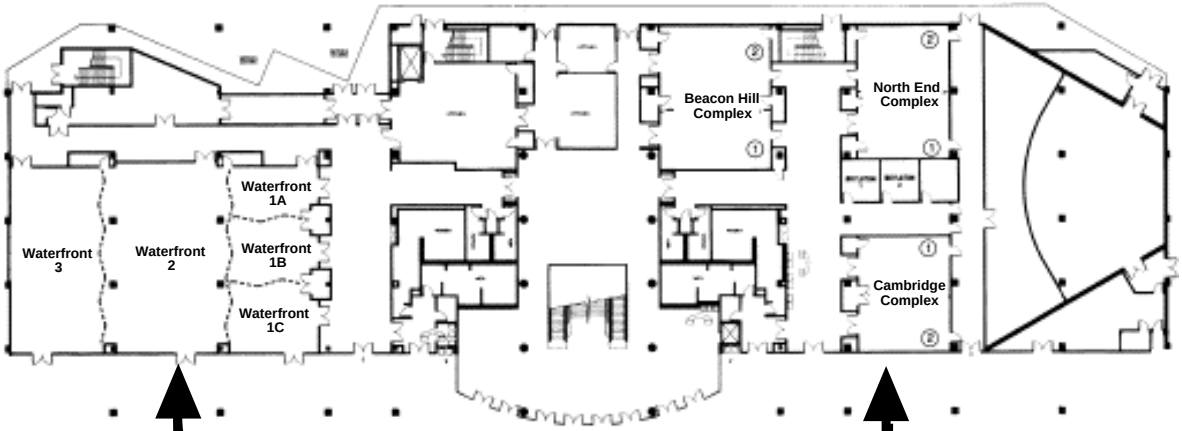
Mezzanine Level World Trade Center



Oral Session Presentations

Back Bay & Federal

Lower Level World Trade Center



Waterfront

Oral Session Presentations

North End, Cambridge, & Beacon Hill

Conference Chairman's Message

Bringing Global Mobility to the Network Age - as the conference opens this is still more of a promise than a reality. However, perhaps at no point in the series of these conferences have we been closer to making the promise real. While no one can argue with the remarkable success of voice based mobile communications, today's infrastructure lacks the bandwidth, capacity, QoS management functionality, and economics to support the wideband connectionless networking we enjoy in our offices and increasingly in our homes. The growth of the internet and scope of internet enabled applications together with the intense competition in the industry are creating a pull from users for new packet data services and a push by service providers to enable new revenue streams from high speed data connectivity and new revenue streams from sale of content or transaction fees. Today we live in a wired Network Age which the internet has already made global. However in the wireless world we still lack a critical mass of compatible air interfaces, business agreements, and satellite infrastructure to make the wireless global promise real. Yet just as in the Network dimension, the pull of the market is there, and service providers are more than ready to push the technology and infrastructure into the market.

As you examine the nearly 500 papers presented in this conference you will see what seems to be a disjointed range of topics. However, they all share the common theme embodied in global mobility and networking in that they provide one more brick in the foundation of a new wireless infrastructure. Inside you will find treatment of the key topics and issues including: enhancing capacity, managing interference, enabling quality of service, planning for the new infrastructure, and examination of the new standards needed to support new multimedia based applications. Enjoy the event and take advantage of the willingness of the authors to share their contributions.

Preparing for a major conference is a multi-year effort requiring a great deal of work, and I appreciate the assistance of our committee members who made it possible to manage this effort. For this meeting we have tried to take advantage of the very same network technology that is the subject matter of this conference. All aspects of the management of the conference from internet based submission of papers to database driven email promotion and communications has been employed with authors and the committee. The only place we were not able to avoid paper was dealing with the legal throwback of requiring a physical piece of paper in the form of a signed copyright release form. The outcome of this experiment had the clear positive aspect of allowing a great increase in our productivity. However, it is also the case that internet based infrastructure, tools, and technology are still in a highly unstable and rapidly maturing state. I appreciate the patience of authors and conference participants who had to deal with the occasional website outages, mysterious email failures, and other unexplained great mysteries of computer file format incompatibilities.

Stuart Lipoff
Conference Chair, VTC 2000-Fall

Society President's Message

Welcome to Boston and our second Vehicular Technology Conference of the 21st century. Because of the tremendous growth in the area of personal communications (especially cellular) in recent years, the VTS Board of Governors made the decision to begin holding two conferences each year. We held two extremely successful conferences in 1999: Houston, Texas in the spring and Amsterdam in the fall. In May of 2000 our conference was held in Tokyo and was again a tremendous success. The pattern we hope to hold is to have one conference each year on the North American continent with the second elsewhere in the world. Next spring our conference is scheduled for Tel Aviv, Israel with a second conference in Atlantic City, New Jersey in the fall. We urge you to consider your plans for next year and continue your outstanding support of our conferences. The Board of Governors has long felt that effective conferences are one of the best services the society can provide to our members, and our two conferences per year schedule is an effort to further meet the needs of our members.

Speaking of society membership: may I urge those of you who may not yet be members of the Vehicular Technology Society to seriously consider changing that status. I am certainly aware that our conferences are attended by many who are not members of our society or perhaps even members of the IEEE. That being the case, you are missing out on the other services that we provide for our members. The Technical Proceedings of The Vehicular Technology Society have long been recognized as outstanding and are another service available to our members. The VTS Newsletter goes to all of our members and contains articles less technical that those in the proceedings as well as regular updates on our conferences and other activities. If you currently find information of value in our conferences, I am sure you would welcome the addition of our proceedings and newsletter.

Again, I welcome you to Boston and hope you have such a great experience here that you will want to expand that experience by becoming a member of our society.

A. Kent Johnson
President, Vehicular Technology Society

2000- Fall IEEE VEHICULAR TECHNOLOGY CONFERENCE

Conference Executive Committee

Conference Chair
Stuart Lipoff (Arthur D. Little, Inc)

Conference Vice-Chair Events
Jeffery Maul (c-quential Inc)

Conference Vice-Chair Program & Tutorials
Louis Kaczmarek (c-quential Inc)

Arrangements Chair
Gerald Larocque (c-quential Inc)

Exhibits Chair
David Metta (Horizon House)

Financial Chair
Robert Alongi (IEEE Boston Section)

Secretary
Toni Warren (Arthur D. Little, Inc)

Organizing Committee

Jim Budwey (Horizon House)
John Greichen (Analog Devices)
Janice Huxley-Jens (Kenan Systems Div of Lucent)
George Kovatch (US Dept of Transportation Volpe Center)
Joe Mullin (Arch Communications)
Mitchell Shifrin (Hittite Microwave)
Zoran Zvonar (Analog Devices)

Technical Paper Review Committee

Fred Goldstein (c-quential Inc)
John Greichen (Analog Devices)
Roger Hay (c-quential Inc)
Louis Kaczmarek (c-quential Inc)
George Kovatch (DOT Volpe Center)
Gerald Larocque (c-quential Inc)
Stuart Lipoff (Arthur D. Little, Inc)
Willie Lu (Infineon Technologies)
Ed Mitukiewicz (c-quential Inc)
Joe Mullin (Arch Communications)
Ramaiah Velidi (Nortel Networks)
Ning Yang (GTE Labs)
Zoran Zvonar (Analog Devices)

2000- Fall IEEE VEHICULAR TECHNOLOGY CONFERENCE
Session Chairs

Anthony Arrott
Bjorn Bjerke
Pete Boyer
Stefano Buzzi
Craig Carlson
John Day
John Dogan
Arthur Giordano
Fred Goldstein
Roger Hay
Allen He
Ivan Howitt
Mary Ann Ingram
James Irvine
Alan Levesque
Kostas Liopiros
Ed Mitukiewicz
Joseph Mullin
Peter Papazian
John Proakis
Masoud Salehi
Jeff Schodorf
Edward Tiedemann
Sennur Ulukus
Katie Wilson
Jack Winters
Ning Yang
Aylin Yener
Zoran Zvonar

Call for papers
The IEEE Semiannual Vehicular Technology VTC 2001 Spring Conference
May 6-9, 2001
David Intercontinental Hotel
Tel Aviv, Israel

General Information

The VTC 2001 - Spring will be held in Tel-Aviv, Israel. At this moment in time, the industry is at the brink of a revolutionary leap forward. That of moving from the plain telephone services to the new era of multimedia, internet and e-commerce services all for the mobile user. In view of the commercial success of wireless mobile telephony on one hand and the wireline internet on the other, their marriage is very much in focus of society and the focus of our conference. On this background papers are solicited along the following primary areas.

Technical Subject Area

- **Antennas & Propagation (01)**

Adaptive Antennas and Arrays, Channel Measurement/Modeling/Prediction, Indoor Propagation.

- **Wireless Access (02)**

Multiple Access Technology, Spread Spectrum Technology, OFDM Techniques, Access Protocols, Channel Assignment, Spectrum Efficiency, Resource Allocation, 4G Methods.

- **Transmission Technology (03)**

Modulation/Demodulation, Source/Channel Coding, Interference Rejection, Equalization and Synchronization, Multiuser Detection, Software Radio, Transceiver Design.

- **Multimedia, Network, and Systems (04)**

Mobile Multimedia Technology, Mobile Data/Computing/Navigation Networks, Wireless Packet Networks, Media Access Control, Enhanced Mobility IP.

- **Wireless Personal Communications (05)**

IMT - 2000, Broadband Mobile Communications Systems, Cellular Technology, Location Techniques, 2.5G and 3G System Performance, Radio Network Design, Power Control Techniques, SS7/AIN meets IP

- **Mobile Satellite Communications (06)**

Mobile Satellite Communications, LEO/MEO/GEO Networks, Navigation

- **Transportation Applications (07)**

Intelligent Transportation/Vehical systems, Vehicular Electronics, Communication Interfaces for Vehicle Operators.

- **Applications (08)**

Wireless Internet Methods, Wireless E-Commerce, Software agents, Hybrid Solutions.

Submission Of Abstract

Authors should submit an extended abstract up to 2 pages. Forms for submission are, camera ready (in 3 original) hard copies, or soft copy in MS Word , PDF or PS. The submission must include the name, complete return address, telephone and fax numbers, the designation number of the Technical Subject Areas of the paper, and e-mail address of the authors. Submissions should be sent to:

The VTC 2001 Secretariat,
Dan Knassim Ltd.
P.O.Box 1931, Ramat Gan 52118, Israel
Tel: +972-3-6133340 (Ext. 209)
Fax: +972-3-6133341
Email: vtc2001@congress.co.il
Web-Site:http://www.congress.co.il/ieee_new

Important Dates

September 30th ,2000 last date for submission of abstracts
December 15th, 2000 notification of acceptance
February 15th, 2001 last date for submission of full paper

General Chair

Reuven Meidan
Motorola Israel

Technical Program Chair

Anthony J. Weiss
Tel Aviv University

Awards Luncheon at 12:00Noon Wednesday 27 September 2000
Plaza Ballroom Seaport Hotel

Welcome and Introductions: Stuart Lipoff
General Conference Chair

Presentation of 1999 VTS AWARDS: Ray Trott
Awards Chairman

The following awards will be presented:

1998 Neal Shepherd Memorial Best Propagation Paper Award - This is to recognize the best paper relating to Propagation published in the Transactions on Vehicular Technology.

The award will be presented to Jean-Yves Chouinard, John Lodge, & François Patenaude, for their paper, "Eigen Analysis of Wide-Band Fading Channel Impulse Responses." March, 1999 VTS Transactions. The prizes are certificates and $166.66 for each of the authors.

IEEE Third Millennium Medals -

Linda Sue Boehmer	Robert W. McKnight
Robert E. Fenton	Evan B. Richards
Samuel A. Leslie	Eric J. Schimmel
Roger D. Madden	Jan E. Uddenfeldt

Introduction of Keynote Speaker: Jeffrey Maul
Vice Chair Events

Applications Keynote Speaker: Dr. Barry Goodstadt
Associate Director c-quential Consulting
Myths and Challenges of the Wireless Web: What do Consumers really want from the WWW (Web Without Wires)

Dr. Barry E. Goodstadt is an Associate Director in c-quential Consulting. Dr. Goodstadt has devoted his career to the analysis of the adoption of new technology products and services by consumers and by businesses and service subscriptions from one provider to another. In particular, he has focused his attention on wireless services, and related emerging technologies (including the Wireless Web).

He has more than 20 years of experience in consulting, business planning and marketing strategies for local and long distance services, mobile satellite services, data services, paging/enhanced messaging applications, PCS developments, cellular telephone companies and electric utilities.

Dr. Goodstadt received his Ph.D. in Social Psychology from Temple University. He has held academic positions at the University of Maryland, the State University of New York and at Temple University.

He is a frequent speaker at industry conferences and symposia and has authored more than 100 technical articles and papers, including two recent papers titled: Wireless Data: Scenarios for Success and Gaining Competitive Advantage in the U.S. Wireless Telephony Market: The Marketing Challenge.

Financial Support of The Conference is Gratefully Acknowledged by The Following Organizations

Tabletop Exhibitors

Arthur D Little, Inc
Anritsu
Artech House
Flexco Microwave
John Wiley & Sons
Kluwer Academic Publishers
Micro-Coax
Temex
Times Microwave
TLC Precision Wafer Technologies

Event Sponsors

Analog Devices - Conference Track
Anritsu - Coffee Breaks
Motorola - Speaker Breakfasts

VTC Digest advertisers

Times Microwave
NexTek
OFDM Forum (Wi-Lan)

Publications and Mailings

Arthur D Little, Inc

Tuesday Opening Plenary Session 8:30AM

Harborview Ballroom WTC UL

Conference Overview and Introductions:
Stuart Lipoff, Conference General Chair

Welcome to Boston:
Michael P. Lewis, Acting Project Director
Central Artery/Tunnel Project *"The Big Dig"*

Mr. Lewis is responsible for day-to-day management of the most ambitious, complex, technologically challenging, and politcally charged public works project in American History. An eight-year veteran of *The Big Dig*, he came to the project from The Mass Highway Department. Mr. Lewis is a civil engineer educated at McGill University and The University of Vermont.

Keynote Speaker: Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Commission

Perspectives on the Next Generation of Communications Technology

Prior to assuming his current FCC position, Hatfield was Chief technologist at the agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Hatfield was Deputy Assistant Secretary of Commerce for Communications and Information and Deputy Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Hatfield was the founding director of the Telecommunications Division at the University College at the University of Denver and, for many years, taught telecommunications policy at the University of Colorado a Boulder. Currently he is teaching a graduate course in telecommunications technology at Georgetown University. Hatfield holds a BS in electrical engineering from Case Institute of Technology and an MS in Industrial Management from Purdue University.

Tuesday Track1 10:30AM

Indoor Propagation

Federal WTC ML

2.1.2.1 Tapped Delay Line Channel Models at 5.3 GHz in Indoor Environments
Dr Xiongwen Zhao, Dr Jarmo Kivinen, Prof Pertti Vainikainen
Radio Laboratory, Helsinki University of Technology

2.1.2.2 Spatial and Temporal Characteristics of 60 GHz Indoor Channels
Mr Hao Xu, Dr Vikas Kukshya, Mr Theodore Rappaport
Mobile and Portable Radio Research Group, Virginia Tech

2.1.2.3 Experimental Investigations of Correlation Properties of MIMO Radio Channels for Indoor Picocell Scenario
Mr Jean Philippe Kermoal, Mr Klaus I. Pedersen, Dr Preben E. Mogensen
Center for Person Komunikation, Aalborg University

2.1.2.4 Indoor and Outdoor Measurements of Space, Polarization, and Angle Diversity for Cellular Base Station in Urban Environments
Mr Byung-ki Kim, Dr Warren Stutzman, Dr Dennis Sweeney
Virginia Polytechnic Institute and State University

2.1.2.5 Simple and Accurate Path Loss Modeling at 5 GHz in Indoor Environments with Corridors
Dr Jonas Medbo, Mr Jan-Erik Berg
Ericsson Radio Systems AB

Tuesday Track1 1:30PM

Indoor Propagation

Federal WTC ML

2.1.3.1 Impact of Human Shadowing on Temporal Variation of Broadband Indoor Radio Channel Characteristics and System Performance
Mr Pejman Hafezi, Dr Andy Nix, Dr Mark Beach
University Of Bristol

2.1.3.2 Pedestrian-Induced Fading for Indoor Channels at 2.45, 5.7 and 62 GHz
Dr William Scanlon, Mr Francesco Villanese, Dr Noel Evans
Centre for Communications Engineering, University of Ulster

2.1.3.3 Monte Carlo Simulation of Delay and Angle Spread in Different Building Environments
Mr Cheolhang Cheon, Mr Henry Bertoni, Mr George Liang
Polytechnic University

2.1.3.4 Detailed Radio Imaging of Buildings at 2.4 GHz
Mr M J Mughal, Dr A. M. Street, Dr C. C. Constantinou
The University of Birmingham

2.1.3.5 The Bluetooth Channel
Dr Gert F Pedersen, Dr Patrick Eggers
Aalborg University

Tuesday Track1 3:30PM

Channel Improvement

Federal WTC ML

2.1.4.1 Closed-loop Transmit Diversity Techniques for Multi-element Transceivers
Ari Hottinen, OlavTirkkonen, Risto Wichman
Nokia Research Center

2.1.4.2 Performance of Downlink Nulling in Combined Packet/Circuit Switched Systems
Mr Klaus Hugl, Prof Ernst Bonek
Institut fuer Nachrichtentechnik, Tech. Univ. Wien

2.1.4.3 A Study of Polarization Diversity Using an Electromagnetic Spatio-Temporal Channel Model
Mr Thomas Svantesson
Chalmers Univ. of Tech.

2.1.4.4 Link-Optimal BLAST Processing with Multiple-Access Interference
Dr Angel Lozano, Dr Farrokh Farrokhi, Dr Gerard Foschini
Lucent Technologies

2.1.4.5 Space-Time Coding for UMTS Performance Evaluation in Combination with Convolutional and Turbo Coding
Mr Roger Gaspa, Prof Javier R. Fonollosa
Universitat Politècnica de Catalunya

Tuesday Opening Plenary Session 8:30AM

Harborview Ballroom WTC UL

Conference Overview and Introductions:
Stuart Lipoff, Conference General Chair

Welcome to Boston:
Michael P. Lewis, Acting Project Director
Central Artery/Tunnel Project *"The Big Dig"*

Mr. Lewis is responsible for day-to-day management of the most ambitious, complex, technologically challenging, and politcally charged public works project in American History. An eight-year veteran of *The Big Dig*, he came to the project from The Mass Highway Department. Mr. Lewis is a civil engineer educated at McGill University and The University of Vermont.

Keynote Speaker: Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Commission

Perspectives on the Next Generation of Communications Technology

Prior to assuming his current FCC position, Hatfield was Chief technologist at the agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Hatfield was Deputy Assistant Secretary of Commerce for Communications and Information and Deputy Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Hatfield was the founding director of the Telecommunications Division at the University College at the University of Denver and, for many years, taught telecommunications policy at the University of Colorado a Boulder. Currently he is teaching a graduate course in telecommunications technology at Georgetown University. Hatfield holds a BS in electrical engineering from Case Institute of Technology and an MS in Industrial Management from Purdue University.

Tuesday Track2 10:30PM

Adaptive and Advanced Antennae

Backbay WTC ML

2.2.2.1 Space Hopping Scheme Under Short Range Rician Multipath Fading Environment
Mr Satoru ISHII, Mr Atsushi HOSHIKUKI, Prof Ryuji KOHNO
Futaba Corporation

2.2.2.2 Coherent Interference Suppression with an Adaptive Array Using Spatial Affine Projection Algorithm
Ms Yahong Zheng, Mr Rafik Gougran, Mr Mohamed El-Tanany
Carleton University

2.2.2.3 Investigation of the Trade-off Character-istics of Beamforming Performance in DS-CDMA System
Dr Tae-Gyu Chang, Mr Jae-Hwa Kim, Mr Chong-Yoon Kim
School of Electrical Engineering, ChungAng University

2.2.2.4 Downlink Capacity of Multirate DS-CDMA with Antenna Array and SIR Based Power Control in Multicell Environment
Dr Francois Chin, Mr Yan Zhou, Dr Ying-Chang Liang
Centre for Wireless Communications

2.2.2.5 Non-stationary Interference Exciser in Smart Antenna Systems Using an Adaptive Gabor Expansion
Mr Jaehak Chung, Mr Sang-Youb Kim, Dr Edward Powers
The University of Texas at Austin

Tuesday Track2 1:30PM

Adaptive and Advanced Antennae

Backbay WTC ML

2.2.3.1 An Adaptive Array Antenna for CDMA2000 System
Mr Tatcha Chulajata, Dr Hyuck M. Kwon
Wichita State University

2.2.3.2 Phase and Amplitude Calibration of a PCS Wideband Antenna Array
Mr Peter Papazian, Mr Perry Wilson, Mr Lo Lo
National Telecommunications and Information Administration

2.2.3.3 Capacity Enhancement Based on Using Adaptive Antenna Arrays Optimized for Trunking Efficiency
Dr Ivan Howitt, Mr Fahed Awad
University of Wisconsin - Milwaukee

2.2.3.4 Optimum Element Arrangement of Adaptive Base Station Antennas for SDMA in Circular Cell
Mr Keizo Cho, Mr Yasushi Takatori, Mr Kentaro Nishimori
Nippon Telegraph and Telephone Corporation

2.2.3.5 Adaptive Antennas in WCDMA Systems; Link Level Simulation Results
Dr Bo Göransson, Mr József Barta, Dr Bo Hagerman
Ericsson Research

Tuesday Track2 3:30PM

Adaptive and Advanced Antennae

Backbay WTC ML

2.2.4.1 Match Filter Bound Analysis Used to Evaluate Range Increase Provided by an Adaptive Antenna Array
Dr Ivan Howitt
University of Wisconsin - Milwaukee

2.2.4.2 FDD DS-CDMA Downlink Beamforming by Modifying Oplink Beamforming Weights
Dr Ying-Chang Liang, Dr Francois P.S. Chin
Centre for Wireless Communications

2.2.4.3 Hybrid Adaptive Algorithm Based on Temporal Update and Spatial Spectrum Estimation for Adaptive Array Antenna
Mr Kazunori Watanabe, Dr Ryuji Kohno
Yokohama National University

2.2.4.4 Soft Handoffs in Code Division Multiple Access Systems with Smart Antenna Arrays
Mr David Hastings, Dr Hyuck Kwon
Wichita State University

2.2.4.5 Semi-blind Method for Adaptive Transmit Antenna Array for CDMA Systems
Dr Jinho Choi
Dept. of Electronic Engineering, Konkuk University

Tuesday Opening Plenary Session 8:30AM

Harborview Ballroom WTC UL

Conference Overview and Introductions:
Stuart Lipoff, Conference General Chair

Welcome to Boston:
Michael P. Lewis, Acting Project Director
Central Artery/Tunnel Project *"The Big Dig"*

Mr. Lewis is responsible for day-to-day management of the most ambitious, complex, technologically challenging, and politcally charged public works project in American History. An eight-year veteran of *The Big Dig*, he came to the project from The Mass Highway Department. Mr. Lewis is a civil engineer educated at McGill University and The University of Vermont.

Keynote Speaker: Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Commission

Perspectives on the Next Generation of Communications Technology

Prior to assuming his current FCC position, Hatfield was Chief technologist at the agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Hatfield was Deputy Assistant Secretary of Commerce for Communications and Information and Deputy Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Hatfield was the founding director of the Telecommunications Division at the University College at the University of Denver and, for many years, taught telecommunications policy at the University of Colorado a Boulder. Currently he is teaching a graduate course in telecommunications technology at Georgetown University. Hatfield holds a BS in electrical engineering from Case Institute of Technology and an MS in Industrial Management from Purdue University.

Tuesday Track3 10:30AM

Wireless Access

Cambridge WTC LL

2.3.2.1 Joint Design of Adaptive Channel Coding and Multiple Access Control for Integrated Voice and Data Services in a Cellular Wireless Network|with Contention Queue
Dr Yu-Kwong Kwok, Dr Vincent K N Lau
Department of EEE, The University of Hong Kong

2.3.2.2 A Novel Multiuser Transmission Scheme Requiring No Channel Estimation and No Equalization at the Mobile Stations for the Downlink of TD-CDMA Operations in the TDD Mode
Mr Michael Meurer, Mr Apostolos Papathanassiou, Mr Tobias Weber
University of Kaiserslautern

2.3.2.3 Multichannel CSMA with Signal Power-Based Channel Selection for Multihop Wireless Networks
Dr. Asis Nasipuri, Dr Samir Das
The University of Texas at San Antonio

2.3.2.4 A MAC Algorithm for Energy-limited Ad-hoc Networks
Mr Kyu-Tae Jin, Dr Dong-Ho Cho
Korea Advanced Institude of Science & Technology

2.3.2.5 Extending Earliest-Due-Date Scheduling Algorithms for Wireless Networks with Location-Dependent Errors
Dr Shiao-Li Tsao
Industrial Technology Research Institute

Tuesday Track3 1:30PM

Wireless Access

Cambridge WTC LL

2.3.3.1 A Queuing Priority Channel Access Protocol for Voice/Data Integration on the Air Interface of Microcellular Mobile Radio Networks
Dr Mostafa Nofal, Dr Nawal el-fishawy, eng saied abd el atty
Faculty of electronic engineering

2.3.3.2 Demand Assignment Multiple Access Protocols for Wireless ATM Networks
Dr Anna Hac
University of Hawaii

2.3.3.3 Wavelet Packet Function Based RAKE / Adaptive Multichannel DFE Equalization for WPMA System over Frequency Selective Rayleigh Fading Channels
Dr Zhang Xiaodong, Prof Bi Guangguo
Southeast Univ.,China

2.3.3.4 QoS Guarantees for Third Generation (3G) CDMA Systems via Admission and Flow Control
Ms Cristina Comaniciu, Dr Narayan Mandayam, Mr David Famolari
WINLAB, Rutgers University

2.3.3.5 An OFDM Based Multicarrier MFSK System
Mr Rajnish Sinha, Dr Roy Yates
WINLAB

Tuesday Track3 3:30PM

Wireless Access

Cambridge WTC LL

2.3.4.1 An Iterative Approach to the Power Control Problem in Wireless Networks for Integrated Services
Dr Symeon Papavassiliou, Dr George Kotsakis
New Jersey Institute of Technology

2.3.4.2 Spatial Multi-user Access OFDM with Antenna Diversity and Power Allocation
Joonsuk Kim, JohnCioffi
Stanford University

2.3.4.3 A Fast Cell Search Algorithm Using Code Block CPM in Asynchronous W-CDMA System
Jung-Hyun Choi, Dr Nak-Myeong Kim
Ewha Women's University, in Seoul, Korea

2.3.4.4 Weighted Fair Queueing for Data Service in a Multimedia CDMA System
Mr Seung Sik Choi, Dr Dong Ho Cho
KAIST, Electrical Eng.

2.3.4.5 Peak-to-Average Ratio Suppression Schemes in DFT Based OFDM
Mr Young-Seo Park, Dr Scott Miller
University of Florida

Tuesday Opening Plenary Session 8:30AM

Harborview Ballroom WTC UL

Conference Overview and Introductions:
Stuart Lipoff, Conference General Chair

Welcome to Boston:
Michael P. Lewis, Acting Project Director
Central Artery/Tunnel Project *"The Big Dig"*

Mr. Lewis is responsible for day-to-day management of the most ambitious, complex, technologically challenging, and politcally charged public works project in American History. An eight-year veteran of *The Big Dig*, he came to the project from The Mass Highway Department. Mr. Lewis is a civil engineer educated at McGill University and The University of Vermont.

Keynote Speaker: Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Commission

Perspectives on the Next Generation of Communications Technology

Prior to assuming his current FCC position, Hatfield was Chief technologist at the agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Hatfield was Deputy Assistant Secretary of Commerce for Communications and Information and Deputy Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Hatfield was the founding director of the Telecommunications Division at the University College at the University of Denver and, for many years, taught telecommunications policy at the University of Colorado a Boulder. Currently he is teaching a graduate course in telecommunications technology at Georgetown University. Hatfield holds a BS in electrical engineering from Case Institute of Technology and an MS in Industrial Management from Purdue University.

Tuesday Track4 10:30AM

Transmission Technology I

Northend WTC LL

2.4.2.1 Optimal Turbo Decoding Metric Generation in a Pilot Assisted Coherent Wireless Communication System
Dr Fuyun Ling
Qualcomm Incorporated

2.4.2.2 Pilot-aided Adaptive Chip Equalizer Receiver for Interference Suppression in DS-CDMA Forward Link
Mr Frederik Petre (with accent on last e), Dr Marc Moonen, Dr Marc Engels
IMEC

2.4.2.3 Effects of Adaptive Equalization on the Performance of Broadband Wireless Communications in Fading Channels
Ms Assia Semmar, Dr Tue Huu Huynh, Dr Michel Lecours
Laval University

2.4.2.4 Nonlinear Adaptive Blind Interference Cancellation for CDMA Systems
Dragan Samardzija, NarayanMandayam, Ivan Seskar
WINLAB, Rutgers University

2.4.2.5 Implementation of an Experimental 384 kb/s Radio Link For High-Speed Internet Access
Mr Bruce McNair, Dr Leonard Cimini, Mr Nelson Sollenberger
AT&T Labs - Research

Tuesday Track4 1:30PM

Transmission Technology I

Northend WTC LL

2.4.3.1 A Decoding Algorithm for I-Q Space-Time Coded Systems in Fading Environments
Mr Salam Zummo, Dr Al-Semari Saud
King Fahd University of Petroluem & Minerals

2.4.3.2 Efficient Evaluation of Error Probabilities for Systems with Intersymbol Interference an Gaussian Noise
Mr Ramon Schlagenhaufer, Dr Brent R. Petersen, Dr Abu B. Sesay
TRLabs

2.4.3.3 Low-Complexity Channel Estimation for WCDMA Random Access
Dr Ralf Weber
Ericsson Eurolab Deutschland GmbH

2.4.3.4 Proposal of OFDM System with Data Repetition
Prof Hideo Kobayashi, Mr Medina Luciano
Mie University

2.4.3.5 Stationary Schemes for Optimal Transmission over Fading Channels with Delay Constraint
Rohit Negi, JohnCioffi
Stanford University

Tuesday Track4 3:30PM

Transmission Technology I

Northend WTC LL

2.4.4.1 A Blind Diversity Reception Based on Eigenfilter Approach for Mobile Communications
Prof Hiroshi Suzuki, Dr Yukitoshi Sanada, Mr Rikuhiro Hanai
Tokyo Institute of Technology

2.4.4.2 C/I Balancing under Limited Power Dynamics for JD-CDMA
Mr Rajanish Rajanish, Dr P.W. Baier
University of Kaiserslautern, Germany/IISc, India

2.4.4.3 WCDMA Initial Cell Search
Mr Anders Østergaard Nielsen, Ms Sari Korpela
Nokia Mobile Phones

2.4.4.4 Adaptive QAM Modulations with Complex Spreading for High-speed Mobile Multimedia Communications
Dr Yeon Ho Chung, Dr Ki Hong Song
Dongeui University, Pusan, Korea (South)

2.4.4.5 Selection or the Most Efficient Shortened Reed Solomon Codes from a Neural Network Database
Dr Behnam Kamali, Mr Henderson Benjamine
Mercer University

Tuesday Opening Plenary Session 8:30AM

Harborview Ballroom WTC UL

Conference Overview and Introductions:
Stuart Lipoff, Conference General Chair

Welcome to Boston:
Michael P. Lewis, Acting Project Director
Central Artery/Tunnel Project *"The Big Dig"*

Mr. Lewis is responsible for day-to-day management of the most ambitious, complex, technologically challenging, and politcally charged public works project in American History. An eight-year veteran of *The Big Dig*, he came to the project from The Mass Highway Department. Mr. Lewis is a civil engineer educated at McGill University and The University of Vermont.

Keynote Speaker: Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Commission

Perspectives on the Next Generation of Communications Technology

Prior to assuming his current FCC position, Hatfield was Chief technologist at the agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Hatfield was Deputy Assistant Secretary of Commerce for Communications and Information and Deputy Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Hatfield was the founding director of the Telecommunications Division at the University College at the University of Denver and, for many years, taught telecommunications policy at the University of Colorado a Boulder. Currently he is teaching a graduate course in telecommunications technology at Georgetown University. Hatfield holds a BS in electrical engineering from Case Institute of Technology and an MS in Industrial Management from Purdue University.

Tuesday Track5 10:30AM

Transmission Technology II

Beaconhill WTC LL

2.5.2.1 Joint Maximum Likelihood Approach in Overloaded Array Processing
Mr Saffet Bayram, Mr James Hicks, Dr Robert Boyle
Mobile and Portable Radio Research Group, Virginia Tech

2.5.2.2 Reduced Complexity of Multi-Code DS-CDMA Receiver Using a COF Only for a Pilot Channel
Mr Shingo Suwa, Dr Takahiko Saba, Mr Masayuki Ariyoshi
Keio University

2.5.2.3 Signal Space Whitening MLSE with Multibeam Adaptive Array
Mr Akihito Hanaki, Dr Takeo Ohgane, Dr Yasutaka Ogawa
Hokkaido University

2.5.2.4 Turbo MAP Decoder Design for IS-2000 System
Mr Gyongsu Lee, Sin-ChongPark
Information and Communications University

2.5.2.5 Joint Decoding and Channel Estimation for Space-Time Codes
Dr Alex Grant
Institute for Telecommunications Research

Tuesday Track5 1:30PM

Transmission Technology II

Beaconhill WTC LL

2.5.3.1 Antenna Diversity Combining Schemes for W-CDMA in Fading Multipath Channels
Mr Bjorn A Bjerke, Dr Zoran Zvonar, Dr John G. Proakis
Northeastern University

2.5.3.2 Interference Cancellation Using the Gibbs Sampler
Dr Timothy Schmidl, Dr Alan Gatherer, Dr Xiaodong Wang
Texas Instruments

2.5.3.3 Accurate Noise Estimates in Multicarrier Systems
Mr Carlos Aldana, Mr Atul Salvekar, Mr Jose Tellado
Stanford University

2.5.3.4 An Improved Decision Feedback Receiver for CDMA IS-95 Reverse Link
Dr Bin Li, Dr Wen Tong, Dr Rui Wang
Nortel Networks

2.5.3.5 On the Effect of Correlation in Multislot Link Layer Analysis for GPRS
Mr Javier Gozalvez, Prof John Dunlop
University of Strathclyde

Tuesday Track5 3:30PM

Transmission Technology II

Beaconhill WTC LL

2.5.4.1 A Block Coded Modulation Method for Variable-rate Data Transmission
Mr Eiji Okamoto, Dr Hiroyo Ogawa
Communications Research Laboratory

2.5.4.2 Modeling Interference Diversity in GSM Networks
Dr Stefan Brück
Bell Labs, Lucent Technologies

2.5.4.3 Adaptive Acquisition for DS-SS Systems with Antenna Diversity
Mr Hyon-Sock Chang, Mr Keun-Moo Lee, Dr Yong H. Lee
Department of Electrical Engineering, KAIST

2.5.4.4 Space-Time Bit-Interleaved Coded Modulation with an Iterative Decoding Strategy
Eng Andrea Tonello
University of Padova - DEI - Department of Electronics

2.5.4.5 UEP of Progressive Images in Wireless Channels
Mr Minyi Zhao, Dr Ali N. Akansu
New Jersey Center for Mulimedia Research, ECE Dept.,

Tuesday Opening Plenary Session 8:30AM

Harborview Ballroom WTC UL

Conference Overview and Introductions:
Stuart Lipoff, Conference General Chair

Welcome to Boston:
Michael P. Lewis, Acting Project Director
Central Artery/Tunnel Project *"The Big Dig"*

Mr. Lewis is responsible for day-to-day management of the most ambitious, complex, technologically challenging, and politcally charged public works project in American History. An eight-year veteran of *The Big Dig*, he came to the project from The Mass Highway Department. Mr. Lewis is a civil engineer educated at McGill University and The University of Vermont.

Keynote Speaker: Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Commission

Perspectives on the Next Generation of Communications Technology

Prior to assuming his current FCC position, Hatfield was Chief technologist at the agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Hatfield was Deputy Assistant Secretary of Commerce for Communications and Information and Deputy Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Hatfield was the founding director of the Telecommunications Division at the University College at the University of Denver and, for many years, taught telecommunications policy at the University of Colorado a Boulder. Currently he is teaching a graduate course in telecommunications technology at Georgetown University. Hatfield holds a BS in electrical engineering from Case Institute of Technology and an MS in Industrial Management from Purdue University.

Tuesday Track6 10:30AM

Wireless PCS I

Waterfront2 WTC LL

2.6.2.1 Power Control in a Multicell CDMA Data System Using Pricing
Mr Cem Saraydar, Dr Narayan Mandayam, Dr David Goodman
Wireless Information Network Laboratory

2.6.2.2 Performance of Link Adaptation in GPRS Network Simulations
Mr Pablo Jose Ameigeiras Gutierrez, Dr Jeroen Wigard, Dr Preben Mogensen
Center for Person Kommunication (Aalborg University)

2.6.2.3 Performance of Coded Higher Order Modulation Schemes and Hybrid ARQ for Next Generation Cellular Systems
Dr Amitava Ghosh, Dr Louay Jalloul, Mr Mark Cudak
Motorola

2.6.2.4 Equalization and Multi-user Detection in Frequency Selective Channels for Space Time Block Coding Based Transmit Diversity (STTD)
Dr Anand Dabak, TimSchmidl, Chaitali Sengupta
Wireless Communications Branch, Texas Instruments

2.6.2.5 Cutoff Rate Analysis of Pilot Assisted CDMA System with Power Control
Jason Chen, LouayJalloul
Motorola, Inc.

Tuesday Track6 1:30PM

Wireless PCS I

Waterfront2 WTC LL

2.6.3.1 Effects of Mobile Speed on System Performance, Results from Orange/Fujitsu UMTS Field Trials in UK
Mr Thrasivoulos Griparis, Mr Robert Joyce, Dr Jamal Khalab
Fujitsu Europe Telecom R&D Centre Ltd

2.6.3.2 Transmission Delay Control for Single Frequency OFDM Multi-Base Stations in a Cell Using Position Information
Mr Takeshi Kokubo, Dr Shoichiro Yamasaki, Dr Masao Nakagawa
Dept. of Electrical Engineering, Keio University

2.6.3.3 Measurement Assessment for Link Quality Estimation in 3G Wireless Communication Networks
Mr Peter Gunreben, Dr Kiran Rege, Dr Jens Mückenheim
Lucent Technologies

2.6.3.4 Data Fusion Based on Neural Network for the Mobile Subscriber Location
Dr Sandrine Merigeault, Mr Mickael Batariere, Dr Jean Noel Patillon
MOTOROLA

2.6.3.5 New Generation Features for Tactical Wireless Communication Networks
Mr Dimitrios Vergados, Mr Angelos Liveris, Mr Evangelos Verentziotis
National Technical University of Athens

Tuesday Track6 3:30PM

Wireless PCS I

Waterfront2 WTC LL

2.6.4.1 An Equal-Strength/Power-Suspended Power Control Scheme for a Cellular DS/CDMA System
Mr Chieh-Ho Lee, Dr Chung-Ju Chang
National Chiao Tung University

2.6.4.2 Outage Performance Considerations in Cellular Systems: A Comparative Review
Dr George Karagiannidis, Dr Stavros Kotsopoulos
Wireless Telecommunications Laboratory

2.6.4.3 Quality of Service Management for Mixed Services in WCDMA
Mr Davide Imbeni, Mr Magnus Karlsson
Ericsson Telecomunicazioni SpA

2.6.4.4 Joint Power Control, Base Station Assignment and Sectorization for CDMA Cellular Systems
Mr Manouchehr Mahmoudi, Dr Elvino S. Sousa
University of Toronto

2.6.4.5 Design of Cyclically Permutable Codes for PN Code Acquisition in WCDMA TDD Mode
Dr Srinath Hosur, Dr Anand Dabak
Texas Instruments Inc.

Tuesday Opening Plenary Session 8:30AM

Harborview Ballroom WTC UL

Conference Overview and Introductions:
Stuart Lipoff, Conference General Chair

Welcome to Boston:
Michael P. Lewis, Acting Project Director
Central Artery/Tunnel Project *"The Big Dig"*

Mr. Lewis is responsible for day-to-day management of the most ambitious, complex, technologically challenging, and politcally charged public works project in American History. An eight-year veteran of *The Big Dig*, he came to the project from The Mass Highway Department. Mr. Lewis is a civil engineer educated at McGill University and The University of Vermont.

Keynote Speaker: Dale N. Hatfield, Chief
Office of Engineering and Technology
Federal Communications Commission

Perspectives on the Next Generation of Communications Technology

Prior to assuming his current FCC position, Hatfield was Chief technologist at the agency. Before joining the Commission in December 1997, he was Chief Executive Officer of Hatfield Associates, Inc., a Boulder, Colorado based multidisciplinary telecommunications consulting firm. Before founding the consulting firm in 1982, Hatfield was Deputy Assistant Secretary of Commerce for Communications and Information and Deputy Administrator of the National Telecommunications and Information Administration. Before moving to NTIA, Hatfield was Chief of the Office of Plans and Policy at the FCC. Hatfield was the founding director of the Telecommunications Division at the University College at the University of Denver and, for many years, taught telecommunications policy at the University of Colorado a Boulder. Currently he is teaching a graduate course in telecommunications technology at Georgetown University. Hatfield holds a BS in electrical engineering from Case Institute of Technology and an MS in Industrial Management from Purdue University.

Tuesday Track7 10:30AM

Wireless PCS II

Waterfront3 WTC LL

2.7.2.1 Effect of Phase Noise on RF Communication Signals
Dr Tadao Nakagawa, Mr Katsuhiko Araki
NTT Network Innovation Laboratories

2.7.2.2 Forward Link Capacity Based on Interference Characteristics in CDMA Systems
Mr Hoon Kim, Mr Jayong Koo, Dr Youngnam Han
Information and Communication University

2.7.2.3 Traffic Modeling and Performance Analysis for Dual-Band Systems
Dr Ming Zhang, Mr Alan MacDonald
AT&T Wireless Services

2.7.2.4 Performance of Optimum Transmitter Power Control in WCDMA Cellular Mobile Systems
Dr Qiu Ling, Prof Zhu Jinkang
University of Science & Technology of China

2.7.2.5 Mobile Location Method for Non-Line-of-Sight Situation
Dr Peter Wang, Dr Marilynn Green
Nokia Research Center

Tuesday Track7 1:30PM

Wireless PCS II

Waterfront3 WTC LL

2.7.3.1 A New Hybrid MAP/MLSE Soft-output Adaptive Equalizer for TDMA-based Land Mobile Cellular Links
Dr Stefano Galli
Telcordia Technologies (formerly Bellcore)

2.7.3.2 On the Achievable Network Capacity of the CDMA2000-1X System With and Without Transmit Diversity
Ashvin Chheda
Nortel Networks

2.7.3.3 CDMA Capacity on Pathloss and Power Control
Dr David Lee, Dr William C. Y. Lee
Vodafone AirTouch

2.7.3.4 Handoff Rerouting Scheme for Multimedia Connections in ATM-based Mobile Networks
Ms Janise McNair, Dr Ian Akyildiz, Dr Sridhar Radhakrishnan
Georgia Institute of Technology

2.7.3.5 Combinations of Power Controls for CDMA2000 Wireless Communications Systems
Mr Tatcha Chulajata, Dr Hyuck M. Kwon
Wichita State University

Tuesday Track7 3:30PM

Wireless PCS II

Waterfront3 WTC LL

2.7.4.1 Power Control with Time Delay Compensation
Dr Fredrik Gunnarsson, Dr Fredrik Gustafsson
Linkopings Universitet Department of Electrical Engineering

2.7.4.2 Mobile Communications beyond Third Generation
Dr Werner Mohr
Siemens AG

2.7.4.3 Investigation of 3rd Generation Mobile Communication RACH Transmission
Dr Che-Li Lin
CCL/ ITRI (Industrial Technology Research Institute)

2.7.4.4 A Markov-Based Model for Performance Evaluation in Multimedia CDMA Wireless Transmission
Dr Mario Hueda
University of Cordoba - Argentina

2.7.4.5 Scheduling Strategies for Downlink Packet Transmission in W-CDMA UMTS
Mr Muhammad Kazmi, Mr Philippe Godlewski, Mr Christophe Cordier
Ecole Nationale Superieure des Telecommunications

Tuesday Track8 1:30PM

Poster A

Harborview WTC UL

2.8.3.3 Some Results on Channel Capacity When Using Multiple Antennas
Mr Quentin Spencer, Dr Lee Swindlehurst
Brigham Young University

2.8.3.4 Comparison of Indoor Propagation Channel Characteristics at 893MHz and 37.2GHz
Dr Larbi Talbi, Dr Gilles Delisle
Université du Québec à Hull

2.8.3.5 Wide Band Indoor Radio Channel Measurements at 5.8 GHz
Mr Iñigo Cuiñas, Ms Mercedes Sanchez Varela, Dr Manuel Garcia Sanchez
Universidade de Vigo

2.8.3.6 Performance Evaluation of Space-Time Block Coding Using a Realistic Mobile Radio Channel Model
Mr Hector Carrasco-Espinosa, Dr Jose Delgado-Penin, Dr Javier Rodriguez-Fonollosa
Universitat Politecnica de Catalunya

2.8.3.7 Combined Pilot Aided and Decision Directed Channel Estimation for the RAKE Receiver
Ms Anna Zhuang, Mr Markku Renfors
Nokia Mobile Phones

2.8.3.9 Evaluation of Space-time Turbo-codes for Third Generation Systems
Dr Alister Burr
University of York

2.8.3.10 Spatial Domain Interference Canceler Using Multistage Adaptive Array with Precise Timing Estimation
Dr Nishimura Toshihiko, Dr Ohgane Takeo, Dr Ogawa Yasutaka
Graduate School of Engineering, Hokkaido University

2.8.3.15 Characterisation of Cross Polarisation Discrimination in Forest Environments
Mr Istvan Zsolt Kovacs, Mr Patrick C.F. Eggers, Mr Kim Olesen
Center For Person Kommunikation, Aalborg University

2.8.3.16 In-Network Evaluation of Mobile Handset Performance
Mr Jesper Nielsen, Mr Gert F. Pedersen
Center for Person Kommunikation, Aalborg University

2.8.3.17 The Fading Characteristics in the Microcellular Environments Using Deterministic Prediction Model
Mr Byoung-Seong Park, Mr Do-Hyung Choi, Dr Han-Kyu Park
Dept. of Electrical & Computer Eng., Yonsei University

2.8.3.18 Statistical Characteristics of Pedestrian-Induced Fading
Mr Francesco Villanese, Dr William G. Scanlon, Dr Noel E. Evans
Centre for Communication Engineering - University of Ulster

2.8.3.21 Prediction of Fading Signal in a Multipath Environment
Dr Rodney Vaughan, Mr Paul Teal, Mr Raviv Raich
Industrial Research Limited

2.8.3.24 An Antenna Array Receiver Using Channel Estimation In a DS/CDMA System with M-ary Orthogonal Modulation
Mr Jeongho Park, Mr Sukhyun Yoon, Dr Chaneon Kang
Information & Telecomm. Lab. Dept. of E&C Eng. Yonsei. Univ.

2.8.3.26 Efficient Simulation of Fading Channels within a Packet Simulator
Mr Ratish Punnoose, Mr Pavel Nikitin, Dr Daniel Stancil
Carnegie Mellon University

2.8.3.27 Subspace-Based Blind Joint Detection of Fading, Asynchronous Cochannel TDMA Signals
Mr Jing Wang, Dr James Cavers
Simon Fraser University

2.8.3.28 Multiple-Input Multiple-Output (MIMO) Radio Channel Measurements
Ms Carol Martin, Dr Jack Winters, Mr Nelson Sollenberger
AT&T Labs-Research

2.8.3.30 Comparison of the Electromagnetic Properties of Building Materials at 5.8 GHz and 62.4 GHz
Mr Iñigo Cuiñas, Mr Jean-Pierre Pugliese, Dr Akram Hammoudeh
Universidade de Vigo

Wednesday Track1 08:30AM

Propagation & Channel Models

Federal WTC ML

3.1.1.1 PCS Band Angle of Arrival Measurements Using a 4 Element Linear Array
Perry Wilson, PeterPapazian
Institute for Telecommunication Sciences

3.1.1.2 Isolation and Analysis of the Log-Normal Shadowing Component
Ms Terri Lowe, Dr Jay Weitzen
TRW

3.1.1.3 Finite Sample Estimates for Mobile Channels
Dr Rodney Vaughan
Industrial Research Limited

3.1.1.4 Direction Dispersion and Space Selectivity in the Mobile Radio Channel
Prof Bernard Fleury
Center for Person Kommunikation

3.1.1.5 Radio Network Planning with Neural Networks
Thomas Binzer, FriedrichLandstorfer
Institute of Radio Frequency Technology

Wednesday Track1 10:30AM

Propagation & Channel Models

Federal WTC ML

3.1.2.1 Water Enhancement for Macro amd Microcells
Dr David Lee, Dr William Lee
Vodafone AirTouch Plc

3.1.2.2 Joint Estimation of the Space-time Distributed Signal Parameters
Jonghyun Lee, ChongHyunLee, Joohwan Chun
Korea Advanced Institute of Science and Technology

3.1.2.3 Spatio-Temporal Characteristics at Base Station with Microwave Urban Propagation
Mr Hironari Masui, Mr Masanori Ishii, Mr Kozo Sakawa
YRP Key Tech Labs

3.1.2.4 A Multiple Input/Multiple Output Channel Model for Simulation of TX and RX Diversity Wireless Systems
Mr Matthias Stege, Mr Marcus Bronzel, Prof Gerhard Fettweis
University of Technology Dresden

3.1.2.5 A Path Loss Model with Height Variation in Residential Areas Based on Experimental and Theoretical Studies Using a 5G/2G Dual Band Antenna
Mr Naoki Kita, Dr Akio Sato, Dr Masahiro Umehira
Nippon Telegraph and Telephone Corporation

Wednesday Track1 1:30PM

Propagation & Channel Models

Federal WTC ML

3.1.3.1 Wideband Channel Sounding at 5.1 GHz for Angular and Polarisation Diversity on Hiperlan Diversity
Mr Alain Sibille, Mr Juergen Kunisch
ENSTA

3.1.3.2 Radiation Phantoms for Handheld Phones
Dr Gert F Pedersen
Aalborg University

3.1.3.3 Mobile Radio Prediction Model Considering Long Term Fading in Urban Microcellular Environment
Dr Ki-Hong Song, Dr Yeon-Ho Chung
Dongeui Institute of Technology

3.1.3.4 An Analysis of Fading Mechanisms for Fixed Antennas
Mr Jack Smith, Mr Doug Reed, Mr Hande Prashanth
Motorola

3.1.3.5 The Eta-mu Distribution: A General Fading Distribution
Dr Michel Daoud Yacoub
School of Electrical and Computer Engineering - UNICAMP

Wednesday Track1 3:30PM

Propagation & Channel Models

Federal WTC ML

3.1.4.1 Application of RBF Neural Networks to the Prediction of Propagation Loss over Irregular Terrain
Mr Ruben Fraile, Dr Narcis Cardona
Universidad Politecnica de Valencia

3.1.4.2 Radio Propagation in Urban Small Cells Environment at 2 GHz: Experimental Spatio-temporal Characterization and Spatial Wideband Channel Model
Mr Philippe Laspougeas, Mr Patrice Pajusco, Mr Jean-Claude Bic
France Télécom CNET

3.1.4.3 A Stochastic Multiple-Input-Multiple-Output Radio Channel Model for Evaluation of Space-Time Coding Algorithms
Klaus Pedersen, Jean PhilippeKermoal, Preben Mogensen
Aalborg University

3.1.4.4 Prediction of Path Loss in Environments with High Rised Buildings
Mr Frederiksen Frank, Mr Preben E. Mogensen, Mr Jan-Erik Berg
Aalborg University

3.1.4.5 Mathematical Models for Radiosignals Dynamic Range Prediction
Dr Vladimir Mordachev
Belarus State University of Informatics and Radioelectronics

Wednesday Track2 08:30AM

Multimedia

Backbay WTC ML

3.2.1.1 Dynamic QoS Control for Wireless ATM Networks
Mr Ruifeng Zhao, Mr Hailin Jiang, Mr Zhenhui Tan
Modern Communication Research Institute

3.2.1.2 QoS Constrained Resource Allocation for Multimedia Wireless Networks
Mr Harold Zheng, Ms Sherry Wang, Dr John Copeland
Georgia Institute of Technology

3.2.1.3 Mobility Management and Routing Algorithms for Soft Handoff in Wireless Mobile Data Network Using MGCP
Mr Yong-i Kim, Dr Hwang Soo Lee
Dept. EE, Korea Advanced Institute of Science and Technology

3.2.1.4 A Framework for Mathematical Modeling of 2-tier Hierarchical Mobile Ad-Hoc Networks
Mr Jung-hee Ryu, Dr Dong-Ho Cho
Korea Advanced Institute of Science and Technology

3.2.1.5 Performance Evaluation of Hybrid OFDM/CDMA/SFH Approach for Wireless Multimedia
Mohinder Jankiraman, Dr Ramjee Prasad
Delft University of Technology

Wednesday Track2 10:30AM

Multimedia

Backbay WTC ML

3.2.2.1 Soft Reservation Multiple Access with Priority Assignment(SRMA/PA): A Novel MAC Protocol for QoS-Guaranteed Integrated Services in Mobile Ad-Hoc Networks
Dr Chung Gu Kang
Korea University of Korea

3.2.2.2 HOLPRO: A New Rate Scheduling Algorithm for CDMA Downlink Networks
Ms Aikaterini Varsou, Dr H. Vincent Poor
Princeton University

3.2.2.3 Link Layer Buffer Size Distributions for FTP and HTTP/1.0 Applications in an IS-2000 System
Dr Farooq Khan
Lucent Technologies

3.2.2.4 Mobile IP Based DECT Multimedia Architecture for IMT-2000
Mr Amoakoh Gyasi-Agyei, Dr Seppo J. Halme
Helsinki Univ. of Technology, Communications Laboratory

3.2.2.5 Multimedia Mobile Terminal P-link Station with TDMA-TDD Technology
Mr Osamu Nakamura, Mr Ishiguro Takayuki, Dr Ohtsuka Hiroyuki
NTT DoCoMo Inc.

Wednesday Track2 1:30PM

Multimedia

Backbay WTC ML

3.2.3.1 An Enhanced Reliable Multicast Protocol for Wireless Environments
Mr Djamel Sadok, Prof Paulo Roberto Freire Cunha, Dr Judith Kelner
Centro de Informatica, Universidade Federal de Pernambuco

3.2.3.2 Application of Erasure-only Decoded Reed-Solomon Codes in Cell Recovery for Congested ATM Networks
Dr Behnam Kamali
Mercer University

3.2.3.3 On-Demand Associativity-Based Multicast Routing for Ad Hoc Mobile Networks
Prof Chai Keong Toh, Mr Santithorn Bunchua, Mr Guillermo Guichal
Georgia Institute of Technology

3.2.3.4 Optimum Rate and Power Adaptation for Multirate CDMA
Syed Jafar, Dr Andrea Goldsmith
Stanford University

3.2.3.5 Quality of Service Control over GPRS Data Network
Dr Shiao-Li Tsao
Industrial Technology Research Institute

Wednesday Track2 3:30PM

Multimedia

Backbay WTC ML

3.2.4.1 IEEE 802.11 and ETSI Hiperlan Type 1: Performance Comparison under Influence of a Burst-Noise Channel
Mr Zoran Hadzi-Velkov, Mr Boris Spasenovski
Faculty of Electrical Engineering at Macedonia

3.2.4.2 TCP over Asymmetric CDMA Radio Links
Mr Yong Bai, OgielskiAndy
WINLAB, Rutgers University

3.2.4.3 Block Codes with Soft-decision Trellis Decoding in Compressed Image Transmission over Rayleigh Fading Channel
Dr Yuan Dongfeng, Ms Gao Chunyan
Department of Electronics Engineering, Shandong University

3.2.4.4 Evaluation of Mobile Ad Hoc Networking Techniques in a Cellular Network
Prof Ramjee Prasad, Mr Carl Wijting
Center for Person Kommunikation, Aalborg University

3.2.4.5 Erlang Capacity of CDMA Systems with Adaptive Arrays
Dr Peter McLane, Mr Srikanth Subramanian
Queen’s University

Wednesday Track3 08:30AM

Wireless Access

Cambridge WTC LL

3.3.1.1 Performance of TCP/IP over IS-2000 Based CDMA Radio Links
Dr Ashok Rudrapatna, Mr Yong Bai, Dr Pengfei Zhu
Bell Labs, Lucent Technologies

3.3.1.2 Performance of Multicarrier CDMA with MSK Modulation and One-bit Differential Detection in a Multipath Fading Channel
Dr Said Elnoubi, Dr Abbas ElShamly
Alexandria University

3.3.1.3 Performance of Space-Time Multi-user Detection in Synchronous DS-CDMA Systems with FEC Coding
Mr Walaa Hamouda, Dr Peter McLane
Queen's University

3.3.1.4 Intelligent Call Admission Control for Differentiated QoS Provisionings in Wideband CDMA Cellular Systems
Chung-Ju Chang, Mr Scott Shen
Dep. of Comm. Eng. of National Chiao Tung Univ., Taiwan

3.3.1.5 Dynamic 3G Network Selection for Increasing the Competition in the Mobile Communications Market
Mr Gwenael LE BODIC, Dr Demessie GIRMA, Dr James IRVINE
University of Strathclyde

Wednesday Track3 10:30AM

Wireless Access

Cambridge WTC LL

3.3.2.1 Efficient Water-filling Algorithms for Gaussian Multiaccess Channel with ISI
Mr Chaohuang Zeng, Ms Louise Hoo, Dr John Cioffi
Stanford University

3.3.2.2 Dynamic Time-Division-Duplex Wireless Local Loop
Dr Mohsen Kavehrad, Dr Junsong Li, Dr Reinaldo Valenzuela
The Pennsylvania State University

3.3.2.3 Admission Control for Future Multi-Service Wideband Direct-Sequence CDMA (WCDMA) System
Mr. Bjorn Hjelm
University of Colorado

3.3.2.4 Analysis of the Uplink of an Asynchro-nous Multi-user DMT OFDMA System
Eng Andrea Tonello, Dr Nicola Laurenti, Prof Silvano Pupolin
University of Padova - DEI - Department of Electronics

3.3.2.5 Radio Link Performance and Traffic Capacity of Indoor Wireless Systems Integrated with Outdoor Cellular
Dr Fortunato Santucci, Dr Fabio Graziosi, Ing Valerio Di Claudio
University of L'Aquila, Dept. of Electrical Engineering

Wednesday Track3 1:30PM

Wireless Access

Cambridge WTC LL

3.3.3.1 Admission Control in Wireless Systems with Heterogeneous Traffic and Overlay Cell Structure
Dr Fortunato Santucci, Dr Wei Huang, Prof Vijay K. Bhargava
University of L'Aquila, Dept. of Electrical Engineering

3.3.3.2 An Improved Channel Inversion Based Adaptive OFDM System in the Presence of Channel Errors and Rapid Time Variations
Mr Emad Al-Susa, Prof Richard Ormondroyd
University of Bath

3.3.3.3 Integrated Air Interface Access Schemes for Broadband Wireless Communications
Mr Galileo De Obaldia, Dr Dave Grace, Mr Tim Tozer
University of York

3.3.3.4 A Modified Hopfield Neural Network Algorithm for Cellular Radio Channel Assignment
Dr Saied Elnoubi, Dr Nawal A. El-Fishawy, Eng. Wael El-Sersy
Faculty of Electronic Engineering at Menouf

3.3.3.5 A Novel FHSS Multiple-Access System Using M-ary Orthogonal Walsh Modulation
Mr Joonyoung Cho, Mr Youhan Kim, Dr Kyungwhoon Cheun
Pohang University of Science and Technology, KOREA (ROK)

Wednesday Track3 3:30PM

Wireless Access

Cambridge WTC LL

3.3.4.1 Quality of Service and Grade of Service Optimisation with Distributed Dynamic Channel Allocation Schemes Based on Hopfield Neural Network Algorithms
Mr Oscar Lazaro, Dr Demessie Girma
University of Strathclyde

3.3.4.2 High-rate OFDM Codes for Peak Envelope Power Reduction and Error Correction
Mr Makoto Yoshida, Mr Eizou Ishizu, Mr Saito Tamio
Fujitsu Laboratories LTD.

3.3.4.3 Trunking Efficiency and Load Balance for Multiple-Carrier CDMA Systems
Dr Allen He, MarkNewbury
Lucent Technologies

3.3.4.4 Spatial CDMA - A Distributed Multiple Antenna Access Method for Broadband Wireless Communication
Dr Joseph Hui
Arizona State University

3.3.4.5 Theoretical Analysis of the Pilot Tones Assisted COFDM System over Fast Multipath Fading Channels
Mr Lei Wan, Dr Vimal Kishore Dubey
Comm Res Lab, School of EEE, Nanyang Technological Univ.

Wednesday Track4 08:30AM

Transmission Technology I

Northend WTC LL

3.4.1.1 Pre-equalization of MIMO Wireless Channels with Delay Spread
Mr Hemanth Sampath, Dr Helmut Bolcskei, Dr Paulraj Arogyaswami
Stanford University

3.4.1.2 Combining Turbo-Code and Co-channel Interference Cancellation
Ms Hiroko Hisata, Dr Jun Horikoshi
Gunma University

3.4.1.3 Adaptive Successive Interference Cancellation for the IS-95 Uplink
Prof John Shynk, Mr Kuei-Chiang Lai
University of California, Santa Barbara

3.4.1.4 Initial Characterisation of Multiple-Input Multiple-Output (MIMO) Channels for Space-Time Communication
Dr Mark Beach, Mr Darren McNamara, Dr Peter Karlsson
University of Bristol

3.4.1.5 Application of RS-coded MPSK Modulation Scenarios to Compressed Image Communication in Mobile Fading Channel
Mr Zhang Lijun, Prof Cao Zhigang, Ms Gao Chunyan
State Key Lab on Microwave and Digital Communication

Wednesday Track4 10:30AM

Transmission Technology I

Northend WTC LL

3.4.2.1 Parallel Decoding of Turbo Codes Using Soft Output T-Algorithms.
Mr Udayan Dasgupta, Dr Krishna Narayanan
Department of Electrical Engineering, Texas A&M University,

3.4.2.2 Amplitude and Phase Estimation Considerations for Asynchronous CDMA with Superorthogonal Codes and Successive Interference Cancellation
Mr Jeffrey Andrews, Dr Teresa Meng
Stanford University

3.4.2.3 RAKE Receiver with Adaptive Interference Cancellers for a DS-CDMA System in Multipath Fading
Joo Hyun Yi, Jae HongLee
Shool of Electrical Engineering, Seoul National University

3.4.2.4 Joint Equalization and Decoding of Trellis Coded Signals Using the Generalized Viterbi Algorithm
Mr Raphael VISOZ, Mr Antoine Berthet, Mr Patrick Tortelier
France Telecom

3.4.2.5 Performance of HD-Parallel Interference Cancellation in DS-CDMA System
Dr Xue Gao, Mr Chengshu Li
Modern Communication Research Institute

Wednesday Track4 1:30PM

Transmission Technology I

Northend WTC LL

3.4.3.1 Reducing the Error Floor in Turbo Codes by Using Non-Binary Constituent Encoders
Dr Javier Garcia-Frias
University of Delaware

3.4.3.2 A New Efficient Decision-Aided ISI Canceler for Mobile Communication Systems
Mr Panos Karaivazoglou, Prof Kostas Berberidis
University of Patras

3.4.3.3 New TCM Codes for AWGN and ISI Channel by Matched Symbol-Mapping Method
Mr Keattisak Sripimanwat, Dr R.M.A.P. Rajatheva, Dr Kazi Ahmed
Telecommunications program, Asian Institute of Technology.

3.4.3.4 Interference Suppression Receiver with Adaptive Antenna Array for Code Division Multiple Access Communication Systems
Mr Weiguang Hou, Dr Hyuck Kwon
Wichita State University

3.4.3.5 A New Space-time Minimum Variance Receiver for CDMA Systems and its Performance Analysis
Joowan Kim, SoohongKim, Joohwan Chun
SK Telecom (IMT-2000 Development Group)

Wednesday Track4 3:30PM

Transmission Technology I

Northend WTC LL

3.4.4.1 Combined DA/DD/NDA Channel Estimation Techniques for Downlink WCDMA
Mrs Elena-Simona Lohan, Dr Markku Renfors
Tampere University of Technology

3.4.4.2 Evaluation of the MAP Decoding for the Turbo Codes of IMT-2000
Mr Gyongsu Lee, Sin-ChongPark
Information and Communications University

3.4.4.3 A Spreading Sequence Allocation Procedure for MC-CDMA Transmission Systems
Dr David Mottier, Mr Damien Castelain
Mitsubishi Electric ITE

3.4.4.4 Improved Viterbi Decoder Metrics for Two-Stage Detectors in DS-CDMA
Mr Ayman Elezabi, Dr Alexandra Duel-Hallen
North Carolina State University

3.4.4.5 Iterative Super-Exponential-Estimator for Fast Blind Channel Identification of Mobile Radio Fading Channels
Mr Andreas Schmidbauer
Institute for Communications Engineering (LNT)

Wednesday Track5 08:30AM

Transmission Technology II

Beaconhill WTC LL

3.5.1.1 Performance of TCM Schemes over Equalized Channels
Dr Tho Le-Ngoc, Dr Hichem Besbes
Concordia University

3.5.1.2 Optimal Adaptive Precoding for Frequency-Selective Nagakami-m Fading Channels
Dr Anna Scaglione, Prof Sergio Barbarossa, Prof Georgios Giannakis
University of Minnesota

3.5.1.3 Blind Adaptive Multiuser Detection for Multirate CDMA
Dr Ivan Howitt, Mr Neal Seidl, Dr James Richie
University of Wisconsin - Milwaukee

3.5.1.4 Soft-Output M-Algorithm for the Concatenation of Detecting and Decoding
Mr Huaiyu Dou, Mr Xiangning Fan, Mr Guangguo Bi
Southeast University

3.5.1.5 Demodulation of D2PSK with a DPSK Detector and Improved Error Performance in AWGN
Dr Shouxing Qu, Mr Yuan Jiang
Cadence Design Systems

Wednesday Track5 10:30AM

Transmission Technology II

Beaconhill WTC LL

3.5.2.1 A Method to Improve the Transmission Performance under Slow to Fast Fading Environment
Ms Yoshiko Saito, Mr Keiichi Kitagawa, Mr Mitsuru Uesugi
Matsushita Communication Industrial Co., Ltd.

3.5.2.2 Performance Evaluation of a Direct Conversion Radio for Tri-Band GSM and GPRS
Mr Daniel Fague
Analog Devices, Inc.

3.5.2.3 Evaluation of Link-level Performance Improvements by Using Smart Antennas for the TD-CDMA Based UTRA TDD Mobile Radio System
Mr Gerald Lehmann
SIEMENS AG, Germany

3.5.2.4 A Fast Selective-Direction MMSE Timing Recovery Algorithm
Dr Hanks zeng, Dr Ye (Geoffrey) Li, Dr Jack Winters
AT&T Labs-Research

3.5.2.5 Iterative Channel Estimation and Decoding with Product Codes in Multicarrier Systems
Mr Frieder Sanzi, Mr Stephan ten Brink
Institute of Telecommunications

Wednesday Track5 1:30PM

Transmission Technology II

Beaconhill WTC LL

3.5.3.1 Coding of PPM Based Modulation Techniques to Improve the Performance of Infrared WLAN's
Mr Rui Alves, Dr Atilio Gameiro
Institute of Telecommunications

3.5.3.2 Optimal Sequences to Suppress the Multiuser Interference for CDMA Systems
Mr Jibing Wang, Dr Ming Zhao, Dr ShiDong Zhou
Tsinghua University

3.5.3.3 Turbo Decoding in a Rayleigh Fading Channel with Estimated Channel-State Information
Mr Shin Hyundong, Mr Kim Sunghwan, Mr Lee Jae Hong
Seoul National University, Institute of New Media & Commun.

3.5.3.4 A Searcher for the Synchronization Channel of WCDMA
Mr Gyongsu Lee, Sin-ChongPark
Information and Communications University

3.5.3.5 Reduced-Complexity MAP Equalizer for Dispersive Channels
Mr Michael Lopez, Dr Kambiz Zangi, Dr Jung-Fu Cheng
Massachusetts Institute of Technology

Wednesday Track5 3:30PM

Transmission Technology II

Beaconhill WTC LL

3.5.4.1 Mobile Radio Multi-Link Analysis
Dr Jonqyin Sun, IrvingReed
Lucent Technologies

3.5.4.2 An Effective CIC (Co-channel Interference Canceller) Scheme for Multi-rate CDMA
Mr Suzuki Toshinori
KDD R&D Laboratories Inc.

3.5.4.3 A Novel Coherent Demodulation for M-QAM OFDM Signal Operating in the Burst Mode
Prof Hideo Kobayashi
Mie University

3.5.4.4 A Novel Symbol Frame and Carrier Frequency Synchronization for Burst Mode OFDM Signal
Prof Hideo Kobayashi
Mie University

3.5.4.5 Performance of an Experimental 384 kb/s 1900 MHz OFDM Radio Link in a Wide-Area High-Mobility Environment
Mr Bruce McNair, Dr Leonard Cimini, Mr Nelson Sollenberger
AT&T Labs - Research

Wednesday Track6 08:30AM

Wireless PCS I

Waterfront2 WTC LL

3.6.1.1 Transmission of Embedded VBR Multimode Encoded Speech on UMTS Common Packet Channels
Dr Babich Fulvio, Dr Vatta Francesca, Dr Deotto Lia
University of Trieste, Italy

3.6.1.2 A Connection Admission Control Using Transient Outage Probability in CDMA Systems
Dr Yeong Min Jang, JeehwanAhn
ETRI - Radio & Broadcasting Tech. Lab.

3.6.1.3 Classification and Characterisation of Mobile Broadband Services
Eng Fernando José Velez, Prof Luis Manuel Correia
University of Beira Interior

3.6.1.4 A Cost Effective Paging Scheme for IMT-2000 Systems
Wenye Wang
Georgia Institute of Technology

Wednesday Track6 10:30AM

Wireless PCS I

Waterfront2 WTC LL

3.6.2.1 Hardware-Fitted Modeling and Simulation of QoS of VoIP Over a Wireless LAN
Prof Kaveh Pahlavan
WPI

3.6.2.2 Uplink Capacity of Multirate Multicell CDMA Wireless Local Loop System with Narrowbeam Antenna and SIR Based Power Control
Dr Francois Chin, Mr Yan Zhou, Dr Ying-Chang Liang
Centre for Wireless Communications

3.6.2.3 Diversity Combining of a Fast Varying, Correlated Multipath Fading Channel for Direct-Sequence Spread-Spectrum Systems
Mr Wen Gao, Mr Shiauhe Tsai, Dr James S. Lehnert
School of Electrical and Computer Engineering, Purdue Univ.

3.6.2.4 A Cellular Architecture for Supporting Geocast Services
Mr BEONGKU AN
New Jersey Institute of Technology

3.6.2.5 Design and Implementation of an Experimental Wireless Terminal
Mr Jan-Derk Bakker, Dr Ramjee Prasad
Delft University of Technology

Wednesday Track6 1:30PM

Wireless PCS I

Waterfront2 WTC LL

3.6.3.1 Soft Handover Gain in WCDMA
Nicola Binucci, MaurizioCaselli
Ericsson Telecomunicazioni SpA

3.6.3.2 Voice/Data Transmissions in Common Packet Channel of 3GPP
Mr Jae-Woo So, Dr Dong-Ho Cho
Dept. of EE, KAIST

3.6.3.3 Performance Analysis of Group Handoff in Fiber-Optic Cellular System
Mr Young-uk Chung, Dr Dong-Ho Cho
Dept. of EE, KAIST

3.6.3.4 On the Rake Receiver Performance
Dr Boujemaa Hatem, Dr Siala Mohamed
France Telecom CNET/DMR/IIM

3.6.3.5 Dealing with Location Uncertainty in Mobile Networks Using Contextual Temporal Fuzzy Cognitive Maps
Mr Satish Jamadagni
Silicon Automation Systems

Wednesday Track6 3:30PM

Wireless PCS I

Waterfront2 WTC LL

3.6.4.1 The Rough Road to IMT-2000 RTT Standard
Mr Björn Hjelm
University of Colorado, Boulder

3.6.4.2 Link Performance Evaluation of EGPRS in LA and IR Modes
Dr Sangarapillai Lambotharan, Dr Davood Molkdar
Motorola

3.6.4.3 Performance Evaluation of Cellular Mobile Systems with Successive Co-Channel Interference Cancellation
Mr Mazen Hasna, Dr Mohamed Slim Alouini
University of Minnesota, Twin Cities

3.6.4.4 A New Type of Multiuser Detector for CDMA Mobile Communication
Ms Yongyu Chang, Mr Dacheng Yang, Mr Wenbo Wang
Beijing University of Posts and Telecommunications

3.6.4.5 Adjustment Loop Transmit Power Control During Soft Handover in CDMA Cellular Systems
Mr Kojiro Hamabe
NEC Corporation

Wednesday Track7 08:30AM

Wireless PCS II

Waterfront3 WTC LL

3.7.1.1 Optimizing Antenna Parameters for Sectorized W-CDMA Networks
MSc Sara Stefansson, PhD B. Christer V. Johansson
Allgon System AB

3.7.1.2 An Exclusive Intergroup Handoff Algorithm in Fiber-Optic Microcell/Picocell Radio System
Mr Young-uk Chung, Dr Dong-Ho Cho
Dept. of EE, KAIST

3.7.1.3 Enhanced Soft Handover Algorithms for UMTS System
Mr Xinjie Yang, Dr Shahram Ghaheri-Niri, Dr Rahim Tafazolli
University of Surrey

3.7.1.4 Automatic Base Station Placement And Dimensioning for Mobile Network Planning
Mr Xuemin Huang, Dr Ulrich Behr, Prof Werner Wiesbeck
Institut fuer Hoechstfrequenztechnik und Elektronik (IHE)

3.7.1.5 Impact of Mobile-Originated Short Message Service on the Digital Control Channel of TDMA Systems
Mr Milap Majmundar
SBC Technology Resources, Inc.

Wednesday Track7 10:30AM

Wireless PCS II

Waterfront3 WTC LL

3.7.2.1 Sigmoid-Basis Nonlinear Power Control Algorithm for Mobile Radio Systems
Mr Zekeriya Uykan, Dr Heikki Koivo
Helsinki University of Technology, Control Engineering Lab.

3.7.2.2 Modification of Maximum Power Handoff with Timer (MPHT) Algorithm in Cellular Mobile Communications
Mr Shahriar Shirvani Moghaddam
Iran University of Science & Technology (IUST)

3.7.2.3 New Handoff Initiation Algorithm (Optimum Combination of Hysteresis & Threshold Based Methods)
Mr Shahriar Shirvani Moghaddam
Iran University of Science & Technology (IUST)

3.7.2.4 Iterative Equalization and Decoding with Channel Shortening Filters for Space-Time
Mr Gerhard Bauch, Dr Naofal Al-Dhahir
Institute for Communications Engineering, Munich University

3.7.2.5 Mobile Stations Location with Heterogeneous Data
Dr Maurizio A Spirito
Nokia Research Center

Wednesday Track7 1:30PM

Wireless PCS II

Waterfront3 WTC LL

3.7.3.1 Simulation Results of a Typical GSM Pico-cell System
Dr Davood Molkdar
Motorola

3.7.3.2 Novel Strategy for Call Admission Control
Mr Marjan Bozinovski, Mr Petar Popovski, Dr Gavrilovska Liljana
Institute of Telecommunications, Faculty of EE, Skopje

3.7.3.3 Performance Analysis of GSM Traffic Channel Capacity With(out) High Speed Circuit Switched Data
Mr Jahangir Sarker, Dr Seppo Halme, Mr Mika Rinne
Communications Laboratory, Helsinki University of Technology

3.7.3.4 Performance Evaluation of an AAL2 Link Transmission Scheme for Voice and Data Packets in BS-BSC Links
Mr Jae Hoon Chung, Mr Young Hoon Kwon, Mr Ki Hyoung Cho
Korea Advanced Institute of Science and Technology

3.7.3.5 Suppress Multi-Access Interference Detector Based on Software Radio
Mr Ji Xiang, Mr Zhang Ping
Beijing University of Posts and Telecommunications

Wednesday Track7 3:30PM

Wireless PCS II

Waterfront3 WTC LL

3.7.4.1 Capacity Simulations and Analysis of CDMA2000 Packet Data Services
Lin Ma, ZhigangRong
Nokia Research Center

3.7.4.2 Effects of Code Acquisition Design Parameters in the IMT-2000 System
Mr Chung Jaewook, Mr Jang Ilsoon
ETRI (Electronics and Telecommunications Research Institute)

3.7.4.3 Optimization of Fixed Network Design in Cellular Systems Using Local Search Algorithms
Mr Bhaskar Krishnamachari, Dr Stephen Wicker
School of Electrical Engineering, Cornell University

3.7.4.4 A Formal Approach to Modeling and Performance Analysis of Shared Channels
Dr Lia Deotto, Dr Fulvio Babich
Trieste University - Italy

3.7.4.5 A New Method to Solve the Dropped Call in CDMA Cellular System
Mr Wei Deng, Dr Bo Ai
Beijing Univ.of Posts& Telecommunications

Wednesday Track8 08:30AM

Poster B

Harborview WTC UL

3.8.1.1 Up-link Performance of the DQRUMA MAC Protocol in a Realistic Indoor Environment for W-ATM Networks.
Mr Christos Verikoukis, Dr Juan Olmos
Universidad Polytecnica de Catalunya

3.8.1.12 Mutual Coupling and Scattering Effects on Cellular CDMA Systems Using Smart Antennas
Mr Alexander M Wyglinski, Dr Steven D. Blostein
Queen's University

3.8.1.15 Field Test Results for Beam and Null Simultaneous Steering S/T-Equalizer in Broadband Mobile Communication Environment
Mr Nobuhiko Miki, Mr Shigeru Tomisato, Dr Tadashi Matsumoto
NTT Mobile Communications Network Inc.

3.8.1.17 Validation of Handset Antenna Test Methods
Mr Mikael Bergholz Knudsen, Dr Gert F. Pedersen, Dr Bo G. H. Olsson
Bosch Telecom Danmark A/S

3.8.1.18 Sensitivity Analysis of Compact Antenna Arrays in Correlated Nakagami Fading Channels
Dr James Zeidler, Ms Jianxia Luo, Dr Stephen McLaughlin
University of California, San Diego

3.8.1.19 Measurements of Wideband Multi-element Transmit - Receive Diversity Channels in the UMTS-band
Mr Patrick Eggers
Aalborg University, Center for PersonKommunikation

3.8.1.20 A Pre-FFT Equalizer Design for Application to HIPERLAN/2
Mr Simon Armour, Dr Andy Nix, Prof Dave Bull
University of Bristol

3.8.1.22 Spreading Sequence Sets with Zero Correlation Zone for Quasi-Synchronous CDMA Communication Systems
Mr Xinmin Deng, Mr Pingzhi Fan
Institute of Mobile Communications

3.8.1.23 Tracking of Time-Frequency Misalignments in 2D-Pilot-Symbol-Aided Coherent OFDM Systems
Ms Maria Julia Fernandez-Getino Garcia, Dr Santiago Zazo, Dr Jose M. Paez-Borrallo
Polytechnical University of Madrid

3.8.1.24 On Optimum Stochastic Rate/Power Control: Solution by a Primal-Dual Algorithm
Lic Tiina Heikkinen
University of Lund, Department of Mathematical Statistics

Wednesday Track 8 1:30PM

Poster C

Harborview WTC UL

3.8.3.1 Channel Assignment in Cellular Networks without Channel Separation Constraints
Dr Stephen Hurley, Dr Roger Whitaker, Dr Derek Smith
Cardiff University

3.8.3.2 The System Performance Analysis of Link Adaptation in Hiperlan/2
Mr Zihuai Lin, Mr Göran Malmgren, Mr Johan Torsner
Ericsson Radio Systems AB

3.8.3.3 CLR Performance of VBR Traffic in Wireless ATM Access Networks
Dr Lee Ha Cheol, Dr Lee Byung Seub
Yuhan College, Dept. of Information and Telecomm.

3.8.3.4 An Optimum Rate/Power Allocation Scheme for Downlink in Hybrid CDMA/TDMA Cellular System
Mr Rathneswaran Vannithamby, Dr Elvino Sousa
University of Toronto

3.8.3.5 Applying Splitting Algorithms to Channel Allocation Problems-Parameter Selection
Mr Xi Xie, Dr Stephen Wicker
Cornell University

3.8.3.6 A Multiple Access/Self Interference Canceller Receiver for DS-CDMA Multiuser Detection over Fading Channels
Dr Santiago Zazo, Dr Faouzi Bader, Dr J. M. Paez Borallo
Universidad Politecnica de Madrid-ETSI Telecomunicacion

3.8.3.7 A Prioritized Random Access with Discriminative Power Ramping Step Size
Mr Hyudae Kim, Mr Sunghong Wie, Dr Dongho Cho
Korea Advanced Institute of Science and Technology

3.8.3.8 An Adaptive Two-Stage Decorrelator for DS/CDMA Systems
Dr Pramod Varshney, Ms Weihua Ye
Syracuse University

3.8.3.9 Hierarchical Cell Structures with Adaptive Radio Resource Management
Mr Christian Hartmann, Mr Oliver Schlegelmilch
Munich University of Technology

3.8.3.10 Capacity Comparison of Packet Options in CDMA2000 with Various Power Control Methods
Dr Yiping Wang, Dr David Paranchych, Mr Ashvin Chheda
Nortel Networks

3.8.3.12 Exploring Adaptive Turbo Coded Modulation for Flat Fading Channels
Sriram Vishwanath, Dr Andrea Goldsmith
Stanford University

3.8.3.13 Dedicated Priority Function SEG for TD-CDMA Cellular System
Dr Takahiro Shoji, Mr Katsuhiko Hiramastu, Mr Osamu Kato
Matsushita Communication Ind. Co., Ltd.

3.8.3.15 Mobile Assisted Handoff Based on Euclidean Distance Metric
Mr Ruifeng Zhao, Mr Hailin Jiang, Mr Zhenhui Tan
Modern Communication Research Institute

3.8.3.17 An OFDM System with Reduced Non-linear Effect
Mr Masaaki Harada, Dr Masaaki Katayama, Dr Akira Ogawa
Ogawa Laboratory, Depertment of Information Electronics,

3.8.3.18 Throughput Enhancement in TDMA Through Carrier Interference Pulse Shaping
Mr Balasubramaniam Natarajan, Dr Carl Nassar, Dr Steve Shattil
Colorado State University

3.8.3.19 Hybrid Type-II ARQ/AMS Supported by Channel Predictive Scheduling in a Multi-User Scenario
Mr Nilo Casimiro Ericsson, Ms Sorour Falahati, Prof Arne Svensson
Uppsala University, Signals & Systems Group

3.8.3.20 Performance Analysis of Fixed Cell Assignment in Broadband Wireless Networks
Dr Jae Lim, Dr Harold Stern
Samsung Telecommunications America, Inc.

3.8.3.21 An Investigation on Capacity Versus Guard-Bands for the TDD Mode in UMTS
Mr Harald Haas, Dr Steve McLaughlin, Dr Gordon Povey
The University of Edinburgh

3.8.3.22 Fair Resource Management in Diverse Cellular Systems
Dr James Irvine, Mr Gwenael Le Bodic, Mr Robert Atkinson
University of Strathclyde

3.8.3.23 A New Estimation Scheme for Frequency and Timing Offsets in OFDM Systems
Mr Sekchin Chang, Dr Edward J. Powers
The University of Texas at Austin

3.8.3.26 Improving the Transmission Efficiency in the Mobile Communication Systems Using Turbo Codes
Dr Atef Abou-El-Azm, Dr Nawal A. El-Fishawy, Dr. Farid S. Farid S. Mohammed
Faculty of electronic engineering at Menouf

3.8.3.27 Comparison of Fading Channel Capacity Under Different CSI Assumptions
Dr Mohamed-Slim Alouini, Dr Andrea Goldsmith
University of Minnesota

3.8.3.28 Comparison of the Level Crossing Rate and Average Fade Duration of Rayleigh, Rice, and Nakagami Fading Models with Mobile Channel Data
Mr Ali Abdi, Mr Kyle Wills, Dr H. Allen Barger
University of Minnesota

3.8.3.29 Considering Downlink Intermodulation Distortion in Switched Multibeam Antennas for Cellular Radio Systems
Mr Mattias Wennström
Signals & Systems Group, Uppsala University, Sweden

3.8.3.30 Simulation of Error Process on Mobile Radio Channels Based on Chaos Equations
Dr Lorenzo Favalli, Prof Eugenio Costamagna, Mr. Marco Rizzardi
University of Pavia, Department of Electronics

Thursday Track1 08:30AM

Mobile Satellite

Federal WTC ML

4.1.1.1 Building Shielding Loss Measurements and Modelling at the 5 GHz Band in Office Building Areas
Andres Alayon Glazunov, LennartHamberg, Jonas Medbo
Ericsson Radio Systems AB

4.1.1.2 Engineering Aspects and Performance Evaluation of a Multi-Service Low Earth Orbit Mobile Satellite Communication System
Dr Mostafa Nofal
Faculty of Electronic Engineering at Menouf

4.1.1.3 Improving Subscriber Position Location Using a Hybrid Satellite-assisted and Network-based Technique
Mr Dimitrios Drakoulis, Mr Sofoklis Kyriazakos, Dr George Karetsos
National Technical University of Athens

4.1.1.4 Error Control for Ka-Band Land Mobile Satellite Communications Systems
Dr Jeffrey Schodorf
MIT Lincoln Laboratory

4.1.1.5 Wideband Wave Propagation Measurements for Local Multipoint Distribution Systems (LMDS) at 26 GHz
Mr Juergen Maurer, Mr Dirk Didascalou, Prof Werner Wiesbeck
University of Karlsruhe (TH)

Thursday Track1 10:30AM Mobile Satellite

Federal WTC ML

4.1.2.1 Role of PAF in a Multi-satellite CDMA Based LEO Satellite System
Mr Abdul Waheed Umrani, Dr Vimal K. Dubey
Nanyang Technological University

4.1.2.2 Location-aware Long-lived Route Selection in Wireless Ad Hoc Networks
Mr Dongkyun KIM, Dr Chai-Keong Toh, Dr Yanghee Choi
Department of Computer Engineering,Seoul National University

4.1.2.3 Bayesian Bootstrap Filtering for Multiple Mobile Position Determination Using LEO Satellites
Sangwoo Cho, JoohwanChun, Richard Roy
Korea Advanced Institute of Science and Technology

4.1.2.4 Adaptive Dynamic Channel Allocation Scheme for Spotbeam Handover in LEO Satellite Networks
Mr Sungrae Cho
Georgia Institute of Technology

4.1.2.5 Performance Evaluation of Intersegment Handover Procedures in UMTS Scenario
Dr Michele Luglio, Mr Marco Leo
University of Rome Tor Vergata

Thursday Track1 1:30PM

Mobile Satellite

Federal WTC ML

4.1.3.1 Bluetooth-based Wireless Connectivity in an Automotive Environment
Mr Rene Nuesser, Dr Rodolfo Mann Pelz
Robert Bosch GmbH

4.1.3.2 A New Approach to the Geometry of TOA Location
Dr James Caffery
University of Cincinnati

4.1.3.3 Wireless Communication System Architecture and Physical Layer Design for Airport Surface Management
Mr Zhiqiang Wu, Dr Carl Nassar, Arnold Alagar
Colorado State University

4.1.3.4 Enhancing Authentication Mechanism with Mobile Agent in Mobile Communication System
Mr Wei Deng, Dr Bo Ai
Beijing Univ.of Posts and Telecommunications

4.1.3.5 Security Architecture for Wireless Residential Networks
Dr Prashant Krishnamurthy, Dr Joseph Kabara
University of Pittsburgh

Thursday Track1 3:30PM

Mobile Satellite

Federal WTC ML

4.1.4.1 On Performance of Switching Techniques for Integrated Services in CDMA Wireless Systems
Ms Sebnem Ozer, Dr Symeon Papavassiliou, Dr Ali Akansu
New Jersey Institute of Technology

4.1.4.2 A Power-Saving Multicast Routing Scheme in 2-tier Hierarchical Mobile Ad-Hoc Networks
Mr Jung-hee Ryu, Dr Dong-Ho Cho
Korea Advanced Institute of Science and Technology

4.1.4.3 An Expert System Architecture for the Design of Local Area Networks
Dr Nawal El-fishawy, Dr Salah Khamis
Faculty of electronic enigineering at Menouf

4.1.4.4 Performance Analysis of Handoff Scheme in Integrated Voice/Data Wireless Networks
Dr Qing-An Zeng, Dr Dharma P. Agrawal
University of Cincinnati

4.1.4.5 Delay Performance Analysis of Voice Traffic in a Cellular Wireless ATM Network
Dr Tung Chong Wong, Dr Jon W. Mark, Dr Kee Chaing Chua
Centre for Wireless Communications, Nat'l Univ. of Singapore

Thursday Track2 08:30AM

Transportation

Backbay WTC ML

4.2.1.1 Interfacing to the On-Board Diagnostic System
Dr Micheal Parten, Mr Sam Broyles
Texas Tech University

4.2.1.2 Vehicular Information BROadcasting Relay (VIBROR) Protocol for Inter-Vehicle Communications
Mr Satoshi Matsuda, Prof Hiromi Okada
Information Network Laboratory, Kansai University

4.2.1.3 Distributed Antenna System for Mass Transit Communications
Mr Mike Fitzmaurice, Mr Mike Wyrzykowski
Toronto Transit Commision / Futurecom Systems Group

4.2.1.4 An Anti-Car-Collision System Using GPS and 5.8GHz Inter-Vehicle Communication at an Off-Sight Intersection
Mr Yuichi Morioka, Mr Sota Toshiro, Dr Nakagawa Masao
Dept. of Information and Computer Science, Keio University

4.2.1.5 Technical Evaluation of an Electronic Millimeter Wave Pre-View Mirror
Dr Marc Heddebaut, Mr Jean Rioult, Ms Marielle Cuvelier
INRETS - French National Institute for Transport Research

Thursday Track2 10:30AM

Transportation

Backbay WTC ML

4.2.2.1 Real-Time Low Cost Passive Imaging System for Automotive Applications
Mr Ahmad CHAMSEDDINE, Dr Marco KLINGLER, Dr Nathalie ROLLAND
INRETS

4.2.2.2 Positioning Emergency Calls Along Roads and Motorways Using a GSM Dedicated Cellular Radio Network
Mr Mourad Laoufi, Dr Marc Heddebaut, Prof Jean - Michel Rouvaen
INRETS - French National Institue for Transport Research

4.2.2.3 On-board Dynamics Failure Detection of the Two-motor-driven Electric Vehicle System
Dr Tae-Gyu Chang, Dr Hoi D. Ha, Mr Jung G. Kim
School of Electrical Engineering, Chung-Ang University

4.2.2.4 Hybrid OFDM for Future DSRC Applications
Mr Jakka Bhasker Reddy, Mr Kurt Herremans, Ms Liesbet Van der Perre
Interuniversity Microelectronics Center (IMEC)

Thursday Track2 1:30PM

Transportation

Backbay WTC ML

4.2.3.1 Evaluation of GPS Availability for Train Positioning Along a Railway Line
Miss Juliette Marais, Mr Bruno Meunier, Dr Marion Berbineau
INRETS - LEOST

4.2.3.2 Comparison of Current Solutions for the Provision of Voice Services to Passengers on High Speed Trains
Dr James Irvine, Dr Farrokh Abrishamkar
University of Strathclyde

4.2.3.3 Metro-North Railroad Telecommunica-tions Infrastructure Project
Stephen Weiss, WayneStaley
Clifton, Weiss & Associates, Inc.

4.2.3.4 Potential Use of Near, Mid and Far Infrared Laser Diodes in Automotive LIDAR Applications.
Dr Amer Samman, Dr Lajos Rimai, Dr Jim McBride
Ford Motor Company

4.2.3.5 Modeling of Hybrid Electric Vehicles Using Gyrator Theory: Application to Design
Dr Mark Ehsani, Mr Jean Yves Routex, Mr Sebastien Gay-Desharnais
Texas A&M University

Thursday Track2 3:30PM

Transportation

Backbay WTC ML

4.2.4.1 Modeling and Control of a Hybrid Electric Vehicle
Dr Micheal Parten, Dr Jordan Berg, Dr Timothy Maxwell
Texas Tech University

4.2.4.2 The Multisensor Tracking System with the Airborne Sensor to Mitigate the Effect of Cross-Range Errors
Mr KAWAMOTO DAISUKE, Dr KAWASE TETSUYA, Mr HASHIRAO MASATAKA
KEIO UNIVERSITY

4.2.4.3 Mobile Location Estimation in Cellular Networks Using Fuzzy Logic
Dr Xuemin Shen, Dr Jon W. Mark, Mr Jun Ye
University of Waterloo

Thursday Track3 08:30AM

Wireless Access

Cambridge WTC LL

4.3.1.1 Capacity Enhancement Using Intelligent Relaying for Future Personal Communication Systems
Mr Timothy Harrold, Dr Andrew Nix
University of Bristol

4.3.1.2 Adaptive Transmission Rate Control Scheme for ABR Services in the CBR and ABR Services Integrated DS/CDMA Systems
Mr Takumi Ito, Prof Seiichi Sampei, Prof Norihiko Morinaga
Graduate School of Engineering, Osaka University

4.3.1.3 Telegeoinformatics for Efficient Resource Allocation and Protocol Development in Wireless Networks
Dr Prashant Krishnamurthy, Dr Hassan Karimi
University of Pittsburgh

4.3.1.4 Packet Scheduling in SDMA Based Wireless Networks
Mr Ulrich Vornefeld
ComNets, RWTH Aachen University of Technology

4.3.1.5 Uplink Acquisition of Synchronisation Parameters in MC-CDMA Systems
Mr Bader Faouzi, Dr Santiago Zazo, Dr J. M. Paez Borallo
Universidad Politecnica de Madrid- ETSI Telecomunicacion

Thursday Track3 10:30AM

Wireless Access

Cambridge WTC LL

4.3.2.1 DRMA with Multiple Slots Reservation and Retransmission Algorithm Using Exponential Backoff Scheme
Mr Yota Komoriya, Ms Mioko Tadenuma, Mr Nishino Yoshiyuki
Dept. of Information & Computer Science, Keio University

4.3.2.2 Capture with Delay and Power Randomization in Spread-Spectrum CDMA Slotted ALOHA System
Ms Mi-Sun Do, Mr Youngjun Park, Dr Jai-Yong Lee
Yonsei University

4.3.2.3 Maximum Packing Channel Assignment Algorithm in Multi-Rate Traffic Microcellular Networks
Mr Felipe A Cruz-Pérez, Mr Domingo Lara-Rodríguez, Dr Mauricio Lara
Comm. Section, Elect. Eng. Dept., CINVESTAV-IPN

4.3.2.4 Predictive Adaptive Loading for Hiperlan II
Mr Steven Thoen, Dr Liesbet Van der Perre, Dr Marc Engels
Inter-University Micro Electronics Center (IMEC)

4.3.2.5 A Radio Channel Emulator for WCDMA, Based on the Hidden Markov Model (HMM)
Ms Anna Umbert, Dr Pilar Diaz
POLYTECHNIC UNIVERSITY OF CATALONIA (UPC)

Thursday Track3 1:30PM

Wireless Access

Cambridge WTC LL

4.3.3.1 The Impact of Front End LNA on Cellular System
Dr David Lee, William C. Y.Lee
Vodafone AirTouch

4.3.3.2 Performance Comparison of the Radio Link Protocols of IEEE802.11a and HIPERLAN/2
Dr Hui Li
Ericsson Eurolab Deutschland GmbH

4.3.3.3 Adaptive Traffic Control Scheme in Hierarchically Structured CDMA Cellular Systems
Mr jongin Kim, Dr Youngnam Han, Mr Jihwan Ahn
Information and Communications University

4.3.3.4 Interference-Plus-Noise Covariance Matrix Estimation for Adaptive Space-time Processing of DS/CDMA Signals
Mr Ioannis Psaromiligkos, Dr Stella Batalama
Dept. of Electrical Engineering, SUNY at Buffalo

4.3.3.5 An Iterative Heuristic Algorithm for Applied Channel Assignment
Mr Pete Boyer, Dr Pablo Vicharelli
GTE Laboratories

Thursday Track3 3:30PM

Wireless Access

Cambridge WTC LL

4.3.4.1 Forward Link Capacity of Coherent DS-CDMA and MC-CDMA Broadband Packet Wireless Access in a Multi-cell Environment
Dr Sadayuki Abeta, Dr Hiroyuki Atarashi, Dr Mamoru Sawahashi
NTT DoCoMo Inc.

4.3.4.2 A Power Control and Scheduling Concept for EGPRS
Mr Arne Simonsson
Ericsson Erisoft AB

4.3.4.3 Cellular Coverage for Efficient Transmission Performance in MBS
Dr José Fernandes, Eng José Garcia
Universidade de Aveiro, Instituto de Telecomunicações

4.3.4.4 Sensitivity of Performance of SARP and HARP to Traffic Loading Variations in a Hierarchical Cellular System under Non-uniform Traffic Distribution
Dr Francis Lau, CLee
Hong Kong Polytechnic Univeristy

4.3.4.5 Uplink and Downlink Capacity Evaluations of a Multi-tier CDMA Mobile Network Employing Directional Handset Antennas
Prof Richard Ormondroyd, Mr Francesco Nazzarri
Cranfield University

Thursday Track4 08:30AM

Transmission Technology I

Northend WTC LL

4.4.1.1 MAP Equalization for DQPSK in Multi-pass Demodulation
Dr Ali Khayrallah, Dr Tracy Fulghum, Dr Dennis Hui
Ericsson, Inc.

4.4.1.2 Achieving Flexibility in a Viterbi Decoder DSP Coprocessor
Dr Dale Hocevar, Dr Alan Gatherer
Texas Instruments

4.4.1.3 Analysis of Internal Data Width Requirements for SISO Decoding Modules
Ms Yufei Wu, Dr Brian Woerner
MPRG Lab, Virginia Tech

4.4.1.4 Iterative Channel Estimation for EGPRS
Dr PAUL STRAUCH, Mr Carlo Luschi, Dr Alexandr Kuzminskiy
Bell Labs, Lucent Technologies

4.4.1.5 Blind Multiuser Detection in Multipath CDMA Channels with Unknown Correlated Noise
Dr Stefano Buzzi, Prof Vincent Poor
Princeton University

Thursday Track4 10:30AM

Transmission Technology I

Northend WTC LL

4.4.2.1 Error Performance Analysis of Space-Time Codes
Dr Costas Georghiades, Mr Murat Uysal
Texas A&M University

4.4.2.2 A Fixed Point Approach to Wideband Amplifier Compensation for IS-2000
Prof J R Cruz, Mr John Wustenberg, Ms Helen Xing
The University of Oklahoma

4.4.2.3 Frame Synchronization of Turbo Coded Systems Using a List-Synchronization Technique
Mr M Mostofa Howlader, Dr Brian Woerner
Virginia Tech

4.4.2.4 Subspace Based Multiuser Detector Algorithms
Dr Parthapratim De
Mitsubishi Electric Information Technology Center America

4.4.2.5 Performance Analysis of a Narrowband Two-Signal Receiver Based on Joint Detection
Mr Marco Moretti, Dr Gerard Janssen
Delft University of Technology

Thursday Track4 1:30PM

Transmission Technology I

Northend WTC LL

4.4.3.1 Two-Dimensional Code Acquisition in Fixed Multipath Channels
Mr Marcos Katz, Dr Jari Iinatti, Savo Glisic
Centre for Wireless Communications, University of Oulu

4.4.3.2 Performance of Soft-Output Space-Time Equalization for EGPRS
Carlo Luschi, AlexandrKuzminskiy, Paul Strauch
Bell Laboratories, Lucent Technologies

4.4.3.3 Generalized RAKE Reception for Cancelling Interference from Multiple Base Stations
Dr Yi-Pin Wang, Dr Greg Bottomley
Ericsson Inc. USA

4.4.3.4 Multiuser-Macrodiversity Detection in Rayleigh Fading Channels
Ms Lisa Welburn, Dr James K. Cavers, Dr Kevin W. Sowerby
Simon Fraser University

4.4.3.5 Generalized Principal Ratio Combining for Space-Time Codes in Slowly Fading Channels
Young Ju Kim, Hwang SooLee
KAIST

Thursday Track4 3:30PM

Transmission Technology I

Northend WTC LL

4.4.4.1 Improved Single-User Detector for WCDMA Systems Based on Griffiths' Algorithm
Mr Jonas Karlsson, Prof Hideki Imai
University of Tokyo

4.4.4.2 Multiuser Detection with Partial Information for Asynchronous CDMA-Based Radio Networks
Mr Liqing Zhang, Dr Michael Kaplan
McGill University

4.4.4.3 On the Potential of Multimode Antenna Diversity
Mr Thomas Svantesson
Chalmers Univ. of Tech.

4.4.4.4 Highly Efficient Large-Domain Moment-Method Analysis and CAD of Radio-Frequency Antennas Mounted on or Situated in Vehicles
Dr Branislav Notaros
University of Massachusetts Dartmouth

4.4.4.5 Channel Precoding for pi/4-DQPSK and MSK over Frequency-Selective Slow Fading Channels
Miss Jennifer Sui Ying Lee, Dr Weihua Zhuang
University of Waterloo

Thursday Track5 08:30AM

Transmission Technology II

Beaconhill WTC LL

4.5.1.1 Combined Temporal and Spatial Filter Structures for CDMA Systems
Ms Aylin Yener, Dr Roy D. Yates, Dr Sennur Ulukus
Wireless Information Network Laboratory, Rutgers University

4.5.1.2 Iterative Demodulation and Decoding of Differential Space-time Block Codes
Mr Anh Nguyen, Dr Mary Ann Ingram
Georgia Institute of Technology

4.5.1.3 Interference Cancellation with Permutation Trellis Codes
Prof Hendrik C Ferreira, Prof A J Han Vinck
Rand Afrikaans University

4.5.1.4 DS Code Acquisition in Slowly Fading Multi-path Channel
Dr Jari Iinattu
University of Oulu

4.5.1.5 Capacity and Quality Enhancement for ANSI-136 Downlink Using Interference Cancellation and Beamforming
Dr Abdulrauf Hafeez, Dr Molnar Karl
Ericsson Inc.

Thursday Track5 10:30AM

Transmission Technology II

Beaconhill WTC LL

4.5.2.1 Bit Error Probability of M-ary Quadrature Amplitude Modulation
Dr Dongweon Yoon, Mr Kyongkuk Cho, Dr Jinsock Lee
Dept. of Info. and Comm. Eng., Taejon University

4.5.2.2 The Capacity Analysis of SSB/BPSK-DS/CDMA with Successive Interference Canceller
Mr Myoungseob Lim
Chonbuk National University

4.5.2.3 Performance of a Residue Number System Based DS-CDMA System over Bursty Communication Channels
Dr A S Madhukumar, Dr Francois Chin
Centre for Wireless Communications

4.5.2.4 A Self-calibration Algorithm for an Asynchronous CDMA-Based Antenna Array
ChongHyun Lee, JoohwanChun
Korea Advanced Institute of Science and Technology

4.5.2.5 Multiuser Detection for Multi-Rate CDMA in Multi-Path Fading Channels
Mr Po-Wei Fu, Dr Kwang-Cheng Chen
Institute of Communication, National Taiwan University

Thursday Track5 1:30PM

Transmission Technology II

Beaconhill WTC LL

4.5.3.1 An Efficient Carrier Frequency Offset Estimation Scheme for OFDM System
Young Seok Lim, Jae HongLee
School of Electrical Engineering, Seoul National University

4.5.3.2 A Re-Investigation of Scalar Quantization for Mobile Speech Transmission
Mr Thomas Hindelang, Dr Tim Fingscheidt, Richard V. Cox
Institute for Communications Engineering

4.5.3.3 Joint Channel Tracking of Co-channel Signals for IS-136 Mobiles
Dr Huseyin Arslan, Dr Karl Molnar, Dr Abdulrauf Hafeez
Ericsson Inc.

4.5.3.4 Space-Time-Block-Coded OFDM Systems with Transmit Beamformers for High-Speed Indoor Wireless Communications
Mr Kuo-Hui Li, Dr Mary Ann Ingram
Georgia Institute of Technology

4.5.3.5 Variable Length Equalisers for Broadband Mobile Systems
Mr Felip Riera-Palou, Dr James M Noras
University of Bradford

Thursday Track5 3:30PM

Transmission Technology II

Beaconhill WTC LL

4.5.4.1 Investigation of Two-Branch Transmit Diversity with Two-Branch Receive Diversity in Micro Cellular Environments
Mr Mikael Bergholz Knudsen, Dr Gert F. Pedersen
Bosch Telecom Danmark A/S

4.5.4.2 Efficient Algorithm for Adjustment of Adaptive Predistorter in a Transmitter for OFDM Signals
Prof Krzysztof Wesolowski, Mr Janusz Pochmara
Poznan University of Technology

4.5.4.3 Full Exploitation of Diversity in Space-time MMSE Receivers
Dr Manzano Vidal, Dr Margarita Cabrera, Mr Adrian Agustín
Universitat Politècnica de Catalunya

4.5.4.4 Iterative Detection for Rayleigh Space-Time Channels
Ms Monica Navarro, Dr Alex Grant
Institute for Telecommunications Research (UniSA)

4.5.4.5 PCC: Principal Components Combining for Dense Correlated Multipath Fading Environments
Dr Mohamed-Slim Alouini, Dr Anna Scaglione, Dr Georgios Giannakis
University of Minnesota

Thursday Track6 08:30AM

Wireless PCS I

Waterfront2 WTC LL

4.6.1.1 Call Admission Control Algorithm for CDMA Systems with Adaptive Antennas
Mr Yoshitaka Hara
YRP Mobile Telecommunications KTRL Co., Ltd.

4.6.1.2 Transmit Diversity Schemes for Broadband Mobile Communication Systems
Dr Frederick Vook, Dr Timothy Thomas
Motorola Labs - Communication Systems Research Lab

4.6.1.3 An Adaptive VCT Based Handoff Scheme for Mobile Base Station in ATM Network
Eunjung Kim, Dr Dongho Cho
Korea Advanced Institute of Science and Technology

4.6.1.4 IN Service Management in IMT-2000 Network
Ms Yong Lee, Ms HyunSook Kim, Dr JooSeok Song
Yonsei University

4.6.1.5 Mobile Multimedia Platforms
Mr Andrew Stirling
Arthur D. Little Ltd

Thursday Track6 10:30AM

Wireless PCS I

Waterfront2 WTC LL

4.6.2.1 Channel Based Adaptive Resource Allocation at the MAC Layer in UMTS TD-CDMA Systems
Dr Roberto Verdone, Mr Mirko Ferracioli, Dr Velio Tralli
CSITE-CNR, University of Bologna

4.6.2.2 The NLOS Error Mitigation Techniques for Position Location Using IS-95 CDMA Networks
Mr Sung-Shik Woo, Mr Heung-Ryeol You
Korea Telecom

4.6.2.3 Performance of 64 kbit/s Data Transmision with the ARQ Protocol of the DECT Standard on Fading Channels
Ms Yi YUAN-WU
CNET France Telecom

4.6.2.4 Complexity-Performance Trade-offs in Turbo Codes for IMT-2000
Dr Ivan Fair, Ms L.F. Choy, Dr Witold Krzymien
University of Alberta

4.6.2.5 A High Channel Efficiency Transceiver Based on Direct Access Frequency Synthesis Technique
Mr Chung Ming Yuen, Mr Kim Fung Tsang
City University of Hong Kong

Thursday Track6 1:30PM

Wireless PCS I

Waterfront2 WTC LL

4.6.3.1 Adaptive Quantization for Third-Generation TDMA Transmitters
Dr Giridhar Mandyam
Nokia Research Center

4.6.3.2 Automatic Base Station Selection and Configuration in Mobile Networks
Dr Stephen Hurley
Cardiff University

4.6.3.3 Effects of Power Control Errors and Multipath Fading on BER in a Cellular CDMA System
Mr Juan Manuel Romero Jerez, Ms Margarita Ruiz Garcia, Dr Antonio Diaz Estrella
University of Malaga

4.6.3.4 Finding User Position Location Using the Doppler Information in Satellite CDMA Systems
Soohong Kim, Joohwan ChunChun
Korea Advanced Institute of Science and Technology

4.6.3.5 An Integrated Approach for Performance Modeling and Evaluation of Soft Handoff in CDMA Mobile Cellular Systems
Mr Nagate Atsushi, Dr Sugano Masashi, Dr Murata Masayuki
Osaka University

Thursday Track6 3:30PM

Wireless PCS I

Waterfront2 WTC LL

4.6.4.1 Potential Physical Layer Enhancements for AMR Speech over EDGE
Dr Nefedov Nikolai
Nokia Research Center

4.6.4.2 Uplink Capacity of FFF W-CDMA Mode in UMTS Networks for Mixed Services
Antonio Rodrigues, JoaoSilva, Hugo Pinto
IST/IT - TECHNICAL University OF LISBON

4.6.4.3 A Traffic dispersion Strategy in Fiber-optic Multitier Cellular System
Mr Young-uk Chung, Dr Dong-Ho Cho
Dept. of EE, KAIST

4.6.4.4 Channel Estimation Using Short Training Sequences
Dr Hasan A Amca, Mr Ahmet Rizaner, Mr Ali Hakan Ulusoy
EMU - Department of Electrical and Electronic Engineering

4.6.4.5 Joint Deployment of Macrocells and Microcells over Urban Areas with Spatially Non-Uniform Traffic Distributions
Mr Byungchan Ahn, Dr Jung-Wan Cho, Dr Hyunsoo Yoon
Korea Advanced Institute of Science and Technology

Thursday Track7 08:30AM

Wireless PCS II

Waterfront3 WTC LL

4.7.1.1 Optimization of Power Management in a CDMA Radio Network
Dr Jin Yang, JinsongLin
Vodafone AirTouch

4.7.1.2 System Level Performance Evaluation of GPRS for Various Traffic Models
Dr Walter Featherstone, Mr Leonardo Provvedi, Dr Davood Molkdar
Motorola

4.7.1.3 System Level Performance Evaluation of EGPRS in GSM Macro-Cell Einvironments
Dr Walter Featherstone, Dr Davood Molkdar
Motorola

4.7.1.4 Performance Studies of Rate Matching for WCDMA Mobile Receiver
Dr Insoo Sohn
Electronics & Telecommunication Research Institutue (ETRI)

4.7.1.5 A Call Admission Algorithm with Optimal Power Allocation for Multi Class Traffic in CDMA Systems
Mr Kuenyoung Kim, Dr Youngnam Han
Information and Communication University at Taejon

Thursday Track7 10:30AM

Wireless PCS II

Waterfront3 WTC LL

4.7.2.1 An Analysis of the 3-Stage Search Process in W-CDMA
Dr Srinath Hosur, SundararajanSriram
Texas Instruments Inc.

4.7.2.2 Adaptive Path Selective Linear Multipath-Decorrelating Receiver for CDMA Frequency-Selective Fading Channels
Dr Hasan A Amca, Mr Ali Hakan Ulusoy, Mr Ahmet Rizaner
EMU - Department of Electrical and Electronic Engineering

4.7.2.3 GPS-Based Message Broadcast for Adaptive Inter-Vehicle Communications
Mr Min-Te Sun, Mr Kentaro Yamada, Dr Ten H. Lai
The Ohio State University

4.7.2.4 Multi-Cell WCDMA Signal Processing Simulation
Mr Vikram Kaul, Mr Wenfeng Zhang, Dr Roy Yates
Wireless Information Network Laboratory (WINLAB)

4.7.2.5 Enhanced Capacity Management for 2nd and 3rd Generation Cellular Networks
Mr Sofoklis Kyriazakos, Mr Dimitris Drakoulis, Mr Christos Kossidas
National Technical University of Athens

Thursday Track7 1:30PM

Wireless PCS II

Waterfront3 WTC LL

4.7.3.1 Teletraffic Modelling and Performance Evaluation in Multilayer Cell Architecture
Mr Walter A Dos Santos, Dr Shahram Ghaheri-Niri, Dr Rahim Tafazolli
Centre for Communication Systems Research

4.7.3.2 CDMA2000 Reverse Link: Design and System Performance
Dr Sandip Sarkar, Mr Tao Chen, Dr Edward Tiedemann
Qualcomm Incorporated

4.7.3.3 Performance Enhancements for the GSM/EDGE Radio Access Network
Dr Claes Tidestav, Mr Mathias Eriksson, Mr Arnaud Vedrine
Ericsson Radio Systems AB

4.7.3.4 Performance Optimization of Single Frequency Broadcast Systems in FDD-CDMA Cellular Bands for Wireless Multimedia Services
Mr Wilson Wong, Dr Elvino Sousa
University of Toronto

4.7.3.5 Voice Enabled Request and Response for Mobile Devices Supporting WAP Protocol
Mr Aditya Mohan, Mr Akshay Mohan
HFCL

Thursday Track7 3:30PM

Wireless PCS II

Waterfront3 WTC LL

4.7.4.1 Effects of Fading Correlation on Multiple Antenna Reception Mobile OFDM Systems
Mr Andreas Hutter, Mr Joachim Hammerschmidt, Ms Elisabeth de Carvalho
Technische Universität München

4.7.4.2 A Novel Deregistration Strategy for Mobile Networks
Mr Zuji Mao, Dr Christos Douligeris
University of Miami

4.7.4.3 The Performance of the M-ary DS/ CDMA Cellular System over Rayleigh-Fading Channel with a Hybrid EGC-SC Scheme
Mr Kathiravetpillai Sivanesan, Dr W.H. Lam
Dept. of EEE, The University of Hong Kong

4.7.4.4 Capacity Comparison of Turbo and Convolutional Codes in Multi-cell DS-CDMA Systems
Dr Kwok Li, Mr Yuan Li
Nanyang Technological University

4.7.4.5 Multi-antenna Wireless Base Stations in TD/CDMA Communications Systems
Mr Christoph Walke, Prof Bernhard Rembold
Institute of High Frequency Technology

Thursday Track8 08:30AM

Poster D

Harborview WTC UL

4.8.1.1 Effect of the Cell Size and the Path Loss Model on the GSM Erlang Capacity for Microcellular Environments
Mr Genaro Hernández-Valdez, Mr Felipe A. Cruz-Pérez
Universidad Autónoma Metropolitana

4.8.1.2 Turbo-coded Error Control for Wireless ATM Networks
Dr Jin Kim
SK Telecom

4.8.1.4 Blind Decision Feedback Equalizer with Tracking Ability in Severe Propagation Conditions
Dr Monia Turki-Hadj Alouane, Dr Meriem Jaidane-Saidane, Dr Sofiene Cherif
Laboratoire des Systèmes de Communications

4.8.1.6 A Suitable Set Partitioning Method For MTCM with Biorthogonal Symbol Sets
Mr Chunlong Bai, Prof Ping Zhang, Dr Weidong Wang
Beijing University of Posts and Telecommunications

4.8.1.7 Postdetection Diversity Receiver for DAPSK Signal over the Rayleigh and Rician Fading Channel
Jong Youl Lee, Young MoChung, Sang Uk Lee
New Media & Comm. Inst. Seoul National University

4.8.1.8 The Effect of Branch Correlation in Dual MRC, SC and SWC Diversity Systems for Noncoherent MFSK over Nakagami-m Fading Channels
Mr C M Lo, Dr W.H. Lam
The University of Hong Kong

4.8.1.9 Multi-Channel (Blind) Equalization for TDMA Cellular Systems
Dr Young-Hoon Kim, Dr Insoo Sohn
Electronics and Telecommunications Research Institute

4.8.1.10 Analysis of Iterative Decoding for Serial Concatenated Convolutional Codes
Dr WeiDong Wang, Dr Ping Zhang, Mr ChunLong Bai
Beijing University of Posts and Telecommunications

4.8.1.11 Multicarrier CDMA Systems with Transmit Diversity
Mr Xiaodong Cai, Dr Ali Akansu
New Jersey Institute of Technology

4.8.1.12 The Adaptive Least Mean Square Algorithm Using Several Step Size for Multiuser Detection
Mr Byung-goo Choi, Mr Yong-Wan Park
Yeungnam University

4.8.1.13 Space-Time Multistage Parallel Interference Cancellation for CDMA
Dr Ning Kong
TRW

4.8.1.14 Code Acquisition System Using Periodic Property of PN Code in Rayleigh Fading Channel
Mr KyungWoon Jang, Mr TaeHoon Kim, Dr YongWan Park
Yeungnam Univ.

4.8.1.15 An Adaptive Channel Estimation Scheme for DS-CDMA Systems
Dr Hyuk Jun Oh
Stanford University

4.8.1.16 Multi-user Detection Using CMA & The Cancellation Method In Fast-Fading Channels
Mr Sunjin Yeom, Mr Jaehong Kim, Dr Yongwan Park
Yeungnam university, Information & Communication Engineering

4.8.1.17 Performance of Coherent Square M-QAM with Lth order Diversity in Nakagami-m Fading
Mr Manjeet Patterh, Dr Tara Kamal, Dr Balwinder Sohi
Sant Longowal Institute of Engineering and Technology (SLIET)

4.8.1.18 The General Procedure For Designing a MTCM Scheme With Biorthogonal Symbol Sets
Mr Chunlong Bai, Prof Ping Zhang, Dr Weidong Wang
Beijing University of Posts and Telecommunications

4.8.1.19 SDR-Based Digital Channelizer/De-Channelizer for Multiple CDMA Signals
Prof Woncheol Lee, Prof Yoan Shin, Prof Sungbin Im
School of Elecronic Engineering, Soongsil University

4.8.1.20 A Fast Software Method of Decorrelating Multiuser Detector in W-CDMA System
Ms Yanjun Hu, Mr Jinkang Zhu, Dr Jun Gu
University of Science and Technology of China

4.8.1.21 Integrated Design of Adaptive Receivers and CDMA/PRMA Multimedia Medium Access Scheme
MsC Roger Hoefel, Dr Francisco Cavalcanti
State University of Campinas - UNICAMP

4.8.1.22 An Efficient Call Admission Control for QoS Provisioning in Wireless Networks
Dr Xuemin Shen, Ms Xiaoning Yang
University of Waterloo

4.8.1.23 Determining Optimal Numbers of Traffic Channels in BS and Vocoders in MSC
Dr Woo-Yong Choi
Hyundai Electronics Industries Co. Ltd.

4.8.1.24 Capacity Analysis of a UTRA-TDD System
Ms Concepción Téllez, Ms Eva González-Parada, Ms Margarita Ruiz-García
Dpto. Teconlogía Electrónica, University of Málaga

4.8.1.25 Edge Compact Control/Data Bandwidth Dimensioning
Dr Thomas Sexton, DeepaDevaraj
Nokia Research Center

4.8.1.26 Outage Probability of a Multicarrier DS/CDMA System with Adaptive Antenna Array
Dr Jin Kim
SK Telecom

4.8.1.27 A New Adaptive Routing Scheme Based on the Traffic Characteristics in Mobile Ad-hoc Networks
Mr Sun-ho Lee, Mr Jung-hee Ryu, Dr Dong-Ho Cho
Korea Advanced Institute of Science and Technology

4.8.1.28 Blocking Performance Evaluation of Link between MSC's for CDMA Inter-MSC Soft Handoff
Dr Woo-Yong Choi
Hyundai Electronics Industries Co. Ltd.

4.8.1.29 Design of Semi Blind Decision Feedback Equalizer with Short Training Sequence
Ms MERIEM JAIDANE, Mr SOFIANE CHERIF, Ms YOUSRA BEN JEMAA
Ecole Nationale d'Ingénieurs de Tunis

4.8.1.30 Dynamic Rate Control Based on Interference and Transmission Power in 3GPP WCDMA System
Mr. Hwang Gyung-Ho, Mr. Cho Dong-Ho
Korea Advanced Institute of Science and Technology

Thursday Track8 1:30PM

Poster E

Harborview WTC UL

4.8.3.1 Mobile Network Traffic Forecasting
Dr Peter Darwood, Mr Warren Linton, Dr Ian Oppermann
Southern Poro Communications

4.8.3.2 A New Multimedia Network Architecture Using 3G CDMA2000
Dr MUN GI CHOI, Mr YINGCHUN XU
3COM CORPORATION

4.8.3.3 Effect of Various Threshold Settings on Soft Handoff Performance in Various Propagation Environments
Mr Sung Jin Hong, Dr I-Tai Lu
Polytechnic University

4.8.3.4 Simple Nonlinear GMSK Receiver for Multipath Environment
Mr Ramon Sanchez-Perez, Dr Casajus Quiros
E.T.S.I. Telecomunicacion, Universidad Politecnica de Madrid

4.8.3.5 An Implementation Method of a Turbo-code Decoder Using a Block-wise MAP Algorithm
Mr Goohyun Park, Mr Sukhyon Yoon, Dr Bubjoo Kang
Info.& Comm. Lab. Dept. of Elec. & Computer Eng. Yonsei Univ.

4.8.3.6 MAP-Algorithm with Fixed-Point Representation for Software Radios
Ms Anne Wiesler, FriedrichJondral
Institut fuer Nachrichtentechnik

4.8.3.7 Noise-reduced GMDF for Acoustic Echo Cancellation in Mobile Environments
Mr Jeffrey Lariviere, Dr Rafik Goubran
Carleton University

4.8.3.9 Adaptive Dynamic Channel Allocation Scheme for Wireless Multimedia
Mr Zhimin Ang, Mr Wuyang Zhou, Mr Jinkang Zhu
University of Science and Technology of China

4.8.3.10 Robust DFE for Limiter-Discriminator Based HIPERLAN Receivers
Mr Ramon Sanchez-Perez, Dr F. Javier Casajus-Quiros, Dr Subbarayan Pasupathy
ETSI Telecomunicacion, Universidad Politecnica de Madrid

4.8.3.11 Hybrid Linear and Non-linear PIC for WCDMA
Dr Xiaofeng Tao, Mr Ming Lei, Dr Ping Zhang
Beijing University of Posts and Telecommunications

4.8.3.14 Signal-strength-based Cellular Location Using Dynamic Window-width and Double-averaging Algorithm
Mr Liangxue Zhu, Mr Jinkang Zhu
University of Science & Technology of China

4.8.3.15 Wireless Data Transmission for High-Speed Train Control
Dr Bing Bu, Mr XiShi Wang
Northern JiaoTong University

4.8.3.18 An Investigation of Inter-cell Interference in UTRA-TDD System
Mr Qingyu Miao, Mr Wenbo Wang, Mr Dacheng Yang
Beijing University of Posts and Telecommunications

4.8.3.21 Techniques to Provide Coverage and Capcity in GSM Pico-cell Environment
Dr Davood Molkdar
Motorola

4.8.3.22 Comparison of Indoor Geolocation Methods in DSSS and OFDM Wireless LAN Systems
Prof Kaveh Pahlavan
WPI

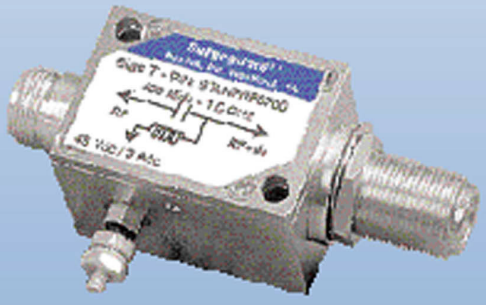
4.8.3.23 Adaptive Antenna Algorithms for Multimedia Communications
Dr John Thompson, Dr Rudy Tanner
The University of Edinburgh

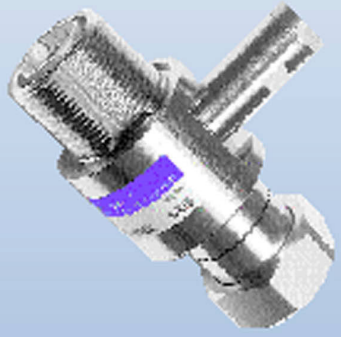
4.8.3.26 Estimating the Gains of Adaptive Antenna Systems for GPRS and EDGE Data Services in GSM Networks
Mr Ulrich Rehfuess, Dr Kolio Ivanov
Siemens AG

4.8.3.29 Flexible Security and a New Structure for Electric Commerce on Software Radio
Mr Makoto Sugita, Dr Uehara Kazuhiro, Dr Kubota Shuji
NTT Network Innovation Laboratories

SurgeGuard™

NexTek SurgeGuard™





SurgeGuard™ Umbrella of Lightning Protection

NexTek, Inc. 439 Littleton Road Westford, MA 01886
Tel: 978-486-0582 Fax: 978-486-0583
www.nexteklightning.com

Chip In To Make OFDM Technology A World-Wide Standard

Fixed Wireless Access • Local Area Networks/Home Multi-media • Road Access Networks

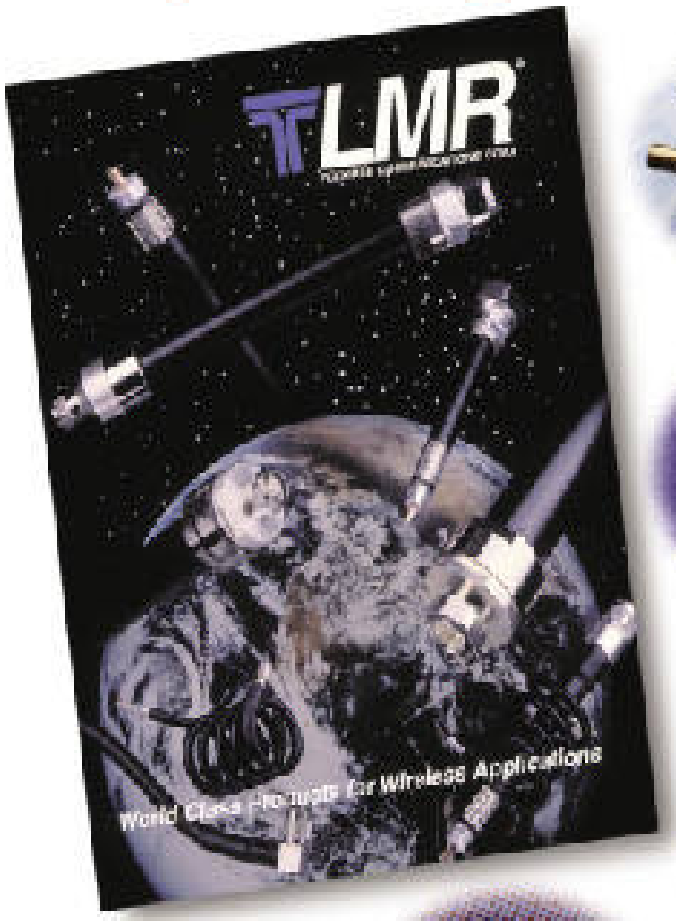
Let your voice be heard; now's the time to get involved. Start your participation at the next OFDM Forum meeting in Tampa, FL in **November 2000.**

For more information about the OFDM Forum, or to learn how you can become a member, visit **www.ofdm-forum.com** or call (403) 207-6303.

The OFDM Forum is a voluntary association of hardware manufacturers, software firms, telecommunications companies and other users of orthogonal frequency division multiplexing (OFDM) technology in wireless applications. The organization was established to create a single, compatible global OFDM standard for cost-effective, high-speed wireless networks on a variety of devices.

www.ofdm-forum.com

Flexible Coax Solutions . . . They're All Right Here

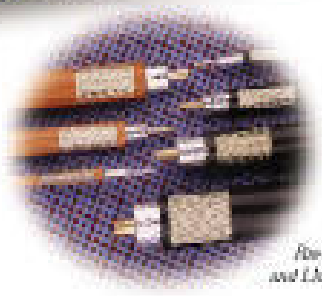


LMR® - BB Braids Waveright Coaxial Cables

ezTRAC® and ezRAD Radiating Cables

A Complete Family of Hardware Accessories and Installation Tools

A Comprehensive Line of Connectors



Fire Resistant LMR® - FLPL Plenum and LMR® - FR Riser Coaxial Cables

A Full Line of Coaxial Cables, Connectors, Hardware Accessories and Tools Plus 50 Years of Experience. Visit our web site for your free catalog today!

TIMES MICROWAVE SYSTEMS
A Smiths Industries company

World Headquarters: 358 Hall Avenue, Wallingford, CT 06492 ■ 203-949-8400, 1-800-867-2629 FAX: 203-949-8423
International Sales: 4 School Brae, Dysart, Kirkcaldy, Fife, Scotland KY1 2XB UK ■ +44(0)1592655428 FAX: +44(0)1592653182
www.timesmicrowave.com