

IEEE VTS NEWS DIGEST

Connecting the Mobile World

Companion to VTS News, Volume 48, Issue 1 February 2001

Features

- 3 Mobile Communications Development in Central and Eastern European Countries
- 3 The Future of Radio is Clear: Satellite Radio
- 3 Airports and Tunnels Get Wired For Wireless

Contents

- 3 Report On VTC2000-Fall
- 5 Transportation Systems

- 5 Standards
- 5 Professional Activities
- 5 Automotive Electronics
- 5 Mobile Radio
- 6 Chapter News and Meetings
- 7 News
- 7 Joint Rail Conference 2001
- 8 27th September 2000 VTS Board Meeting Report
- 11 VTC2001-Spring
- 12 Calls for Papers
- 13 Calendar of Events

Short articles are available on-line. For longer articles, only the abstract is available on-line. VTS News is sent to all VTS members, and is included in the society subscription. Non-VTS members can subscribe at a cost of \$30 per year. For details of this, or for pricing information of single copies, contact the IEEE Customer Service on 1-800-678-IEEE (USA and Canada), +1 732-981-1393 (outside USA and Canada), and FAX: +1 732-981-0027

Foreword

James Irvine, Editor

Happy New Millennium!

Those of us counting from one can now join the computer scientists of this world who insist on starting at zero and agree that we have, on the Gregorian calendar, reached the third millennium.

The cloud to this particular silver lining is that the time has now past for my venerable *Chambers 20th Century Dictionary*, although to be fair to Chambers, they had more foresight than some software developers and changed name to the *Chambers English Dictionary* in 1988.

The relevance of this fact to the *VTS News* is the fact that this particular book is what I refer to when checking my Ps and Qs. While I hope that we all agree that the *VTS News* is published in English, the interesting question is 'which one?' This was brought home to me by a comment to one of our Senior Editors, Frank Lord, that he had made a mistake in his spelling. In fact, Frank faxes his articles to me rather than sending them electronically, and when I rekey them I use British spelling. If you would like to blame anyone, it should be me.

Most columns are submitted electronically, and are only edited for format. Most features do require editing, especially since we are averaging more than one non-native English speaking feature writer per issue. Most of them use International English rather than American English. Other material – this foreword, news items, some reports – are written or rewritten from submitted

material. Editing is done in Scotland, and copy submitted to Piscataway for laying out and printing.

The IEEE Professional Communication Society recently discussed this dilemma (Ron Blicq, 'Guidelines for English Language International Technical Documentation?', *IEEE PCS Newsletter*, Sep/Oct 2000), but found little consensus. Although most respondents wanted a standard, 36% wanted it based on British English, 26% on American English, and a the best part of half, 40%, were undecided. On a sample of 5 words, on one (caulk), Americans favoured the British spelling (to a larger extent than the Europeans, including British, themselves) and on another, (spelt/spelled), the majority everywhere favoured the American spelling. Other words split down country lines, with Canadians and Australasians voting with the Europeans.

One of the key features of the *VTS News* is its timeliness. Columns discussing recent technical developments are in your hands between six and eight weeks from being written. In the light of this, and the fact that there is no real consensus, it is not really practical re-edit 33000 words to standardise on one specific spelling convention. Therefore, while every effort will be made to ensure that spelling is consistent within an individual article, articles will use the convention – American or International – that is most appropriate. I hope that this is an acceptable compromise between readability and speed.

Vehicular Technology Society Executive Committee

President, **J. R. Cruz**

The University of Oklahoma
School of Electrical and Computer Eng
202 West Boyd, Room 219
Norman, OK 73019-0631
Tel: 1 405 325 4280
Fax: 1 405 325 3836
E-mail: cruz@mailhost.ecn.ou.edu

Executive Vice President, **Dennis Bodson**

233 N. Columbus St.
Arlington, VA 22203
Tel: 1 703 243 3743
Fax: 1 703 522 4342
E-mail: bodsond@worldnet.att.com

Vice President Mobile Radio,

Eric J. Schimmel
6216 Hollins Drive
Bethesda, MD 20814
Tel: 1 301 530 7987
E-mail: e.schimmel@ieee.org

Vice President Land Transportation,

Harvey M. Glickenstein
PB Transit & Rail Systems, Inc
3334 Adams Court
Bensalem, PA 19020
Tel: 1 201 648 8700
Fax: 1 201 648 0888
E-mail: h.glickenstein@ieee.org

Vice President Motor Vehicles,

Robert A. Mazzola
R.A. Mazzola Associates.
12500 Crystal Mountain Drive #620
Thompsonville, Michigan 49683.
Tel: 1 231 378 4722
E-mail: rmazzola@prodigy.net

Secretary, **Essam Sourour**

Ericsson, Inc.
7001 Development Drive
Post Office Box 13969
Research Triangle Park, NC 27709
Tel: 1 919 472 7067
Fax: 1 919 472 6555
E-mail: sourour@rtp.ericsson.se

Treasurer, **Charles Backof**

Motorola
8000 W. Sunrise Blvd.
Fort Lauderdale, FL 33322
Tel: 1 954 723 6152
Fax: 1 954 723 6957
E-mail: EPOR16@email.mot.com

VTS Board of Governors

Charles Backof ('01) *VTS Treasurer*

Dennis Bodson ('01) *Executive Vice President, Standards Committee Chairman*

J. R. Cruz ('02), *VTS President*

Robert Fenton ('01)

Ohio State Univ.
2177 Oakmount Rd.
Columbus, OH 43221
Tel: 1 614 292 4310
Fax: 1 614 292 7956
E-mail: fenton@ee.eng.ohio-state.edu

Robert L. French ('00) *IEEE ITS Council Representative*

R&D. French Associates
6137 Tuliptree Lane
Nashville, TN 37221
Tel: 1 615 673 6211
Fax: 1 615 673 0311
E-mail: r.french@ieee.org

John T. Gilsenan ('02)

13736 Lockdale Rd.
Silver Spring, MD 20906-2117
Tel: 202 647 2592
Fax: 202 647 7407
E-mail: GILSENANJT@state.gov

A. Kent Johnson ('01) *Past President*

Brigham Young University
1225 East Cambridge Court
Provo, UT 84602
Tel: 1 801 378 3726
Fax: 1 801 378 7575
E-mail: a.k.johnson@ieee.org

Anil T. Kripalani ('02) *Membership Committee Chair*

Qualcomm Inc.
5775 Morehouse Drive, Rm L-514K
San Diego, CA 92130
Tel: 1 858 658 4241
Fax: 1 858 658 2115
E-mail: anilk@qualcomm.com

Robert A. Mazzola ('00) *VTS Vice President, Convergence Conference Committee Representative, SAE Liaison, Long Range Planning Committee Chair*

George F. McClure ('00) *Past President, Conference Committees Chairperson, Public Relations/Publicity Committee Chairperson*

1730 Shiloh Lane
Winter Park, FL 32789
Tel: 1 407 647 5092
Fax: 1 407 644 4076
E-mail: g.mcclure@ieee.org

Samuel R. McConoughey ('01)

Past President
Mobile Communications Consulting
13017 Chestnut Oak Drive
Gaithersburg, MD 20878-3556
Tel: 1 301 926 2837
Fax: 1 301 926 2506
E-mail: mccon@compuserve.com

Tom Rubinstein ('02) *VTS Webmaster, Conference site selection, New member liaison*

Motorola
9980 Carroll Canyon Road
P. O. Box 85036
San Diego, CA 92186-9130
Tel: 1 858 530 8432
Fax: 1 858 530 8313
E-mail: cegr01@email.mot.com

Gordon L. Stüber ('03)

Georgia Institute of Technology
School of Electrical and Computer Engineering
Atlanta, GA 30332
Tel: +1 404 894 2923
Fax: +1 404 894 7883
E-mail: stuber@ece.gatech.edu

Raymond C. Trott ('00) *Awards Committees Chairperson, Paper of the Year Awards, Avant-garde Awards*

Trott Communications Group, Inc.
1425 Greenway Drive, # 350
Irving, TX 75038
Tel: 1 972 580 1911
Fax: 1 972 580 0641
E-mail: ray.trott@trottgroup.com

James A. Worsham, Jr. ('02) *Conference Board Member*

BellSouth, Room 42U85,
675 West Peachtree Street NE,
Atlanta, GA, 30375
Tel: 1 404 330 0381
Fax: 1 404 330 0386
E-mail: jim_worsham@snt.bellsouth.com

VTS News Staff

Editor

James M. Irvine
Mobile Communications Group, EEE
Strathclyde University
George Street
Glasgow G1 1XW Scotland
Tel: +44 141 548 4072
Fax: +44 141 552 4968
E-mail: j.m.irvine@ieee.org

Senior Editors

Standards

Dennis Bodson

Automotive Electronics
William J. Fleming
TRW Vehicle Safety Systems, Inc.
4505 West 26 Mile Road
Washington, MI 48094
Tel: 1 810 781 7394
Fax: 1 810 781 7274
E-mail: william.fleming@trw.com

Transportation Systems

Harvey M. Glickenstein

Mobile Radio

Javier Gozalez
C/ San Juan Bosco, nº 14-B 3F
03005 Alicante
SPAIN
E-mail: j.gozalez@ieee.org

Professional Activities

Frank E. Lord
35 Hartford Ave.
San Carlos, CA 94070
Tel/Fax: 1 650 594 0512

Chapter News & Meetings

Gaspar Messina
9800 Marguetta Drive
Bethesda, MD 20817
Tel: 1 202 418 1348
Fax: 1 202 418 1412
E-mail: GMESSINA@fcc.gov

Book Reviews

Dirk Pesch
Cork Institute of Technology
Cork
IRELAND
E-mail: dpesch@cit.ie

Feature Articles in the February Issue

Mobile Communications Development in Central and Eastern European Countries

Arturas Medeisis, Head of Section, SRFS Lithuania

In this paper, Arturas Medeisis from the radio regulator in Lithuania discusses the mobile radio market in those European countries which were formerly part of the Eastern Block. Since the fall of communism ten years ago,

these countries have been trying to restructure their economies, and telecommunications is a key part of this regeneration. Mobile systems in particular were well suited to exploit this new market.

The Future of Radio is Clear: Satellite Radio

Michael J. Bergman, Sirius Satellite Radio, Inc

This paper gives an overview of Satellite Digital Audio Radio Service (SDARS), discusses some of the benefits and

technical challenges, and introduces some next-generation features of SDARS.

Airports and Tunnels Get Wired for Wireless

Philip E. Deck, Vice President & Chief Technical Officer, Concourse Communications

In September 1997 a special purpose company named New York Telecom Partners obtained an exclusive Agreement with the Port Authority of New York and New Jersey to design, supply, install, commission, operate, maintain, and upgrade a neutral host, equal access, wireless communications network within Port Authority owned facilities. The network, known as the Telecommunications Network Access System, or TNAS,

serves all licensed and unlicensed wireless service providers that wish to participate in the Public/Private Partnership wherein the Port Authority receives usage based revenue for the use of their wireless rights-of-way by the service providers. NYTP is the TNAS network developer and operator and does not provide services over the network. This article gives an overview of Phase I of the TNAS implementation (the [road] tunnels and the airports).

Report on VTC2000-Fall

The IEEE VTS Vehicular Technology Conference returned to the United States of America after an absence of more than a year by way of Amsterdam and Tokyo for the 52nd conference, held in Boston from the 24th to the 28th of September 2000. The venue was the Seaport Hotel and World Trade Centre in South Boston, giving delegates an excellent view of the 'Big Dig' project to replace the central raised motorway in Boston with an underground highway. More than 1000 abstracts were submitted, and of these about 500 were accepted for oral presentation and a further 150 or so being presented as posters.

The Conference Committee, chaired by Stu Lipoff, took the opportunity to introduce a number of novel features. The first was making the paper submission and reviewing process completely electronic, with the exception of the signed copyright form (electronic signatures are not – yet – valid in the United States). This considerably reduced the amount of paperwork the committee had to organise. Printed proceedings must be provided for VTC since it is included in the IEEE 'All Publications' package for

libraries, but wire binding was used allowing shorter print runs, eliminating waste.

Slightly less successful were innovations in the catering arrangements. Rather than providing hosted lunches, to allow more time in the programme and encourage networking, small lunch boxes with sandwiches, crisps, cake and soft drink could be purchased and eaten in the poster presentation area. Unfortunately the preferred option for delegates seemed to be to head for the Trade Centre's cafeteria where a much larger choice was available. Seating for the one hosted lunch, the Awards Luncheon was limited, so this was added as a cost option, but the traffic control was slightly too effective with the result that the event was rather poorly attended.

The opening plenary was addressed by Michael P Lewis, Acting Project Director, Central Artery/Tunnel Project, "The Big Dig". This \$14 billion dollar, 19 year project is centred on the construction of 7 1/2 miles of new motorway in central Boston, half of which is underground. The second opening speaker was Dale N. Hatfield, Chief of the Office of Engineering and Technology at the FCC (Federal



Figure 1 Barry Goodstadt addresses the Awards Luncheon

Communications Commission). He discussed the scarcity radio resource, noting that if we are to avoid spectrum drought and avoid growth grinding to a halt, we need help from the engineering community.

The awards presented at the Awards Luncheon were reported in the previous (November 2000) issue of the *VTS News*. The Awards Luncheon was addressed by Barry Goodstadt of C-quential Consulting with the talk entitled 'Myths and Challenges of the Wireless Web'. Mr Goodstadt noted that a lot of speculation had taken place with regard the prospects for wireless web access. One forecast was for 217 million users by 2005. However, Motorola had forecast one billion wireless web phones in place by that date compared to 260 million today. A straw poll of the audience showed only three people raising their hands in the affirmative to using their mobile phone to access the web. Mr Goodstadt pointed out the differences between accessing the web from a wired or wireless connection. A wired connection normally had a flat rate charge, compared to a perhaps unreliable connection which had to be paid for by the minute. He noted that we are also all speed freaks, like big screen TVs and 19 inch computer monitors. Things are changing – AT&T now offers free, unlimited web access, but only to three portals.

A survey of 1000 households in April 2000 showed that current web users were two or three times more likely to consider using wireless access to the web than people who only had mobile phones. They were likely to be aged between 18 and 35, have a fax and a pager, and therefore be technically sophisticated. A survey in the United Kingdom of companies showed that 59% felt that WAP brought no benefit to their business, and only 17% will migrate to GPRS. Based on this, that survey estimated that there will be 16 million active wireless web users by 2007 rather than one billion by 2005. E-commerce whilst walking was not really practical generally.

Barry Goodstadt argued that the killer application is not there. Wireless voice is not yet particular good, and wireless data access has slow speed. Converting large Web based pages to WAP is difficult. I-mode in Japan been a very great success, but this was in a different culture, and

much of its traffic is with messaging type services rather than a replacement for wired web access. High-speed will come, but not in 2005 or 2007. He predicted that there will be wireless access to the Internet, but that will be access to existing services. It was not a case for whether – it would happen, that was certain – but rather when and how.

Continuing the novel culinary arrangements, there was no evening banquet but a 'Special Event' of a panel session accompanied by beer and pizza (soft drinks were also available). The Panel Session addressed 'Advanced Technologies for 3G and Beyond', and speakers included Francis O'Brien of Lucent, Chuck Weatley, Senior VP for Qualcomm, Håken Eriksson, VP and

General Manager of Ericsson Research, John Chatter, Director of Radio System Technology at Nortel and David Douglas, VP Network Experience, Sun Microsystems.

Attendance at VTC numbered a healthy 718, of which slightly over 200 were students. There were 223 attendees at the tutorials, a 50% increase in the number budgeted for. Unfortunately, the poster sessions suffered from a high number of cancellations, with about half being withdrawn in the last month before the conference. There is obviously a feeling that poster papers are somehow of less value than oral presentations, but this is not true. Both are printed equally in the proceedings, and the split between poster and oral presentation at VTC is often (and sometimes only) done on the basis of timetabling to maintain the theme of the tracks. Poster presentations have certain advantages – it is possible to have more interaction with a poster presenter than is possible with an oral presentation where questions are limited. In any case, author or observer, those who attended benefited not only from a technical programme of the highest standard but the chance to enjoy New England at a particularly pleasant time of year.



Figure 2 The Seaport Hotel was within reasonable walking distance from the centre of Boston, although a ferry was also available.

This is an abridged version of the report on the conference. A full version of the report can be found in the printed *VTS News*.

Regular Columns in the November Issue

Automotive Electronics

Bill Fleming, Senior Editor

These are the items covered in the Automotive Electronics column in the February 2001 VTS News. Please see the printed version for the full article.

- 2001 Model Year New Electronics Features
 - 1 Communiport
 - 2 Peltier-Effect Cooled Seats
 - 3 Radar Adaptive Cruise Control (ACC)
 - 4 Minivan Power Lift Gate and Power Sliding Door
 - 5 Top-Mounted Navigation Unit
 - 6 Vehicle Entertainment
 - 7 Multi-Electronic-Function Rearview Mirror
 - Trends in Automotive Electrical
 - Against All Odds — Electronics Drives Future Innovation
 - 42-Volt Electrical Systems
 - Future Automotive Electronics Functions
-

Transportation Systems

Harvey Glickenstein, Senior Editor

These are the items covered in the Transportation Systems column in the February 2001 VTS News. Please see the printed version for the full article.

- Kowloon Canton Railway Corporation (KCRC) has shown a measurable increase in ridership on both the existing light rail and East Rail lines.
 - A consortium led by Bombardier Transit Corporation has signed a design build operate maintain (DBOM) contract for a monorail system in Las Vegas.
 - The French National Railways (SNCF) has awarded a contract to an Alstom Bombardier joint venture for 22 TGV double deck high-speed trainsets.
 - The Ottawa-Carleton Regional Transportation Commission (OC Transpo) broke ground for their first light rail line last year.
 - Istanbul opened its first heavy rail transit system late last year.
 - Florida passed a constitutional amendment requiring the state to build a high-speed rail system in the November election.
 - Docklands Light Railway has ordered 12 additional cars.
 - Salt Lake County and two adjacent counties in Utah approved a 0.25-cent sales tax increase for public transit.
 - The Tri-County Metropolitan Transportation Authority (Tri-Met) has purchased 17 new low floor vehicles.
 - New York City Transit (NYCT) has restructured its Division A Automatic Train Supervision (ATS) Project.
-

Standards

Dennis Bodson, Senior Editor

- IEEE Standards Board Action Relating to the Vehicle Technology Society at their December 7, 2000 meeting.
 - IEEE Standards Association (IEEE-SA) Board of Governors
 - ITU Streamlines Standardization Process
 - CTIA, WDF Agree to Merge
 - CTIA Changes Add Internet to Name
 - TIA to Integrate MMTA
 - ITU Hosts First Regulatory Convention
 - 3rd Generation Partnership Project Expands its Membership
 - CTIA Releases the Latest Edition of the Wireless Industry Indices Report
-

Professional Activities

Frank Lord, Senior Editor

In this article, Frank Lord discusses campaigning for Professional Development issues, particularly increases in the number of temporary workers allowed in to the USA with H-1B visas, in relation to the recent US elections.

Mobile Radio

Javier Gozalez, Senior Editor

These are the items covered in the Mobile Radio column in the February 2001 VTS News. Please see the printed version for the full article.

- TETRA
 - M-commerce
 - Mobile location based services
 - Forums activities
 - Japan's mobile market
 - ITU TELECOM ASIA 2000
 - FCC & US spectrum licensing news
 - Satellite mobile communications
 - Technology news
 - Mobile phone health risks
 - China
 - Mobile communications market forecasts
 - Spectrum licenses
 - WAP news
 - Bluetooth news
 - Other news
-

Chapter News & Meetings

Gaspar Messina, Senior Editor

New York Section

The New York City VTS and ComSoc Chapters co-sponsored a rail signal systems technology sharing forum on October 18, 2000. Lead panelists explained, and answered questions on the Communications Based Train Control (CBTC) system that is being developed for the Southeastern Pennsylvania Transportation Authority (SEPTA), and the new train control system being developed for the Southern New Jersey Light Rail Transit System (SNJLRTS), which has a shared right-of-way for freight service.

Lead panelists were John LaForce and John Sutton. Mr. LaForce is an IEEE Member, Voting Member on the IEEE CBTC Standards Committee, and Deputy Chief Engineer - Operations for SEPTA. Mr. Sutton is Director, SNJLRTS-New Rail Construction. Co-presenters with Mr. Sutton were Ms. Olga Cataldi and Mr. Rajee Alexander, both from the Booz-Allen & Hamilton consulting firm. Systems engineers, suppliers, installers, and operators were present and shared their insights.

Thirty-three paid admission fees and thirteen IEEE NYC Section VTS Chapter invited speakers and honored guests raised the total attendees to forty-six. The total includes thirty-six IEEE Members, including one student IEEE Member. Prior to the formal program, NYC VTS Chapter Officers were elected and immediately commenced serving. The new officers are:

- Chairman: Kenneth E. Vought, P.E. (SM)
- Vice Chairman: David E. Weiss (SM)
- Treasurer: Bradley P. Craig, P.E. (M)
- Secretary: David K. Horn (M)

The NYC VTS Chapter has scheduled two forums in 2001. In April, the VTS forum will focus on propulsion, control and signage innovations incorporated into the latest rapid transit rail cars ordered by New York City Transit, the R-143 cars manufactured by Kawasaki Rail Car. The October 2001 VTS forum will review fiber optic communications systems being applied for rail vehicle control.

Nortel Networks has graciously offered to host both of these IEEE NYC Section VTS Chapter forums in 2001.

Rail Rapid Transit Vehicle Innovations Forum

The IEEE New York Section Vehicular Technology Chapter will sponsor a technology-sharing forum on **New York City Transit's R-143 Rail Car propulsion, control, and signage systems**. Rail Rapid Transit Vehicle Innovations Forum, hosted by Nortel Networks, will take place on April 24, 2001, 6:00 to 8:00 PM at 320 Park Avenue, (50th ST) New York City. The lead panelist, **Mr. Erwin Schaeffer**, New York City Transit's project manager on the R-143 procurement, will explain and answer questions on these new technology, Rapid Transit vehicles.

Systems engineers, suppliers, installers, and operators are invited to share insights. Future IEEE NY Section, VTS Technology Sharing forums are being planned for:

- Fiber Optic Communication networks for Rail Vehicle control,
- Automatic Bus Location and Control Systems, and
- Wayside and Railcar PA and Customer Information Systems

There is a \$35.00 charge for the forum and refreshments commencing 5:30 PM.

Advance registration is required for admission. IEEE Members and non-members may register for the April 24, 2001 forum by sending \$35.00 checks payable to IEEE NY Section to Brad Craig, Louis T. Klauder and Associates, 317 Madison Avenue, Suite 1621, New York, New York 10017. If you are an IEEE member, please provide your membership number and indicate if you are interested in participating in one or more of the planned forums.

Additional information regarding program specifics can be obtained by contacting Mr. David Horn of Fluor Daniel Infrastructure, at (212) 947-7110, or by e-mail at david.horn@fluor.com.

Greece

As of 17 July 2000, the Vehicular Technology Chapter of the Greece Section has changed its status to include the Aerospace and Electronic Systems Society.

3rd Generation Infrastructure and Services

The chapter is sponsoring an International Symposium on 3rd Generation Infrastructure and Services from 2-3 July 2001 in Athens, Greece. Discounts are available for advance registration before the 1st of May, and those registering after this date will receive the proceedings on CD only rather than on hard copy as well. For further details, contact Mrs. Penelope Koutroubi (email: piko@egnatia.ee.auth.gr) or see their web site: <http://newton.ee.auth.gr/3GIS/>

Philadelphia, Pennsylvania

This chapter held a meeting on November 8, 2000. Mr. Brandon Swartley from Stone & Webster, presented a paper on Richmond Static Frequency Converter (SFC) Project Update. A total of 15 people attended the meeting including 7 guests.

Note to VTS Chapters

VTS Chapters world-wide are eligible to receive \$100.00 U.S. at the end of the calendar year for submitting L-31 Meeting Attendance Forms reflecting their Chapter's periodic meeting to VTS Chapter Activities Chairman.

Gaspar Messina,
9800 Marquette Drive,
Bethesda, Maryland 20817, U.S.A.

VTS News

Al Gross 1918-2000

Al Gross, wireless communications pioneer, IEEE VTS Fellow and member of the VTS Distinguished Speaker Programme died at his home in Sun City, Arizona, on the 21 December 2000.

Interested in radio from the age of nine, by fifteen he was building his own radio chassis before miniaturising the system to produce a hand-held device he christened the "walkie talkie" which he patented in 1938. It was the first of many fundamental contributions to the wireless technology we use today. His work attracted the interest of the military and he worked for the US Office of Strategic Services (OSS) throughout World War II. He developed a system of ground to air communications which was very difficult to monitor and was only declassified in 1976, being described by the US Joint Chiefs of Staff as one of the most successful wireless intelligence gathering methods ever employed.

After the war, Al Gross formed his own company to develop hand held radio technology, and continued to innovate, patenting in 1949 a means of paging individual receivers which forms the heart of a mobile telephone system. More patents followed in the 1950s and 60s, before he started to work for larger corporations specialising in microwave communications. Never one for retirement, from 1990 until the time of his death he worked as a senior engineer for Orbital Sciences Corporation.

As is often the case with people who come up with revolutionary ideas, Al Gross was ahead of his time. He intended his pager to be used by doctors, but when demonstrated at a medical convention in Philadelphia there were concerns from the doctors that a beeping device would upset patients. During the 1950s, US telephone companies were not interested in taking up the technology. As he himself said, if his patents had not run out in 1971, he'd have been a millionaire several times over by now. He was quoted as saying "If you have a cordless telephone or a cellular telephone or a walkie talkie or beeper, you've got one of my patents."

This is not to say that Al Gross lacked recognition for his pioneering work. Some of his many awards were a Commendation from President Reagan (1981), the IEEE's Century of Honors Medal (1984), the Marconi Gold Medal (1995), the 1999 IEEE Edwin Howard Armstrong Achievement Award, and just last year the Lemelson-MIT Lifetime Achievement Award for invention and innovation and for playing a major role in the wireless personal communications field.

As those who have had the pleasure of hearing him speak can testify, Al Gross had a rare ability to pass on not

only his considerable knowledge but also his enthusiasm. He will be missed.

Transactions Changing To Electronic Peer Review System

As of January 1, 2001, all new submissions to the Transactions are being processed electronically.

Papers will be submitted electronically, using one of several standard formats, and reviews will be provided electronically as well. The process is web-based, using a tool that was developed in coordination with the IEEE. The submission of papers involves creating an individual account and prospective authors and reviewers are encouraged to go ahead and create their personal account. The tool can be accessed at <http://tvt-ieee.manuscriptcentral.com/index.html>.

This transition will require the assistance of both authors and reviewers, which is greatly appreciated. This effort will ensure that the Transactions continues to provide timely publication of work that is of interest to our readers.

VTS Awards Presented at Convergence

Two presentations of awards reported in the last issue were made at Convergence 2000 in October.

Convergence founder Trevor Jones receives a Millennium medal



Kent Johnson presents the 2000-1 Convergence Fellowship to Jean Yves Routes

Membership Matters

Society membership declined by 1% between November 1999 and November 2000, and currently stands at 5422. The following VTS members have recently been elected Senior Members by the Admission and Advancement Panel at its last two meetings: **Shlomi Arnon**, Israel Section, **Robert J Bultitude**, Ottawa Section, **Hossam H Hmimy**, Dallas Section, **Min Huei Kim**, Taegu Section, **Chan Kyung Park**, Oregon Section, **Robert S Roman**, New Jersey Coast Section, **Dan Keun Sung**, Daejeon Section and **Kenneth E Vought**, Westchester Subsection.

Joint Rail Conference

The 2001 Joint Rail Conference, sponsored by the Land Transportation Division of the VTS and the Rail Transportation Division of the ASME will take place in

Toronto, Canada from April 17th to 19th 2001. In this issue we reproduce the abstracts of the 15 papers accepted from the IEEE in order to give you a flavour of the conference.

There will also be papers at the conference from the ASME. If this encourages you make the trip to Toronto, a registration form is available on the VTS web site.

Engineering the CBTC Interface with MTA-NYCT's R143 Vehicle

Edwin A. Mortlock, C.Eng., Principal Systems Engineer, Parsons Transportation Group, and Erwin H. Schaefer, P.E., Project Manager R143, Division of Car Equipment, MTA-New York City Transit

ITS Standards for The Rail Industry

Thomas J. McGean, P.E., TJMPE

Development of A Next Generation ATP System

Kazutoshi Sato, Senior Researcher, and Hideki Arai, Researcher, Signalling and Telecommunications Technology Division, Railway Technical Research Institute

Train Control for Shared Traffic on A Light Rail System

Rajee P. Alexander, Senior Consultant, and Olga K. Cataldi, Associate, Booz-Allen & Hamilton, Inc.

Development of Tracking Train Detection Device (Combat) by Using Wireless Communication

Noriyuki Nishibori and Tatsuya Sasaki, Railway Technical Research Institute; Osamu Kawai and Hirofumi Ogushi, West Japan Railway Company; and Takayuki Kasai and Akihisa Toyoda, Nippon Signal Co., Ltd.

Broadband Networks for Transit Applications

Rafael L. Ruffo, P.E., Design Manager, MTA-New York City Transit

Use of i-Mode Cellular Phones For Facility Management System

Makoto Kikuchi, Senior Researcher; Yusaku Yagi, Senior Researcher Laboratory Head; and Mikio Tanaka, Dr.Eng., General Manager, Transport Information Technology Division, Railway Technical Research Institute

Reliability Centered Maintenance for Improved Rail System Operating Efficiency and Safety

John P. Cullen, President, Rail Science, Inc.

The Use of GPS (Global Positioning System) for Synchronizing NYC Transit Frequency Converters

John Dellas, P.E., Principal Engineer, Electrical; Morris Schwartz, P.E., Chief Communications Engineer; Stanley Karoly, P.E., Chief Electrical Engineer; Stanley Fox, P.E., Principal Engineer, Electrical; Louis Ciarallo, P.E., Principal Engineer, Electrical; and Mysore L. Nagaraja, P.E., Senior Vice President and Chief Engineer, Department of Capital Program Management, MTA-New York City Transit

Analysis of Stray Current, Track-To-Earth Potentials and Substation Negative Grounding In Dc Traction Electrification System

Kinh D. Pham, P.E., Elcon Associates, Inc., Ralph S. Thomas, P.E., and Walt E. Stinger, P.E., LTK Engineering Services, Inc.

Tunnel Lighting and Station Emergency Lighting

Melvin Sussman, P.E., Principal Engineer, Electrical; Gabriel Reves, P.E., Principal Engineer, Electrical; Stanley Karoly, P.E., Chief Electrical Engineer; Harry Tom, P.E., Principal Engineer, Electrical; Joseph Esposito, P.E., Principal Engineer, Electrical; and Mysore L. Nagaraja, P.E., Senior Vice President and Chief Engineer, Department of Capital Program Management, MTA-New York City Transit

Septa's M-4 Transit Car Door Experience

Daniel J. Gibbone, Senior Project Engineer, James W. Malloy, Engineer II, Southeastern Pennsylvania Transportation Authority (SEPTA); and Norman Vutz, Senior Engineer, LTK Engineering Services, Inc.

Long Range Rolling Stock Planning Using Computer Simulation Models

Rongfang (Rachel) Liu, P.E., Ph.D., AICP, Project Manager/Professional Associate, PB Transit & Rail Systems, Inc.

Vehicle Technology Assessment for Downtown Baltimore East-West Transit Connector

Alain J. Kouassi, Senior Consultant, Booz-Allen & Hamilton, Inc.

Railroad Ride Quality Assurance Assessment

Richard Shockley, Communications Systems Manager, Southern California Regional Rail Authority

27th September 2000 VTS Board of Governors Meeting Report

The VTS Board of Governors' Meeting was held at VTC 2000-Fall in Boston. President Kent Johnson was in the chair, with Board Members Charles Backof, Dennis Bodson, J. R. Cruz, Bob Fenton, Bob French, John Gilson, Anil Kripalani, Bob Mazzola, George McClure, Tom Rubinstein, Ray Trott, Jim Worsham, Vice Presidents Harvey Glickenstein and Eric Schimmel and Secretary Essam Sourour. Also present during the meeting were Vijay Barghava, Linda Sue Boehmer, Art Greenberg, James Irvine, Kumar Krishen, Jae Hong Lee, Roger Madden, Tadashi Matsumoto, Reuvan Meidan, and Evan Richards. Mel Lewis sent his apologies.

Treasurer Charles Backof reported that the net worth of the society had grown by \$420,000 over the last

year. It was agreed to move \$200,000 dollars to long-term investment account, which leaves \$1 million in the long-term investment account, and \$400,000 in cash. The budget proposal shows a surplus of about \$67,000 dollars on a budget of about \$1 million. As of the first of July the society had 5180 members, 720 of them student members.

Art Greenberg, Chair of VTC2001-Fall reported on plans for that conference which will be held from the 7-11 of October in the Sheraton Convention Hotel and Atlantic City Conference Centre. He pointed out that this is not a casino hotel and that no gambling takes place. All 400 rooms have been booked and they are looking at other hotels. They have a 22 member committee, and all the chairs are in place. Tutorials will be held on the Sunday,

with eight tracks in the technical sessions from Monday to Wednesday. There will be a workshop on Thursday. The web site is up and running (www.fallvtc2001.org) and a Call for Papers had been distributed. There are expecting some sponsorship income in February or March 2001, but requested some additional seed money. A motion to allow a total of \$20,000 seed money was agreed. The Conference Centre is next to the railway station, with a good service from Philadelphia and connections to the north-east corridor. Air access is to Atlantic City International, or to Philadelphia airport, which is about 1 1/2 hours away.



Figure 1 Attendees at the Board Meeting. From left, Anil Kripalani, Bob Mazzola, J. R. Cruz, Roger Madden, Tom Rubinstein, Reuvan Meidan, John Gilsean, Harvey Glickenstein, Linda Sue Boehmer, Kent Johnson, Essam Sourour, Jim Worsham, George McClure, Ray Trott, Bob Fenton, Charles Backof, Dennis Bodson, Bob French, Roger Madden (at wall on left) and Eric Schimmel (at wall on right).

Tadashi Matsumoto, Secretary of VTC2000-Spring reported on the outcome of the Tokyo conference. In a 550 papers had been accepted, of which 165 had been posters. Registrations totalled 930, with 493 delegates attending tutorials. Due to large number of attendees, the conference made a large surplus and the order of 17 million Japanese yen. Tad made two specific proposals. He noted that some considerable effort had been spent designing the logo. Each conference having a different logo meant that this effort had to be repeated, and there was no comment branding for VTC. He therefore suggested that the same format be used for conferences in the future (where no logo had yet been decided), since the VTC2000-Spring logo could be quite easily changed so that the globe could be centred on the location of the conference, the city name replaced, and the slogan replaced with the appropriate slogan. The second proposal was that since the conference surplus was much larger than expected, the proportion going to the Japanese chapter was also very much larger than expected, and he proposed using some of this money to set up a fund for Japan chapter award. These proposals were favourably received, and was agreed, committee to bring forward proposal on the award the next meeting.

Reuvan Meidan reported that everything was in place for **VTC2001-Spring**. 220 submissions had been received by three days before the board meeting. This was in line with the total received at that point by Tokyo, where a total of 805 papers were submitted. Acceptances are expected to be sent out in mid December, with full papers being required February. The registration rate will depend a number of submissions, but is expected to be in the order of \$450 dollars for members pre-registering.

Jae Hong Lee reported on plans for a **VTC2003** in Korea. The meeting will be held on the same venue has the ASEN (Asian European) meeting and the venue organisers had been concentrating on that. They will negotiate after this meeting. The venue is close to a subway station to allow easy access to other parts of the city and the use of alternative hotels if required.



Figure 2 Tadashi Matsumoto reports on VTC2000-Spring

Vijay Barghava reported on plans for **VTC 2002-Fall** in Vancouver. Along with Kent Johnson, he had examined the Hyatt Regency Hotel at the IEEE board meeting in June. They have a fixed rate of \$155 a night for 2002, which is a very good deal considering that people are currently being more this year. \$20,000 seed money was approved. The call for papers will be available at the Tel Aviv conference. Lunches will not be unbundled as the total cost will still be less than the Boston conference considering the favourable exchange rates with Canada.

Kumar Krishen reported on **VTC'99-Spring** in Houston. The conference was technically good in terms of papers and financially a success in that it made a surplus (about \$72k), but attendance was less than had been hoped for, due to the fact that that was first year in which two conferences had been held per year. The conference is not yet closed out, although all the money had been dispersed. It cannot be closed until the paperwork is complete, in particular an audit.

Stu Lipoff reported 630 advance registrations for **VTC2000-Fall**, and on-site registrations by that day the total was up to 713. He was expecting 800 people to register the end of the conference, which was within the budget. It noted that all paper processing except for copyright form been done electronically. It had not impossible to process that electronically, and these forms had caused 50% of the administrative work load. 150 posters had accepted, but about half of those cancelled in last month. The printed conference proceedings used a wire binding process to allow shorter print run with no wastage.

On other conference business, it was suggested that an web cast of a conference session or plenary be investigated to allow non-attending members to benefit.

Ray Trott, Awards Chariman reported on the awards which would be presented at VTC2000-Fall. His column appeared in the last (November 2000) issue. The meeting also agreed to make an Outstanding Service Award to Tadashi Matsumoto.

Kent Johnson, President, gave his report. The five-year society review was due in November 2000. He had met with Eric Schimmel, Linda Sue Boehmer and George McClure the previous day in order to prepare a response. The Technical Activities Board had rejected the new financial model so the old one still applies. The society reserves will be reduced to pay for the deficit. About 6% of

reserves, which in the case of the Vehicular Technology Society amounted to \$1.4 million dollars, will go to pay the deficit, and projection for next year's charge is 10%.

Another output from the Technical Activities Board was that after 2002, all conferences would have to produce fully electronic conference proceedings, although hard (printed) copies will be required as well. VTS already complies with this requirement.

J. R. Cruz reported that **transactions** will have caught up with the backlog by the year end. There be working for the past nine months on setting up by Manuscript Central and customise it for the VT transactions. This removes paper from the refereeing process, allowing the work to be done electronically with resultant cost savings. Communications Letters have been using it. Hopefully testing will begin at the beginning of this October, with the system up and running by later this year. The July Transactions on Vehicular Technology had only recently been mailed due to staff changes at the IEEE. This will affect the September issue.

Wireless activities with the IEEE: A telephone conference call had occurred to discuss wireless activities within the IEEE. The working group of suggested that the Transactions on Vehicular Technology be renamed to include the term wires.

George McClure, Publicity Committee Chairman presented a report on chapter development. Gaspar Messina, VTS Chapters Co-ordinator, has attended the IEEE Chapter Coordinators Retreat held in New Orleans in February 2000 where a number of ideas for chapter development had been proposed. George presented a ten point plan for development of VTS chapters including better information exchange, a VTS chapter handbook, enhanced grants for chapter activities and to support guest speakers and encouragement to set up chapters in locations not currently served. This plan was approved.

Harvey Glickenstein, VP Transportation, reported that the books for the Joint Rail Conference 1999 will be closed within a month, and JRC2000 should be closed within two months.

Jim Worsham, who is responsible for past conferences, reported on the close out of conferences. A financial report had been prepared by the VTC'99-Spring organisers but there was some questions as to whether its form would be acceptable to the IEEE. The report had been delayed due to awaiting documentation from the IEEE, and it was agreed to seek a delay in the financial penalties imposed by the IEEE for the late close out of conferences due to this.

Jim also reported that there were problems closing out VTC'99-Fall in Amsterdam. The organisers had used a company to process registrations, which has caused difficulties since the auditors are not in a position to verify the original documents held by that company. A second difficulty was the fact that the conference was held with WPMC99 and some transactions had not been separated. It was agreed to seek further details from the conference organisers.

Eric Schimmel report on elections. The successful candidates for the five Board of Governors positions for the term 2001 to 2003 inclusive were Robert L. French, Robert A. Mazzola, George F. McClure, Raymond C. Trott and Gordon L. Stüber, the first four of whom are existing

members of the Board of Governors. Kent Johnson, having served two terms as President, is not longer eligible for the position. J. R. Cruz was nominated for the post of President, and Dennis Bodson for the post of Executive Vice President, with the other executive members – Bob Mazzola, Harvey Glickenstein, Eric Schimmel, Essam Sourour and Charles Backof – being nominated for their existing positions. These candidates were duly elected. Greg Bottomley, currently Associate Editor of the Transactions on Vehicular Technology, will take over from J. R. Cruz when he becomes President on 1 January 2001.

Bob Fenton, Convergence Representative, reported that Mr Jean Yves Routex, a French student currently studying at Texas A&M University, is the awardee for the 2000-1 Convergence Fellowship.

Bob Mazzola, VP Motor Vehicles, reported that Society President Kent Johnson would present a Millenium Medal to Trevor Jones, Convergence founder, at Convergence 2000. The Convergence Transportation Electronics Association has voted to invite IEEE and SAE Vice Presents for Education to be ex-officio members of the organization to better and leverage education programme sponsorship among the three organisations.

ITS Representative Bob French reported that the ITS Conference (ITSC) would be held in Dearborn on 1-3 October 2000, with the Intelligent Vehicles Symposium (IV) on the 4th and 5th of October. The ITS Council will meet on the 1st of October, also in Dearborn. That will be its only meeting this year. The ITS Council newsletter can be found at www.ieee.org/its, with the latest (September 2000) issue posted on the 7th of September. ITSC2001 will be in Oakland from 25-29 August 2001. IV2001 will be held in Tokyo on the 5th and 6th of June 2001.

Tom Rubinstein, Conference Site Selection and New Member Liaison reported that discussions on holding VTC2003-Fall in Florida had been productive and it was agreed to go ahead with this contingent on the approval of the local section. He also reported that enquiries had been received in New Zealand, Budapest and Genoa. Of these Genoa was a most for reserves advanced. It was noted that the made a transportation difficulties, and was might be sensible to investigate Milan as an alternative. It was agreed to purchase a copy of Adobe out that produce documents in PDF, and proceed with the new member survey.

James Irvine, Newsletter Editor reported that the first issue of a new format of the VTS News had been produced, and extra had been printed and distributed to delegates that Boston conference. Copy for the November issue is complete, but the newsletter coordinator had moved positions within the IEEE and a replacement has not yet been appointed, which may cause some delays.

Dennis Bodson, Standards Committee Chairman reported that there was an IEEE Standards Board meeting that day and the next, and that the next meeting would be on the 13th and 14th of November 2000. He also reported that the mobile book reprint project is going ahead, and is a response was awaited from the IEEE. The VTS had been asked if it would like to be represented on an R&D Policy Committee meeting in Washington. John Gilsenan was nominated.

The next meeting will be held on the 9th of February 2001 in San Diego.

VTC2001-Spring
6-9 May 2000
Rodos Palace Hotel and Conference Center, Rhodes, Greece



VTC2001-Spring Relocates to Rhodes

After careful consideration of the situation in Israel regarding the unrest in the West Bank and Gaza, the VTS conference committee and the local VTC committee in Israel have decided to relocate the Tel Aviv conference to Rhodes Island, Greece.

The May 6-9 dates and conference schedule stay the same, but the hotel location is no longer the David Intercontinental, Tel Aviv. The new location is the Rodos Palace Hotel and Conference Center, Rhodes, Rhodes Island, Greece.

For information about the hotel please look up the VTC2001/Spring conference web site at http://www.congress.co.il/ieec_new/index1.html

Rhodes Island is one of the most frequently visited of the Greek islands, located in Eastern Mediterranean close to coast of Turkey. In early May, daytime temperatures of between 20 and 25°C can be expected. The Rodos Palace is a large conference center in the suburbs of the city of Rhodes, which is the main town on the island.

The island has a long history, being a staging port dur-

ing the Crusades, and was for more than two hundred years the home to the Knights of St. John of Jerusalem (Knights Hospitallers), who converted Rhodes into an almost impenetrable fortress. It then came under Turkish and Italian rule before becoming part of Greece in 1947. Its population of 90,000 swells considerably during the summer as visitors come to see Rhodes Town, a World Heritage city with its medieval city walls, or to relax on the various beaches around the island. We are confident you will enjoy the island during your leisure time, as well as having a pleasant meeting environment for the conference. We hope to be able to get back to Israel when things settle, through one of the future VTCs.

The conference is still being run by the very capable committee in Israel, chaired by Reuven Meidan, with the support of Dan Knassim, a conference organizing company. Almost 1000 paper abstracts were submitted, so this promises to be a very comprehensive conference.

Mel Lewis, VTS Conference Coordinator
Reuven Meidan, VTC2001-Spring General Chair



Lindos, on the east of the island on a rocky outcrop surrounded by beaches boasts a 14th century BC Temple to Athena, and a 2nd century Acropolis.



The entrance to Mandraki harbour, Rhodes.



FIRST CALL FOR PAPERS
FOURTH INTERNATIONAL SYMPOSIUM ON
WIRELESS PERSONAL MULTIMEDIA COMMUNICATIONS (WPMC'01)

**WPMC'01 General chair:**

Professor Ranjee Prasad, Aalborg University, Denmark

WPMC'01 Technical Programme Chair:

Professor Jørgen Bach Andersen (Aalborg University, Denmark)

WPMC'01 Technical Programme Co-chairs:

European, Middle east and Africa Co-chair: Dr. Marc Engels (IMEC, Belgium); North & South America Co-chair: Dr. Uma Jha (Morphix, USA); Asia & Pacific Co-chair: Dr. Shinsuke Hara (Osaka University, Japan)

WPMC Steering Board:**Co-Chairs:**

Professor Hideki Imai (The University of Tokyo, Japan), Professor Ranjee Prasad (Aalborg University, Denmark) Dr. Shingo Ohmori (Communications Research Laboratory, Japan).

Board Members:

Dr. Fumiyuki Adachi (Tohoku University, Japan), Professor Vijay K. Bhargava (University of Victoria, Canada), Dr. Ki Chul Han (ETRI, Korea), Professor Gordon L. Stuber (Georgia Institute of Technology, USA), Dr. Kouichi Honma (Panasonic, Japan), Dr. Heikki Huomo (Nokia, Finland), Dr. Toshiho Ihara (Communications Research Laboratory, Japan), Prof. Ryuji Kohno (Yokohama National University, Japan), Dr. Magnus Madfors (Ericsson Radio Systems AB, Sweden), Dr. Werner Mohr (Siemens AG, Germany), Dr. Nobuo Nakajima (NTT DoCoMo, Japan), Professor Norihiko Morinaga (Osaka University, Japan).

WPMC Advisory Board:

Chair: Professor Mitsutoshi Hatori, President YRP R&D Committee.

Board Members:

Dr. Kazi M. Ahmed (Asian Institute of Technology, Thailand), Professor Paul W. Baier (Universität Kaiserslautern, Germany), Professor Ezio Biglieri (Politecnico di Torino, Italy), Dr. Hachihei Kurematsu (Fujitsu Ltd., Japan), Professor Byeong Gi Lee (Seoul National University, Korea), Professor Teng Joon Lim (National University of Singapore, Singapore), Professor Elvino Sousa (University of Toronto, Canada), Professor Branka Vucetic (The University of Sydney, Australia).

Sponsored by:

Yokosuka Research Park R&D Committee, Communications Research Laboratory, Japan, IEICE, Japan.

In cooperation with (to be approved):

IEEE Denmark section, Denmark, IEEE Japan Council, Japan, Royal Danish Embassy, Tokyo, Japan, Center for PersonKommunikation, Aalborg University, Denmark, The Society of Danish Engineers (IDA), Teletechnical Society (TTS).

September 9-12, 2001

Aalborg Kongres & Kultur Center, Aalborg, Denmark

An active global platform has been created in 1998 to have open discussions on the future wireless personal multimedia communications by organizing International Symposium on Wireless Personal Multimedia Communications (WPMC) as an annual event.

The first symposium was held in 1998 at Yokosuka Research Park (YRP), Japan, the second symposium was held in 1999 in Amsterdam, The Netherlands, and the third symposium was held on November 12-15, 2000 in Bangkok, Thailand.

The fourth symposium will address the open challenges to realise wireless broadband multimedia communication systems.

The organizing committee for WPMC'01 invites to submit extended abstracts on the following topics (but not limited to) to the Symposium Secretariat, latest by April 30, 2001

- Broadband Access Techniques
- Antennas and Propagation
- Coding and Modulation for MM communications
- Wireless LANs
- Wireless IP
- Network Planning
- Radio Resource Allocation for MM communications
- Traffic Modeling
- Authentication, Authorization and Accounting (AAA)
- Multimedia Satellite Communications
- Wireless Access
- Personal Area Networks
- Navigation
- Intelligent Transport System
- Software (Defined) Radio
- Embedded Systems
- RF Technology
- Wireless Broadband Multimedia Communications
- Wireless Speech Communications
- Image Processing
- Protocols
- QoS provision
- Next generation cellular systems

The organizing committee for WPMC'01 also invites to submit proposals for tutorials, workshops and panel sessions to the Symposium Secretariat, latest by April 30, 2001.

Deadlines:

Extended abstract (up to 800 words) : April 30, 2001.

Notification of acceptance : May 31, 2001.

Final manuscript in electronic version as PDF or PS : June 30, 2001

Web-address for the symposium : www.wpmc01.org/

Download as pdf

Symposium Secretariat:

Att. Ms. Helle Kongsved,
CPK, Aalborg University, ,
Frederiks Bajers Vej 7A5-210
DK-9220 Aalborg
Denmark
Tel.:+45-96359824
Fax:+45-98151583
Email: hko@cpk.auc.dk



Conferences of Interest

The following table shows VT-06 sponsored and co-sponsored conferences as well as related conferences not sponsored by the Society. While every attempt was made to ensure accuracy, you should contact the respective conference committee to confirm date and location.

DATE	CONFERENCE	LOCATION	WEB PAGE	
20-22 February 2001	EPMCC 2001	Vienna, Austria	http://www.epmcc.com	
26-28 March 2001	3G2001	London, UK	http://conferences.iee.org.uk/3G2001/	
17-19 April 2001	Joint Rail Conference	Toronto, Canada		
6-9 May 2001	VTC 2001-Spring,	See below	http://www.congress.co.il/iee_new/	
20-22 May 2001	2001 Radio Frequency Integrated Circuits Symposium	Phoenix, AZ	http://www.ims2001.org/rfic	
6-8 June 2001	3Gwireless 2001	San Francisco, CA	http://delson.org/3gwireless01	
11-15 June 2001	ICC2001	Helsinki, Finland	http://www.icc2001.com	
8-13 July 2001	APS International Symposium / URSI Radio Science Meeting	Boston, MA	http://www.ieeeaps.org/2001APSURSI/	
15-18 August 2001	3rd Int. Workshop on Mobile Wireless Comms Networks	Recife, Brazil	http://www.cin.ufpe.br/~mwcn2001/principal.htm	
19-22 August 2001	RAWCON 2001 Radio and Wireless Conference	Boston, MA	mailto:heutmaker@lucent.com	
25-29 August 2001	ITSC 2001	Oakland, CA	http://www.ewh.ieee.org/tc/its/2001/	
9-12 September 2001	WPMC'01	Aalborg, Denmark	http://www.wpmc01.org See overleaf for details	✓
25-28 September 2001	IVEC2001 Veh. Electronics Conf.	Tottori City, Japan	http://www.kankyo-u.gr.jp/	
30 September – 3 October 2001	PIMRC 2001	San Diego, CA	http://www.pimrc2001.org	✓
7-11 October 2001	VTC 2001-Fall	Atlantic City, NJ	http://www.fallvtc2001.org	✓
28-31 October 2001	MILCOM 2001	Washington, DC	http://www.milcom.org/2001	✓
14-16 November 2001	ISCIT 2001	Chiang Mai, Thailand	http://www.kmitl.ac.th/~iscit/	✓
25-29 November 2001	Globecom 2001	San Antonio, TX	mailto:g.weisman@comsoc.org/	✓
20-24 January 2002	Int. Conf. on Micro Electro Mechanical Systems (MEMS)	Las Vegas, NV	mailto:kkcline@pmmconferences.com	
Spring 2002	VTC 2002-Spring	Birmingham, AL	mailto:jacksonP2@bek.com	
16-21 June 2002	APS International Symposium / URSI Radio Science Meeting	San Antonio, TX	http://www.ieeeaps.org/2002APSURSI/	
24-28 September 2002	VTC 2002-Fall	Victoria, BC	mailto:bhargava@enr.UVic.CA	
Spring 2003	VTC 2003-Spring	Seoul, Korea	mailto:m.lewis@ieee.org	

Conferences marked '✓' have open calls for papers as of 28 February 2001. This list is based upon the conference calendar at our web site, which is updated more frequently than this list can be. To access it go to the following URL: <http://www.vtsociety.org/>, then click on "Conference List" in the left frame.

Corrections and additions to this list are most welcome. We are particularly interested in adding listings for Automotive and Transportation conferences. Please send corrections and additions to Tom Rubinstein at t.rubinstein@ieee.org.

Important Announcement VTC2001-Spring

Due to the security situation in Israel, VTC2001-Spring has been relocated to Rhodes. The timing and programme remain the same. See page 11 for full details.