

**1997 Wireless Communications Conference**  
 Regal Harvest House Boulder, Colorado  
 August 11-13, 1997

**Sponsors**

- IEEE Microwave Theory and Techniques Society (MTT-S): 50%
- Int'l Microelectronics and Packaging Society (IMAPS): 50%

**Technical Cosponsors**

- National Institute of Standards and Technology (NIST)
- Institute for Telecommunications Sciences (ITS)
- IEEE Communications Society (ComSoc)

**Steering Committee**

- General Chair Roger Marks
- Technical Chair Michael Heutmaker, Lucent
- Exhibits Dan Swanson
- Finance Dick Sparks
- Jim Drehle, HP {President, IMAPS}
- Publicity John W. Meredith, HP
- Publications Janet Kingston, IMAPS
- Registration Jack McIlroy, MITRE Corp.
- At-Large Peter Staecker
- Site Selection George Oltman

**Technical Program Committee**

Prof. Masami Akaike, **Science University of Tokyo**, Tokyo, *Japan*  
 Dr. Seng-Woon Chen, **Qualcomm**, San Diego, CA  
 Dr. Roger Dalke, **Institute for Telecommunication Sciences**, Boulder, CO  
 Dr. Kari-Pekka Estola, **Nokia** Research Center, Helsinki, *Finland*  
 Mr. Michael Fennelly, **ATN Microwave** Inc., Billerica, MA  
 Dr. Bernard D. Geller, **Sarnoff** Research Center, Princeton, NJ  
 Dr. Michael S. Heutmaker, **Lucent** Technologies, Princeton, NJ  
 Mr. Charles R. Hodges, **nCHIP**, San Jose, CA  
 Dr. Kenneth M. Lakin, **TFR Technologies**, Inc., Bend, OR  
 Dr. Mali Mahalingham, **Motorola** SPS, Tempe, AZ  
 Dr. Louis T. Manzione, **Lucent** Technologies, Murray Hill, NJ  
 Dr. Roger B. Marks, **NIST**, Boulder, CO  
 Dr. Luc Martens, **University of Ghent**, *Belgium*  
 Dr. Masahiro Muraguchi, **NTT** Wireless Systems Laboratories, Kanagawa, *Japan*  
 Dr. Modest Oprysko, **IBM** T.J. Watson Research Center, Yorktown Heights, NY  
 Mr. Richard Perko, **M/A-COM**, Lowell, MA  
 Dr. Peter Petre, **Hughes** Research Laboratories, Malibu, CA  
 Mr. Bill F. Riddle, **NIST**, Boulder, CO  
 Dr. Mohammad Shakouri, **Hewlett-Packard** Co., Palo Alto, CA  
 Mr. Joseph Staudinger, **Motorola** SPS, Tempe, AZ  
 Mr. Andreas Thiel, **Swiss Federal Institute of Technology**, Zurich, *Switzerland*  
 Prof. Vijai Tripathi, **Oregon State University**, Corvallis, OR  
 Mr. Ben Zarlingo, **Hewlett-Packard** Co., Everett, WA

**Additional Support**  
John Horton & Terry Oxley

**Program**

- 10 Single-Track **Technical Sessions** (Monday afternoon - Wednesday)
- Half-day **Workshop** (Monday morning)
  - *Modeling & Simulation of Circuits for Wireless Communication Systems*
  - Organizer and Chairman: John F. Sevic, QUALCOMM, Inc.
  - 7 speakers
  - well organized and focused; very well received
- **Panel Discussion** (Tuesday evening)
  - *Wireless Evolution and its Impact on Technology Needs*
  - Organizer and Chairman: Dr. Sanjay Kasturia, Lucent
  - Panelists:
    - Robert C. Dixon, Chief Scientist, Omnipoint
    - Paul Anuszkiewicz, Director of RF Engineering, PrimeCo PCS
    - Kari-Pekka Estola, Director, Laboratory of Electronics  
Nokia Research Center, Helsinki, Finland
  - informative and energetic
- **Banquet Speaker** (Monday evening)
  - Mike Marcus, FCC
  - “Patrolling the Ether: The Search for Captain Midnight”

**Paper Submission Results**

North America	51 papers	2 countries
Asia	15 papers	4 countries
Europe	15 papers	11 countries
<b>TOTAL</b>	<b>81 papers (51 accepted)</b>	<b>17 countries</b>

<b>Topic</b>	<b>Session Titles</b>
Systems	<ul style="list-style-type: none"> <li>•Local Multipoint Distribution Systems (LMDS)</li> <li>•Wireless Systems and Modems</li> <li>•Systems and Signal Processing</li> </ul>
Actives	<ul style="list-style-type: none"> <li>•Device Nonlinearity</li> <li>•Active Devices</li> </ul>
Passives/Integration	<ul style="list-style-type: none"> <li>•Integrated Passive Components</li> <li>•Ceramic Packaging and Devices</li> </ul>
Measurements	<ul style="list-style-type: none"> <li>•Characterizing Digital Modulation</li> </ul>
Antennas/Propagation	<ul style="list-style-type: none"> <li>•Wireless LAN and Indoor Propagation</li> <li>•Antennas and Propagation</li> </ul>

**Pre-Publicity**

- Advance Program
- complete, updated Web site
- calendar listings
  - ⇒ major microwave/RF trade magazines
  - ⇒ *IEEE Spectrum*
  - ⇒ *Wireless Week*
  - ⇒ local newspapers
  - ⇒ many on-line conference calendars
- pre-conference article in *EE Times*
- advertisement in exchange for exhibit table:
  - ⇒ *IEEE Spectrum*
  - ⇒ *Wireless Week*
  - ⇒ *Applied Microwave and Wireless*
  - ⇒ *RCR (Radio Communications Reports)*
  - ⇒ RF Globalnet Website

### Registration Results

	1997	1996
<b>Total Registered</b>	<b>254</b>	171
Technical Sessions	200	-
Workshop	82	0
Panel	88	0

### Geographic Distribution

**14 nations:** Austria, Belgium, Canada, Finland, France, Germany, Israel, Japan, Korea, Netherlands, Spain, Switzerland, United Kingdom, United States

### Pre-Registration Method

<b>Internet</b>	<b>46%</b>	many using downloaded reg. form
Fax	29%	
Phone	13%	
Mail	18%	

## Exhibition Services

(contracted to IMAPS)

- IMAPS printed and mailed Exhibitor Prospectus
- IMAPS absorbed nearly all costs
- IMAPS took 10% of income from booths they sold

## Exhibition Results

- 19 tabletop exhibits
  - 13 paid, at \$1000 each (budgeted for 20)
  - 6 traded for publicity

### Preliminary Financial Report

	Preliminary Result	Budget
Income	\$92,566	\$94,500
Expense	\$61,195	\$69,200
<b>Surplus</b>	<b>\$31,421</b>	<b>\$25,300</b>

## Post-Publicity

- press in attendance
  - *EE Times* (Communications Editor)
  - *Wireless Week* (Reporter)
  - *Web Week* (Senior Editor)
  - *Applied Microwave & Wireless* (Publisher)
  - *RF Globalnet Website* (President)
  - *Rocky Mountain News* (Telecommunications Reporter)
- significant post-conference coverage
  - *EE Times*
    - “The IEEE conference is one of the few venues where chip makers can rub shoulders with specialists in passive components, hybrid packaging and voiceband and broadband systems. Though only in its second year, the meeting already is staking out unique space in broadband-systems analysis.”
  - *Web Week*
- technical Conference Report prepared for:
  - Journal of Research of NIST*
  - MTT-S Newsletter*

**Proposal**  
**1998 IEEE Radio and Wireless Conference (RAWC'98)**  
Sheraton Colorado Springs (Colorado)  
August 9-12, 1997

**Proposed Sponsors**

- IEEE Microwave Theory and Techniques Society: 90%
- IEEE Pikes Peak Section: 10%

**Proposed Technical Cosponsors**

- IEEE Communications Society
- National Institute of Standards and Technology
- Institute for Telecommunications Sciences

**Endorsement**

- MTT-20 (Wireless Communications)

**Key points**

- Outgrowth of MTT-S effort on Wireless Communications Conference
- Same core organizers, plus key new ones
- IMAPS is not a sponsor
- New name focuses more strongly on the radio aspects of wireless

**Steering Committee**

- General Chair Roger Marks
- Technical Chair Michael Heutmaker, Lucent Technologies
- Local Arrangements Jack McInay, MITRE Corp., Colorado Springs  
John Meredith, HP, Colorado Springs
- Finance Dick Sparks
- Finance Vice-Chair (*open*)
- Exhibits Mike Fennelly, ATN Microwave
- Publications Gary Breed, *Applied Microwave & Wireless*
- Registration George Jankovic, RF Globalnet Website
- Publicity (*open*)
- At-Large Peter Staecker

**Additional Organizers**

- Workshop Coordinator (*being recruited*)
- Sunday Workshop John Sevic
- Monday Workshop (*organized by Pikes Peak Section*)
- Panel Session Sanjay Kasturia, Lucent Technologies
- European Publicity Lutfi Albasha, University of Leeds

**Technical Program Committee**

- to be finalized (based on WCC'97 TPC)

### Schedule

	Morning	Afternoon	Evening
Sunday	Workshop		
Monday	Workshop	Sessions	Banquet
Tuesday	Sessions		Panel
		Exhibition	
Wednesday	Sessions		
	Exhibition		

- similar schedule to 1997 WCC
- added all-day Sunday workshop (modeling; John Sevic)

### Hotel

- Sheraton: best of four sites visited
- negotiated good deal & signed a contract
- excellent meeting, dining, and exhibition facilities
- 7 miles from airport; hotel shuttle

### Budget

(excluding loans)	Budget	1997 Actuals
Income	\$79,100	\$82,566
Expense	\$65,120	\$51,195
<b>Surplus</b>	<b>\$13,980</b>	\$31,421

- approved by Budget Committee yesterday
- based on 1997 WCC budget
- lower registration fees - made too much money in 1997
- lower exhibitor fees - would like more exhibitors

### Themes

- focus on the intersection of MTT-S and ComSoc
- address the vacuum in wireless standards
- keep the single-track format for technical sessions
  - a vertical look at the wireless industry
  - interactive; customers meet suppliers
- key technical strengths in interdisciplinary areas
  - **nonlinearity** (already the *premier* conference!)
    - device characterization (modeling & measurement)
    - effect on digital modulation
    - role in complete system propagation model
  - **broadband wireless systems**
    - LMDS, wideband CDMA, etc.
  - **propagation**

### **Long-Range Plans**

- grow conference
  - attendance
  - exhibition
  - workshops (possibly in parallel)
- develop new participants and leaders for MTT-S
  - we have not “cannibalized” MTT-S

### **Medium-Range Plans**

- develop Technical Program Committee
  - subcommittees with more autonomy
  - develop focused sessions
- start moving conference around (by 2000)
- Chair in 1999: Michael Heutmaker

### **Endorsement by MTT-20**

Date: Fri, 19 Sep 1997  
From: bgeller@sarnoff.com (BERNARD GELLER)  
To: Roger Marks

Roger,

Thank you for your phone call and the report. Your proposal to make the re-named Radio and Wireless Conference solely sponsored by the MTT is exciting. I believe that the MTT community would benefit greatly from a conference such as you propose because it could bring together a range of communications disciplines some of which are not available at the IMS. I believe that this will be not only valuable to the current MTT membership, but would open the door to new members who work in related technical areas. You have the support of both John Horton and myself.

--Bernie