Yes indeed, we are all very much excited about IMS2012, which is finally coming to Montréal. It is only the second time since its inception that this Symposium has been held outside the United States. This Symposium is poised to be a truly international event with the historic 60th anniversary celebration of MTT-S, and of course, unforgettable personal memories. Microwave Week, with IMS as its centre piece together with the RFIC and ARFTG conferences as well as the largest commercial exhibition of its kind, will add a special flavour to Montréal’s beautiful summer decorated by its well-known festivities. This year, you can see a number of fine-tuned programs and innovations, which are summarized in the section “What’s New”. You will find a wealth of useful and important information in this Program Book, which facilitates your Microwave Week attendance and your Montréal stay.

Founded in 1642, Montréal has been recognized as one of the most romantic, welcoming, artistic, innovative, and culturally diverse cities in the world. The city offers everything to everyone with easy access to everywhere.

Our motto “MICROWAVES WITHOUT BORDERS” or “MICRO-ONDES SANS FRONTIERES” not only reflects our unique international destination, French heritage and culture in North America but also the international cooperation and spirit of our community. The IMS2012 Steering Committee and our colleagues of IEEE Meeting & Conference Management and MP Associates have been working selflessly for you and for our IMS events around the clock to make sure this year’s Microwave Week will be a unique success. In spite of the worldwide economic turmoil, but encouraged by early indications, we are expecting to experience one of the most attended Microwave Weeks in history. We have already broken historic IMS records including an all-time record number of technical paper submissions, an all-time record number of received MicroApps presentation proposals, and there have never been before so many commercial exhibit booth reservations at such an early date.

The opening ceremony highlights the presentation of our plenary speaker, Mr. Steve Mollenkopf, President and Chief Operating Officer of Qualcomm. He provides a keynote address on “3G/4G Chipsets and the Mobile Data Explosion.” This year’s closing session features a presentation of our keynote speaker, Professor Thomas H. Lee of Stanford University. He talks about “The Fourth Age of Wireless and the Internet of Everything.”

On behalf of the IMS2012 Steering Committee and the City of Montréal, I feel privileged and honoured to invite you, your family and friends to take part in this unparalleled event and explore the friendly atmosphere of Montréal. To plan your trip, visit and stay, you can find useful information on the city of Montréal at http://www.tourism-Montréal.org/about our famous international festivals and happenings like the world famous Formula 1 racing, the International Fireworks competition at the amusement park La Ronde (of the Six Flags family), and the international Jazz Festival, all for your enjoyment right before and after Microwave Week.

Please prepare your attendance to ensure a memorable time and experience that you cannot afford to miss. You should go to http://ims2012.mtt.org/ or download our mobile apps for information and the latest news on IMS2012 and Microwave Week. I promise that you will discover a world of colourful ethnicity, rich culture, multiple languages, new ideas, international cuisines, and of course, the warm camaraderie and sheer joie de vivre to be found all united in one place, our unique Montréal. A bientôt! See you soon!

Ke Wu
PLENARY SESSION TALK

3G/4G Chipsets and the Mobile Data Explosion

Monday, 18 June 2012
1730 - 1900
Room 710

Plenary Speaker: Steve Mollenkopf

The Plenary talk will be given by Steve Mollenkopf, President and Chief Operating Officer of Qualcomm. From his leadership role in Qualcomm, one of the greatest and most successful global telecommunication corporations, as well as pioneer of Code Division Multiple Access (CDMA) technology, Mr. Mollenkopf is ideally positioned to provide an acute and authoritative perspective on microwave technology and business which should be in the interest of all the attendees of the IMS. His talk will be entitled “3G/4G chipsets and the mobile data explosion.”

Abstract of the talk

The rapid growth of wireless data and complexity of 3G and 4G chipsets drives new design and deployment challenges for radio and device manufacturers along with carriers. This talk will provide a perspective on the problem from the point of view of a large, worldwide manufacturer of semiconductors and technology for cellular and connected consumer electronics devices. The increase in device and network complexity will result in significant business opportunities for the industry.

Biography of the Speaker

Steve Mollenkopf serves as president and chief operating officer of Qualcomm, leading the company’s business operations, product and worldwide sales groups. In this role, Mr. Mollenkopf also serves as president of Qualcomm CDMA Technologies (QCT). Moreover, he is a member of Qualcomm’s Executive Committee, helping to drive Qualcomm’s overall global strategy.

Since 2008, Mr. Mollenkopf led QCT and served as executive vice president and group president of Qualcomm, driving growth and providing critical technical and operational leadership. QCT, the company’s semiconductor business, is the world’s largest wireless chip supplier and fabless semiconductor company, in terms of revenue.

A published IEEE author, Mr. Mollenkopf holds patents in areas such as power estimation and measurement, multi-standard transmitter system and wireless communication transceiver technology. He serves on the Board of Directors for the Semiconductor Industry Association and serves as a Board Member and is on the Board Executive Committee and CEO Council for the Global Semiconductor Alliance.

Mr. Mollenkopf holds two electrical engineering degrees, a bachelor of science in electrical engineering from Virginia Tech and a master of science in electrical engineering from the University of Michigan at Ann Arbor.
CLOSING CEREMONY TALK
The Fourth Age of Wireless and the Internet of Everything
Thursday, 21 June 2012
1600 - 1730
Room 710

Closing Speaker: Thomas H. Lee
The Closing talk will be given by Thomas H. Lee, Professor at Stanford University. Prof. Lee is well known as a prolific writer, a pioneer scholar and an outstanding speaker. He will close the symposium by presenting his vision on the future of key aspects of microwave and internet technology.

Abstract of the talk
“Making predictions is hard, particularly about the future”. The patterns of history are rarely discernible until they’re obvious and perhaps irrelevant. Wireless may be an exception, at least in broad outline, for the evolution of wireless has been following a clear pattern that tempts us to extrapolate. Marconi’s station-to-station spark telegraphy gave way to a second age dominated by station-to-people broadcasting, and then to today’s ubiquitous people-to-people cellular communications. Each new age was marked by vast increases in value as it enlarged the circle of interlocutors. Now, these three ages have covered all combinations of “stations” and “people,” so any Fourth Age will have to invite “things” into the mix to provide another stepwise jump in the number of interlocutors. This talk will describe how the inclusion of multiple billions of objects, coupled with a seemingly insatiable demand for ever-higher data rates, will stress an infrastructure built for the Third Age. Overcoming the challenges of the coming Fourth Age of Wireless to create the Internet of Everything represents a huge opportunity for RF engineers. History is not done.

Biography of the Speaker
Thomas H. Lee received the S.B., S.M. and Sc.D. degrees in electrical engineering, all from the Massachusetts Institute of Technology in 1983, 1985, and 1990, respectively. His graduate work at MIT resulted in the world’s first RF CMOS IC in 1989.

Since 1994, he has been a Professor of Electrical Engineering at Stanford University, where his research focus is on silicon RFIC technology. He has received several “Best Paper” awards, at ISSCC and CICC, and is a Packard Foundation Fellowship recipient.

He served for a decade as an IEEE Distinguished Lecturer of the Solid-State Circuits Society, and has been a Distinguished Lecturer of the Microwave Society as well. He holds 57 U.S. patents and authored “The Design of CMOS Radio-Frequency Integrated Circuits” and “Planar Microwave Engineering” and co-authored four additional books on RF circuit design. He also cofounded the memory company Matrix Semiconductor (acquired by SanDisk in 2006) and Ayla Networks. He is currently on leave from Stanford to serve as Director of the Microsystems Technology Office at DARPA.

In 2011, Dr. Lee was awarded the Ho-Am Prize in Engineering (colloquially known as the “Korean Nobel”) for his RF CMOS work.
**IMS2012**

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<tr>
<th>Time</th>
<th>Session</th>
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<tr>
<td>0800 - 1200 AM Workshops &amp; Short Courses</td>
<td>1200-1320 Panel Session</td>
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<tr>
<td><strong>SUNDAY</strong></td>
<td><strong>MONDAY</strong></td>
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<td><strong>0800 - 1200 AM Workshops &amp; Short Courses</strong></td>
<td><strong>1200-1320 Panel Session</strong></td>
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<td>WE2A: Unconventional Power Amplifier Architecture with High Efficiency (Cont. in PM)</td>
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<td>WS2B: Modern Techniques for Tunable and Reconfigurable RF/Microwave Filter Development (Cont. in PM)</td>
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<td>WSC: 3D Integrated Circuits (Cont. in PM)</td>
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<td>WS2F: YF &amp; mYF PAs: Linearization and Power Challenges (Cont. in PM)</td>
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<td>WS2G: Towards mm-Wave Intelligent Silicon Power Amplifiers (Cont. in PM)</td>
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<td>WS2I: Wide-Band (Multi-Octave), Fast Settling, RF Frequency Synthesis (Cont. in PM)</td>
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<td>WS2J: RF and Modern Techniques for Multi-standard Radios Coexistence (Cont. in PM)</td>
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<td>WS2L: RF at the Nanoscale</td>
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<td>WS2N: Recent Developments of High-Speed Wireless Transceivers</td>
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**Registration:** 0700-1800 - RFIC Plenary: 1740-1900

**0800 - 1200 AM Workshops & Short Courses**

| **TU1A:** Novel Devices, Waveguiding Structures and Analysis Methods |
| **TU2A:** Time-Domain Modeling: Advances and Applications |
| **TU3A:** Ferromagnetic, Ferroelectric, Antiferroelectric-Based Resonators and Filters |
| **TU3C:** Advances in RF/MEMS Ruggidness and Reliability |
| **TU4A:** Microwave Power Amplifiers |

**1010 - 1150 Late AM Technical Sessions**

| **TU2B:** New Implementations of Couplers and Hybrids |
| **TU3D:** Measurement, Design, and Linearization Techniques for High Efficiency Amplifiers |
| **TU3E:** SC-1: Theory and Design of Frequency Synthesizers (Cont. in PM) |
| **TU3F:** SC-4: Microwave Circuits — Three Dynamics, Bifurcation, and Practical Stability Analysis/Design (Cont. in PM) |
| **TU3G:** SC-6: Dielectric Resonator Antennas, Theory, Design and Applications with Recent Advancement (Cont. in PM) |

**1200-1320 Panel Session**

**RFIC Interactive Forum:** 1330-1550

**0800 - 1200 AM Workshops & Short Courses**

| **WE2A:** Frontend Transceiver-Based Algorithms for IM/DD Systems |
| **WE2B:** Frontend Transceiver-Based Algorithms for IM/DD Systems |
| **WE2C:** Frontend Transceiver-Based Algorithms for IM/DD Systems |
| **WE2D:** Frontend Transceiver-Based Algorithms for IM/DD Systems |
| **WE2E:** Frontend Transceiver-Based Algorithms for IM/DD Systems |
| **WE2F:** Frontend Transceiver-Based Algorithms for IM/DD Systems |

**1010 - 1150 Late AM Technical Sessions**

| **TU1B:** Silicon and III-V Based MMICs Achieve New Performances Milestones for Radiometers in Earth Remote Sensing |
| **TU2A:** Time-Domain Modeling: Advances and Applications |
| **TU2B:** Time-Domain Modeling: Advances and Applications |
| **TU3A:** Ferromagnetic, Ferroelectric, Antiferroelectric-Based Resonators and Filters |
| **TU3B:** Microwave Power Amplifiers |

**1200-1320 Panel Session**

**Radio Frequency Integrated Circuits (RFIC): Future Directions**

**0800 - 1200 AM Workshops & Short Courses**

| **TH1A:** Rectifiers for Wireless Power Transmission |
| **TH1B:** Rectifiers for Wireless Power Transmission |
| **TH1C:** Rectifiers for Wireless Power Transmission |
| **TH1D:** Rectifiers for Wireless Power Transmission |
| **TH1E:** Rectifiers for Wireless Power Transmission |

**1010 - 1150 Late AM Technical Sessions**

| **TH1A:** Rectifiers for Wireless Power Transmission |
| **TH1B:** Rectifiers for Wireless Power Transmission |
| **TH1C:** Rectifiers for Wireless Power Transmission |
| **TH1D:** Rectifiers for Wireless Power Transmission |
| **TH1E:** Rectifiers for Wireless Power Transmission |

**1200-1320 Panel Session**

**THRF: Emerging Systems and Application**

**0800 - 1200 AM Workshops & Short Courses**

| **WF2A:** Integration and Technologies for mm-wave Sub-systems (Cont. in PM) |
| **WF2B:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |
| **WF2C:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |
| **WF2D:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |
| **WF2E:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |

**1010 - 1150 Late AM Technical Sessions**

| **WF2A:** Integration and Technologies for mm-wave Sub-systems (Cont. in PM) |
| **WF2B:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |
| **WF2C:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |
| **WF2D:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |
| **WF2E:** White Space Technologies Future Emerging Technology Needs (Cont. in PM) |

**1200-1320 Panel Session**

**RF MEMS for Defense and Aerospace**

**0800 - 1200 AM Workshops & Short Courses**

| **ARFTG Interactive Forum:** 1000-1050 and 1520-1600 |
| **RFIC Interactive Forum:** 1330-1550 |
| **IMS Interactive Forum:** 1330-1550 |
| **MicroApps:** 0905 to 1900 |

**1010 - 1150 Late AM Technical Sessions**

| **WF3A:** RF MEMS for Defense and Aerospace |
| **WF3B:** RF MEMS for Defense and Aerospace |
| **WF3C:** RF MEMS for Defense and Aerospace |
| **WF3D:** RF MEMS for Defense and Aerospace |
| **WF3E:** RF MEMS for Defense and Aerospace |

**1200-1320 Panel Session**

**RF MEMS for Defense and Aerospace**
### 1300 - 1700 PM Workshops & Short Courses

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>1300 - 1530</td>
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<td>New Modeling and Simulation Techniques for Periodic Structures</td>
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### 1300 - 1700 PM Workshops & Short Courses

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>1300 - 1700</td>
<td><strong>Late PM Technical Sessions</strong></td>
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### Social Events

- **17 June 2012**
  - IMS2012 Welcome Reception: (Palais des Congrès, Viger Lobby): 1900-2030
  - Women in Microwaves Reception (Pointe-a-Cailles Museum): 1800-1930

- **18 June 2012**
  - Chapter Chair's Meeting and Reception (Hyatt, Grand Salon): 2000-2200

- **19 June 2012**
  - Women in Microwaves Reception (Palais des Congrès, Level 7 - Room 710a): 1900-2100

- **20 June 2012**
  - Industry Hosted Cocktail Reception (Palais des Congrès, Level 2 - Exhibition Ballroom): 1700-1800

- **21 June 2012**
  - MTI5 Awards Banquet (Palais des Congrès, Level 7 - Room 710b): 1800-2100
  - IMS2012 Closing Reception (Palais des Congrès, Viger Lobby): 1730-1830

### IMS2012 Closing Reception (Palais des Congrès, Viger Lobby): 1730-1830

- **22 June 2012**
  - MTI5 Student Awards Luncheon (Le Westin Hotel, Level 9 - Fortifications Ballroom): 1200-1400
  - NVNA Users Forum to Thursday Night (Fortifications Ballroom, Westin): 1645-1710

**Technical Track Key:**
- **μWave Field & Circuit**
- **Techn. Passive Components**
- **Active Components**
- **Passive Components**
- **Emerging Technical Areas**
- **Sys. & Applications**
- **General Interest**

**IMS2012:**
- IMS2012.mtt.org
EXHIBITION COMPANY LISTING
IMS2012 EXHIBITING COMPANIES AS OF 20 MARCH 2012:

Exhibit hours have been scheduled to provide maximum interaction between conference attendees and exhibitor personnel:

Tuesday, 19 June 0900 to 1700
Wednesday, 20 June 0900 to 1800
Thursday, 21 June 0900 to 1500

= First-time exhibitor
525 total exhibitors and 42 first-time exhibitors!

2COMU
3G Metalworx Inc.
A-Alpha Waveguide Co.
A.J. Tuck Co.
A.T. Wall Company
AA-MCS
Accumet Engineering Corp.
ACEWAVETECH, Inc.
ADMOTECH Co., Ltd.
AdvTech Ceramics
Advance Reproduction Corp.
Advanced Chemical Company
Advanced Circuitry International
Advanced Research Systems, Inc.
Advanced Switch Technology
Advanced Test Equipment Rentals
Advansys Electronix
Aeroflex Inc.
Aethercomm Inc.
Agilent Technologies
A.I. Technology, Inc.
Aldelec, Inc.
Aliner Industries, Inc.
Alliance Corp.
AMCAD Engineering
Ammcom Communications Inc.
AMCrf
American Beryllia, Inc.
American Microwave Corp.
American Standard Circuits, Inc.
American Technical Ceramics
Amtek HCC Industries
Amphenol Printed Circuits
Amplicorp
AmpLifeInc.
AMT Solutions Co., Ltd.
ANADIGICS
Analog Devices, Inc.
Anapico Ltd.
Anaren, Inc.
Anatech Electronics
Anoison Electronics
Anritsu Co.
ANSYS, Inc.
APA Wireless Technologies
Apollo Microwaves Ltd.
Applied Thin-Film Products (ATP)
AR RF/Microwave Instrumentation
ARC Technologies, Inc.
Artech Tech: Enabling Innovation
Artech House
ASB Inc.
Aselsan
Association of Old Crows/Naylor Pub.
Astrolab, Inc.
ATE Systems, Inc.
Auriga Microwave
Aurora Software & Testing, SL
Avago Technologies
Averna
AVX Corp.
AWR Corp.
Axiom Test Equipment, Inc.
BBZ Technologies
B&Z Industries, Inc.
BE2cubed, Inc.
Besser Associates, Inc.
Biliex Technologies, Inc.
Bonding Source
Bowei Integrated Circuits Co., Ltd.
BSC Filters Ltd.
C W Swift
Cadence Design Systems, Inc.
Cambridge University Press
CAP Wireless Inc.
CapeSym, Inc.
Carlisle Interconnect Technologies
Cascade Microtech, Inc.
Centellax, Inc.
Centerline Technologies, LLC
Century Seals Inc.
Cerix & Cerrexwave
Channel Microwave
Charter Engineering, Inc.
Chengdu Omicron Microwave Tech. Co., Ltd.
Chengdu Seekon Microwave Comm. Co., Ltd.
Chengdu Tiger Microwave Tech. Co., Ltd.
Chin Nan Precision Electronics Co., Ltd.
Ciao Wireless, Inc.
Cirex International, Inc.
Cobham
Colicraft, Inc.
Coleman Cable Systems, Inc.
Coleman Microwave Co.
Colorado Microcircuits
COM DEV Ltd.
Communication Power Corp. (CPC)
Communications & Power Industries
Complex Corp.
Component Distributors Inc.
Constant Wave
Continental Resources, Inc.
Corning Gilbert Inc.
Corry Micronics Inc.
Crate Aerospace & Electronics
Crate Polyclon
Cree, Inc.
Crystek Corp.
CST of America, Inc.
CTT Inc.
Cuming Microwave Corp.
Custom Cable Assemblies, Inc.
Custom Interconnects
Custom Microwave Components, Inc.
Custom MMIC Design Services, Inc.
Daa-Sheen Technology Co., Ltd.
Daisy RS
Dblm
Delta Electronics Mfg. Corp.
Delta Microwave Inc.
Design Workshop Technologies Inc.
Diamond Antenna & Microwave Corp.
Dielectric Laboratories, Inc.
Diemat, Inc.
DITF Thin Film
DiTom Microwave Inc.
Dong Jin Technology Innovation Co., Ltd.
Dow Key Microwave Corp.
Ducommun LaBarge Technologies, Inc.
Du Pont Electronic Technologies
Dyconex AG
Dynawave Inc.
Dyne-Tech Co., LTD
e2v aerospace and defense Inc
EADS North America
Eclipse Microwave, Inc.
EE-Evaluation Engineering
Elbit Systems EW & SIGINT-Elisra
Elcom Technologies Inc.
Elcon Precision, LLC
Electro Rent Corp.
ElectroMagneticWorks Inc.
Elliptika
EM Research, Inc.
EM Software & Systems - FEKO
EMC Technology/Florida RF Labs
Emerson & Cuming Microwave Products
Emerson Connectivity Solutions
Empower RF Systems
Empowering Systems, Inc.
EMS SCAN
ENS Microwave, LLC
Epoxy Technology, Inc.
ETL Systems
ETS-Lindgren
EuMW2012/Horizon House Publ. Ltd.
Excalibur Engineering Inc.
EZ Form Cable Corp.
F &K Delvotec, Inc.
Farfan Technology Ltd.
Ferrite Microwave Technologies
Ferro-Ceramic Grinding
First Level Inc.

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EXHIBITION COMPANY LISTING
IMS2012 EXHIBITING COMPANIES AS OF 20 MARCH 2012:

Flann Microwave
Flexco Microwave Inc.
Focus Microwaves Inc.
Fotofab
Freescale Semiconductor
Frontlinek Technologies Inc.
FTG Corp.
G-Way Microwave/G-Wave Inc.
Gap Wireless Inc.
Geib Refining Corp.
Gel-Pak
Gerotron Communication GmbH
GGB Industries, Inc.
GigaLane Co., Ltd.
GigOptix, Inc.
Global Communication Semiconductors, LLC
Gova Advanced Material Technology Co., Ltd.
Gowanda Electronics
Greenray Industries Inc.
GuangShun Electronic Tech. Research Inst.
Harbour Industries, Inc.
HEL Inc.
Herley Industries
Herotek Inc.
Hesse & Knips Inc.
High Frequency Electronics
Hirose Electric Co., Ltd.
Hittite Microwave Corp.
Holzworth Instrumentation Inc.
Hong Kong Sun Fung Co., Ltd.
HRL Laboratories, LLC
Hughes Circuits Inc.
Hunter Technology
IBM Corp.
IEEE Microwave Magazine
IEEE Xplore Digital Library
IHP GmbH
IKE Micro
IMST GmbH
In-Phase Technologies, Inc.
Infineon Technologies
Infinite Graphics
Innertron, Inc.
Innovative Fabrication
Instek America Corp.
Integra Technologies Inc.
Integrand Software, Inc.
Intercept Technology Inc.
International Manufacturing Services Inc.
Intertronic Solutions Inc.
iNTEST Thermal Solutions
Ion Beam Milling, Inc.
IPDIA
IQD Frequency Products Inc.
Ironwood Electronics
Isola
ISOTEC Corp.
ITC Co., Ltd.
ITTherm Technologies
ITT Exelis Microwave Systems
IW Insulated Wire Microwave Products Div.
JFW Industries, Inc.
Johanson Manufacturing Corp.
Johanson Technology Inc.
JQL Electronics Inc.
Jye Bao Co., Ltd.
K&L Microwave Inc.
Kaben Wireless Silicon Inc.
KCB Solutions
Keragis Corp.
KEYCOM Corp./Sales Dept.
Krytar Inc.
KVQ Quartz Crystal Technology GmbH
Kyocera America, Inc.
LadyBug Technologies LLC
Lake Shore Cryotronics, Inc.
LanJian Electronics
Lark Engineering Co.
Laser Process Mfg.
Laser Processing Technology, Inc.
Laser Services
LCF Enterprise
Leader Tech. Inc.
Liberty Test Equipment
Linearizer Technology Inc.
Linwave Technology Ltd.
Litron Inc.
Logus Microwave
Lorch Microwave
LPKF Laser & Electronics
M/A-COM Technology Solutions
M2 Global Technology Ltd.
Marcel Electronics International
Marki Microwave, Inc.
Massachusetts Bay Technologies
Matierion
MathWorks
Maury Microwave Corp.
McGraw-Hill Professional
MCV Technologies, Inc.
MECA Electronics, Inc.
Mega Circuit Inc.
MegaPhase
Meggitt Safety Systems, Inc.
Mercury Computer Systems, Inc.
Mersen
Mesuro
Metropole Products Inc.
Micable Inc.
Mician GmbH
Micreo Limited
Micro Communications, Inc.
Micro Electronic Tech. Development
Micro Lambda Wireless, Inc.
Micro Systems Engineering GmbH
Micro-Coax Inc.
Micro-Mode
MicroApps
MicroAssembly Technologies, Inc.
MicroFab Inc.
Micronetics Inc.
Microsemi Corp.
Microtech, Inc.
Microwave Applications Group
Microwave Communications Labs, Inc.
Microwave Development Labs Inc.
Microwave Dynamics
Microwave Engineering Europe
Microwave Journal
Microwave Product Digest
Microwave Technologies Co., Ltd.
Microwave Technology, Inc.
Microwavefilters S.R.L
Microwaves & RF/Penton Electronics Group
MIG Microwave Innovation Group
Millitech Inc.
Mini-Systems Inc.
MITEQ, Inc.
Mitsubishi Electric & Electronics Modelithics, Inc.
Modular Components National Inc.
Molex RF/Microwave Business Unit
Momentum Performance Materials
Morion, Inc.
Mosis
MPDevice Co., Ltd.
MrtronPTI
Murata Electronics
Nanjing Jiexi Technologies Co., Ltd.
NARDA
National Instruments
NDK
NEL Frequency Controls, Inc.
Networks International Corp. (NIC)
Nitronex Corp.
Noise XT
NoiseWave Corp.
Norden Millimeter Inc.
Northrop Grumman
NSI
Nuherz Technologies, LLC
Nuvotronics
NuWaves Engineering
NXF Semiconductors
OEWaves Inc.
OML, Inc.
OMMIC
ON Semiconductor
OPHIR RF Inc.
Orient Microwave Corp.
P/M Industries Inc.
P1dB, Inc.
Paciwave, Inc.
Palomar Technologies
Paricon Technologies Corp.
Pascall Electronics Ltd.
Passive Plus Inc.
Peregrine Semiconductor Corp.
PHARAD, LLC.
Photo Sciences Inc.
Picking Interfaces, Inc.
Piconics Inc.
Pivotone Communication Tech., Inc.
Planar
Planar Monolithics Industries, Inc.
Plansee Thermal Management Solutions

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EXHIBITION COMPANY LISTING
IMS2012 EXHIBITING COMPANIES AS OF 20 MARCH 2012:

Plextek Ltd.
Pole/Zero Corp.
Polyfet RF Devices
Ponn Machine Cutting Co.
Power Module Technology
Precision Connector, Inc.
Precision Manufacturing Group
Presidio Components, Inc.
Presto Engineering, Inc.
Q Microwave, Inc.
Q3 Laboratory
Qingdao Xingyi Electronic Equipment Co.
Quest Microwave Inc.
QuiK-Pak
QuinStar Technology, Inc.
QWED Sp. z o.o
R&K Company Ltd.
Radant MEMS, Inc.
Reactel, Inc.
RelComm Technologies Inc.
Remcom, Inc.
Remtec, Inc.
Renaiessance Electronics Corp.
Res-Net Microwave, Inc.
Resin Systems Corp.
RF Depot Inc.
RF Globalnet
RF Industries
RF Logic
RF Mecorecom Corea

RF Technology International
RFcore Co., Ltd.
RFHIC Corp.
RFMD
RFMW, Ltd.
RFS Ferrocom Ferrite Division
RH Laboratories, Inc.
Richardson RFPD
RIV Inc. - Precision Printing Screens
RJR Polymers Inc.
RLC Electronics, Inc.
Rogers Corp.
Rohde & Schwarz
Rosenberger North America LLC

S3 Group
Sainty-Tech Communications Ltd.
Samtec, Inc.
San-iron Inc.
Sangshin Elecom Co., Ltd.
Sanmina-SCI OMED
Sawmics Inc.
Schmid & Partner Engineering AG
Scientific Microwave Corp.
Scintera, Inc.
SDP Telecom Inc.

Selectron Inc.
Semi Dice Inc.
SemiGen
Semtech Corp.
SGC Technologies Inc.
SGMC Microwave

Shenzhen Atten Electronics Co., Ltd.
Shenzhen Huayang Tech.
Development Co.
Shenzhen Yulongtong Electron Co.,Ltd.
Shin-Etsu Chemical Co., Ltd.
Signatone
Silicon Cert Laboratories
Sinclair Manufacturing Co.
SIPAT Co.
Skyworks Solutions, Inc.
Smith Interconnect
Sonnet Software Inc.
SOURIAU PA&E
Southwest Microwave, Inc.
Spanawave Corp.
Spectra - Mat, Inc.
Spectrum Elektrotechnik GmbH
Spectrum Microwave, Inc.
Spinner Atlanta
Sprague Goodman
SSI Connector Gage Company
STTechnology Corp.
SSI Cable Corp.
State Of The Art Inc.
Star Industries Corp.
StratEdge Corp.

Sumida America Components
Sumitomo Electric Device Innovations
SV Microwave Inc.
Symmetricon
Synergy Microwave Corp.
T-Chip Inc.
Taconic
Tahoe RF Semiconductor, Inc.
Tai-Saw Technology Co., Ltd.
Teledyne Coax Switches
Teledyne Cougar
Teledyne Defence Ltd.
Teledyne Labtech
Teledyne MEC
Teledyne Microelectronics
Teledyne Microwave
Teledyne Relays
Teledyne Scientific
Teledyne Storm Products
Teledyne Technologies, Inc.
Telegartner, Inc.
Telemakus, LLC.

Teseq, Inc.
TestEquipment.com, Inc.
TestEquity LLC
Testforce Systems Inc.

Texas Instruments
Thales Components Corp.
THINFILMS Inc.

Times Microwave Systems
TMD Technologies Ltd.
Toshiba America Electronic Crmpts.
Total Temp Technologies, Inc.
TowerJazz
TRAK Microwave Corp.
Transcom, Inc.
Transline Technology Inc.
TriQuint Semiconductor
TRM Microwave
TRS-RenTelco
TRU Corporation Inc.
TTE Inc.

TTM Technologies, Inc.
TYDEX
UltraSource Inc.
UMS (United Monolithic Semiconductors)
UTE Microwave Inc.
Vacuum Engineering & Materials Co., Inc.
Valpy Fisher Corp.

Vanguard Technology Corp.
VeCTRAwave
Vectria Ltd.
Vectron International
Verspecht-Teyssier-Degroote
VidARF
Viking Tech America Corp.
Virginia Diodes Inc.
VisJay Intertechnology, Inc.
Voltronics Corp./Dover
VTI Instruments Corp.
W. L. Gore & Associates, Inc.
Weinschel Associates
Wenzel Associates Inc.
Werlatone Inc.
West Bond Inc.
WEVERCOMM Co., Ltd.

Wibicom
Wiley-IEEE
WIN Semiconductors Corp.
WIPL-D D.O.O.
Wireless Design & Development
Wireless Telecom Group

WiSpry, Inc.
X-Com Systems
XS Systems, Inc.
Xi'an Forstar S&T Co., Ltd.

Xi'an Gold Waves S&T Co., Ltd.
Yantel Corp.
Yokowo Co., Ltd.
Yortec Inc.
Z-Communications, Inc.

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