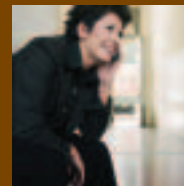
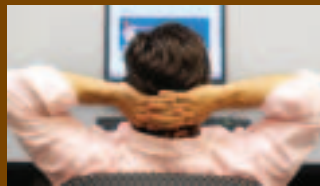


INTERNATIONAL CONFERENCE ON
Consumer
2005 IEEE Electronics



TUTORIALS:
JANUARY 8-9, 2005

CONFERENCE: AT THE INTERNATIONAL CONSUMER
JANUARY 11-12, 2005 ELECTRONICS SHOW IN LAS VEGAS



International Conference on
**Consumer
Electronics**



Digital Television | Optical Discs

Home Networking | Digital Audio | Video Recording | Content Security

**Advance Program
January 8-12, 2005**

Registration information at www.icce.org

ICCE JOINS CES IN LAS VEGAS

The IEEE Consumer Electronics Society is proud to present ICCE 2005 at the International Consumer Electronics Show in Las Vegas. This change will co-locate the premier consumer electronics technical conference with the world's largest annual consumer technology event. Start your trip by visiting the over 2,000 exhibitors at CES while choosing from our collection of ICCE Tutorials. Immediately after CES, the ICCE Conference will report on the latest research and technology that brought these products to the world.

The International Conference on Consumer Electronics is where key technologies, services and architectures for the next generation of consumer entertainment and information delivery products are first shared and discussed. The ICCE Tutorials update engineers on the latest CE technologies, while the conference papers provide insight into advancements in the field. Industry executives will discuss exciting advances in their keynote and luncheon presentations, while our panelists will surely provoke lively discussions. Digital Television, Video, Audio, Home Networking, and Wireless are featured topics in this 23rd annual engineering event.

We welcome you to attend the reinvented ICCE!

*Hans Baumgartner,
2005 Conference Chairman*



**2005
CONFERENCE
CHAIRMAN**

**HANS
BAUMGARTNER,
SARNOFF
CORPORATION**

ABOUT CES

The International Consumer Electronics Show (CES) is the world's largest annual tradeshow for consumer technology and America's largest annual tradeshow of any kind. The International CES reaches across markets, spans the globe and helps thousands of consumer electronics businesses grow and thrive each year.

INTERNATIONAL CES AND EXHIBITS | THU-SUN, JAN. 6-9, 2005
ICCE TUTORIALS | SAT-SUN, JAN. 8-9, 2005
ICCE CONFERENCE | MON-WED, JAN. 10-12, 2005

Due to the popularity of CES, be sure to register for the conference and reserve your rooms immediately!

For detailed conference, registration, and lodging information, visit the conference website or contact Charlotte Kobert by email at icce@ieee.org, phone 724-449-8314, or fax 724-449-8359 .

WWW.ICCE.ORG

CONFERENCE OVERVIEW

Location

The ICCE Tutorials and Conference will be held in rooms N256-N264 on the second floor of the Las Vegas Convention Center North Hall.

International CES - January 6-9

Over 2,000 exhibitors will be showing the latest consumer products coming to the marketplace. From the largest, flattest televisions to the smallest, most feature-packed mobile phones...they all will be on display at the show. Keynote speakers include the CEOs of Intel, Microsoft, HP, Motorola, and the CEA. An Exhibits Plus badge is included with your advance ICCE registration for access to the CES Exhibits, Keynotes and selected CES sessions. CES runs from January 6-9, so arrive a few days early and experience this event.

ICCE Tutorials - January 8-9

Six technical tutorials will run on Saturday and Sunday providing attendees with in-depth overviews of today's most sought after technical subjects during the last two days of CES. Details may be found in the Tutorials section of this brochure and on the ICCE web site.

ICCE Conference - January 10-12

Industry and academic innovators will present the latest advances in consumer electronics during the ICCE Conference on Monday through Wednesday. The program is packed with over 240 oral and poster presentations with major tracks in Digital Television, Audio, Video, PVRs, Optical Discs, Wireless, Home Networking, and Security. Keynotes, luncheons, panels and social events highlight each day of the conference. See the schedule grid and session list for details.



SPECIAL EVENTS

Opening Keynote Address

The conference opens on Monday, January 10 at 9:00 AM with the keynote address: Digital Content Throughout the Networked Home, by Patrick Griffis, Vice President, Digital Living Network Alliance as well as Director of Worldwide Media Standards, Microsoft. All tutorial and conference registrants are invited to attend this presentation.

Poster Sessions

Interact one-on-one with authors and see demonstrations of new technologies while enjoying complimentary refreshments at the daily poster sessions. The posters are now organized into topic sessions that run in parallel with the oral presentations so that attendees will be able to find demonstrations of interest each day of the conference.

Welcome Reception

Join us for one of the ICCE highlight events-the Welcome Reception sponsored by the Consumer Electronics Association. Food, beverages, and a casual atmosphere provide attendees with the perfect opportunity to meet with colleagues and friends for an evening of fun and relaxation. We welcome all conference attendees to this event.

Technology Luncheon

All ICCE attendees are invited to a technology luncheon sponsored by Samoff Corporation (formerly the David Samoff Research Center of RCA). This event will feature a casual meal and presentations from this pioneering laboratory.

Awards Luncheon and Keynote

This year, admission to the Tuesday Awards Luncheon is included with all paid ICCE conference registrations. The luncheon is the society's opportunity to recognize some of the outstanding achievements of our peers and to enjoy the keynote presentation, Forefront of Display Technologies Powered by New Light Sources by Dr. Shigeo Kubota, Senior Vice President and CTO (Devices Technology), Sony Corporation. A ticket is included in the registration packets.

Panel Discussion

A cross-section of industry representatives will discuss Mobile Multimedia during this informal luncheon moderated by Stuart Lipoff, IP Action Partners.

All Special Events are included with Conference registration. See www.icce.org for details and updates.

ICCE 2005 CONFERENCE PROGRAM

ICCE CONFERENCE

Monday, January 10, 2005

9:00am	10:20am	Opening Keynote			
10:30am	12:10pm	1.1 Advanced Video Transmission	1.2 Home Networking Standards	1.3 Optical Disc Systems 1	1.4 User Authentication
12:20pm	2:20pm	Technology Luncheon			
2:20pm	4:00 pm	2.1 PVR and Multimedia Development, Integration, & Complexities 1	2.2 Encryption and Rights Management	2.3 Optical Disc Systems 2	2.4 Poster P1 & P3; Video Processing 1 & Networking 1 (Wireless)
4:00pm	4:20pm	Break (Posters)			
4:20pm	6:00pm	3.1 PVR and Multimedia Development, Integration, & Complexities 2	3.2 Home Networking Architectures	3.3 Still and Video Cameras	3.4 Multimedia Processor Design
6:00pm	8:00pm	Welcome Reception			

Tuesday, January 11, 2005

9:00am	10:40am	4.1 Digital TV Broadcast: DVB & ISDB-T1	4.2 Wireless Home Multimedia Networks Computer	4.3 Video Quality Enhancement 1	4.4 Human Computer Interaction 1
10:40am	11:00am	Break			
11:00am	12:20pm	5.1 Digital TV Broadcast: DVB & ISDB-T2	5.2 Display Enhancement	5.3 Video Quality Enhancement 2	5.4 Human Computer Interaction 2
12:30pm	2:30pm	Awards Luncheon and Keynote			
2:40pm	4:00pm	6.1 Audio Technologies and Applications 1		6.3 H.264/AVC Implementation	6.4 Poster P2&P5; Video Processing & Remarkable CE Technologies
4:00pm	4:20pm	Break (Posters)			
4:20pm	6:00pm	7.1 Audio Technologies and Applications 2	7.2 Video over Wireless	7.3 H.264/AVC Algorithms	7.4 Acquisition Systems

Wednesday, January 12, 2005

9:00am	10:40am	8.1 Video Codec Implementation	8.2 Wireless Lan 1	8.3 Compressed Video and Display Processing 1	8.4 Image Watermarking
10:40am	11:00am	Break (Posters)			
11:00am	12:20pm		9.2 Wireless Lan 2	9.3 Compressed Video and Display Processing 2	9.4 Poster P4&P6: Networking 2 & Multimedia
12:20pm	2:00pm	Panel Luncheon: Mobile Multimedia			
2:00pm	3:20pm	10.1 Digital Television Broadcast ATSC 1	10.2 Home Applications	10.3 Video Format Conversion for Displays 1	10.4 Handheld Applications
3:20pm	3:30pm	Break			
3:30pm	4:50pm	11.1 Digital Television Broadcast ATSC 2	11.2 JPEG and JPEG2000	11.3 Video Format Conversion for Displays 2	11.4 Mobile Electronics Applications

TOPIC LEGEND

 Video

 Audio

 PVR and Optical Disc

 Digital Television

 Security

 Applications

 Networks and User Interface

 Posters

TECHNICAL PROGRAM COMMITTEE

REGISTRATION INFORMATION

To receive the applicable prices at registration you must use one of the following "priority codes" when requested in the registration process:

ADVANCE FEES

Conference (Includes CD-ROM Conference Digest and one Awards Luncheon ticket)

IEEE Member:	\$495
Priority Code:	I3EM
(IEEE# required)	
Non-Member	\$595
Priority Code:	I3EN
Student	\$245
Priority Code:	I3ES
(ID# required)	
Life-Member	\$245
Priority Code:	I3EL
(IEEE# required)	

TUTORIALS

ICCE Tutorials	\$365.00
(all included)	
IEEE Member	\$325.00



TECHNICAL PROGRAM CHAIR

PETER H.N. DE WITH
**LogicaCMG/
 Eindhoven
 University of
 Technology,
 Netherlands**

Technical Program Vice-Chair

Anthony Vetro
 Mitsubishi Electric

Chinese Representative

Ja-ling Wu
 National Taiwan University

European Representative

Dietmar Hepper
 Thomson

Korean Representative

Sangil Park
 Samsung Electronics

Far East Representative

Kazuo Kuroda
 Pioneer Corporation
 Saif alZahir
 Computer Science University of
 Northern British Columbia, Canada

Wael Badawy
 University of Calgary

Jean Baronas
 Sony Electronics

Ed Barrett
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Atul Batra
 Mitsubishi Digital

Petronel Bigioi
 National University of Ireland, Galway

Martin Bolton
 STMicroelectronics

Vito Brugliera
 Consultant

Yung-Chang Chen
 National Tsing Hua University

Cherif Chibane
 Norzak

Peter Corcoran
 FotoNation Ireland Ltd.

Jayant Datta
 Discrete Laboratories, Inc.

Richard F. Doherty
 Envisioneering

Lee Estrada
 Toshiba America Electronic
 Components

James O. Farmer
 Wave7 Optics, Inc.

Bernard Fong
 Auckland University of Technology

John G. N. Henderson
 Hitachi America, Ltd.

Christian Hentschel
 University of Technology Cottbus

Dietmar Hepper
 Thomson

David Hostetler
 Premier Wireless

Takuya Ima-ide
 Hitachi Ltd.

Michael A. Isnardi
 Sarnoff Corporation

Ralph Justus
 Consumer Electronics Association

Brent Karley
 Freescale Semiconductor

S. K. (Suki) Kim
 Korea University

Sung-Jea Ko
 Korea University

Uwe E. Kraus
 Bergische Universitat Wuppertal

Akiomi Kunisa
 Sanyo Electric Co. Ltd.

Stuart Lipoff
 Applied Value Corporation

Wang He Lou
 Mitsubishi Digital Electronics

Vishal Markandey
 Texas Instruments

Aldo W. Morales
 Penn State University

Kazuhiro Ohara
 Texas Instruments

Anthony Ojo
 Philips Consumer Electronics

Sharon Peng
 Harman Consumer Group

James D. Richards III
 Aerodyne Corporation

William A. Rowe
 WARowe Consultancy

Masaru Sakurai
 Toshiba Corporation

Paul A. Snopko
 Techwell, Inc.

Sorin G. Stan
 Philips Optical Storage

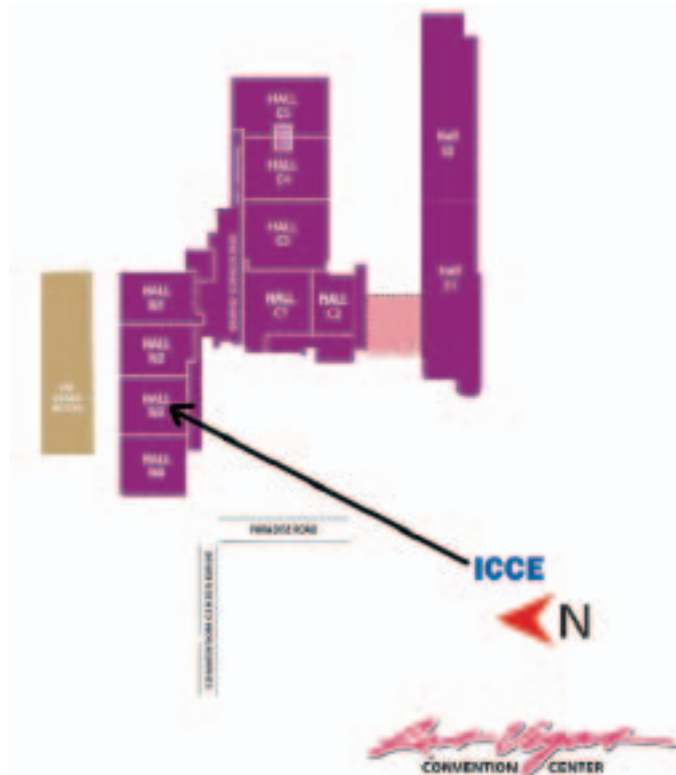
Peter Van Beek
 Sharp Laboratories of America

Virginia Williams
 Consumer Electronics Association
 CEA

James Williamson
 Sony Electronics, Inc.

Chojuro Yamamitsu
 Pioneer Co. Ltd

Kei Yamashita
 OITDA



TECHNICAL SESSIONS



PATRICK GRIFFIS,
VICE PRESIDENT,
DIGITAL LIVING
NETWORK
ALLIANCE AND
DIRECTOR OF
WORLDWIDE
MEDIA
STANDARDS,
MICROSOFT,
OPENING
KEYNOTE



DR. SHIGEO
KUBOTA
SENIOR VICE
PRESIDENT AND
CTO (DEVICES
TECHNOLOGY),
SONY
CORPORATION,
AWARDS
LUNCHEON
KEYNOTE

- 1.1 Advanced Video Transmission**
- 1.2 Home Networking Standards**
- 1.3 Optical Disc Systems 1**
- 1.4 User Authentication**

- 2.1 PVR and Multimedia Development, Integration, & Complexities 1**
- 2.2 Encryption and Rights Management**
- 2.3 Optical Disc Systems 2**
- 2.4 Poster P1&P3: Video Processing 1 & Networking 1 (Wireless)**

- 3.1 PVR and Multimedia Development, Integration, & Complexities 2**
- 3.2 Home Networking Architectures**
- 3.3 Still and Video Cameras**
- 3.4 Multimedia Processor Design**

- 4.1 Digital TV Broadcast: DVB & ISDB-T 1**
- 4.2 Wireless Home Multimedia Networks**
- 4.3 Video Quality Enhancement 1**
- 4.4 Human Computer Interaction 1**

- 5.1 Digital TV Broadcast: DVB & ISDB-T 2**
- 5.2 Display Enhancement**
- 5.3 Video Quality Enhancement 2**
- 5.4 Human Computer Interaction 2**

- 6.1 Audio Technologies & Applications 1**
- 6.3 H.264/AVC Implementation**
- 6.4 Poster P2&P5: Video Processing & Remarkable CE Technologies**

- 7.1 Audio Technologies & Applications 2**
- 7.2 Video over Wireless**
- 7.3 H.264/AVC Algorithms**
- 7.4 Acquisition Systems**

- 8.1 Video Codec Implementation**
- 8.2 Wireless Lan 1**
- 8.3 Compressed Video and Display Processing 1**
- 8.4 Image Watermarking**

- 9.2 Wireless Lan 2**
- 9.3 Compressed Video and Display Processing 2**
- 9.4 Poster P4&P6: Networking 2 & Multimedia**

- 10.1 Digital Television Broadcast: ATSC 1**
- 10.2 Home Applications**
- 10.3 Video Format Conversion for Displays 1**
- 10.4 Handheld Applications**

- 11.1 Digital Television Broadcast: ATSC 2**
- 11.2 JPEG and JPEG2000**
- 11.3 Video Format Conversion for Displays 2**
- 11.4 Mobile Electronics Applications**

Chairs: Michael Isnardi; Anthony Vetro
Chairs: Peter Corcoran; Petronel Bigioi
Chairs: Kei Yamashita; Sorin Stan
Chairs: Vishal Markandey; Akiomi Kunisa

Chairs: Jean Baronas; Saif al Zahir
Chairs: Vishal Markandey; Akiomi Kunisa
Chairs: Kei Yamashita; Sorin Stan

Chairs: Dietmar Hepper; Kazuo Kuroda

Chairs: Jean Baronas, Saif al Zahir
Chairs: Peter Corcoran; Petronel Bigioi
Chairs: Takuya Imaide; Kazuhiro Ohara
Chairs: Peter De With; Michael Isnardi

Chairs: Uwe Kraus; Bernard Fong
Chairs: James Farmer; Bernard Fong
Chairs: Christian Hentschel; Sharon Peng
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Chairs: Saif alZahir; Jean Baronas

Chair: Jayant Datta
Chair: Peter Corcoran

Chairs: TKazuo Kuroda; Haruo Okuda

Chair: Jayant Datta
Chair: Anthony Vetro
Chairs: Michael Isnardi; Peter DeWith
Chairs: Uwe Kraus; Paul Snopko

Chair: Michael Isnardi
Chairs: Bernard Fong; James O. Farmer

Chairs: Aldo W. Morales; Christian Hentschel
Chairs: Akiomi Kunisa; Vishal Markandey

Chairs: Bernard Fong; James O. Farmer

Chairs: Aldo Morales; Christian Hentschel
Chairs: Haruo Okuda; Dietmar Hepper

Chairs: Paul Snopko; Uwe Kraus
Chair: Peter DeWith
Chairs: Masaru Sakurai; Anthony Ojo
Chair: Peter Corcoran

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Chair: Peter de With