



# Enabling Technology Forums

for the technologies "inside"



DEFINING TOMORROW'S TECHNOLOGY

## January 5-7 in the Riviera Royale Pavilion

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### PRESENTERS



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## CES 2005 Inaugural Event - Admission is FREE!

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**1:00 PM****SuperSession: Computing for the Consumer - The Entertainment PC****Riviera Skybox 209-210**

What is an Entertainment PC (EPC)? To be an EPC it has to be something special. It has to: unify the user's entertainment experience, concentrate and manage all media (not just some media), be friendly, inviting, and provide a satisfying experience.

Presentations by  
Dr. Jon Peddie, JPR  
Godfrey Cheng, ATI  
Joe Belfiore, Microsoft  
Mike Ling, InterVideo  
Dan Vivoli, nVIDIA  
Jau Huang, Cyberlink

**Turning up the Volume on the Portable Digital Audio Market****Riviera Skybox 208**

This session will discuss the extreme growth of the portable digital audio market from the perspective of the leading silicon solution provider. It will focus on the challenges related to bridging technology complexities together with market and consumer needs and expectations (ie ease of use). It will also help to define the market requirements and how these requirements are being addressed from a technology implementation standpoint.

Presented by  
Mike Wodopian, SigmaTel

**The Future of DVD****Riviera Skybox 204-205**

While various high bandwidth networks are being developed, DVD will be around for several decades to come. Get an overview from Sonic of the current state of dual layer technology and the battle for dominance in high definition DVD formats. Learn about the strategies of the six best current contenders and their likelihood of success. This session is ideal for product planners navigating their future plans for incorporating DVD functionality.

Presented by  
Jim Taylor, Sonic

**After the briefing, meet Jim Taylor, author of "DVD Demystified," in Skybox 204**

**2:00 PM****DTV Image Quality Optimization via DNX - Digital Natural Expression****Riviera Skybox 208**

The rapid growth of the DTV market has introduced new technologies for displays and new manufacturers into what was a mature market. With the introduction of DNX Certification, Pixelworks is introducing the first effort to set a benchmark for video performance based on scientific measurement and analysis.

Presented by  
Craig Verbeck, Pixelworks

**Are Consumers Ready for 64-bit Computing?****Riviera Skybox 207**

In 2005, desktop and mobile Personal Computers will reach prices consumers can afford. Microsoft will (finally!) ship a 64-bit version of windows XP. Will any of this matter to users who deploy their systems for consumer-oriented applications? If so, which ones, and why? In this session, Nathan Brookwood will share Insight 64's view of the factors that will impact consumer adoption of 64-bit systems.

Presented by  
Nathan Brookwood, Insight 64

**Digital Media Content Drives Memory and I/O Bandwidth Higher****Riviera Skybox 206**

The rapid move of entertainment and communications devices to multi-format digital media is driving up the I/O and memory bandwidth needs and the links that drive media interfaces. The explosion of personal digital content ranging from pictures, to DVD's, digital video recorders and high definition television has made memory bandwidth a critical resource needed to store, recall and reformat these images to a variety of display standards.

Presented by  
Craig Hampel, Rambus

**Adding CD/DVD Recording and Navigation to Your Product Faster****Riviera Skybox 204-205**

What does it take to add DVD recording and play back to your set top box design? Find out as Sonic walks you through the process of incorporating a DVD Recorder software stack into an existing system reference design. This session will cover many of the key design issues that should be considered before a plan is finalized.

Presented by  
Eric Zetlin, Sonic

**3:00 PM****Big-Screen TVs Outlook to 2008 - Microdisplay RPTV, LCD & PDP****Riviera Skybox 208**

RPTV will sell at least 11 million units globally in 2008 and potentially as many as 22 million units. Forecast is based on new analytical approach - "technology battlegrounds." Associated forecasts for LCD and PDP displays over 30" diagonal are provided. Steve Marsland will review key findings of MCG's Report; Home Entertainment: Opportunity Analysis and Forecast 2004 published in partnership with Insight Media in November 2004.

Presented by  
Steve Marsland, McLaughlin CG

**AutoFocus and Zoom for Camera Phones - Impact of the Liquid Lens****Riviera Skybox 206**

The advent of the camera phone has produced a variety of challenges – such as durability, speed, simplicity, power consumption, and size - that have made mechanical lenses more expensive and complex. The solution to these challenges is the liquid lens – an optical revolution that is bringing auto focus and zoom capabilities to the next generation of camera phones. Attend this session to hear the story behind this innovation, to see the technology first-hand, and to learn more about how liquid lenses will change camera-phone optics forever.

Presented by  
Etienne Paillard, Varioptic

**At 5:00PM, Varioptic will hold a press conference in Skybox 206**

**Moving and Consuming High Bandwidth Content in the Home****Riviera Skybox 204-205**

With PCs, set top boxes, DVRs, cameras, and PMPs all trying to share digital content, how will all of this content get organized and shared in the new connected home? At this session, Sonic explains the new standards major manufacturers are developing and incorporating to make managing and consuming your digital content in the right place on the right device a snap.

Presented by  
Mark Ely, Sonic

**4:00 PM****Inside the Digital Set Top Box****Riviera Skybox 209-210**

From different geographies to different service providers the digital set top box is continuing to evolve in innovative ways. It's not just cable and satellite anymore. We will take you through the market dynamics and technology requirements of these new opportunities.

Presentations by  
Christine Arrington, Acacia RG  
Vinayak Bhide, Zoran  
Toby Farrand, Digeo  
Bill Loesch, Consultant  
TBA, Cirrus Logic

**Khronos - Creating the Foundation for Embedded Media Processing****Riviera Skybox 208**

The Khronos Group is enabling advanced media processing on cell phones and other embedded devices by creating royalty-free media processing API standards. This presentation will provide an insight into the rapidly forming ecosystem for embedded media processing including the market drivers, the role of the Khronos Group and the key features and roadmap of the OpenGL ES 3D API.

Presented by  
Neil Trevett, Khronos / 3DLabs

**Defining HiDef in Silicon - The Big Picture****Riviera Skybox 207**

Advanced DTV systems require the integration of many digital and analog capabilities. This presentation offers an overview of DTV image processing functions at the IC level.

Presented by  
Bert McComas, Consultant

**The DVR with DVD Recording - The Killer CE Product****Riviera Skybox 204-205**

Customers love their DVRs. Incorporating DVD Recording into the DVR is a natural evolution that solves several real problems for customers and results in a new winning product category. Let Sonic explain what this combination device can look like, and how it will succeed in the market.

Presented by  
Mark Ely, Sonic

**8:00 AM****SuperSession:  
Connecting the  
Connected Home****Riviera Skybox 209-210**

The "digital home landscape" has grown remarkably in just a few years to accompany the dramatic increase in U.S. residential broadband connections and the emergence of data networking solutions. This session will provide insight into the current and future platforms, solutions, and technologies for the home networking markets.

Presentations by

Kurt Scherf, Parks & Associates  
Eric Dewannain, Texas Instruments  
Michael Stich, Texas Instruments  
Mark Depietro, Motorola  
Bill Carney, Texas Instruments

**High-Performance  
Processors for  
Consumer Devices****Riviera Skybox 207**

This presentation will compare and contrast general-purpose processors that are appropriate for consumer equipment--such as set-top boxes, PVRs, and HDTVs--that need more CPU performance than an integrated SoC can provide. Products to be discussed include MIPS processors from PMC-Sierra, Toshiba, AMD, and Raza; PowerPC chips from AMCC and Freescale; XScale chips from Intel; and x86 chips from Intel, AMD, and Via.

Presented by

Linley Gwennap, The Linley Group

**Next Generation  
3G Technology -  
A Case Study****Riviera Skybox 206**

A short market overview for basestation and handset markets, followed by a specific example of next generation 3G technology. I have chosen the parallel DSP core from Morpho Technologies to highlight the needs of next generation 3G designs. Issues and solutions to the 3G basestation and 3G Handset will be discussed.

Presented by

Conrad Maxwell, Maxwell CG

**Interested in presenting  
at future ETF events?  
Contact Rich McComas  
at (877) 7FORUMS  
or send email to  
rich@horizonevents.com**

**9:00 AM****Smart Chips for Smart  
Phones - Media & Image  
Processing for Cellular****Riviera Skybox 209-210**

Wireless Media Processors deliver better image processing, power efficiency and amazing 2D and 3D graphics. 2005 will be a banner year for this market

Presentations by

Dr. Jon Peddie, JPR  
Ward Pitkin, Texas Instruments  
James Bruce, ARM Inc.  
David Cooper, Imagination Tech.  
Thomas "Rick" Tewell, Fujitsu  
Ville Miettinen, Hybrid Graphics  
Brian Bruning, nVIDIA

**IP-TV/Network  
Entertainment Takes Off****Riviera Skybox 208**

IP-TV is a huge new market opportunity for CE makers and content delivery providers. With new silicon solutions available, the market opportunity for IP-TV and a new breed of IP-enabled STBs, will exceed \$18 billion by 2008.

Presented by

John Setel O'Donnell, Equator

**Who Needs 802.11n****Riviera Skybox 207**

The next gen Wi-Fi, 802.11n offers 100Mbps. We examine home networking, the state of the art in Wi-Fi, where current products fall short, and market outlook.

Presented by

Linley Gwennap, The Linley Group

**Digital Media Drives  
Memory and I/O Bandwidth****Riviera Skybox 206**

Advanced CE digital media devices are driving up the I/O and memory bandwidth for processing and media interfaces. Memory bandwidth is a critical resource needed to store, recall and reformat these images to a variety of display standards.

Presented by

Craig Hampel, Rambus

**DVD Demystified,  
Take 2: The Upcoming  
HD DVD Formats****Riviera Skybox 204-205**

What does High Definition DVD mean? Get the scoop from Jim Taylor, Author of "DVD Demystified" and the "DVD FAQ" in an overview of the current state of DVD technology, including dual layer and the battle for high definition DVD.

Presented by

Jim Taylor, Sonic

**10:00 AM****Innovative Consumer  
Devices Put IP at the Core  
of the User Experience****Riviera Skybox 208**

Digital content processing is pushing silicon performance requirements and driving the need for intellectual property (IP) in CE systems. As the leading provider of embedded microprocessors for DVD recorders, STBs, DTV, and digital cameras, MIPS will comment on next-generation systems.

Presented by

Jack Browne, MIPS Technologies

**Personal (Head-Mounted)  
Displays - Opportunities  
through 2008****Riviera Skybox 207**

Sales of Personal Displays will reach \$1 billion by 2008 as costs decline. CE vendors should start to design consumer Personal Displays now. Steve Marsland, will review key findings of MCG's Report: Personal Displays: Opportunity Analysis and Forecast 2004.

Presented by

Steve Marsland, McLaughlin CG

**Next Generation Optics -  
Zoom/Focus with No  
Moving Parts****Riviera Skybox 206**

Varioptic's technology uses an electric current to change the shape of two clear liquids, similar to the operation of the human eye. This liquid lense enables optical enhancements including zoom and auto-focus capabilities for camera-phones, automobiles, and medical applications where size, power consumption, durability, cost and temperature matter.

Presented by

Etienne Paillard, Varioptic

**Adding CD/DVD  
Recording and Navigation  
to Your Product Faster****Riviera Skybox 204-205**

What does it take to add DVD recording and play back to your set top box design? Sonic will walk you through the process of incorporating a DVD Recorder software stack into an existing system reference design. This session will cover many of the key design issues that should be considered before a plan is finalized.

Presented by

Eric Zetlin, Sonic

**11:00 AM****The Digital Home -  
Forks in the Road****Riviera Skybox 209-210**

This session looks into directions of the digital home, the current state of Media Center PC and issues with them. The presenter will also share from personal experience, horror stories, myth and hearsay to look at life in a digital home.

Presented by

Leonard Tsai, Medion USA

**Computing Platforms  
for the  
Consumer Era****Riviera Skybox 208**

Discussion of the various factors that have led to the commoditization of desktop PC's over the recent years. Explore strategies to reduce and reverse commoditization, creating a market of innovation and differentiation, instead of increasing pricing pressure. Focus on the digital home and EPC as a key platform for de-commoditization.

Presented by

Cameron Rogers, Shuttle Computer

**The Technology  
Behind Portable  
Digital Audio****Riviera Skybox 207**

This session will discuss how hardware and software integration and quality and support are helping to define and satisfy consumer and marketing requirements for portable digital audio electronics. It will also focus on current and future initiatives being undertaken by industry leaders to propel this market into a broad public acceptance and usage model.

Presented by

Danny Mulligan, SigmaTel

**A new External Storage  
Interface - eSATA, an  
update from SATA IO****Riviera Skybox 206**

The SATA IO group has developed a new standard called External SATA or eSATA. This external connector and cable provide a way to expand storage without the consumer opening the PC. A review of this new and exciting storage technology and some select new SATA IO topics, will be provided by a member of the SATA IO group.

Presented by

Conrad Maxwell, SATA IO

**8:00 AM****SuperSession:  
Convergence: Enabling  
Digital Innovation****Riviera Skybox 209-210**

Advanced cell phones are becoming a platform for convergence. Beyond just communication, the computing capabilities of these devices is beginning to exceed the PCs of only a few years ago, adding music, video, internet, email and many other functions on your phone. Pankaj Kedia will discuss this vision of convergence.

Presented by  
Pankaj Kedia, Intel

**LCOS: The End of the  
Beginning and the  
Future Looks Bright****Riviera Skybox 208**

While some industry pundits question the viability of LCOS, Sony, JVC, Brillian and others remain devoted to LCOS for the future of RP HDTV. The best of today's LCOS offerings deliver unsurpassed image quality with exceedingly fast response times, and by eliminating the screen door effect that characterizes plasma, LCD and projection LCD TVs.

Presentations by  
Chris Chinnock, Insight Media  
Vincent Sollito, Jr, Brillian

**Powering  
Tomorrow's  
Consumer Devices****Riviera Skybox 207**

As CE devices become increasingly smaller, advanced semiconductor technology can help to extend battery life and system run-time. The entire power system – from smart batteries to high-performance power management technology to low-power processing – will play a vital role in the advancement of tomorrow's consumer electronics.

Presented by  
Scott Eisenhart, Texas Instruments

**Enabling Technologies  
for Portable Media  
Players (PMP)****Riviera Skybox 206**

With Portable Media Products such as Apple's iPod a hot item this holiday shopping period, this presentation looks at the future technologies that will be required to enable the next generation of PMP's. New video and audio formats will be looked at, along with new features, user interfaces, and applications. Also how the rights of the content owners can be supported will also be discussed.

Presented by  
James Bruce, ARM

**9:00 AM****Digital TV -  
Its Components  
and Market Forecast****Riviera Skybox 209-210**

Panelists will present their view of the current status of DTV rollout, the market, impact of new technologies, DTV in the future digital home, and key problems facing the IC vendors.

Presentations by  
Henry Choy, Jon Peddie Research  
Vinayak Bhide, Zoran  
Gregory Zancewicz, Microtune  
Rainer Hoffmann, Micronas  
Julian Humphrey, Philips

**Projection Illumination  
Review****Riviera Skybox 208**

High pressure Mercury arc lamps are used in most projection systems today, but new technologies are coming like Xenon, RF excited, LED and laser sources. Market status and outlook.

Presented by  
Chris Chinnock, Insight Media

**Understanding DSP  
Solutions for the  
Home Theater****Riviera Skybox 207**

The home theater requires new features and capabilities for audio processing. This workshop explains how advanced DSPs will support better audio fidelity, more channels and the latest standards.

Presented by  
Bobby McGoldrick, TI

**Technologies for  
Connecting the  
Digital Home****Riviera Skybox 206**

The digital home demands innovative IC solutions for delivering, viewing and storing content. CE vendors will need new cost effective processors to address issues such as Security, Java Performance and Energy Management.

Presented by  
David Rose, ARM

**Moving and Consuming  
High Bandwidth Content  
in the Home****Riviera Skybox 204-205**

Sonic explains the new standards major manufacturers are developing to allow PCs, set top boxes, DVRs, cameras, and PMPs to organize & share digital content

Presented by  
Todd R Collart, Sonic

**10:00 AM****Big-Screen TVs Outlook to  
2008 - Microdisplay RPTV,  
LCD & PDP****Riviera Skybox 208**

The global RPTV market is forecasted to grow to at least 11 million units in 2008 and potentially as large as 22 million units. Forecasts for RPTV, LCD and PDP are based on new analytical approach - "technology battlegrounds." from the new report; Home Entertainment: Opportunity Analysis and Forecast 2004.

Presented by  
Steve Marsland, McLaughlin CG

**Video Compression and  
Image Processing for  
the DVR / PVR / STB****Riviera Skybox 207**

Streaming media applications such as IP Set-top Boxes and Digital Media Adapters need to support an increasing range of video codec algorithms. This presentation will provide an overview of the different video compression standards and performance levels required for real-time implementations.

Presented by  
Jeremiah Golston, TI

**Enabling a New Generation  
of Car Multimedia and  
Telematics Platforms****Riviera Skybox 206**

Car Multimedia and Telematics platforms are the convergence point of Digital Media, Voice/Data Communications and Driver Assistance features. Next generation platforms must deliver new functions, and securely interoperate with portable devices. ARM and its Silicon Partner, Fujitsu Microelectronics are together enabling next generation solutions.

Presented by  
Wayne Lyons, ARM Inc.

**The DVR with  
DVD Recording -  
The Killer CE Product****Riviera Skybox 204-205**

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Presented by  
Todd R Collart, Sonic

**11:00 AM****Media Server  
Strategies -  
Blueprint for Success****Riviera Skybox 209-210**

What Is a Media Server? It's going to be huge and long lasting >\$5 Billion by 2008. However, there will be conflict and confusion for consumers and suppliers.

Presentations by  
Dr. Jon Peddie, JPR  
Brian Heuckroth, Cirrus Logic  
Beau Beck, Airgo Networks  
Mike McCoy, ADS Tech  
George Tang, InterVideo  
Jim Nguyen, WISchip Int'l  
Kai Scheffer, Micronas

**Advanced TV  
Market Outlook****Riviera Skybox 208**

The outlook for TV technologies will be presented by region and size. A review of recent surveys of retailers, brands and worldwide panel/imager/tube suppliers.

Presented by  
Ross Young, DisplaySearch

**Connect Consumer  
Electronics Wirelessly****Riviera Skybox 207**

Overview of connectivity trends in digital cameras, camcorders, portable media players, etc. Technological trends, such as high-definition capture and high-definition display, as well as high-density and low-cost memory, will be discussed.

Presented by  
Yoram Solomon, Texas Instruments

**Silicon Solutions for Next  
Generation STB Designs****Riviera Skybox 206**

Recent innovations such as high-definition content reception and display, rendering of multiple video channels, integrated PVR, and broadband require new approaches to design of STB solutions.

Presentations by  
Dan Davis, ARM Home Solutions  
Wendell Smith, Conexant

**DVD Demystified,  
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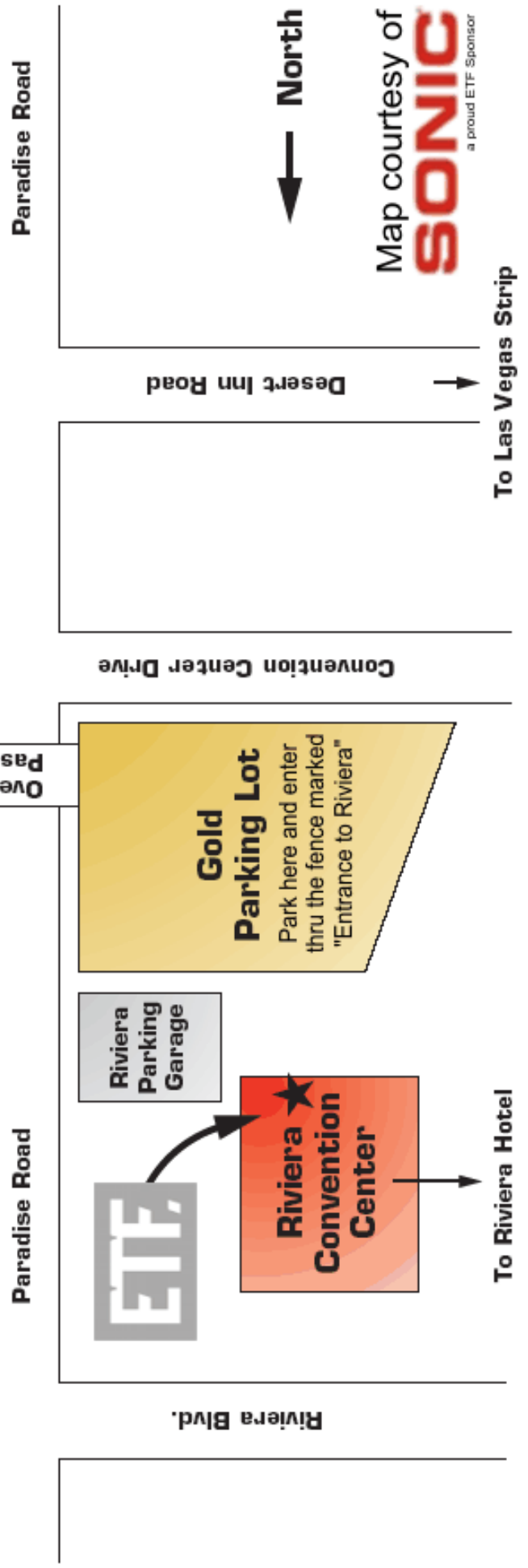
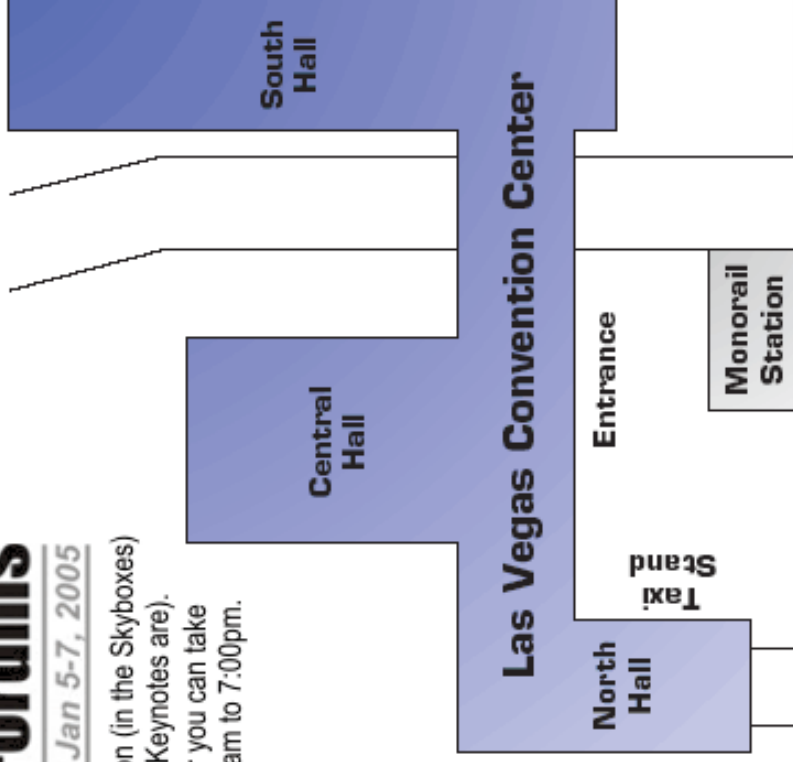
Presented by  
Jim Taylor, Sonic



# Enabling Technology Forums

International Consumer Electronics Show - Jan 5-7, 2005

All ETF briefings will be presented on the 2nd floor of the Riviera Royale Pavilion (in the Skyboxes) which is across Paradise from the Hilton Conference Center (where the CES Keynotes are). From the LVCC, your walk to the Riviera will take between 5 and 15 minutes, or you can take Route 9 of the CES Shuttle System which runs ever 20-30 minutes from 7:30am to 7:00pm.



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