

Company	Title	Synopsis:
Belden	10GigE over Twisted Pairs for Audio and	The newly-ratified 10 Gigabit cable standard for emerging applications and distances up to 100 meters is rapidly growing in Ethernet networking and will soon come to digital audio and digital video applications, such as ultra-high-speed networks for file transfers and server virtualization. Is the world turning into one giant server? Come and find out.
Canwest	The Future is Virtual (Reality that is).	Practical overview of the advanced systems deployed by CanWest for Virtual Reality, graphics and advanced studio functionality.
Charles Poynton	The outlook for HDTV, S-HDTV, U-HDTV, and digital cinema	HDTV's first demonstration in North America was in 1981. Wide-scale commercialization in consumer space has taken 25 years. Digital studio video was first standardized in 1984, as Rec. 601. Just ten years later, in 1994, the DV camcorder was introduced to consumer space, using the Rec. 601 standard. Super-HDTV and Ultra-HDTV have been in development in Japan for several years now. Can we expect comparable deployment scenarios for them? In this talk I will paint a high-level picture of the progress of video technology. I will discuss the crossover of technology from studio technology to consumer technology, and the ever-strengthening influence of information technology. I will also discuss the common elements among and the differences and between HDTV and digital cinema. I will discuss some specific, short-term challenges of broadcast technology, such as the introduction of flat panel (LCD) display technology in the studio.
Dolby	Taming the Audio Loudness Beast	Paper will discuss the techniques behind Dolby Volume and why it is the "Hammer" technique to resolving audio level problems at the consumer end. Then a system wide approach will be discussed that explains where and why audio level problems occur in the first place.
Harris	Bye Bye Blackburst - A new Synchronization and Time Labelling System for Media	SMPTTE Time code has served the industry well since its inception. With the tremendous changes in technology, it has simply been outpaced and outgrown as a timing technology. Thus a new standard is being developed to encompass the current and future needs for such a system.
Miranda	Evolving Trends in Television Delivery and Consumption	This presentation is not about traditional broadcasting but rather about how Video media is being delivered and how it is being consumed. The presentation includes a case study of a variety of alternative delivery methods including: iTunes (needs no other description); Joost (the web based TV delivery platform by the creators of Skype); Xbox Live (a site that allows content to be downloaded and viewed via internet connected game consoles); HBO Broadband (a recent internet delivery play by a traditional broadcaster); HULU (a site recently launched by NBC and Fox to deliver episodes of currently airing programs) Each case study includes the following information: Content Delivery Model, Revenue Model, Current Statistics on usage, Outlook for future. The presentation also includes a comparison of revenue projections for traditional broadcast and alternative delivery models. The overall message of the presentation is a positive one for broadcasters and is a call to action to be aware of evolving delivery and consumption models
REAL D	3D Systems and Standards for Theatrical Exhibition	3D digital cinema represents more than 20% of the digital cinema installations worldwide, and is a significant driver of the digital cinema roll-out. This paper will examine the technologies that are enabling 3D digital cinema on a technical level, addressing issues such as efficiency, crosstalk, colour fidelity, and motion artifacts. It will also address the evolving standards for distribution of stereoscopic movies - including common practices which have not been standardized.
Supernal Entertainment	DCI-based Digital Cinema including Stereoscopic 3D in Digital Cinema and Television	An overview of DCI-based Digital Cinema progress to date, the importance of the DCI specification and its embodiment in standards-based technology across media. This includes Stereoscopic 3D Digital Cinema systems, trends in production/post-production tools and technology, recent progress in content, and an emphasis on Stereoscopic 3D deployment in television.
Tandberg	Bridging the Standards - The Way Forward for Digital TV Delivery	With the availability of new hardware achieving excellent efficiencies for the compression of video there is a big push in the industry to take the opportunity to make big bandwidth savings in digital TV delivery. But there are many legacy issues that need to be addressed - many of these in the consumer's home. This paper will examine these issues and look at what solutions are now available to bridge the gaps between the latest delivery technologies and the legacy ones - making the best of both worlds.
Tektronix	Advanced technology testing in Video over IP: through the network and the layers	USA & Europe is leading the world in rapid deployment of video over IP and broadband ,shortly to be followed by Canada with many exiting new roll-outs. This technology is key both the tripleplay operator and the broadcaster who is replacing video contribution infrastructure with IP. Also traditional broadcasters are now deploying direct IP services to the home, to expand consumer choice and boost revenues with on-demand services. Video in these networks is an opportunity and a challenge to these operators from different worlds. Being successful means understanding content monitoring (from the video industry) as well as transport and IP delivery issues necessary in modern cable and telco networks. This paper discusses the unique new challenges facing broadcasters and operators in testing MPEG, IP and RF layers together. It attempts to answer such questions as: <ul style="list-style-type: none"> • What is cross correlation of IP and video errors? • What are the test needs during each phase of deployment? • Is my RF ingest stream clean at source, and are my IP pathways set up correctly? • Is my content compliant at source to ensure clean & correct reception by all decoders? • How will my service be affected by other traffic on the network? • What QOS and QOE test methods are available, and how effective are they? • Will the user experience be acceptable? The nature and effect on video over IP errors are examined and illustrated with clips, because advanced compression techniques and different encapsulation methods, make troubleshooting. It is very easy to see the effect of errors on an IP video system, but it is crucial to be able to determine the true cause, in a fast and efficient way.
Thompson	Understanding and Implementing JPEG2000 Compression for Field Acquisition	The need for different types of compression within the various stages of the broadcast production workflow is examined and the general codec characteristics that are optimum for each stage discussed. Particular attention is devoted to the Capture and Edit stages and a case is made for the suitability of the JPEG2000 algorithm in these use cases including the benefits conferred by the scalability characteristics of this codec. The particular design choices and trade-offs used in implementing a scalable JPEG2000 implementation for the Infinity Product Series are described and explained.
Panasonic	AVC Intra acquisition	Since the introduction of HDTV cameras and recorders; imagers, micro-processors, integrated circuits and encoding schemes have all advanced apace with the IT industry. Meanwhile HD production has become the rule rather than the exception, as HDTV standards have matured. Image acquisition innovations have recently been focused on either expanding the HD market with smaller and more affordable cameras or pursuing "Digital Cinematography" which has inspired abandonment of the constraints of broadcast type HD standards to emulate legacy 35mm film production and digital intermediary infrastructure. So what then can be accomplished with current technologies when they are applied to systems designed specifically for HD production and broadcast standards? In particular, what can be accomplished for the 2/3" 3 CCD shoulder mount camera-recorder? Can compromises made years ago be renegotiated? Advanced encoding schemes and recording methods can obviate the need for horizontal pre-filtering and additional color sub-sampling typical of in-camera recorders. Bit depth reduction is no longer necessary and full 10 bit sampling heretofore reserved for master recording can be employed in a shoulder mount camera recorder; therefore a This paper will examine some of the performance penalties of the formerly necessary design compromises; and outline specific, newly available, innovations that allow us to rev
Miranda	1080p60 What, where, when?	A number of broadcasters around the world have already indicated that for them HD is 1080p60 and nothing less. In the mean time consumer electronics retailers are busily marketing Displays, DVD players and even game consoles that are 1080p60. What does this mean to broadcasters and for their infrastructure? This paper provides an in depth look at the benefits and challenges of 1080p60 and its associated 3Gbps infrastructure. The paper takes a look at each key element in the broadcast food chain from acquisition to production and graphics, transmission and delivery to the home, and shows the state of 1080p technology for each key element.