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The Channel

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Newsgathering cannot function without freelancers. But who steps in when things go wrong?

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RFE/RL back on FM in Kyiv

In May Radio Free Europe/Radio Liberty announced that its Ukrainian-language broadcasts can again be heard on FM in Kyiv. The Ukrainian capital's most popular radio station, "Voice of Kyiv" began rebroadcasting RFE/RL Ukrainian service programmes on FM 98 on May 9. RFE/RL president Thomas A. Dine welcomed the launch, saying "this is good for Voice of Kyiv and good for RFE/RL, but above all it is good for Ukrainian listeners to have access to another source of independent news and analysis." "Voice of Kyiv" airs two hours of RFE/RL programming every weekday. RFE/RL Ukrainian Service programmes were previously rebroadcast nationally on FM by Ukraine's Dovira network, but were dropped under pressure from the Kuchma regime in February 2004.

iQ for Revenge of the Sith



Quantel's iQ played a key workflow role in mastering the latest Stars Wars movie and creating the digital intermediate. It was the final stop in building the reels to assemble the film out and record the digital cinema master. It was used to create the 'opticals' – the digital wipes and dissolve transitions between the scenes, as well as to slot in last minute updates. All the HD and 444 deliverables, the theatrical trailers and many screening reels were run through iQ. Star Wars producer Rick McCallum hailed the iQ as 'liberating technology for film-makers'. At NAB 2005, Quantel launched the Newsbox range of pre-packaged integrated news production systems. Newsbox is a self-contained unit that comes with all that is needed to ingest material, view rushes, choose shots, edit stories, review finished pieces and play them out to air. The server has been re-engineered to bring a new level of compactness and affordability – the complete system fits into two 24 inch flightcases and can be up and running on location in a couple of minutes.

New Indian TV news channel

Reuters and Times of India are launching a 24-hour TV news channel in India this year, following Reuters agreement to acquire a 26% equity stake in The Times Global Broadcasting Co Ltd, the news broadcasting company of the Times of India Group. Reuters will supply branded programming to the channel. The new channel is set to take advantage of the huge growth in India's cable TV market, now the world's third largest with 44 million subscribers. Its revenues will come from subscriptions and advertising sales. Broadcasting initially in English and operating from Mumbai and Delhi, the news and current affairs channel will target the growing urban TV audience in India.

Seville Charter

In May, representatives from 20 broadcasting organisations from Mediterranean countries signed the "Seville Charter" which sets down a number of commitments regarding news coverage and editorial policies on the part of the signatories. This is the first such document between broadcasters from the northern and southern shores of the Mediterranean. The charter was handed to EBU Secretary General Jean Réveillon and ASBU Director General Abdelhafidh Harguem to ensure its adoption by the greatest possible number of members from both organizations. Fifteen organizations signed the Charter: CyBC (Cyprus); ENRS & ENTV (Algeria); ERT (Greece); ERTU (Egypt); France Télévision (France); HRT (Croatia); JRTV (Jordan); LJB (Libya); RAI (Italy); RTM (Morocco); RTVE (Spain); RTVSLO (Slovenia); TVM (Mauritania); TVR (Romania) and Euronews (Europe).



37 more TV channels for Pakistan

Pakistan is clearing the way for licences to be granted for a further 37 private TV channels. The new channels will increase the number of private channels to 52, in addition to the state-owned terrestrial broadcaster PTV, two private DTH channels and one government DTH channel. According to the Minister for Information and Broadcasting, Sheikh Rashid Ahmed, Pakistan has a much freer media than other countries in the region with many TV channels, 55 private radio stations and more than 1,000 newspapers.

DW and RFI join forces in Arab world and CIS

Deutsche Welle and Radio France Internationale are joining forces to broadcast their programmes in the Arab world and states of the Commonwealth of Independent States. Both broadcasters are looking at ways to air some DW Arabic-language programmes on Radio Monte Carlo-Middle East to gain more listeners. RFI will help DW to develop its Arabic programmes, and they are also considering sharing frequencies in Moscow, St Petersburg and parts of the CIS to enable RFI to broadcast its own French and Russian programmes alongside DW Russian and German programmes. Both broadcasters have already been working together since January 2003 to produce programmes and study the use of shared FM frequencies, in particular in the Balkans.

EU accelerates digital switch to 2012 • VOA launches 24-hour-a-day FM radio broadcasts in Ghana • DW signs Radio Alnas as rebroadcasting partner in Iraq • BBC opens new monitoring bureau in Kiev • Launch of French DRM website: www.drmfrance.com • CNN's Jill Dougherty appointed managing editor for Asia Pacific • GlobeCast launches cable distribution platform on IA-13 satellite • GERMAN TV on Cogeco Cable in Canada • NTL Broadcast rebrands as Arqiva • Aaj TV, Pakistan's first private TV, started operations from Pakistan • BBC iMP content trial begins September 2005 • Wohler appoints David Johnson as COO •

AIB part of 'Putting Europe in the picture'

Broadcast editors and correspondents from all over Europe gathered in Brussels on 20 April for a two-day consultative conference on how the EU can help broadcasters to report European affairs more effectively. It was the first time that senior editors from both public and commercial TV, radio and online news outlets were asked to contribute directly to the development of a new European Commission communication strategy. The Commission Vice-President Margot Wallström underlined the Commission's willingness for a better partnership with broadcasters and suggested regular meetings between broadcasters and EU institutions to assess the changing needs of both sides. The conference was conducted in collaboration with the main European broadcasting associations, including the EBU, CIRCOM, ACT, AER, COPEAM, ENEX, and the Association for International Broadcasting (AIB).



DMB field trials a success

The results of RadioScape's trials in Cambridge, UK show that the design of DMB networks, for the carriage of video and multimedia services based on state-of-the-art codes, can proceed using essentially the same rules as for current DAB audio networks. DMB is viewed by many as the next logical step in the evolution of DAB, and could represent the next step in the evolution of mobile phones delivering the vision of video and data on the move that 3G promised. DMB offers a much better and more cost effective solution for operators that can be implemented now as it is based on proven DAB technology. In countries such as Korea and China DMB trial systems are already up and running.

Intelsat gearing up for IA-8 launch

IA-8, the fifth Intelsat Americas satellite, is slated to launch on June 20. From 89°W, it will offer prime landmass coverage of the Americas, Caribbean and Hawaii. The 89°W location falls in the valuable North America cable broadcast arc. IA-8 features C-, Ku- and Ka-band transponders, allowing for increased power and flexibility for all applications, including those used by Government customers, broadcasters, corporations, service providers and others. IA-8 is the company's first North American launch, first Ka-band payload and the first with two zone beams specifically designed for complete and powerful coverage of South America.

Al Jazeera Live

Al Jazeera has launched another first in Arab broadcasting: Al Jazeera Live, a new specialised media service that airs live conferences, meetings, discussions and other gatherings covering political, social, cultural, economic and other issues of relevance. The new service is similar to c-span in the USA, and does not use anchor people or an editing process. MD Wadah Khanfar said that initially the service will be on ArabSat, but it is planned to widen the footprint by utilizing other satellites in the near future. Al Jazeera Live joins existing media services, namely its flagship, the Arabic language news service, the two web sites (in Arabic and English) and Al Jazeera Sports. Preparations are underway for the launch of Al Jazeera International (the English language news service), as well as a documentary and children's channel.



ALJAZEERA
CHANNEL

AIB responds to BBC Charter Review

The AIB has submitted its response to the UK government's Green Paper which is part of the review of the next BBC Royal Charter, due to start in 2007. The AIB response, which has been forwarded to the UK Department of Culture, Media and Sport, carries the views of the Association's members in regard to the future of the BBC, with particular emphasis on the BBC's international operations. "Part of the AIB's role is to ensure that the voices of its members are heard by governments and regulators around the world," commented Simon Spanswick, AIB chief executive. "We monitor media regulators and potential media legislation in many of the countries that AIB members operate in and this includes the United Kingdom. The AIB makes sure that its members' views are heard by legislators, regulators and politicians throughout the world."



Singapore's MediaCorp restructures

In the wake of Singapore's MediaCorp's restructuring three new strategic business units started operating from 1 June. Each of these three units – News, Radio and Print; Television; and Group Services – are headed by a Deputy Group CEO, a newly created position. The company is also setting up a new business development unit to develop and co-ordinate a long-term strategy for its operations in China, Taiwan and Hong Kong. The former Head of MediaCorp TV, Chua Foo Yong, will head this new unit and report directly to the new Group CEO replacing Ernest Wong when he leaves in September.

China's CCTV 24-hour news channel selects Vizrt graphics • VOA outsources news to Hong Kong contractors • Bbcarabic.com teams up with Egyptian portal gn4me.com • French regulator CSA allows mobile digital TV tests • Harris appoints Ricardo Navarro VP Corporate Development • Ghana to restructure state-owned media • Discovery commissions English & Pockett to create short-form programmes • BBC staff strike in protest at job cuts • Shanghai Media Group's affiliate wins China's first IPTV licence • UK at top of Europe's digital TV table • New Delhi Television to launch English news channel in Canada • France's TF1

Total ASTRA coverage tops 102 million

According to the latest Satellite Monitors results by leading research institutes in Europe, by the start of 2005, the number of homes served by audiovisual broadcast and broadband services via the ASTRA Satellite System at the orbital positions of 19.2° and 28.2° East reached 102.7 million. Within the 30 traditional countries yearly surveyed by SES, the number of ASTRA homes increased by 3.6 million, pushing total ASTRA coverage in satellite and cable to 98.0 million homes. Furthermore, SES ASTRA measured for the first time ASTRA reception in Bosnia (520,000), Serbia (840,000), Morocco (2.78 million) and Tunisia (580,000). The surveys reveal that ASTRA is delivering services to an additional 4.8 million homes in these countries. By the beginning of 2005, more than 41 million households in Europe and North Africa received ASTRA services directly via satellite, another 61.3 million homes receive ASTRA content via cable. France, Germany, Poland, Spain and the UK remained the traditional key markets for ASTRA satellite reception. ASTRA's overall audience growth is driven by the ongoing increase of digital DTH reception across most European countries. At the beginning of 2005, 24 million homes received digital services via ASTRA at 19.2° or 28.2° East. Digital reception now accounts for 58% of ASTRA's total DTH reception. ASTRA is also received by 17.3 million exclusively analogue satellite homes, predominantly located in the German-speaking countries with a strong analogue channel line-up.

Europe should do more for press freedom

On World Press Freedom Day, media watchdog Reporters without Borders said European countries should be doing more to respect press freedom, not least by eliminating prison sentences for media offences. In its annual report, the group noted an increase in formal questioning of journalists, searches of media premises and seizures of documents in Belgium, Denmark, France and Italy. It said France had taken "a dangerous step backwards" by creating new press offences punishable by prison sentences. The organisation also expressed concern about "extra powers of requisition" granted in 2004 to police, state prosecutors and examining magistrates, which do not require a judge to be present during searches of journalists' homes.



Internet ads outdo radio, press strong

UK Internet advertising outstripped radio for the first time last year. Strong growth in broadband subscriptions helped online advertising expenditure to grow by 60% last year to £653.3m in Britain, beating a total of £637.4m for commercial radio, according to research for the Interactive Advertising Bureau. The internet edged above radio in terms

of market share, taking 3.9% of total spending against 3.8% for its closest rival. Internet advertising revenues are now four times larger than they were in 2000. The figures, compiled by accountancy firm PricewaterhouseCoopers and the World Advertising Research Centre, confirmed that the press is the largest, if not the fastest growing, medium. Press spending accounted for 41.5% of the total, followed by television with 23.9% and direct mail with 14.6%. Total advertising expenditure, buoyed by one-off events such as Euro 2004 and the Athens Olympics, rose by 6% to £16.9bn. According to the World Association of Newspapers, the circulation of newspapers in the world increased strongly in 2004, and newspaper advertising revenues made significant gains. Unlike previous years, growth was not only driven by gains in developing markets, but increases in sales in many mature markets.

One button operation

ND SatCom's new Automatic Pointing System (APS) allows an optimized one-button-operation for ND SatCom SkyWAN networks with the ND SatCom SkyRAY Antenna Subsystems without requiring additional satellite bandwidth for the antenna positioning. This innovative APS software can be put into operation worldwide at any location together with an existing SkyWAN network and without pilot signal or reference satellite. Solely the position of the satellite together with all relevant measuring and pointing equipment i.e. SkyWAN, Antenna Control Unit (ACU), GPS-Receiver and compass are necessary to determine the true antenna elevation, azimuth and polarisation angle. All monitoring and control functions are performed by ND SatCom's unique Automatic Pointing System software.

MEN are happy

Canadian company Invidex is installing its innovative software solution VideoLinx at Middle East News (MEN) in Dubai. From request

management to routing and reporting, the new system is expected to allow MEN to meet its rapid growth plans for the next year. "We are very happy with the dedication and professionalism that Invidex has shown throughout the deployment process" said Sam Barnett, COO of MEN. "We are looking forward to major savings by automating our asset management and invoicing." Invidex addresses critical business issues in the multi-billion dollar broadcast video transmission industry.



Into profit with HD

Strong demand for HD programming helped PanAmSat return to profit in Q1. The results are the first since the US satellite operator's IPO in March. The company, which provides links for broadcasters, news organisations and telecoms groups, reported earnings of \$1.1 million, revenues increased by 1.6% to \$208.8 million from \$205.4 million, led by the company's fixed satellite services segment. In April, the company announced that it had entered into a multi-year agreement with China Radio International, China's sole overseas radio network. Through three of PanAmSat's satellites, CRI will reach listeners around the world in eight different languages via its 36 audio channels. PanAmSat will provide C-band capacity on PAS-8, PAS-9 and PAS-10 and turn-around service at its Napa, California teleport to facilitate the global distribution of CRI's programming. PanAmSat is also working with Grupo W-Com to launch a satellite-based broadband Internet service in Mexico.

launches first digital terrestrial service • Digital radio to start in Japan in 2006 • The Democratic Voice of Burma broadcasts via satellite into Burma • EuroNews appoints Michael Peters as MD • VOA launches daily Russian TV news • EC closes investigation into funding of public broadcasters in France, Italy and Spain • Vaclav Kasik re-elected DG of Czech Radio • Radio New Zealand to make changes to National Radio programming and on-air presentation • Beijing sets up Olympic Broadcasting Committee • OSCE chairman pays tribute to journalists' contribution to democratic change • Mexican TV broadcaster Televisa plans to expand

“Look Mum, I’m on TV”

In May, Television New Zealand launched a celebration of 45 years of TV in New Zealand with its exhibition “Look Mum, I’m on TV”. The exhibition demonstrates the evolution of TV over the years and also celebrates and acknowledges 30 years of TVNZ’s Avalon Studios for the contributions they have made to the TV and film industry in the country. In May, New Zealand’s Broadcasting Minister announced a budget allocation of US\$21.3 million (NZ\$30 million) for the country’s public broadcasting industry over the next four years, with the focus on investing in local content and strengthening Radio New Zealand. The budget will provide RNZ with capital funding to assist with the purchase of its new Auckland accommodation, and will enable it to increase the amount of regional and culturally diverse programming available, ensure valuable audio heritage is archived and protected, provide audio-on-demand through www.radionz.co.nz, and expand its Concert FM music network to the West Coast.



ABA seeks your views

With the policy and regulatory framework for the introduction of digital radio in Australia under active consideration by the Government, the Australian Broadcasting Authority is inviting submissions on the merits of placing restrictions on the planning and allocation of broadcasting services in certain frequency bands that may be suitable for digital radio. The issue before the ABA is whether to withhold remaining spectrum that may be needed for digital radio. Restrictions on the planning and allocation of broadcasting services in certain digital radio candidate bands could prevent or limit the introduction of additional analogue radio in some areas and could also affect future digital television services. The ABA will merge with the Australian Communications Authority (ACA) by 1 July 2005 forming the Australian Communications and Media Authority (ACMA). The paper is available at www.aba.gov.au – closing date for submissions is 27 June 2005.

The Middle East beckons for HD

Globally, just over four million TV households receive and watch HDTV programming, with 26% of the top 89 TV operators worldwide offering HDTV services at present. Tariq Bhatti, the AIB’s Representative in Pakistan and the Middle East, says that DTH platform holders will take the lead in Asia because of the compatibility between digital DTH and HDTV. Satellite broadcasters – unlike competing delivery platforms such as cable, SMATV and MMDS – will not have to wait for the NTCs to set standards and establish the necessary regulations for HDTV. Operators of SMATV and MMDS are also faced with the challenge of converting the HDTV signal so that it is compatible with each subscriber’s set-top box or the necessity to replace all set-top boxes. Both requires major investment. As reported in the March edition of *The Channel*, ArabSat demonstrated the first live HDTV broadcast in the Middle East via satellite during Cabsat 2005, when it partnered with Samacom, Sony and GloCom. It is likely that among the next wave of countries to introduce HDTV will be countries in the Middle East because programmers perceive there to be a potential subscriber base with purchasing power for a new HDTV set and decoder. Tariq Bhatti can be reached at tariq.bhatti@aib.org.uk

One step forward, one step back in China

Interest in China surged after Beijing relaxed its media ownership rules to allow foreign investment in joint venture TV, radio and film production companies. Now China is taking a backwards step with new rules limiting investment to one programme production venture per foreign company. News Corp, Viacom and Sony are among the media giants keen to set up joint ventures with Chinese media companies and whose plans of expansion may be affected by the new guidelines. With a population of 1.3 billion, China has the potential to become one of the world’s largest media markets, with spending on print and TV advertising rising 25% last year to \$23.3bn. Time Warner Inc is also in talks with China’s top two broadcasters – China Central Television (CCTV) and Shanghai Media Group (SMG) – about partnerships in TV programme-making but acknowledged that it would be at least five years before China’s contribution to Time Warner’s global revenue becomes significant. China and Hong Kong combined currently contribute only 0.05% to Time Warner’s total revenue.

A foot in the door for HD

South Korea is expected to be one of the next major markets for the rollout of HD. A long standards dispute between government and broadcasters delayed the process, until in October 2003 the South Korean Ministry of Information and Communication announced that it had chosen to move forward with the US digital TV standard as scheduled (ATSC). Discovery Networks Asia recently launched its Discovery HD Theatre in South Korea through Skylife’s SkyHD, the country’s first 24-hour, HD-exclusive pay-TV channel. Korea Digital Broadcasting (Skylife) has been broadcasting HDTV commercially since 2003. The Skylife-DNA partnership offers subscribers an hour of Discovery HD Theatre programming five days a week. Korea’s public service broadcaster KBS is also making the transition to HD. KBS and all of its local affiliates are aiming to digitise its cable television (CATV) capabilities, with complete HD programming targeted by 2010. The transition started with metropolitan areas in October 2001.



Seamless mixing in Athens

Athens-based commercial broadcaster Star Channel has gone to air with Greece’s first fully-automated, end-to-end transmission environment, based on OmniBus Systems’ award-winning Colossus payout solution. Its integration with the Provy’s business management system enables operators to make changes directly in the traffic system that Colossus detects and automatically merges into the live schedule. Colossus also controls the Leitch Opus mixer allowing operators to seamlessly mix between live, tape and server sources and manages the Inscribe character generator for the creation of complex sequences of logos, stills, captions and graphics. It also enables Star to track dynamically the amount of commercial content within its schedules.

In Europe, first in Spain • Sony equips new HD studio facilities for BSkyB • Pending CRTC approvals, Discovery HD Theatre set to launch in 2005 in Canada • BBC World Service receives Roosevelt Four Freedoms award • Foundation to distribute 10,000 wind-up radios in Kenya • RAI International 2 on satellite for Canada • Clear Channel plans to spin off entertainment unit • China launches first coms satellite in 6 years • Slovak parliament debates introduction of licence fee and future of RSI • Taiwan TV Enterprise chooses IBM for MHP launch • French CSA chooses 8 remaining DTT channels • Radio Six International expands



STAR radio relaunching

STAR radio resumed broadcasting on 25 May on FM and short wave to Liberia and the subregion from its studios located at Mamba Point, Monrovia, Liberia. STAR radio was established by the Hironde Foundation in 1997 and had established itself as a primary source of independent and unbiased information for Liberians. It was forcibly closed by the then President Charles Taylor in 2000. After Taylor went into exile in 2003, the ban on STAR radio was lifted. STAR's programme schedule is designed to be relevant to post-war Liberia, with the focus on news and current affairs. As Liberia moves towards elections in October there will be voter education programmes and an opportunity to quiz political aspirants. STAR radio is a non profit organisation run by Liberians in partnership with the Hironde Foundation. It is jointly funded by the EC, Switzerland, the Netherlands, Norway and the UK.

Tennis everywhere

To mark this year's French Open, MaLigne tv and GlobeCast partnered to develop an innovative television offer that allowed the public to follow the tournament, live or taped, whatever network they used. Tennis fans were able to watch the matches in digital quality, without interruption or commercial breaks, with an optional commentary by sports journalists. GlobeCast transmitted the programmes over fibre optics from the French Open to the MaLigne tv IP video headend. The audiovisual signals travelled through the GlobeCast technical centre in Paris where they were encoded in MPEG2, multiplexed, then encapsulated in an IP flow to create the programme package. The package included a mosaic screen to allow simultaneous viewing of the seven programmes. An exclusive Video on Demand (VoD) service allowed viewers to follow the tournament based on their own schedules. In April, GlobeCast launched WING – its global IP-based Content Management Platform that forms the backbone of a global content management network to support delivery of the emerging array of non-linear media.

Growing support for DAB

The World Digital Audio Broadcasting (DAB) Forum says recent announcements from legislative bodies and broadcasters are indicators of a "wave of growing support for DAB". In Norway, public broadcaster NRK aims to migrate its services to DAB and switch off FM in 2014. The Dutch government plans to switch off analogue radio signals no later than 2019; the country's economic ministry is working on proposals to introduce commercial digital radio licences this autumn. In Italy, the media authority has approved a regulatory framework for DAB. In Australia, the heads of the country's major commercial radio networks gathered in Canberra for four days of meetings with federal government ministers to discuss the policy and timeframe for the introduction of DAB. Broadcasters are already conducting digital radio trials in Sydney. And in China, broadcaster Radio Beijing is set to begin trials of DAB this month, and hopes to launch an official DAB service later in 2005.

Multi-channel digital TV for British Forces

Following a contract signing between the Services Sound and Vision Corporation, British Forces Germany and the UK MoD, work will begin this summer to provide DTH reception of the BFBS TV digital multi-channel package for Forces viewers in Germany. British Forces Broadcasting Service will provide viewers with access to high quality digital pictures of BFBS 1 and 2, The Hits 24hr Music Channel, Sky News, and Sky Sports 1 and 2. The contract means 20,000 accommodation units will be equipped with either satellite reception or DVB-C cable distribution over the next 2 years, with a further 5,000 currently being negotiated. HCM, a German cable TV provider, has been contracted by SSVC to install the equipment.

China's global media-on-demand platform

Unveiled at this year's NAB, China's IDV Global Media On-Demand (GMOD) platform is a joint effort of China Government policy making organisations and media certification agencies and China's leading technology and broadband companies. The end-to-end global media-on-demand entertainment system is set to launch in China later this year, delivering rich media content direct to consumers all over the world. The platform encompasses software, hardware, content, encryption, encoding, content certification, distribution network, payment system and business protocols. China's media companies will also be providing content, meaning that Chinese TV shows, culture programmes, games and news about preparation for the 2008 Beijing Olympic Games will reach consumers outside China. China Netcom and MinYing Telecom have expressed interest in being providers and Tsinghua Tongfang, China's second largest PC manufacturer, has expressed interest in building the hardware for the system, the IDV Superbox.

The most interactive interview show

Al Jazeera International – the new 24-hour, English-language news and current affairs channel set to broadcast globally from early 2006 – has recruited renowned journalist Riz Khan for its new Q&A show which will air live daily from Washington DC. MD Nigel Parsons said the project will revolutionise the global news industry by giving viewers the chance to talk directly to newsmakers with their questions. Al Jazeera International will launch in early 2006. While the channel may be headquartered in Doha, Qatar, it is establishing broadcast centres in Kuala Lumpur, London and Washington DC, with supporting bureaux worldwide. The channel's Director of News, Steve Clark, says "Al Jazeera International will be the first English language alternative to Western news media, and will build on the strength of an established global brand with unprecedented access across the Middle East."



Journalists more ethical than you might think

Though news scandals have the public questioning the media, a US study says journalists are more ethical than most people would think. In a test which describes six ethical dilemmas, asks participants what they would do, what motivated their decisions and how they rank the importance of each factor, journalists came out in fourth place, behind seminarians or philosophers, medical students and practising physicians.

European service • Australian TV piracy on the rise • Philippines most dangerous country for journalists • CEM Enterprises raises \$700M and buys TV Nova • NDS income jumps from pay-TV demand • Autocue bought by venture capital firm • Journalists protest in Nepal against further media restrictions • Bulgarian news agency BTA organises First World Meeting of Bulgarian Media • Terrestrial broadcasting losing influence, ABU forum told • Korea's first satellite DMB broadcaster, TU Media, launches • BBC teams up with mCel to launch mobile news service in Mozambique • Ukrainian Television's new website

Harris for Siemens, BSkyB and Azteca

Siemens Business Services has purchased Harris' NetVX high-speed integrated video transport networking system for BBC News following a successful test during coverage of the US presidential election. SBS has a 10-year technology partnership with the BBC. NetVX provides an infinitely flexible platform that can handle multiple packet-based architectures such as ATM and IP over multiple networks such as microwave and satellite and provide the same, and often greater, level of functionality than would previously be found in a myriad of individual hardwired components. With NetVX, analogue or digital video, audio, and/or data can be transported over any combination of networks simultaneously, and it can support various contribution and/or distribution applications. Harris is also supplying the UK's BSkyB with the Harris D-Series Ingest and Play-to-Air Automation System for its forthcoming HDTV services, with Harris providing full turnkey systems integration for the new HD playout platform. In April, TV Azteca, one of the two largest producers of Spanish language TV programming in the world, signed a purchase agreement with Harris for digital TV transmitters and encoding equipment for HDTV. The equipment will bring HDTV to nine cities in México and will be launched in two phases through mid-2006.

More VOA TV to Iran

In May, the Broadcasting Board of Governors announced a significant increase in satellite TV news broadcast into Iran. The Voice of America programme *News & Views*, which for nearly two years has been a nightly 30-minute DTH satellite TV broadcast, is doubling in length leading up to Iran's June 17th presidential election, and now airs five times a day. The expanded coverage is funded by the emergency spending bill just passed into law. The supplemental appropriation includes \$7.3 million for the BBG to support expansion of programming to the broader Middle East, including expanding Arabic-language Alhurra satellite television to Europe. Radio broadcasts to Iran are 24/7 by VOA and Radio Free Europe/Radio Liberty.

Podcasts catching on

Home-made programmes known as

"Podcasts" are catching on with people who own iPods or other digital music players, according to a US survey. 29% of US adults who own MP3 players say they have downloaded podcast programmes from the Internet. Podcasters create radio-like programmes of commentary, music or humour which are saved in MP3 audio format and posted online. Listeners are automatically notified when a new podcast is available. Nearly half of digital music player owners younger than 29 years old have tried out podcasts, the survey found, compared with 20% of those 29 or older. Apple will reportedly support podcasts in the next version of its iTunes and iPod software.



AIB joins ABU

London-based Association for International Broadcasting was one of the new Institutional members approved for admission to the ABU by the Administrative Council in May. The Institutional membership category is designed for organisations with which the ABU seeks closer relationships through reciprocal membership arrangements. Admission is by invitation of the Administrative Council. The ABU now has 148 members in 55 countries and special administrative regions. Radio Television Maldives will host the next half-yearly ABU meeting in the Maldives.

Award for RFA's Han Dongfang

Veteran Chinese labour activist, Radio Free Asia broadcaster, and director of the Hong Kong-based China Labour Bulletin Han Dongfang has been awarded the US-based Gleitsman Foundation's 2005 International Activist Award, as "an unrivalled leader of the workers' movement in China." Han said: "China's economic reforms have achieved many things, but social and economic justice for ordinary Chinese working people is not yet one of them—in fact, the lack of worker representation is probably the main source of instability in China today." Han began producing regular radio broadcasts for Radio Free Asia's Mandarin service in 1997, focusing on workers' issues in China. RFA now airs his programmes three times a week, drawing in millions of listeners and callers and frequently breaking news on China's numerous, under-reported workers.

South Africa's commercial radio on the up

When the Independent Communications Authority of South Africa put forward proposals for amendments to the legal framework governing the control and ownership of commercial radio broadcasters, its recommendations sought to relax the current legal constraints on media companies' ownership of radio assets. At present, media groups can control a maximum of two FM and two AM licences. Under the new rules this would increase to a ceiling of 35% of national licences. With ICASA due to licence another eight new stations this year - including three in the lucrative Johannesburg, Durban and Cape Town markets - this limit will increase to eight stations per media owner in the next five years. Some believe that South Africa's radio broadcasting landscape will ultimately be dominated by three players: the SABC and two private sector conglomerates. At this stage, Kagiso Media and Primedia are the leading contenders for these top spots. In May, Kagiso Media, together with Makana Investment Corp. and Tiso Radio, acquired stakes in Gauteng-based radio stations Kaya FM, P4 Cape Town and P4 Durban forming the Makana Radio Communication consortium. Income growth of the SABC's Public Broadcasting Services (radio) has declined sharply over the last three years, while revenue growth at SA's independent radio stations has been on the up - together they grew by 19.6% against the preceding year to November. The independents are moving very close to doubling PBS's revenue - and the gap seems to be widening.

DRM strategies

Radio New Zealand, together with the Asia-Pacific Broadcasting Union, Thales and THL-Australia, has launched a project to investigate the appropriate Digital Radio Mondiale implementation strategies for radio broadcasters in the region. The technical investigation is being carried out on digital radio transmissions in the medium wave band using the DRM digital system. An analogue medium wave radio transmitter of RNZ has been converted for digital transmissions in this project. This is to facilitate investigations on simulcast transmission of analogue and digital radio programmes.

www.1tv.com.ua • EuroNews signs carriage deal in Estonia • IPTV setback for Korea as terrestrial broadcasters withdraw from trials • UK 2012 digital switchover "unrealistic" • Motorola unveils mobile radio • TPI-Indonesia is Republic's top TV station • Malaysia's Astro reported 1.6 million subscribers for 2005 • Nippon Broadcasting Company (NBS) thwarts rival Livedoor's bid to take over Fuji TV • Khyber TV starts private TV channel in Pakistan • Samacom testing Smart Jog Technology • Spain sets up HDTV forum • US DTH growth not hurting cable • Philippine telecoms firms oppose NTC plan to allow VOIP • Journalists protest

Corporation ↪ Radio Canada International
 Broadcasting Board of Governors (BBG)
 SES ASTRA ↪ ABS-CBN Europe ↪ APTN
 Associated Press Television News ↪
 Autocue Ltd ↪ TDP (Transmitter
 Documentation Project) ↪ Broadcasting
 Agency of Montenegro ↪ Dalet
 n.n. ↪ Teletrax Limited ↪ D.A.V.I.D. GmbH
 Services Sound & Vision Corporation ↪
 Ohler Technologies ↪ Hellas Sat ↪
 RadioScape Limited ↪ InterMedia Survey
 Institute ↪ World Radio Network ↪ Radio
 Romania International ↪ ITN International
 Inmedia Communications ↪ Radio Taiwan
 International ↪ NDSatCom ↪ Deutsche
 Welle ↪ Omnibus Systems ↪ PacSat
 International ↪ PanAmSat ↪ You/Com
 Radiocommunicatie B.V. ↪ Radio Free Asia
 Radio Free Europe/Radio Liberty ↪ ABU -
 Asia-Pacific Broadcasting Union ↪ Radio
 Netherlands ↪ Radio New Zealand
 International ↪ Globecast ↪ Radio Polonia
 Quantel Ltd ↪ Radio Prague ↪ NorCom
 Radio Sweden ↪ Television New Zealand
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 Broadcasting Agency of Montenegro ↪ Dalet
 n.n. ↪ Teletrax Limited ↪ D.A.V.I.D. GmbH
 Services Sound & Vision Corporation ↪
 Ohler Technologies ↪ Hellas Sat ↪
 RadioScape Limited ↪ InterMedia Survey
 Institute ↪ World Radio Network ↪ Television

Alliances, Intelligence, business

In the 12 years since it was
 founded, the Association for
 International Broadcasting has
 established itself firmly on the
 international broadcasting
 scene. It is a unique
 organisation linking players
 inside international
 broadcasting with those in
 related industries. Many know
 of the AIB through its
 magazine, *The Channel*, but this
 is really only one activity
 in the AIB's portfolio

A truly international network The AIB is the non-profit, non-government professional industry
 association that supports the global broadcasting industry. Increasingly influential and with a
 growing international membership, the AIB provides a remarkable range of services and is active in
 markets throughout the world. It enjoys relationships at the highest level with regulators, politicians,
 broadcasters, journalists and academics, promoting the interests of AIB members, ensuring their
 voices are heard and providing an unrivalled forum for the collective interests of the international
 broadcasting industry.

From lobbying and advocacy through to providing detailed and carefully researched market
 intelligence, together with representation and networking, the AIB's head office team in London
 and regional representatives in Asia and the Americas work throughout the year to ensure that
 members' interests are fully served.

The AIB works closely with other associations and organisations in the broadcasting sector worldwide,
 and forges partnerships with publishers, conferences and other bodies to bring additional benefits
 to its members.

The extensive range of contacts that the AIB has, together with a wealth of information and verified
 data built up over 12 years, means that the Association has the answers and intelligence members
 need to take business-critical decisions - information that they rely on time and time again. The AIB
 resources are there for members to use, 365 days a year.

Solid consulting foundations The AIB offers its data and information on a wider basis through its
 international consulting service. From detailed market studies and appraisals provided to
 broadcasters seeking to start services in new territories to licensing and legislative work, AIB
 Consulting delivers results through its detailed knowledge of the broadcasting marketplace, of
 regional and national regulation, uplinking and licensing issues. Blue-chip clients including
 Associated Press, Discovery Networks and ABS-CBN Global have all used AIB Consulting to assist
 their businesses. AIB members benefit from preferential rates for all consulting work.

Funded principally by membership subscriptions and income from advertising in publications and
 event sponsorship, the AIB is governed by an Executive Committee of six people, elected by members
 from member organisations. Its permanent staff include the chief executive and director of business,
 and support staff based in the United Kingdom, while regional representatives provide local
 intelligence and support in the Americas, South Asia, the Middle East and South East Asia.

Your invitation to join Membership is open to all organisations involved in international broadcasting,
 including television and radio broadcasters, satellite operators, infrastructure providers, network
 operators, regulators and manufacturers who supply international broadcasting stations.

Three levels of membership are provided to meet the individual requirements of organisations
 involved in the industry: Corporate, Gold and Platinum. Annual membership fees are £1,250 for
 Corporate, £4,750 for Gold and £9,750 for Platinum.

Corporate members enjoy a comprehensive level of benefits, including market intelligence briefings,
 representation and networking opportunities, while Gold and Platinum members have additional
 membership benefits including complimentary advertising within AIB publications and additional
 brand recognition at AIB events.





AIB Publications

The Channel

The international broadcasting industry quarterly, produced by the AIB and available free-of-charge to qualified readers worldwide. With a rapidly growing regular subscriber base of over 5,000 readers in 120 countries, plus distribution of thousands of extra copies at major conferences, exhibitions and industry shows in every continent, *The Channel* is the magazine that's relied on by readers to keep them fully-briefed about the international broadcasting sector.

AIB Directory of Global Broadcasting

The only broadcasting directory covering television and radio that is published twice every year, with key contact information on major domestic and international broadcasters, plus country-specific data, maps and other useful information.

AIB eNews

The electronic newsletter with a round-up of news from across the international broadcasting industry. Delivered to the desktops of over 15,000 regular subscribers, *AIB eNews* is an important tool that supports AIB members, delivering their news to the industry, to regulators, to politicians and to journalists.

The AIB is the prime supplier of information on the international broadcasting sector.

Together, its three publications reach around 20,000 executives in broadcasting and related sectors including finance, manufacturing, government regulation, research and consultancy.

Advertising in AIB publications is open to members (who receive preferential rates) and to non-members. Contact **Samantha Woollett** on +44 (0) 7759 394 916, e-mail sam.woollett@aib.org.uk to discuss advertising or full-issue sponsorship of the September edition of *The Channel* which will have additional distribution at IBC 2005 in Amsterdam.



Enquiry form

The Association for International Broadcasting - the industry association supporting the world's international broadcasting sector

For further information about any of the areas below, please fax back this form to **+44 (0) 20 8297 0343**.

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☐ **AIB consulting**

AIB Consulting provides cost-effective solutions covering television, radio and satellite. AIB Members benefit from preferential rates.

☐ **AIB advertising**

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or mail to

AIB, PO Box 990, London SE3 9XL, United Kingdom



For more information about the AIB,

go online

www.aib.org.uk

RNW media service

In a bid to provide foreign news organisations with more information about current developments in Holland, Radio Netherlands has launched a new Media Desk. At www.rnmediadesk.nl the station offers both current and in-depth information on a variety of topics, a database of experts working at RNW and useful links to sites dealing with the Netherlands. At the 3rd International Radio Meeting in Mexico City in May, organised by Radio Netherlands with Mexican partners, DG Jan Hoek set out how he sees the role of the European public broadcasters, saying that the media have social responsibility, as well as being there to please the stock- and stake-holders. The media must use its

enormous power to influence public opinion to search for balance, being critical when things go wrong, but also constructive to show that there are alternatives to a spiralling circle of poverty, misery, disease and maybe war.



Zimbabwe's new era?

Zimbabwe's new Minister of Information and Publicity has promised a new era in relations between his ministry and the private media. Dr Tichaona Jokonya said the days of meddling in state-run media organisations were over, and that the state media would no longer receive preferential treatment. There are to be regular briefings organised by his ministry to ensure government ministers or their senior officials are more accessible to the media. The minister believes it is the duty and responsibility of journalists to point out the mistakes the government could be making – “but let's get our information correct” – and he welcomes submissions on a media-driven Code of Conduct. Media practitioners, journalists, human rights activists and the international community will be following with keen interest how the new minister deals with some of the contentious repressive media laws, such as the Access to Information and Protection of Privacy Act (AIPPA), Broadcasting Services Act (BSA) and Public Order and Security Act (POSA), all of which his predecessor Jonathan Moyo used aggressively.

WRN rocks Sky-wards

WRN, one of the leading satellite transmission companies for the UK radio industry, is hosting Virgin Radio Classic Rock on its 'RADIO' channel, Sky Digital 934. WRN receives the Virgin Radio Classic Rock feed at its central London broadcast centre and inserts it into its 'RADIO' channel. WRN also undertakes the EPG submissions to Sky Digital that Virgin Radio is producing for its classic rock station. The 'RADIO' Channel is one of several unique and innovative service offerings developed by WRN for radio stations seeking access to Sky Digital. Richard Jacobs, WRN's Business Development Manager, said: “We developed the 'On Air' service a year ago as a home for broadcasters seeking temporary positions on the Sky platform – either because they are waiting for their own channel number, trialing a station or operating over a temporary period of time. Twelve months on, we now operate two such channels.”

New global media network

Twenty of the world's leading media development organisations have come together to create an international partnership for the development of independent media around the world. The Global Forum for Media Development links international media development groups as well as regional and national media NGOs from Nigeria to China. They are joining forces to leverage their ability to expand people's access to information and foster local, independent media around the world. GFMD will provide an international forum for media assistance NGOs to share best practices in the areas of training journalists, supporting broadcast stations, newspapers, and magazines, working for open and accessible Internet and telecommunications policies, and reforming media law.

India media moves

India's Information & Broadcasting Ministry has issued preliminary licences to Sun Direct TV and Space TV for the launch of ku-band DTH operations. Space TV, an 80:20 Tata Group-Star joint venture, is expected to launch by the end of 2005. Other players in the DTH segment include ASC Enterprises and state-run DD Direct Plus. DD Direct Plus, launched in 2004, is a free-to-air DTH service and claims to have over two million viewers, while ASC Enterprises' Dish TV, launched in September 2003, has about 200,000 subscribers. Indian Information and Broadcasting Minister S Jaipal Reddy is planning to establish an autonomous authority to regulate the content on TV channels and the ministry has also finalised a package for 300 new private FM radio stations. The Indian government has extended the deadline for existing news and current affairs TV channels to ensure compliance of the eligibility criteria for uplinking from India up to 30 September 2005, in order to examine issues over foreign investment and majority Indian shareholding.

Banking on QNet

Autocue have sold their QNet software to Wachovia Bank in Charlotte, NC. QNet is a networked scripting and prompting system that provides a comprehensive range of specialised scriptwriting and rundown management tools. All of these are fully integrated with state-of-the-art digital prompting. The system is being implemented in the second quarter of 2005 at the Wachovia Video Network, its in-house television station. In March, Autocue announced the implementation of the Qscore data ingest and presentation system at one of Canada's leading national sports television broadcasters. QScore is a new application from the Autocue development team – it enables users to organise and streamline the collection and handling of data, including results and league, team and player statistics, either automatically from a number of sources or manually through user input and then automatically populates customisable caption generator (CG) templates for broadcast during the show.



against new Turkish penal code • Spain's analogue TV licences likely to delay DTT • Hitachi claim record 20GB iPod • New ITU standard VDSL2 delivers 10x ADSL speeds • Angola and Cuba sign broadcasting cooperation protocol • Zee Network joins Dubai Media City's broadcast community • Pakistan Broadcasting Corporation to set up 47 radio stations in 3 years • France forecasts 1m DTT by end 05 • SW Radio Africa makes public appeal for financial support as evening short wave ceases • Cutbacks at swissinfo outrage Swiss in France • New AIB Directory of Global Broadcasting to be published in July

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When Antoine Schwarz was appointed in June 2004 as Président Directeur Général of Radio France Internationale by the Conseil supérieur de l'audiovisuel, the French broadcast media regulator, the CSA noted his experience and skills in the broadcasting field – gained in various government departments, at Radio Monte Carlo, as director-general of the Société financière de radiodiffusion (Sofirad), and at the SFP group. Almost one year into his five-year term, Antoine Schwarz talked to Gunda Cannon

How has that first year been – have you enjoyed it?

Of course I have enjoyed it because the field of international radio is really a thrilling one. But I must confess too that my start was more difficult than expected. The reason is that I probably underestimated the resistance to reforms inside the company. And we need reforms in the management of the company because not much has changed in the last 20 years. So my greatest challenge is to establish a dialogue which allows some change and some reforms. In the beginning it was very difficult to find common ground for discussion with the various unions in RFI but I think now I am beginning to get a feel for what the unions can accept and what not.

AIB INTERVIEW

A true



Can you say anything about the changes you want to make?

It is a bit early but I can say that for me there are three priorities. The first priority project is to improve our market share in Africa, in French as well as in English and Portuguese, and possibly Hausa which we don't use at present. The second priority is to re-launch Radio Monte-Carlo Middle East. In the past RMC was very successful in the Middle East but now it faces competition from TV and other local radios, and also Radio Sawa. Our audience is not as large as it was 10 or 15 years ago. Our programming is probably too old-fashioned – we are just looking into that at present. The third task is to develop a European network in Europe. The idea is – but it is just a wish at this point – to establish a network dedicated to European content so that we have the news from Europe on a number of European radio stations. We would like to use some of our frequencies in various cities in Europe for this.

Other large broadcasters are adding FM outlets around the world and moving into multimedia applications to deliver their news. What is RFI doing?

The development of our FM network remains a top priority for RFI – we have 139 FM outlets throughout the world at the present time and 724 radio partners. We are constantly working to develop global institutional partnerships and at the same time partnerships on a regional basis. Our web site is also very important and is constantly developing. We recently launched a new site in Mandarin and another dedicated to football. Whenever an event can be adapted to a specific

technology, RFI provides the service; for example delivering news by mobile phone, as we did for the African Cup of Nations football event in 2004. We are studying other applications for use in the future.

Is RFI's strategy aimed at reaching principally the francophonie or is its task to talk to the whole world?

RFI broadcasts in French and in 19 other languages and its task is to talk to the whole world. As a matter of fact, our motto is "RFI la radio du monde", the world radio. However, the defence and promotion of *francophonie* is of course part of our mission.

Where in the world is your presence strongest?

RFI has nearly 40 million listeners worldwide, and our web site registers 8 million page hits each month. Our strongest presence is in Africa of course, and secondly, in the Middle East. In these two big regions we are probably the first in French-speaking Africa and about at the level of the BBC in the Middle East, in Arabic. At present and until the end of 2005, we are mainly working on promoting ourselves in the Middle East, and in 2006, we will focus on Africa. For the future, I want to add Europe. It seems nobody considers Europe but I think we really belong to Europe and we have to have a European strategy.

With the launch of France's international television channel – CNN à la française – planned, how is that going to affect RFI?

At one time RFI thought that together with France Télévisions we could constitute that new information channel – now we are not involved. However, we are prepared to offer a full range of services on a commercial basis to the future French news channel. I am quite confident that we will work together, and we feel there is no real competition between TV and radio, on the contrary, we think that really we help each other. So at the moment I am just waiting for the president to be appointed for the new company.

The largest international broadcasters offer training for journalists and broadcasters from around the world. Is this part of RFI's mission?

Yes, this is very much a part of RFI's mission, increasingly so. At the end of 2004, we relaunched our operations in this field under the name of "Talent+" with its own web site. The number of training projects planned for this year has increased threefold, to 70. Also, RFI now not only offers training in journalism and technology, but also in management and the Internet.

How important is co-operation with other international broadcasters?

We feel more and more European, the latest evidence being our recent cooperation with Deutsche Welle [RFI and Deutsche Welle are joining forces to broadcast their programmes in the Arab world and states of the Commonwealth of Independent States, and are also considering sharing frequencies in Moscow, St Petersburg and parts of the CIS]. We also work very closely with the BBC – we share a frequency in Budapest. Personally, I feel more and more European, and I'm sure there is a place for an international European radio.

Where do you see international broadcasting going?

First of all, there is obviously a need for international information in the context of globalisation. In this context, radio is a key player, being an easily-available, free-access medium. This is particularly the case with RFI in places like Africa where there is a serious lack of computers, television, and modern means of information. RFI plays a complementary role with regards to television, in places like the Middle East for instance. Broadcasting must be global. I think the ideal scenario for international broadcasting is to be able to provide a global offer of radio, TV and Internet – to have the same strategy for these three media platforms. We at RFI have radio and a good web site, and what we need is to have a good relationship with TV.

European at the helm

There is the thought that if you are not part of it, there is a threat in budget terms because it will affect what is available to RFI.

I don't feel there is a real threat now because in the eyes of the French government the new channel would add to the present French radio and TV channels. Of course, in the long term one can wonder whether there won't be budget choices against the 'old' media. I hope it won't be the case, especially if we work with the new channel.

RFI's budget for 2004 is €127.2m, made up of subsidies from the foreign and cultural ministries and a share of the domestic licence fee. How do you convince your stakeholders about the need to fully fund your operations?

It's my job to have good projects to convince our stakeholders. At the moment we are preparing with them a 3-year development plan that will start next year.

How independent is RFI from the French government?

RFI is totally independent from the French government even if our objectives are fixed by law. And one of them is to present a French outlook on news and current affairs.

Last year the BBC tried to identify the editorial lessons from the Hutton Inquiry and Report. Has what happened at the BBC affected RFI – are there now increased editorial pressures?

Quite categorically, the answer is no.

What is your view of Digital Radio Mondiale?

We are closely examining all recent developments in radio technology including DAB and satellite radio. The main issue at stake in this instance, however, revolves more around listeners' access to, and use of, the equipment rather than the actual technology itself.

Antoine Schwarz, thank you for talking to us.

Thank you – I do appreciate *The Channel*. As a reader I discovered it only when I moved to RFI but I regret that because otherwise I would have read it before!

Originally part of the French Radio Television Authority (ORTF), and then of Radio France from 1974, RFI became an independent broadcasting company in 1983, and an independent national programming company in 1986. With the French government the sole stakeholder, RFI's chairman is appointed by the French regulator CSA. Headquartered in Paris, RFI today broadcasts on short wave and via satellite and FM relays in 20 languages: French, Albanian, German, English, Bulgarian, Cambodian, Chinese, Creole, Spanish, Laotian, Persian, Portuguese for Brasil and Africa, Polish, Romanian, Russian, Southern Slavic, Turkish, Vietnamese, and also Arabic (Radio Monte-Carlo Moyen Orient has been part of RFI since 1996). www.rfi.fr

A touch on the remote control and the big, wide screen on the wall brightens to show a footballer racing for the goal. The image is detailed, crystal clear, almost three dimensional. We can see - almost sense - the tactics of defenders moving to cut him off, crowd roar surrounding us from multiple speakers. It's almost as if we are *there* at the match. These pictures are bigger, clearer, more colourful, the drama more compelling, the emotion stronger. Welcome to the world of high definition television, says **Paul Kafno**



Night Music - the first HD programme from Britain's ITV

Long heralded, this brilliant leap forward in the television viewing experience is at last becoming a reality. Regular HDTV services in Asia and America have finally provoked the bright green shoots breaking out in the UK, Germany, France and Italy. This is a world in which everything is clearer, more colourful, full of sensation and delight, and we can now begin to experience it at home through the new generation of big flat screen televisions. Potentially, this is a great leap forwards, but what will it really mean for consumers, broadcasters and programme makers?

I started making high definition programmes some fifteen years ago. At that time the world's broadcasters saw HD as the natural successor to standard definition. I had made the first all-digital programme *Una Stravaganza dei Medici* for Channel 4 and having wrestled with "television by numbers" was asked to come up with a programme idea to try this new HD technology in anger.

Night Music was the result, and the sheer pleasure of working with these high quality widescreen images convinced me that this was the future. Since then we have covered winter and summer Olympics, world ice-skating, finals of the

football world cup as well as specials of pop concerts, drama, opera, ballet, musicals, documentaries, including the spectacular Les Miserables Tenth Anniversary concert at the Albert Hall, the first HD documentary from a war zone (Mostar) in The Bridge, and the first HD ballet, La Bayadere, from the Royal Opera House.

The production rationale was simple. A programme expecting a long life deserved to be recorded in HD, because that is what the market would demand in the future, but had to earn its budget now in standard definition. At the same time we explored a new market. The cinema seemed ripe for conversion to digital, and high definition showings of live theatre, sport and music events promised new opportunities. Through projects like Cinenet we were able to put live audiences in front of big screen HD images. In every area we learned that high definition made viewers' experience more intense and satisfying. We discovered new sensations to explore, new opportunities to grasp, and as always, new temptations to avoid.

For the consumer, big, affordable, bright screens are already starting to replace the "box" in the corner. Industry

expectations are that average screen size will exceed 3 inches. Even with standard definition images, viewers like the bigger, wider screen, with its cinema-like viewing experience. But standard definition television pictures don't match up to those sourced from DVD or games consoles, and as screens get bigger, imperfections appear worse. High Definition is the natural way of filling these screens. But moving up in size means that programme styles need to adjust: image quality becomes more important, and shot framing and direction needs to change.

High Definition images are often compared to 35mm film used in movies, but this is not really a proper comparison. The two image systems are very different, and have different strengths. High Definition images are digitally acquired and mediated. They do not suffer degradation through multiple copying, nor do they have the "wobble and weave" characteristics of film. This stability in the image, combined with the resolution of fine detail, often gives an impression of three-dimensionality. The audience impact can be impressive. An invited London audience watching the HD finals of the football world cup on a big screen literally gasped when they saw the wide shot of the pitch.

Watching high definition offers new sensations. The surfaces of wood, metal and human skin communicate themselves so that viewers report the uncanny sensation of "feeling" objects they are looking at. Colours are more vivid and truthful. Viewers can read contours of landscapes, or golf courses. The wide shot becomes alive with possibilities because the detail tempts the viewer's eye to explore. Theatrical performances of cultural events like opera or ballet have a whole new appeal in the widescreen high definition medium.

The medium itself is very strong, but how will it be used? For broadcasters, high definition television is an undoubted opportunity to provide a bulwark against the "perfect storm" of

the image in post-production but can produce some very ungainly compositions. The only solution for the director is to place the action within a central, safe 4:3 portion of the image, which looks very odd.

Another problem has to do with the emotional power of shots. The wide shot that is breathtaking in HD can look quite boring in standard definition. The only solution here is to re-edit and produce two versions of the programme. These compatibility questions present real - and painful - issues for production teams, especially directors who find it impossible to ride two horses at once. Ultimately the only solution is uncomfortable. Broadcasters have to make the decision that shooting is optimized for HD viewers (especially if they are asking them to pay a premium), and accept the lesser quality that will result for everyone else.

Inevitably, HDTV presents a terrain scattered with technical arguments. The USA followed the open market philosophy of allowing a thousand blooms to grow, and there is now a delightful range of technical standards poking through the earth, with pictures ranging from 720 to 1080 lines and presentation from progressive to interlace.



The Return of Columbus

broadband, providing fresh impact in the key areas of sport and drama. Sky has a canny record in making commercial judgements about new technology, and their announcement of an HD service recently prompted the BBC to bring their own plans forward. In fact, the USA market now demands programmes sourced in HD so production was already moving in that direction. But for a broadcast service, HD stretches available spectrum and this provokes some interesting arguments about standards.

Making programmes in HD was once a nightmare. Huge cameras, heavy cables and dodgy recorders made the experience a return to the ice age of television. Mobile units in monster trucks challenged the limits of what was permitted on Europe's roads. We once got one of these stuck in the middle of Urbino's narrow streets, and thought we would have to lift it out by helicopter. Today, manufacturers have risen to the challenge producing equipment that is light, reliable and inexpensive, so the cost premium is low. But a problem remains - compatibility.

The reality is that while a programme maker has to deliver in HD, many viewers will still watch in standard definition. This might seem a simple problem of down-conversion, but is actually more deep-seated. High Definition TV is generally acquired and presented in a wide-screen format. A director needs to optimize use of that 16:9 frame, placing performers on one side or other of the screen. A simple down-conversion to the common 4:3 frame will neatly cut off a portion of each side of the screen, probably removing a slice of each performer. "Pan-and scans" will reframe



HD Thames production of *Les Misérables*

Broadcasters in the UK have been torn between accepting standards that work in their existing spectrum bandwidth, and doing the "right thing" by aiming high. One of the delights of digital for broadcasters in a spectrum-hungry world is that programmes can be compressed to deliver more channels in less bandwidth. UK experience of digital television has shown that restricting bandwidth gives viewers noticeably poor colour, less good even than analogue television. So a major question is whether broadcasters will stick to their quality guns and insist that a certain bandwidth is always maintained by their service providers. Will HD really be HD in the end?

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These questions about delivery quality posit a proper relationship between marketing and engineering quality. You can sell viewers a Rolls Royce experience, but these days they will expect to get it, especially when DVDs and computer games are there to show the difference. Terrestrial broadcasters should remember that cable companies have ample bandwidth at their disposal and are in a position to offer higher quality.

learn new tricks, adjusting framings, finessing relationships between shots and shot pacing. In the world of content, creators will inevitably find exciting new material and ideas.

In this new digital world, boundaries between different media essentially disappear. What starts on a high definition screen may also be seen on a mobile phone. Business opportunities lie

in understanding where additional value lies.

Increasingly, the digital generation will demand more opportunities to interact with what they watch. But certain things never change. Viewers crave new



Darcy Bussell in Thames' HD *La Bayadere*

Another annoying aspect of digital broadcasting has been the steady erosion of lip-synch delivered to viewers. This problem arises because digital processing of image data takes longer than that of audio, both at the broadcaster and viewer ends (some flat screens are particularly bad in this respect). The result is sound arriving before picture - the plop of the tennis ball heard before contact is made with the racket. As it happens, viewer judgement of quality tends to be led by the ears. So a high definition picture of a famous actor articulating words that arrive before his mouth shapes them will not only diminish the drama and irritate the viewer, but lessen the quality impression of the picture. Solutions lie in the hands of broadcasters and equipment manufacturers, and they need to be grasped now.



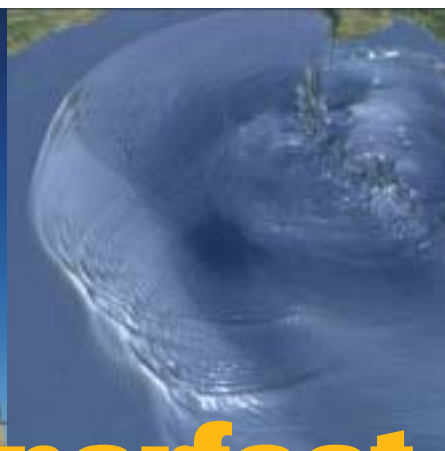
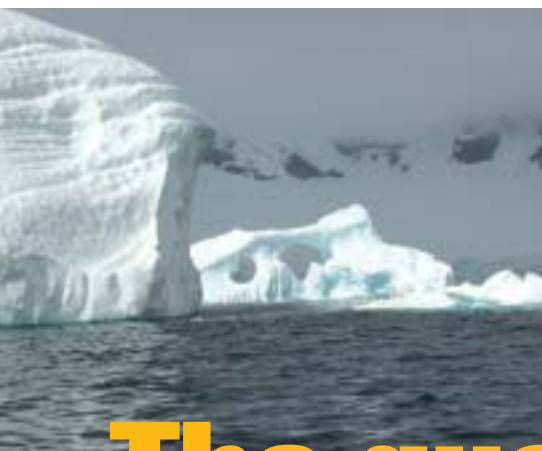
Paul Kafno directing

experiences and want to get as close to them as possible. Broadcasters have a real opportunity to become excited by the high definition medium and find a new vision to satisfy viewer needs. The true challenge as always is to the creative imagination. As we enter this

world of high definition delights it might be as well to remember a little girl called Alice who once got lost in another garden and asked a cat which way she should go. "That depends a great deal on where you want to get to", said the Cat.

Learning to tend this new and delightful garden will take time. Production teams and technicians take easily to HD, but the more they know about digital processing, the easier it is to avoid obvious mistakes. There are straightforward production issues - sets, costumes and make-up all need to be of a sufficient quality - but there are also technical challenges in learning to avoid noise and compression artifacts. From an artistic point of view, high definition pictures deserve to be crafted with care, using supplementary light to shape the images, and learning lessons about how conventional luminaires work in this new medium. Directors and editors need to

Paul Kafno pioneered the first digital and high definition programmes in the UK. His productions have won international awards - Prix Italia, Golden Gate, BAFTA, Prix Gemini, RTS - and been broadcast throughout the world. He is Managing Director of HD Thames, a UK independent set up in 1992 to explore opportunities in digital television. He is a member of the IBC Council, and holds a Senior Research Fellowship at the University of Nottingham.



The quest for the perfect

Essentially, high definition – or hi-vision as it is known in Japan – has always been the best format available at any given time. Shunsuke Tokunaga, based in NHK International Public Relations in Tokyo, says that virtually 100% of NHK's content will be HD by March 2006 and the next thing, "Super Hi-Vision", is already being developed

To find the perfect TV technology that reflects the optical characteristics and psychology of human nature – that was where it all began. In 1964, when we entered the age of colour TV, engineers at NHK Science and Technical Research Laboratories (STRL) embarked on the research of audio-visual equipment that is truly human-friendly.

Hi-Vision, NHK's HDTV system, uses a wide-screen format with a 16:9 aspect ratio, which people find more comfortable to view than the conventional 4:3. HDTV has 1,125 scanning lines, compared to conventional TV images with 525 lines, and carries five times more visual information. HDTV offers the same kind of sound features and noise reduction as a CD, and by positioning a dedicated woofer and other speakers to create a special listening environment, viewers can enjoy total sound immersion.

In Japan, all analogue broadcasts are scheduled to end on July 24, 2011. The core technology of digital broadcasting is HDTV. NHK started shooting in HD in the early 1980's. Then it meant analogue HD. Digital HDTV arrived in 2000 with the launch of digital satellite broadcasting. Digital terrestrial broadcasting followed in December 2003. In Japan, 28.4 million households (60%) are expected to be able to receive digital terrestrial broadcasting by the end of this year.

Post-production

HDTV offers various post-production advantages. Colour and brightness levels can be adjusted with tremendous freedom and at the same time with the utmost precision. The final product can be further

enhanced with sophisticated image composition and high-quality computer graphics. NHK produced *Tsunami: Eyewitness Accounts*, a documentary about the disaster that struck the Indian Ocean region in December 2004. The documentary analyses never-before-seen videos recorded at various sites and uses three-dimensional computer graphics to reveal the latest achievements of scientific research – thus giving a full picture of the massive tsunami that traveled at speeds of more than 700 km/hour. In the NHK/CCTV co-production *Silk Road 2005*, nonlinear editing was harnessed to the full. As a result, the existing 35mm film, image composition, and original HD footage were easily and smoothly blended. In another documentary series, *The Roman Empire*, digital HD technology made possible the stunning, impressionistic 3D CGI technology which was effectively used to reconstruct Rome in its heyday. Around 600 programmes have been co-produced in the last 25 years. Between April 2004 and March 2005, 74 co-productions were broadcast under 44 titles, of which 43 were in HD. Almost all the co-productions that NHK takes part in are produced in HD.

Multi-platform, multi-media

With HD, content developed primarily for broadcasting can also be used in DVDs and movies, thus transcending specific platforms and media. Movies can be produced in a shorter time and at less cost by shooting and editing in HDTV, then transferring to film. George Lucas, James Cameron, Robert Rodriguez and other internationally acclaimed directors have used HDTV in movie-making. HDTV can also be used to show TV programmes in theatres.

The latest projectors enable clear, sharp images to be projected even onto 500 inch screens. NHK has co-produced HDTV programmes with some of the world's top directors and released the film versions in movie theatres.

Efficient archiving

Archiving programmes in HDTV saves money, space, and effort. HDTV is all-digital, so image and sound quality can be preserved indefinitely with no degradation – and no matter how many times the content is used. Archiving in digital format also ensures easy adaptability to future storage media and storage technologies. Valuable video and audio footage can be efficiently stored and effectively used. In a major project with UNESCO, NHK contributes to the documenting and safeguarding of our world heritage by producing digital HD short TV documentaries. The footage is used for various projects and part of it appears on the UNESCO web site (<http://portal.unesco.org/culture>).

On earth, in space

Since that day in 1964, NHK has taken a leading role in promoting HDTV, overcoming technical challenges, developing new HD content, and has applied HD equipment in various environments to explore its possibilities. HDTV cameras were aboard two space shuttle missions, shooting HD images of planet earth from outer space – HDTV met the specifications for use in space. In 2002, the secrets of life at the bottom of the sea were relayed live in HD, using the Super-HARP HDTV camera which is capable of filming in conditions where the light is as faint as moonlight. For the first time ever,



picture never stops

the world was able to see vivid images of deep-sea creatures on the seabed 1,200 metres deep off the coast of Japan. NHK established the HDTV Broadcast Centre in Antarctica in 2003, and its HD cameras captured magnificent images of the aurora and a total solar eclipse over the South Pole. So shooting in HD under subzero temperatures and other severe conditions is now a reality. At the 2004 Athens Olympics, an international joint HDTV production was achieved for the first time in summer Olympic Games history. China has been gearing up for the 2008 Beijing Olympics and declares that "the Beijing Olympics will be the Digital Olympics". The Olympics, too, have entered the HDTV age.

Equipment and the cost factor

HDTV equipment is just as portable and easy to use as conventional TV equipment, and of course available at reasonable cost as well. The latest digital equipment and facilities are continually being introduced at NHK. Thirty-three of our 73 OB vans are equipped for HD broadcasts, the rest will follow suit over the next few years. NHK is developing a range of different equipment for HDTV, from news gathering equipment and production devices to transmission equipment. One such initiative is the Hi-Vision (HDTV) wireless camera which uses the OFDM transmission system impervious to radio disturbances. With this equipment, it is no longer necessary to adjust the direction of transmission/reception antennas. And a cameraman alone can capture and send HD images from a crowd of people, inside a tunnel or a building, by efficiently using reflected signals. The new portable Hi-Vision satellite transmitter can transmit signals from anywhere, with the

development of small and portable, easy to assemble devices. And the Road Race OB van is specially designed to shoot marathons and other road races, and to supply dynamic HD pictures in real time. An HDTV camera (condensation-free) is mounted in the rear and can be moved up and down to capture the dynamic movements of the runners.

News reporting: seeing the world as it is

HDTV equipment has become smaller, more user-friendly and battery-friendly. It is now actively used for news coverage – HD pictures convey events more clearly and vividly than ever. NHK currently serves domestic audiences via five television services – two terrestrial and three via satellite – and three radio channels. NHK has 53 local stations across Japan besides the Broadcasting Centre in Tokyo. Internationally, 70 correspondents maintain a constant vigil on news frontlines in 34 cities around the world. Massive news reports and footage on politics, economics, human interest, and international affairs stream into NHK's Tokyo headquarters every day. Footage from major news bureaux overseas – London, Paris and Berlin for example – is also in HDTV. Images of wartime shambles transmitted from the Baghdad office in Iraq, too, are in HD. HDTV has become the newest "weapon" for TV journalism.

Paving the way for a digital future

In the current transition phase from analogue to digital broadcasting, NHK transmits its programmes in both analogue and digital. 96% of the core terrestrial channel, General TV, is expected to be aired in HD by March 2006. The remaining 4%

consist of conventional pictures filmed or distributed from overseas, so it can be said that virtually 100% of our content goes HD.

Flat screen TVs are among the top sellers in consumer electronic retailers in Japan – around 200,000 sets are being sold every month, most of them able to receive digital broadcasting. Hard-disk type HDTV recorders also began to sell. With the digitalisation of broadcasting, HDTV is rapidly becoming a standard.

A future media that is even more advanced than HDTV is currently being developed by NHK. "Super Hi-Vision," an ultrahigh-definition widescreen system with 4,000 scanning lines offers a picture that carries 16 times more visual information than the contemporary HDTV, offering great realism and immediacy. The quest for the perfect picture never stops.

NHK (Japan Broadcasting Corporation), Japan's sole public broadcaster, introduced a radio service in 1925 and a television service in 1953. Financed by the TV licence fee, NHK currently serves domestic audiences via five television and three radio services. The core channels are *General TV* and *Educational TV*, broadcast terrestrially, and three radio channels. NHK's three satellite channels also offer a varied range of programming. Internationally, NHK broadcasts three TV and radio services under the NHK WORLD umbrella. In 2000, Hi-Vision, NHK's HDTV system, was adopted as the international studio standard by the ITU (International Telecommunication Union). www.nhk.or.jp

The verdict is in, says Gary Shapiro, president and CEO of the Consumer Electronics Association: the US transition to digital television is a top-rated, smashing success

Transition accomplished

Consumers are embracing digital television at a rapid pace – to date more than 16.5 million digital television (DTV) products have been sold in the United States since introduction, marking a consumer investment of more than \$30 billion. The Consumer Electronics Association's (CEA) Market Research estimates that 15 million DTV products will be sold in the US this year alone – most (87%) capable of displaying high definition television, the best that DTV has to offer. And it won't be long before HDTVs out-sell analogue TVs. More consumers than ever say their next TV purchase will be an HDTV. Americans have embraced digital television faster than they took to colourTV. We reached 15% household penetration with DTV products in six years, whereas it took 10 years to reach just 5% for colourTV.

Of course, the sets truly bring their value when they are showcasing high definition content. And today's American consumer has a broad range of choices in how and what they watch in HD. All of the major networks offer hours of high-definition programming including top-rated sitcoms, sports programming, movies and specials. Most of the country's broadcasters are on-air in digital as are major cable providers and satellite networks.

But perhaps the true mark of success for the transition is that most of the conversation now focuses on how to define the end of the transition, or more specifically, the end of analogue television. Indeed the US Congress soon will consider legislation that will set a hard-date for the end of analogue broadcasting.

With more than 70% of US consumers receiving their primary television signal via cable, "Plug and Play" sets known as digital cable ready (DCR) have propelled the transition forward in a consumer-friendly fashion. A DCR set can be plugged directly into a cable system and receive analogue and most digital cable services without a set-top box. We know consumers want this feature. A recent telephone poll fielded by CEA Market Research revealed that 71% of US consumers who are thinking about buying a new TV are planning to purchase



Gary Shapiro

a DCR set. Last year our industry sold a million DCR sets in the US and CEA forecasts that figure will triple in 2005.

HDTV has been an even greater success than even CEA originally imagined. Who knew that HD would proliferate as broadly

and quickly throughout the technology world as it has? Consider that it was just seven years ago at the 1998 International CES that HDTV sets were first showcased. At this year's International CES, we saw first hand that HDTV has truly come of age. Beyond the usual array of dazzling sets and displays came a wave of new products that enhance HD, expand its reach and leverage its wonders. HD camcorders, HD games, HD editing suites – you name it.

But even as we celebrate how far we've come on the road to DTV, we have work to do. Unfortunately, the broadcast industry is opposing a hard analogue cut-off date, which is a step CEA and many others believe necessary to expedite the transition. In addition to a hard analogue cut-off date and the promotion of digital cable ready, I believe we must also achieve the following to get to the end of this transition:

- Broadcasters must deliver their DTV broadcasts at full transmission power.
- Cable operators must retransmit broadcast DTV signals in the same format in which they are delivered over-the-air. HDTV programmes should be retransmitted in HD, not in a lower-quality format.
- Consumer rights must not be impeded. We must maintain an equitable balance between the legitimate rights of copyright holders and consumers' "fair use" rights to record HDTV programming.
- Promote. Promote. Promote. Broadcasters, cable programmers and all involved in the digital transition should use our collective voice to extol the benefits of HD.

We've worked through many challenges and today the outlook for DTV, particularly HDTV, is bright. CEA has aggressive projections for future sales. What was once just a saying is now a reality: "Tomorrow's TV, today".

The **Consumer Electronics Association** is the industry authority on market research and forecasts, consumer surveys, legislative and regulatory news, engineering standards, and training resources. CEA membership unites more than 1700 companies within the US consumer technology industry. www.ce.org

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What is it? High Definition (HDTV) is a digital system for recording, transmitting and showing TV at higher quality than Standard Definition (SD). It was originally developed in Japan which has had an HDTV service since 1991.

Why is it better? The images contain around four times more detail than conventional TV, and come in a widescreen (16:9) format that is close to the shape of a cinema screen.

Is all HD the same? No, there are various standards and approaches. A big choice is between 1080i which offers "interlaced" (each frame divided into two subsequent pictures), and 720p which offers "progressive" (each frame contains full information). Broadcasters are still arguing about which approach to take.

What do the numbers mean? Old TV-speak referred to the number of horizontal lines transmitted for each frame of picture - 625 or 525. Today the reference is to the total number of pixels, the little coloured dots that make up each complete frame of picture. So the 1080 standard uses 1920 x 1080 pixels. 720 uses less, 1280 x 720 pixels. To achieve movement there has to be a succession of images. In USA, the 1080i system uses 60 interlaced frames per second, 720p can use 24, 30 or 60 full frames. In Europe the frame rate will be based on the 50 Hertz rate of the electrical power supply.

What do I look at it on? HD TV sets. Pictures look impressive on bigger screens which are usually flat and use plasma or LCD technology instead of the old CRT (cathode ray tube). Projectors can also be used.

How big a set do I need? Generally you need a set that is more than 36" diagonal to really get the best out of the system, though smaller sized sets do offer better definition and improved colour.

How do I get it? HD can come through broadcast signals (rooftop aerial), satellite (dish) or cable. You need a digital decoder either built into the TV or a separate set-top box.

Is there enough spectrum to deliver these better pictures? There is universal shortage of the most convenient radio frequencies used to transmit terrestrial television. HDTV needs more space, and broadcasters have to decide whether they want to sacrifice more of an expensive and scarce resource if they are to keep true HD quality. Cable has ample potential bandwidth. With satellite it is a question of using more transponder capacity, though this means less channels.

What kind of programmes will I be able to see? Any programmes can be shown on HDTV, though only those recorded at higher quality will show the difference. The broadcast industry is moving towards recording major shows in HD, and movies are recorded on 35mm film then mastered onto HD for video distribution. Expect sports, drama and major documentaries to be among the first genres.

Will I have to pay for the service? In the Nordic and Baltic regions, to receive the HD1 channel via Sirius, viewers have to pay a one-time fee of about SEK 2,000 for a subscription through to 2010. No information is yet available on what German pay-TV operator Premiere or BSkyB in the UK will charge. When public service broadcasters begin they should provide the service without additional charge.



NHK Super Harp HD camera

Will all broadcasters provide HD services? That is a decision for them. So far, broadcasters in Asia and America provide services, and in Europe, UK, France, Germany and Italy are among those planning services. Generally speaking, the higher quality images provided on computers and game consoles are forcing broadcasters to compete. The launch of the HD DVD at the end of this year is also focusing minds.

What is the schedule in Europe? Euro1080 started broadcasting in January 2004, German pay channel Premiere and French TPS launch this year, UK BSkyB in 2006. BBC states it will produce everything in HD by 2010 (but is already producing prime time series in HD for sales to USA). The UK regulator OFCOM has said there will be no UK digital terrestrial HD till 2013, after analogue switch-off in 2012.

Can I record the programmes? Yes, though you will need more memory in your storage/recording devices to see the pictures in best quality. Hard-disc recorders can be used for temporary, and HD DVDs for long-term storage. VHS is not dead - there is a D-VHS format produced by JVC and Mitsubishi which will also play back old VHS tapes.



Sony Qualia HDTV

What about commercial DVDs? The first commercial high definition DVDs will be released towards the end of this year. There are two competing systems, HD-DVD developed by Toshiba and NEC and Blu-Ray developed by SONY.

What is compression? In order to record and distribute these highly detailed pictures, HD programme information is simplified to fit into smaller bandwidth. Broadcasters are responsible for deciding how much compression they will permit when they transmit their signals. Too much compression means that movement and colour detail are compromised.

How is compression done? By removing redundant information. The coding process keeps detail, but re-uses it more effectively. It should not be noticeable to the viewer, though it is most vulnerable when dealing with lots of picture detail and complex movement.

What about sound? HD comes with digital stereo sound as a minimum, but the system also supports multi-channel such as 5.1 surround.

Can I still look at my old recordings? Standard definition programmes can be up-converted to be shown on HDTV sets, but they will appear of lower quality. Even with clever systems, it is impossible to show detail that is not there.

Will I be able to make high definition home videos myself? Yes, manufacturers are already producing cameras for domestic use. As more consumers adopt HD, it will become the standard for home viewing.

Can I expect interactive services? Almost certainly. One advantage is that text is much easier to read on an HD screen and you can have more of it.



Sony HVR-A1E camcorder

Dolby DP 570 multichannel encoder



More pixels, more audio, more opportunities

The move to digital television, including HDTV, has affected Wohler Technologies' entire product range. A great market expansion is underway that is demanding new products and services. The challenge for a manufacturer like Wohler has been pursuing the most promising opportunities while maintaining focus on the company's core business: in-rack audio monitors. Marty Goddard, Senior Sales Engineer, Wohler Technologies, outlines the impact of the HD transition on manufacturing broadcast monitoring systems

New signal formats The Serial Digital Interface (SDI) format for digital video and audio, standardised under SMPTE-259M, has been extended to handle HD, and is now standardised as HD-SDI under SMPTE-292M. Standards such as these can be essential to the proper functioning of broadcast systems when multiple vendors are supplying equipment, but the standards must be followed closely. Ambiguities in standards documents can allow interpretations that cause incompatibilities. Sometimes these can be difficult to correct. Even when they are easy to fix, correcting incompatibilities can take valuable time away from ongoing development projects.

Development tools Development of new products requires new test equipment to support the number of video screen sizes and resolutions. It remains to be seen which formats will be so rarely used as to become obsolete. Useful systems include signal generators, analysers, recorder/players, embedders and encoders.

Video Video for HDTV has an explosion of screen resolutions and aspect ratios, all of which must be supported by manufacturers. The debate over 1080i versus 720p does not affect test signal generators and monitors, since both formats must be entirely supported.

The PenPal HD portable test signal generator by Panorama DTV supports 18 different formats. This set is so complete that it is unlikely that all of them will be used by most facilities, once they are up and running.

For HD video alone there are generally recognised to be 18 different formats, roughly classified as follows:

- at 1080i, we have 50, 59.94 and 60 fps
- at 1080p, we have 23.98, 24, 25, 29.97 & 30 fps
- plus the split frame modes: 1080sF at 23.98, 24, 25, 29.97 and 30 fps

- and at 1035i, we have 59.94 and 60 fps
- at 720p, we have 50, 59.94 and 60 fps.

Confidence video monitors are also required to support these formats. The VAMP2-S8MDA from Panorama DTV will scale for display any of these HD formats, as well as providing 8 channels of audio monitoring.

Audio Including multichannel surround audio in DTV has proved a watershed for expansion in the number of channels required by broadcast audio monitors. The SDI and HD-SDI formats provide up to 16 channels of audio, and have created the demand for more and more channels of signal monitoring. Wohler has spent a great deal of effort in bringing multichannel audio monitoring solutions to the market, and can now de-embed all 16 audio channels from SD-SDI or HD-SDI on the same input. The audio signals are displayed on high-resolution level meter bar graphs, with audio alarms for detection of signal loss, carrier loss, over threshold and phase inversion.

One challenge to supporting audio for DTV in North America has been having to deal with Dolby Laboratories. Broadcast manufacturers have complained about Dolby's monopoly of the audio format standardised for North American broadcast, because there's no choice but to go to Dolby for a licence to use the AC-3 technology. For makers of consumer products this is easy enough, since licensing technology for consumer applications has long been part of Dolby's business model. For professional applications, however, it can be a different story.

Historically, Dolby has not licensed its technology for professional applications, claiming that to do so would mean having to compete with its licensees. However, with AC-3 standardised as the required format for multichannel audio for North American broadcast, Dolby has been compelled to

license AC-3 for broadcast applications. In order to prevent direct competition with Dolby's own product offerings, licensed products, as defined in the licensing agreements, are hindered in some key functional respects.

The solution to this has been for Dolby to provide to the market a decoder module that can be purchased and integrated into various form factors where decoding Dolby multichannel audio is required. Wohler has a comprehensive line of audio monitors that decode Dolby Digital and Dolby E, including the E-MON series, and the E8 series audio monitors. The E-MON provides various downmix modes for 2-channel monitoring, whereas the E8 series provides the decoded multichannel output to individual AES pairs, plus a downmix. Both units provide Wohler's top quality built-in speakers for audio monitoring.

Increased versatility The AMP2-E8 series is our most sophisticated audio monitoring unit, with seven sets of inputs, providing such versatility as a remote broadcast truck or an HD master control facility may require. There are two inputs each for HD or SD-SDI, encoded Dolby Digital or Dolby E, and AES digital audio. In addition, an analogue input is provided for legacy audio monitoring. All of this versatility creates complexity for the user, and so we are soon to release system software update that provides for 10 selectable user presets, and a convenient mode for accessing these presets.

It is important to see the silver lining in all this tumultuous change for what it stands for: increased opportunities. Managing this change and assessing where the best opportunities lie, and then staying focused on those opportunities is the challenge.

Wohler Technologies is a member of the AIB.

Wohler Technologies, Inc. is a leading manufacturer of audio and video monitoring equipment for the broadcast electronics industry. With a strong focus on in-rack audio and video monitoring, Wohler provides standard or custom solutions for the broadcast industry's audio and video monitoring needs. Wohler's latest innovations include a range of Dolby Audio Monitoring products, and a new line of LCD video monitors. Founded in 1983, Wohler is a private company headquartered in South San Francisco, California, USA. www.wohler.com

Satellite out of the HD starting

With High Definition television already a reality in other parts of the world, now all eyes are on Europe. What is the mood there regarding HDTV – do the European broadcasters want it, do the consumers want it? Gunda Cannon asked Yves Feltes, Senior Manager Press Relations at SES GLOBAL & SES ASTRA

[Feltes] This is a development that is mainly driven by the consumer. HDTV is not only a reality for broadcasting, it is a reality for a number of devices: your hand-held video camera, your DVD player and your flat screen display at home. You get basically HDTV quality on these devices if you use them to watch your digital photos for example, but you don't even get a half-way decent quality on your new set if you watch regular broadcasts – and the bigger your screen the bigger the problem. That alone is sufficient reason for the broadcasters to position themselves with HDTV vis-à-vis competing media like DVDs. You are going to see the first regular HD broadcast on ASTRA before the end of the year because we have contracted with German pay-TV broadcaster Premiere who are launching 3 HD channels in November. Premiere is a long-standing customer, and the move to HD is a logical next step in our relationship.

Do satellite operators have a competitive advantage over cable and digital terrestrial HDTV delivery?

Satellite has the advantage as there are practically no limitations on the available bandwidth. You are going to see HD on satellite as of this year, you will probably see some HD programming on the

most developed cable networks, but I am very suspicious about HD being available on terrestrial networks. You need major investments on cable networks to make them HD compatible, taking into consideration that you have to go for simulcast of existing programming and HD programming with the maturing of the market, and if you look at terrestrial networks I just don't see how you are going to make the choice who is going to be authorised to transmit HD on terrestrial networks – the spectrum is just so limited and so the programming offer is going to be very limited.

SES ASTRA today is the European Direct-to-home satellite operator. As Ferdinand Kayser said in a recent interview in *The Channel*, ASTRA is working extremely closely with its customers and partners to develop HDTV services across Europe. So is Astra's satellite network fully ready to carry the HDTV requirements of its customers?

A hundred per cent. The nice thing about satellites is that they are not much more than a mirror in space. If we send up an analogue signal, we get back an analogue signal. If we send up an HD signal, we get back an HD signal. There is no requirement for any additional investment or any specific satellite capacity to be launched in the future in order to provide HD. The existing satellites are perfectly suited to do that.

Let's talk about the various HD partnerships that Astra has formed and how they are changing the broadcasting landscape.

You have to consider that we do not only look at the broadcasting scene from a purely European view. ASTRA today is part of SES GLOBAL, and SES GLOBAL consists of the two main operating companies, ASTRA in Europe and AMERICOM in the US, but also the different participations that we have in Asia, Latin America and Scandinavia. In the US HD is a reality and we can see that in our financial figures. There is no reason why it should not be a reality in Europe. ASTRA decided to take the initiative – we looked for a first provider of HD programming for Europe and that turned out to be Belgium-based Euro1080. Euro1080 is today on ASTRA with 2 channels: HD1 which is available for individual subscription, and a second channel which is used to deliver HD feeds of specific events, concerts, sports events, to digital cinemas. We used our partnership with Euro1080 to get HDTV onto the agenda of all of our broadcasting customers. We also launched a first demo channel which is available 24 hours a day as a dedicated service for points-of-sale – to enable retailers of flat screens to display true HDTV. These first initiatives were coupled with events here in Betzdorf to which we invited all our customers but also the set-top and flat screen manufacturers, to agree on basic technical standards for HDTV in Europe in order to avoid a fragmentation of the market or proprietary systems taking over that market.

You also offer HDTV simulcasts with ProSiebenSat.1 – what is the reasoning behind that?

The simulcasts are used by quite a few people that have the required sets already today, they are used by a number of points-of-sale and they are used by ProSiebenSat.1 in order to gain experience with HDTV.



Yves Feltes





ProSiebenSat.1 is the first commercial, i.e. advertising-financed channel to go the way of HDTV even if it is at this stage only with occasional broadcasts. We anticipate HDTV to grow first as an add-on to existing pay-TV bouquets, meaning you are going to see Premiere, you are going to see Canal Plus, you are going to see BSkyB offer HDTV packages of several channels as an add-on to their existing subscription. But I would like to stress that we really don't see HDTV only as a pay-TV offer – in the second phase you are going to see the free-to-air broadcasters, public or advertising-financed, go for HDTV. That's actually also what happened in other countries where HDTV is much more developed. If the pay-TV operators go into HD and more people are getting used to watching HD pay-TV, they will be disappointed when they switch to commercial and public TV in standard definition. The pressure is going to grow on the broadcasters to go HD. The first one who does that in one market is going to put enormous pressure on its competitors in that market. It's a good chicken-and-egg problem – the egg is there and there is going to be a chicken.

German public service networks ARD and ZDF are said to have an option for additional capacity on SES ASTRA satellites from 2008 that can accommodate HDTV. Can you tell us a little more about that?

I am not at liberty to discuss individual contractual details but the fact is that if and when the German public broadcasters opt for HDTV then you can be sure that we will find ways to accommodate them.

A decade ago there were doubts as to whether viewers were willing to pay for cable or satellite-delivered pay-TV services. Today, cable operators in Germany, Belgium, the Netherlands and elsewhere are keen on HDTV, because it allows them to create a new "super-tier" levied at a premium rate. Is HDTV giving satellite and cable pay-TV a boost?

Yes, we believe that HDTV is going to be the single most important factor in the ongoing conversion from analogue to digital. If you come from a purely analogue terrestrial environment then going satellite or cable meant multi-channel TV. Then you go from analogue to digital in these multi TV households by increasing the number of channels. Pay-TV is usually successful in markets where the terrestrial or FTA offer is not that strong. The next step is interactivity, MHP – all the things that the consumer does not really understand. But if you show the consumer an HDTV signal on an HDTV display, he understands straight away – wow, this is good. It is a new viewing experience, the cost of the equipment is going to come down, you are going to see an increase in HDTV programming available – the trend is inevitable and a really big stimulus for the consumer to go digital.

ASTRA has teamed up with T-Systems for the 2006 Soccer World Cup in HD – that's a new partnership.

That's a very nice piece of business. It is bringing the World Championship to TV stations around the world, in standard definition or in HD. T-Systems as the preferred technical supplier of the FIFA World Cup in Germany is an ideal partner for getting into that market segment which is a business that ASTRA traditionally was not in, whereas on the other side of the Atlantic

with our colleagues at AMERICOM it is part of their business since inception.

So is the arrival of HD welcome news for the satellite operators?

Absolutely, it requires additional capacity, that's good for business. We believe that in response to consumer demand it will drive the conversion from analogue to digital to the profit of broadcasters who can differentiate their offer through HD from their competitors. It is going to be good for the electronics industry because finally they are going to get some decent broadcasting to show on their nice new displays. And with respect to the production side, yes, today producing in HD is a little bit more expensive than producing in SD – about 20% – but the price difference is coming down very rapidly. On the other hand, if you don't do it you are not going to be able to sell your documentary outside Europe. The cost-benefit analysis is tilting towards HD.

What is your prediction for the arrival of the HD mass market in Europe?

The mass market will start in 2006 with the FIFA World Cup in Germany. That will be the excuse for the consumer to get a new TV set. The Premiere and the Canal Plus offers will be in place by then, the MPEG-4 decoders will be available. It will be an elite mass market – as long as your set costs 2,000 euros, HDTV is not in the reach of everyone. But the more people see it at their neighbour's, the more they'll want it too. According to our projections we anticipate that we will have more than 100 HDTV channels on ASTRA by 2015.

Yves Feltes, thank you very much.

Société Européenne des Satellites (SES) was incorporated in 1985 in Luxembourg (Betzdorf) as Europe's first private satellite operator. Today, the ASTRA Satellite System is the leading DTH satellite system in Europe. ASTRA's 13 satellites transmit over 1100 digital and analogue TV and radio channels, as well as multimedia and internet services. ASTRA's two prime orbital positions for DTH services are 19.2° East and 28.2° East. Professional services such as SNG and Cable Contribution transmit from 25.5/24.2° East. SES ASTRA is part of SES GLOBAL which wholly owns SES ASTRA in Europe and SES AMERICOM in the US and holds strategic participations in AsiaSat in Asia, Star One and Nahuelsat in Latin America, and NSAB in Europe. Via its WORLDSAT subsidiary it provides connections to the premier regional satellite fleets of these SES GLOBAL partners.

www.ses-astra.com

SES ASTRA is a Gold Member of the AIB.

Sony arrived in Europe in 1960, establishing its first sales company in Switzerland. Then followed the Bridgend plant, UK, as Sony's first manufacturing facility in western Europe. The Broadcast & Professional division was established in 1978 and is based in Basingstoke, UK.



John Ive joined Sony Broadcast & Professional Europe in 1978 – today, as Director, Strategic Planning, he works within Sony Europe contributing to the strategic direction for HD and



consulting with end users and standards organisations regarding HD production and consumer distribution. He says that after almost three decades in development in research labs, HD is about to take over our lives and our living rooms

Let's look first at the most important person in all of this – the consumer. Viewers are enjoying more choice than ever when it comes to content, in terms of both channels and delivery options. Cable, satellite and digital terrestrial broadcasts offer superior picture quality to analogue, and the incredible range of programmes from public, commercial and niche broadcasters ensures that there's something for just about everyone, 24 hours a day. And what do they really want to watch? The Consumer Electronics Association in the US confirms that movies, sport and educational programmes like natural history are viewed more frequently than other programme categories. These are just the kind of programmes that lend themselves to the visual and sound experience that HD offers.

We're also in the middle of a home cinema explosion. The supremacy of the cathode ray tube is being challenged by a new generation of space saving LCD, plasma and thin-line sets that make a fashion statement in the home. The price of these new display technologies is moving towards mass market affordability. Flat-screen PC monitors have overtaken CRT sales in Japan and the US, and it won't be long before flat panel technologies replace tube-based receivers in European living rooms. We cannot ignore how profound this change from CRT to flat panel really is. While the average size of tube-based receivers has been creeping up over the years, the biggest sets are getting tougher to squeeze into most people's living rooms. Flat screen technology leapfrogs this limitation – making 50 inch, 60 inch or even bigger pictures a viable option in normal-sized homes.

And let's not forget that rich, dynamic audio is an essential part of the consumer entertainment experience. This view is backed up by the Consumer Electronics Association, which shows that what people really want from their TV viewing experience is a crystal clear widescreen picture with 5.1 digital surround sound. What they want, in other words, is High Definition. The trade is awash with tales of customers complaining that their new flat panel displays aren't delivering the resolution they were hoping for. It's not the screen that's at fault, of course. Latest generation screen technology is exposing the limitations of Standard Definition broadcast pictures, and consumers are thirsty for the big-screen, immersive entertainment experience that only HD can deliver.

HD compatibility has already secured a foothold in the living room. Most latest-generation plasmas, LCD screens and rear projectors are ready for HD signals, and Datamonitor forecasts there will be 5 million HDTV households in Europe by 2008. Strategy Analytics are even more bullish, predicting up to 20 million European homes will have HD-capable TV sets by 2008. 2005 will be a busy year for product launches. Sony alone is introducing more than 25 new LCD HD flat screen TV models in Europe this year. These range from stylish designs with multichannel sound to the stunning QUALIA 006: a rear projection TV based on latest SXRD technology that displays breathtaking 1080-line pictures on its 70" screen.

HD figures heavily across Sony's entire personal video and imaging roadmap – from content creation to editing and distribution. Drawing on our heritage as a professional equipment manufacturer, the HDR-FX1 is the first consumer Handycam that can shoot true 1080-line pictures. Consumers can already edit HD content on their PC with packages like the easy-to-use Sony Vegas 6 – giving them the chance to make their very own HD home movies. Next-generation Sony PlayStation hardware will feature the CELL processor that offers sufficient processing power to drive HD applications.

We've seen before that a great format means little without software support, and with HD and Blu-ray there will be an immense choice of content from Day One. Following its

Europe's HD 'Big Bang' is just around the corner

recent acquisition (with other parties) of the MGM movie library, Sony is currently mastering its immense back-catalogue of cinematic entertainment in HD ready for distribution on Blu-ray packaged media. Sony BMG Music Entertainment is already shooting concerts and videos by many of its artists in HD, ensuring that music lovers will have a wealth of material to choose from – either through TV transmissions or packaged Blu-ray media. And with the launch of Sony's Connect music download service, there's a very real possibility that – before long – we could see HD entertainment delivered direct to the home via broadband.

Greater production flexibility

At a time when broadcasters are courting a new tier of premium subscribers, great-looking TV pictures attract viewers in droves – and they attract advertising dollars, euros and yen, as well. In the US, where over 1,000 HD stations are already transmitting, advertising slots on prime time series in HD are the first to sell out. Now the European production community is ramping its content stockpile as it anticipates the widescale launch of HD transmissions. From quality drama to sports and live events, more programmes are being shot in HD – maximising their commercial appeal from Day One, broadening overseas sales opportunities and future-proofing their appeal for tomorrow's distribution channels.



It's also important not to overlook the cultural and educational potential that HD offers. It will, quite literally, change the way people see natural history, travel programmes and musical entertainment. At several hundred euros a pair, tickets to London's Royal Opera House may be out of the reach of most people. With HDTV, we can all enjoy a front row seat at the most prestigious cultural events.

But isn't an investment in HD a complex, costly business for mainstream broadcasters and programme makers? The cost of HD production is now at a very modest premium over SD. Latest generation Sony HD camcorders, switchers and VTRs are no bigger or bulkier than their SD counterparts – so there's no need to worry about space limitations or increased air conditioning requirements when installing HD equipment into a studio or OB truck. Producers can opt to shoot pictures at up to 1080 line resolution, selecting interlaced or progressive shooting modes to accommodate fast-moving action or a more filmic look. HD pictures are also 16:9 native, so there's no need for picture aspect ratio morphing for modern widescreen displays.

Once you've acquired HD pictures and sound, there's a choice of post production options that dovetails with your budgetary as well as your operational needs. If you're looking for unsurpassed quality, it's easy to post-produce HD pictures with the latest generation of non-linear editing systems that retain HD quality end-to-end. Equally, professional content creators may prefer to opt for a step-wise migration strategy. HD pictures look great even when they're downconverted for post production within an existing Betacam infrastructure. This means that programme makers can immediately benefit from an improved on-screen look while phasing capital investments over time.

A fundamental change

HD is finding its way into consumers' hearts and minds – through cable, through satellite, through the Internet, through HD receivers, HD movies and HD camcorders. At Sony, we've been in the HD business since the 1970's, when HD was demonstrated in a lab in Atsugi nearly 30 years ago. Today, our interests span everything from HD cameras, production switchers and professional VTRs to consumer hardware, games, movies and media. This means of course that HD will not be the exclusive preserve of broadcasters, and consumers will have the tools to shoot, edit, display and archive their own personal HD content. And once consumers experience HD for themselves, it's certain that they will never look back.

Driving HD in Europe: the Sony vision

In March this year, Sony Europe President Chris Deering told visitors to the CeBIT electronics fair in Hannover that HD was "the cornerstone" of the company's interests. Sony has consistently indicated that HD is at the heart of its business plans, and has brought together senior executives from across its constituent businesses in a European Task Force. By synergising the company's experience in hardware, music, movies and games, the group aims to drive awareness and stimulate uptake of HD among industry professionals and consumers alike.

Addressing an audience of broadcasters, regulators and manufacturers at a series of HD events held in London, Berlin and Paris in December 2004, Deering signalled the need for the industry to unite behind the successful launch of HDTV in Europe. As an active contributor to the standardisation of HD, Sony has also stated that its objective is to further extend its range of HD options to meet a wide range of production budgets – from the uncompromised quality of HDCAM-SR to the highly cost-effective HDV format that captures true 1080-line pictures on a DV-sized cassette. Announced in September 2003 the latest version of the HDV format has to date attracted the support of some 45 manufacturers and developers.

Sony manufactures audio, video, communications and information technology products for both the consumer and professional markets, employing more than 160,000 people worldwide. Sony Europe, with its corporate headquarters in Berlin, is a subsidiary of Sony Corporation, Tokyo. Sony Europe handles manufacturing, R&D, design, sales and marketing of consumer and business products in Europe.
www.sony-europe.com www.sonybiz.net

Benny Norling has been working in satellite communications for over two decades now: at Nokia he was responsible for launching, marketing and sales of set-top boxes in Europe; in 1997 he joined Ericsson as Head of Product Management for their mobile satellite phones – mainly for Globalstar and AceS. Five years ago he made the move to Nordic Satellite AB where as General Manager he is responsible for NSAB's largest business unit, Broadcast Services, as well as for the strategic planning and business development of the company. Gunda Cannon talked to him

MOVING HEAVEN AND EARTH

What is the feeling about HD in the Nordic countries?

The consumers today know very little about HD as such but it is starting to emerge in a number of magazines and ads for HDTV flat screens. Sales of flat screens in Sweden are about 30% in volume by now, they are becoming more affordable. The DVD player is by far the fastest selling consumer device ever, so people are used to better picture quality. Then enter the broadcasters – they are now looking at this, as a business opportunity or a necessary evil.

Your company brought the first HDTV channel to the Nordic region when you signed last year with Euro1080 – HD1 is now on Sirius with its mix of music, sports, lifestyle, wildlife and fiction. How did this deal come about?

HD1 started in October 2004 as a showcase to demonstrate what will happen in the future. Sweden will cut off all analogue transmissions by 1 February 2008, Finland even earlier in 2007. The Swedish government has just announced that it is switching off analogue in three regions in September of this year as a test case for transition to digital only. So the big issue in Sweden is the switch to digital. At the moment of course there is just one channel, HD1, and to buy a set-top box today and receive only one channel is not an ideal situation for the consumer.

Why do you think Gabriel Fehervari of Euro1080 chose Sirius?

He knows that we are very strong in the Nordic market and the Baltics, where we reach all cable TV networks and DTH households. We have a perfect footprint for the Nordic market, viewers can use 45cm dishes throughout. There are two competing platforms in Scandinavia, Viasat and Canal Digital – only Canal Digital has said they will start one channel on 1 September 2005. Everybody in Europe of course is waiting to see what's happening with regard to compression techniques and standards. I believe one year from now, when MPEG-4 devices are available, the compression techniques will be more effective, we will use nearly half the bandwidth we are using today, and it will be more cost-effective to deliver HDTV.

As a viewer, what do you need to receive HD1 via Sirius?

You need the standard parabolic dish with an LNB, and you need a special set-top box which can take the HDTV signals. Pricing

for the whole package of receiver plus subscription through to 2010 is SEK 7,000.

How many viewers are watching HD1 at the moment?

I don't really know! I think Gabriel Fehervari said that his aim was to have 100,000 viewers throughout Europe this year. The number of sold units is about 80,000, and not all of these are installed and in operation. I would guess that the number in Sweden today is rather small, in the region of 1,500-2,000 units.

How do you see that developing?

It's a two-step development. The first batch of HDTV set-tops will go to the retailers, so that when they are selling their rather costly flat screens they can show the consumers what the possibilities are. I don't think many consumers are buying MPEG-2 boxes today. The development to MPEG-4 will happen rapidly now during the course of this year, and there are also plans for Euro1080 to launch a parallel MPEG-4 service. Our viewers today are mainly in Norway and Sweden. There is a lot of interest in home cinema systems in these countries, and in Finland too. The Baltic countries are also coming on-stream, we see great demand which is amazing. Maybe they will take a jump and say "We will start with HD from day one" – not this year but perhaps next.

In the Nordic region, is HDTV available only by satellite?

Yes, our signal is direct-to-home but also cable TV networks are taking the signal from Sirius. Sweden's biggest network, ComHem, and HKT in Finland have started tests, and some broadband networks in Oslo are also trialling the signal from Sirius.

Crucial to the debate about HDTV is the European spectrum starvation dilemma. Europe went into the digital area with only SDTV and no HDTV and so the new digital spectrum that could have served both SDTV and HDTV, as it does in North America, is now occupied by SDTV alone. What is the situation for terrestrial HDTV in the Nordic region?

The terrestrial networks don't have the spectrum available, not yet. They might in 2008 when analogue services are switched off. The current multiplexes are congested and it will be a challenge for



Benny Norling



NSAB Sirius 4





FOR HD IN THE NORDIC REGION

the terrestrial networks to include HD services. I see the development coming in two ways. The broadcasters are excited about digital TV because they can lower their distribution costs by getting compression down to 3.5 megabits per second, and with the current decoders that will be sufficient quality for standard TV. But on a 43 or 50 inch screen the quality will not be as good as you expect. So standard TV will come down in bit streams, yes, that is already happening now. HD which is currently transmitted at 90 megabits per second will come down to say 12-10 in the first wave, and I expect within a couple of years we will be down to maybe 8 – approximately twice the amount you have for SD today. We will also of course utilise the new DVB standard for source encoding, DVB-S2, to use bandwidth in satellite more efficiently and gain up to 50% more bandwidth. This is of course perfect for transmitting HD signals. SES ASTRA are already conducting trials with this on one of their satellites at 23.5° East. I believe that when one and a half years from now the HDTV receivers will utilise both MPEG-4 for video encoding and DVB-S2 for source encoding, this combination will be very effective in bringing HDTV to the viewers. This is not happening on the competing platforms, in cable and terrestrial.

What is the next step forward in the HD revolution for your company?

Next are trials with Sweden's public broadcaster SVT (Sveriges Television). They have made a short 65mm film which will be used for evaluating HDTV quality and different formats. As you know, there is a format 'war' between 1080i and 720p – SVT and the EBU are in the 720p camp. The manufacturers don't really care because their set-top boxes and flat screens can accommodate both. The next step is to convince and educate the retailers. On 18 April I started an HDTV Forum in Sweden which will be fully established by the middle of this year, in collaboration with manufacturers, programme providers, pay-TV operators and others in the trade so that there is a common voice on what really is HDTV. Today, if you look in the magazines you read that TV sets are HDTV 'supportive' but this is misleading the consumer as these machines cannot take HDTV in the way it has been intended. EICTA in Belgium has now introduced the "HD ready" logo as a quality sign so that retailers and consumers are aware.

What is your prediction: when will the HDTV mass market arrive in Europe?

I believe in 2008, not before. In the DVD world, there is only one format but in the HD-DVD world there are two formats, or actually nine if you count them all. Sony has now initiated discussions to see whether everyone can agree on a unified standard, Blu-ray and HD-DVD combined together. This is of course great news, and when the next wave of DVDs comes in the autumn of 2006, people will be fully aware and use this as a reference. So when consumers watch what is being broadcast on their big plasma screens – which will have dropped in price by then – they will say "Hey, this is just Jurassic!" and will start complaining. So, yes, mass market within the next three years.

Did you have future HDTV demand in mind when you commissioned your new Sirius satellite?

We see the demand – HDTV is coming and there is also increasing demand from Eastern Europe. Sirius 4 will be larger than our current satellites Sirius 2 and 3 put together. Sirius 4 is being built by Lockheed Martin; it will have 52 transponders and will give us coverage throughout Europe and of course Scandinavia, to the Ural Mountains. This will be a perfect match when HDTV arrives because it will be operational by mid-2007 and able to support the HDTV initiatives and developments in these regions.

Benny Norling, thank you very much.

Nordic Satellite AB is jointly owned by the Swedish Space Corporation and SES GLOBAL. NSAB owns and operates the SIRIUS 2 and 3 satellites, offering cost-effective solutions for TV and radio broadcasting and broadband services in the Nordic, Baltic, Central, and Eastern European regions. SIRIUS 4 will be a multi-mission Ku/Ka-band satellite to be built on Lockheed Martin's reliable A2100AX platform with a minimum service life of 15 years. The satellite will be deployed at NSAB's orbital position of 5° East in the second quarter of 2007. www.nsab-sirius.com



Gabriel Fehervari

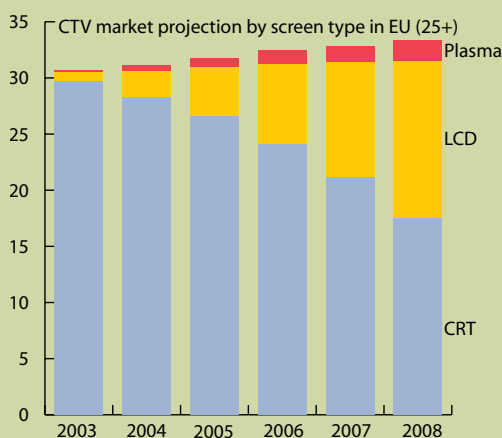
A US-Russian joint venture will launch NSAB's SIRIUS 4 telecommunications satellite in 2007. International Launch Services, made up of Khrunichev State Research and Production Space Centre and Lockheed Martin Corporation, made the deal with Nordic Satellite AB in May. SIRIUS 4 is designed and manufactured by Lockheed Martin and will be put into earth orbit by a Proton carrier rocket with a Briz-M booster. SIRIUS 4 will provide replacement capacity for NSAB's existing SIRIUS 2 and SIRIUS 3 satellites in the Nordic and Baltic markets, as well as enhance coverage in Eastern Europe and Russia, and provide a sub-Saharan Africa beam.

getting **HD** ready

In January of this year, EICTA, the European industry organisation representing the information and communications technology and consumer electronics sectors, announced its conditions for HD labelling of display devices. Tony Graziano, EICTA's Director Technical and Regulatory Policy, says the "HD ready" label introduced by EICTA will give consumers assurance when they purchase devices assumed to be ready for use with HD broadcasts and other HD equipment

In the three quarters of a century that the TV set has been among us, it has become the single most important product shaping global and public opinion on a daily basis. With an estimated global penetration of 1.6 billion TV sets, there is roughly one set for every four human beings. The penetration rate in the EU is estimated to be over 270 million TV sets; this could reach 300 million by 2008.

While there are signs that suggest that parts of the TV market have reached saturation (especially in developed countries) there is a strong belief that the TV industry is in the early stages of the



next wave of growth owing to the emergence of new services and new technologies. The evolutionary shift from analogue to digital TV, the incredible popularity of DVD players and the increasing interest in slimmer and bigger displays (plasma and LCD), is bringing about a fundamental shift in the TV paradigm similar to the transformation and growth seen in the telephone industry

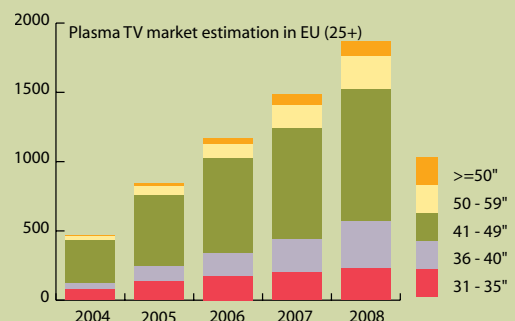
with the emergence of cordless and cellular phones.

While most of the attention is currently focused on the introduction of digital television, high definition TV is strongly establishing itself in Europe. Since mid-2003 HDTV has become a major topic for infrastructure providers and their customers. This was due in part to the impressive uptake in the US, Japan, Australia and South Korea.

In addition there has been a phenomenal rise of flat screen display sales. According to latest industry sales projection figures, by the year 2008 traditional CRT technology will represent just over 52% of the total EU colour television market, LCD will increase to just above 42% (middle range market), whilst plasma will account for just over 6% (high end market). Display makers are confident that sales of flat screen TV technology will double each year for the next four years as consumer switch from traditional CRT technology. What is less certain is whether the dominant technology will be plasma, the current choice for large screen, or LCDs, which monopolise the smaller screen market but are getting bigger and cheaper. There is also a wild card in an emerging technology called organic light-emitting diode (OLED). It is very difficult to predict at this stage which display will eventually dominate. For panels over 40 inches plasma has the lead, and is expected to remain strong for the next few years. For screens below 30 inches LCDs are expected to dominate.

With the spread of DVD and flat screen, wide format equipment, consumers are starting to expect a higher broadcast picture quality.

This trend is having the effect of moving the incentives promoted to consumers by European broadcasters away from the quantity of digital TV services and towards quality. Moreover, it is providing an opportunity to create a bigger differentiation between digital and analogue.



In light of this shift towards higher picture quality, in particular towards HDTV, EICTA, the European Industry Association for Information Systems, Communication Technologies and Consumer Electronics, has introduced the "HD ready" logo as a quality sign for the differentiation of display equipment, capable of processing and displaying HD signals. It is awarded on the basis of minimum functionality requirements and is neutral towards the technology used. Whether LCD, plasma or another technology comes to dominate the market will not affect the applicability of the logo. The logo offers a well balanced approach which responds to viewers' and broadcasters' needs for certainty regarding interoperability with future HD receiver products. Furthermore, it will enhance consumer

assurance and confidence when purchasing new display devices assumed to be ready for use with HD broadcasts and other HD equipment.

The shift towards HDTV poses certain questions about interoperability. The emergence of two emission formats for HDTV in Europe (720p/50 and 1080i/25), however, is not a problem because HDTV set-top boxes and displays should be able to accept both formats. More substantial is the potential for market fragmentation arising from different (albeit standardised) technical options for HDTV. The availability

of two video compression schemes (e.g. MPEG-4 AVC and Microsoft VC-1) may cause some interoperability issues. It is possible that set-top boxes will not work on both schemes.

In the coming years a multitude of CE devices producing HDTV signals are expected in the market. There is a need for a uniform labelling regime that indicates the quality of these devices (as compared to standard resolution devices) in a way that is clear to the consumer, and that creates an assurance that these HDTV sources can interface to HD-ready displays.

A display device has to cover the following requirements to be awarded the logo HD ready

**HD
ready**

Display, display engine

The minimum native resolution of the display or display engine is 720 physical lines in wide aspect ratio.

Video interfaces

The display device accepts HD input via:

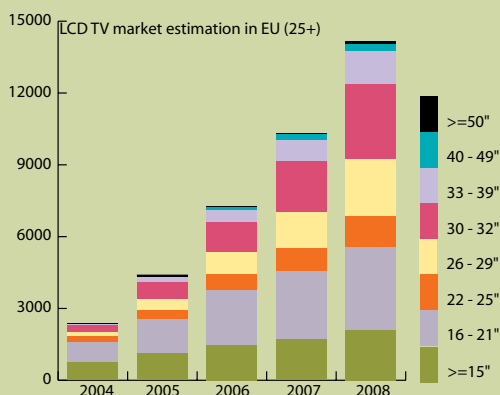
✓ Analogue YPbPr ("HD ready" display devices support analogue YPbPr as a HD input format to allow full compatibility with today's HD video sources in the market. Support of the YPbPr signal should be through common industry standard connectors directly on the "HD ready" display device or through an adaptor easily accessible to the consumer.)

✓ DVI or HDMI

HD capable inputs accept the following HD video formats:

✓ 1280x720 @ 50 and 60Hz progressive ("720p"), and
✓ 1920x1080 @ 50 and 60Hz interlaced ("1080i")

The DVI or HDMI input supports content protection (HDCP)



EICTA is the voice of the Information and Communications Technology and Consumer Electronics Industry in Europe. It is composed of 50 major multinational companies and 32 national associations from 24 European countries. In all, EICTA represents more than 10,000 companies all over Europe with more than 2 million employees and over EUR 200 billion in revenues. www.eicta.org



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In February 2004, Premiere was the first German broadcaster to transmit a major sporting event live in HDTV. Now the Munich-based pay-TV operator is getting the HD ball rolling in Germany by launching three HDTV channels in November of this year. Gunda Cannon asked Dr Friedrich-Carl Wachs, Premiere's Chief Strategy and Development Officer, how quickly HDTV will take hold in Germany

HDTV won't be an overnight success, but we firmly believe that the new TV will assert itself within the next few years. As the first big HDTV highlight, the Soccer World Cup 2006 could give a real boost to HDTV. In the past, soccer world championships have always generated widespread interest in new technologies - the 1954 World Cup helped TV make its breakthrough in Germany, and the 1974 World Cup dramatically stepped up interest in colour television.

Why is Premiere so committed to HD?

Everyone who has ever seen HDTV is overwhelmed by it: seeing really is believing! It's just the best TV there has ever been. It simply has to be the television of the future.

Although Premiere is playing a pioneering role in the launch of HDTV in Europe, your company cannot go it alone. What is involved in reaching agreement with others in the industry about technical standards and the timetable for rollout?

Since it has become clear that MPEG-4/H.264 provides a new compression format which significantly reduces bandwidth requirements, broadcasters see the possibility of providing financially viable HDTV programmes. Since then, we have been seriously focusing on HDTV. The entertainment industry too is expecting HDTV to take off and senses new sales potential. Everyone is pulling together to successfully introduce HDTV. For this reason alone, it was not difficult to come to an agreement with the participating companies. I also think everyone has learned from the errors of the past and no-one wants to get tied up in unnecessary discussions. Our requirements for receivers demand maximum flexibility and future security: they have to be able to display all current formats as well as those that can already be foreseen today. Our timetable for the rollout is also based on this. We will launch HDTV when the equipment

is ready and then we may even be the first in Europe to broadcast with MPEG-4/H.264.

Is there at present in Europe a uniform standard for HD content?

Basically, there is no uniform standard for HDTV, there are just certain minimum requirements. These are also reflected in the "HD-ready" label requirements for displays and projectors: 720 scanning lines in a 16:9 format and 720p and 1080i resolution at a respective frequency of 50 Hz and 60 Hz. Our future HD receivers will also show these formats and standards. There will soon be test streams available for manufacturers, so that their equipment can be tested properly. And we will broadcast a Premiere trailer via the ASTRA promotion channel - this will give consumers who are already asking retailers about HDTV a clearer idea of what it is all about.

As a viewer, how can I receive Premiere's first regular HD channels from November 2005?

To begin with, Premiere HD will only be on ASTRA at 19.2° East. Viewers need a Premiere compatible HDTV receiver, which is currently being developed by Philips, Humax and Pace and which will reach the stores in time. The TV sets for HDTV reception are already available. Viewers just need to make sure that the TV has the "HD-ready" label. And attractive subscription packages for the Premiere HDTV programmes will, of course, be available in time for the launch.

Are you planning to place your HDTV programmes on cable?

Of course! At present, it is easiest to broadcast HDTV via satellite. Enough capacity is available, we can broadcast freely and the receivers are also easier to develop. But we hope to be able to supply our HDTV programmes via cable in time for the 2006 World Cup. Almost 50% of our subscribers receive Premiere via the cable network, and we are already talking to various network operators.



Friedrich-Carl Wachs

P is for pay-TV, pioneer and PREMIERE HD

What about distributing HDTV via digital terrestrial TV?

At the moment, broadcasting HDTV via DVB-T is out of the question in Germany. There just isn't the necessary transmission capacity. We don't even broadcast our "normal" Premiere programmes via DVB-T. Premiere alone has 28 TV channels, but only about 24 programmes can be received via DVB-T. In our opinion this has nothing to do with the programme diversity of digital TV. Besides, only about 5% of German TV households receive their TV programme terrestrially.

There is talk of delivering HDTV via the Internet, via ADSL – are you looking into that?

We try to reach our customers through as many distribution channels as possible. The rising number of ADSL households in Germany makes IP-based broadcasting more interesting for Premiere. HDTV content can also be provided via ADSL in the future, once the required transmission capacity is available.

In Germany, is the general public aware of the HD debate?

Well, until now the public hasn't had a real chance to watch the new dimension of TV. From September, however, this will change dramatically: at IFA, the world's largest consumer electronics trade fair in Berlin, the general public will for the first time experience HDTV. IFA will be full of HD-capable TV screens showing all the advantages of the new standard.

Is the consumer driving the demand for HD programmes?

In the past years, sales of large screens have shot up. Consumer expectations of the TV viewing experience are huge. However, when you watch current broadcasts on these large screens the quality of the picture tends to be worse and so customers are dissatisfied. As a consequence, the demand for high definition pictures is bound to go up: high quality content at last!

LG Philips, the world's second-largest flat-screen maker, recently reported a loss because demand for expensive flat-screen TVs has failed to meet the expectations of manufacturers. How do you interpret this?

For many years, flat screens tended to be a luxury product for home cinema fans. Plasma screens in particular were very expensive.

Meanwhile, however, a very large market for much cheaper but still HDTV-compatible LCD screens has developed. Consequently, plasma screens also have to become cheaper. And the prices will continue to fall. Then these display devices will also become more interesting to the general public.

The hardware can be beautiful but if the programme content does not match, the viewers won't watch. What types of programming are you going to fill your 3 HD channels with?

Starting in November, our three dedicated HDTV channels for film, sport, and documentaries will make TV viewing a spectacular experience. The pictures are so sharp and clear that the viewer really gets the impression of "being there". Especially with the sports programmes you feel like you're right there on the playing field. And documentaries in HDTV show fascinating detail that the viewer just never gets to see on a standard TV.

In the US, Japan and Australia the case for introducing HD has been strengthened by government legislation, and there have also been subsidies and grants. In Europe, it has been left to the broadcasters and operators to identify the business opportunities. Will HD content with its additional operational expenditure bring more revenue than a handful of extra SD channels?

Premiere will offer its three HDTV programmes on a subscription basis. Some of our subscribers already have a flat screen and are just waiting to get high definition picture quality. However, we are not about to abandon our "normal" line-up of programmes on any of our SD channels. On the contrary, we will continue to optimise and expand our range. To us, HDTV is an investment in the future – we are convinced that HDTV is the television of tomorrow. We can only speculate on how many subscribers it will attract. But for anyone who is interested in or a fan of HDTV, Premiere is a key player.

Friedrich-Carl Wachs, thank you very much.



Premiere is the leading pay-TV operator in Germany and Austria, attracting 9 million viewers in 3.25 million households with its focus on exclusive programming. Premiere offers 28 TV and 21 audio channels, with TV premieres of 300 movies each year, 4,500 hours of live sport and 18 theme channels. In 2004, Premiere increased its subscription revenues by roughly 19% (over 2003), and by more than 45% in the pay-per-view segment. Advertising revenue tripled. In March 2005, Premiere floated on the Frankfurt stock exchange with a market capitalisation of €2.6bn. The company and its owners (largest single investor is Permira with 23.6%; Premiere management hold 14.9% of shares) raised up to €1.18bn in the IPO. www.premiere.de



Pay as you go HD

Like all good ideas,
it's a simple one,
says Quantel's Mark
Horton about the
company's new
scheme to make HD
affordable

Commercials and high quality drama or documentary has been the core business of many post houses, production companies and agencies for several decades. Increased competition is now demanding fundamental changes from commercial post houses. Production budgets are pressured because they have to be spread across a greater number of media outlets, and clients are also looking for new ways to get viewers' attention.

Clients are now looking for one or more of the following:

- PAL and NTSC delivery in 4 x 3 and 16 x 9
- cinema commercials
- High Definition deliverables: - for sales today to North America & Japan; for long term archive; for future DVD and HDDVD sales
- MPEG 2, Windows Media 9 etc. for digital delivery: - for 'work in progress' viewing and for the web

Whenever I'm talking with post houses, the subject of HD and high rez always comes up. As clients do more and more SD themselves post houses are sensibly looking to offer something new, something different and something better. So customers suggested to us that they wanted HD but didn't need it right now and weren't yet getting many projects. So we listened and set up a new 'Pay as you Go' scheme for the industry leading eQ system. For customers who feel that HD remains a big financial risk, Pay as you Go HD means that Quantel carries that risk. From day one a customer has all of the power and performance of an eQ but only needs to pay for the HD input and output as and when they need it. As one colleague put it succinctly: 'If you are running a limousine service you usually only carry one passenger - but you wouldn't buy a 2 seater car'.

HD quality in commercials The majority of commercials are shot on 35mm film. We all know the traditional route - this would be telecined to SD for posting, resulting in an SD master at the end of the process. Isn't this illogical - useful Original Camera Negative (OCN) information is mostly thrown away at the point where a transfer is made to SD. Offering a higher quality service is better for the client and better for the post house.

HD quality in long form A similar situation exists for long form drama and documentary. The majority of high quality dramas and documentaries are also shot on S16mm or 35mm and then telecined to SD tape for post work. Throwing away quality makes future programme sales less likely. Why do it? With the new workflow, more of the useful original film camera negative is carried right through post. Telecine is made to a high resolution format. Alternatively, one of the current HD camera formats is used. Then posting takes place at HD with SD versions being produced at the end. The choice of high resolution camera formats is growing including low cost HDDV cameras.

An important side effect of these new choices is that 'broadcast quality' is starting to mean 'low quality' - a significant future issue for Europe, especially as low cost (\$1000 or less) domestic high definition sets, HD DVD players and semi-professional HD cameras originally launched for the North American and Japanese markets become available in Europe.

High resolution workflow / colour correction Posting at HD in a Quantel eQ with the integrated QColor in-context grading facility offers many added benefits. To begin with, non-linear colour correction in editorial context saves time and improves results. With traditional colour correction, whole reels are colour corrected as rushes. This is very time consuming and doesn't allow shots or layers to be colour corrected in relation to each other. We've all experienced that further colour correction is typically needed during compositing. Chromakey is made unnecessarily difficult as colour correction is applied to the bluescreen. On eQ or iQ, this problem doesn't occur - keys can be pulled within the colour correction process and vice versa.

Another advantage is that it is easy to produce multi-format deliverables from a single high resolution master. Making a commercial in high resolution allows easy output of anything from cinema commercials to web content at the maximum possible quality. Once a commercial or long form programme is completed the post house can use eQ to quickly produce any kind of masters required - highly useful for the clients and a profitable service for the post house.

Also, high resolution post preserves film detail giving better keys colour correction and reframing. Trying to pull a key or apply effects from standard definition copies of film material is far harder than working with the original image. Well shot original camera negative or HD gives results of between 4096x3112 (4k), 2048x1556 (2k) or 1920x1080 (HD). Standard definition delivers 720x576 or less. Far less edge detail is available for keyer or tracker algorithms. Also reframing SD material creates softness, whereas HD images can easily be reframed. Why make a difficult key even harder by throwing away information?

How HD 'Pay as you Go' works An eQ purchased with Pay as you Go HD is a fully equipped system, but ingest and playout is limited to SD until a password is loaded into the system. Weekly or monthly passwords can be purchased from Quantel. From day one a customer has all of the power and performance of an eQ but only needs to pay for the HD input and output when they need it.

Pay as you Go eliminates the need for cheap, low performance HD systems that will ultimately disappoint clients, potentially putting them off HD. The last thing a post house wants is a director telling other directors 'don't do HD - it's a nightmare in post'. With a high resolution workflow, total flexibility is maintained throughout post. Clients get a better looking result at the same speed as before. Everybody wins.



Quantel has been a key technology supplier to Post Broadcast and Film users for more than 30 years. Its user base reads like a 'who's who' in Post Broadcast and Film. Since completing a management buyout in 2000, the company is now privately owned and employs nearly 500 people worldwide. It is headquartered in Newbury, UK and has offices in the USA, mainland Europe, Hong Kong, Japan, Korea and Australia. www.quantel.com

Quantel is a member of the AIB.

Latest estimates place China's economy as the world's largest by 2041. It will be the centre of Asian political and economic power with global influence – the Olympics 2008 and Shanghai Expo 2010 are two stepping-stones on this route. China has over 400m TV sets and 500m radios, reaching over 95% of its population. Since inclusion in China's 10th 5 year plan, when digitalisation and HDTV were added to the National Development and Reform Commission's (NDRC) priority project list, policy makers and regulators have speeded up the transformation of China's broadcast industry. Michelle Ollett, Senior Media Consultant at Claydon Gescher Associates in Beijing gives an overview

First steps first The initial tasks to set out digital and HDTV standards have not yet been met. While the Ministry of Information Industry (MII) and the NDRC announced at the beginning of 2005 that this process has entered its final stages there is no date for when the chosen standard will be published – delays are blamed on the financial implications of technical choice. Developing HDTV is part of China's campaign to move towards a full digital broadcast system by 2015. At present, the majority of China's digital broadcast is focused on standard definition TV – China wants to first realise its goal of achieving a full digital service before it turns its attention to high definition TV.

An Olympic goal While the target for the national switching off of analogue

To be considered a HD channel, at least 80% of content should be HD. Two HD channels will be launched in 2005, HD Theatre (*Gaoqing Yanyichang*) will show HD video clips and HD Sports (*Donggan Tiyu*). CCTV plans to have between 6 and 8 HD channels by 2008. China currently has an estimated library of over 200 HD films and over 1000 hours of HDTV programme content. Shanghai and Qingdao provincial networks also claim to be developing HD channels for future release.



Choosing a model There is a difference of opinion as to the way in which HDTV should be rolled out in China. One school of thought advocates spreading the technology to be as far reaching as possible to encourage use and take-up before a pricing model has been developed. There is

for the largest audience in the world

television has been set at 2015, pressure has been put on Beijing to work towards full digital broadcast in time for the 2008 Olympics. SARFT says that Beijing is on target to meet this deadline, but if there are further delays to the selection of standards, this could have an impact on Beijing's ability to meet its 2008 goal.

Who is watching? In 2000 the stated goal of the 10th 5 year plan was to reach 30m digital TV users by 2005, however, SARFT has now revised the target for the end of 2005 to 10m digital TV users. There is some doubt as to whether this revised target can be met. The number of digital TV users stood at 1.2m at the end of 2004. HD capable TV sets account for approximately 20% of the market according to the China Audio Industries Association. In 2004, HDTV sales reached 500,000 and there have been fierce price wars between manufacturers in a market with tough margins.

What can they watch? Provincial TV stations are being encouraged by SARFT to develop HDTV channels and HD film channels. However, HD content is very expensive to make and distribute. The cost of HDTV is three times the cost of analogue programming. An experimental HD channel was established in 2003 in Shenzhen. The channel currently broadcasts 2 hours of HD content a day. Shenzhen investment in its HD channel to date has been US\$290,000.

however, an expectation amongst audiences that HDTV will be free to the end user – many of which have already purchased HDTV capable TV sets. Another school of thought feels that HDTV should be a paid-for service from the very beginning. As the broadcast quality is much higher than standard definition TV it is a product that audiences could be prepared to pay for.

Government stimulation Increased government support – shown through initiatives such as NDRC's investment of US\$2.54m to support the joint CCTV/China Film Group Corp. development of a HDTV experimental platform will be needed to boost the high end of digital TV.

The future It remains to be seen whether HDTV will become popular in China. There has been considerable uptake in the number of HDTV capable sets being sold, but a lack of HDTV content means for the moment HDTV is not developing as quickly as expected, while China's policy makers focus on the much larger task of meeting its digitalisation targets.



Claydon Gescher Associates is China's leading media strategy consultancy active in the PRC for over 13 years. www.cga-ltd.com

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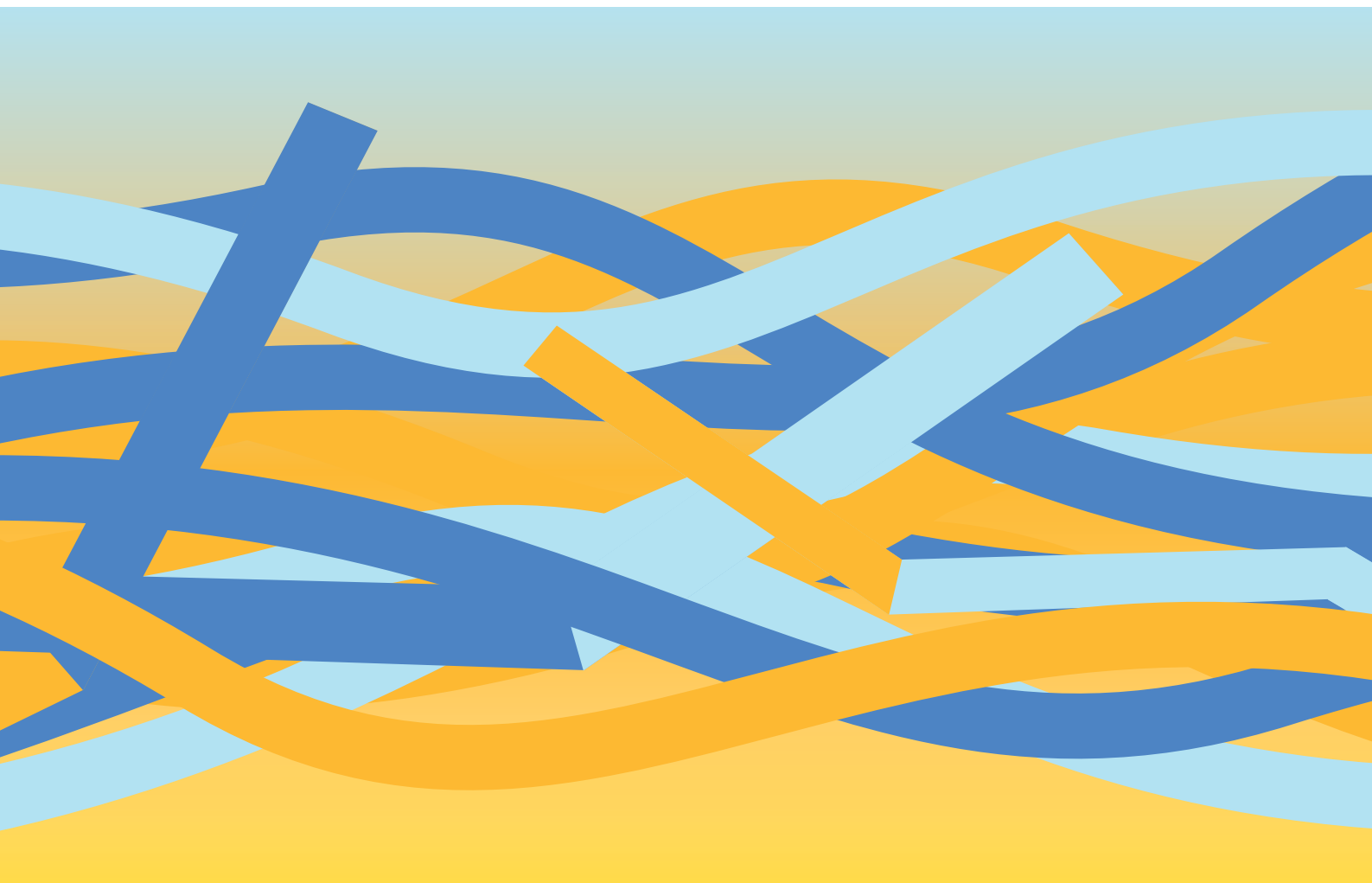
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Not your typical SNG operator

As his email address suggests, Steve Mallory is the boss at PACSAT. Steve runs one of the US' most active satellite news gathering and production businesses. With its fleet of KU-uplink trucks strategically positioned in key cities around the country, and its digital post production facilities, PACSAT is poised for growth, as Anver Anderson found out

How did PACSAT get started?

PACSAT was formed back in 1987. At that time I was foreign correspondent for NBC News based in Tokyo. I'd been out there for some nine years covering revolutions and coups, and with a young family on the way I had to make a decision on what I really wanted to do. Having spent some time trying to come up with ideas, I learned about some trucks that were being put together for news gathering and circulated around the US and I thought, "There may be some sort of future here." I did some research and developed a television news service utilizing KU-band for distribution. I hocked my car, bought a satellite truck, hired a couple of camera crews, bought some equipment. This was the way we got the service going, which at that time covered the California State capital.

A year and half later, I left NBC, returned to the US – Sacramento, California – and took over running the business, full time. We added another truck in 1989 and two more the year after that and now we're at 11 trucks spread around the country and we're just getting ready to order our twelfth. We also have two international flyaways (C/KU-band) which travel extensively around the world. The business originally started as TV news service but we had aspirations of moving into syndications for broadcasters and sports networks, corporations and government agencies.

Where have you been active internationally?

The flyaways have been utilised extensively throughout the Middle East, Afghanistan and Guantanamo Bay, Haiti, and of course we were very busy with the tsunami coverage out of Indonesia. Whenever major news events happen in difficult areas, our flyaways see action. We also provide our customers with communications links for coordination and logistics whilst they're out in the field.

What developments are you seeing in your customers' requirements?

We are just starting to see an increase in demand for HDTV capability, so we've already fitted one truck with Tandberg 4.2.2/4.2.0 encoders and we are currently kitting out a second – this time with Tiernan 4.2.2/4.2.0 encoders. The current demand is relatively minor and slow, however I do foresee 2006 bringing a major increase in demand, mostly for sport, but also for mobile news production. Most of the television networks are now moving in that direction and we at PACSAT don't intend to miss that train. We're already in the process of ordering another truck which will be specifically designed for HDTV production. It will have C-band and KU-band transmission capability – simultaneously! We get involved in all kinds of events from the National Basketball Association playoffs/finals, Superbowls, World Series Basketball games to other major special events – for example the Oscars – you name it, we're involved with it.

Many of the arenas you're working from already have fibre connectivity with broadcast stations and other points of presence to which broadcasters have access to. Why the need for an SNG truck?

A lot of ancillary events go on around the main event. Take the World Series for example – you may have an international feed, you may

have a Spanish language feed, you have the primary feed, a standard definition feed, an HDTV feed. It's impossible to do them all on fibre and often you find the SNG truck is a back-up for the fibre – or vice versa. You have to split the feeds up – they (a particular entity – e.g. NBC Sports, ABC Sports, CBS etc.) may each be taking the same cameras for the event, but they each have their own clients taking it to different parts of the world who will want to put their own translation/language in. Some will want to put their own people in front of the camera and might even be running a pre-game show or post-game show using inserts from the event – and those shows need not be dedicated to the actual event itself.

With an increase in demand for these feeds to be provided in HD as well as SD, and with all the multitude of transmission paths required – C-band/KU-band, both nationally and internationally – we really need to get our newest truck operational as early as possible to meet our clients' needs fully. This complex flexibility and capability for sport transmission is really where I feel the market is growing today. News is a well-margined business though it's inconsistent in demand – you may get a dead week or two in world events, but sport is always there – and always on the air. HDTV is going to become the number one transmission system for sport by next year. If you go into a consumer electronics shop today, you can see that they are primarily providing HDTV capable equipment and in fact when you have that supported by NBC saying that they are only producing HDTV from now on, it's clear you can't escape it.

PACSAT is in the process of moving into the HDTV field and we're taking it month by month, developing our fleet to meet the capabilities and requirements for HDTV. We've bought HDTV cameras – we do production shoots now in HDTV – and we've just finished a commercial for an ad agency in southern California in HD, including the post-production work. We have full production facilities here in Sacramento – including Avid Symphony, Discreet Logic Flint – for graphics animation; we have an HDTV edit bay as well as an audio sound design room where we can produce radio commercials. It's a very sophisticated and efficient operation. Overall we have around 35 staff at PACSAT.

That doesn't sound very typical for an SNG operator.

No, it isn't typical at all. There are only a few companies here in the US which mix uplinking/SNG work with production facilities – you can count them on one hand. But all of this facility brings real value to our clients, especially now that we are adding the HDTV capability.

Steve Mallory – thank you very much.

PACSAT is a total video company providing domestic and international services: news, sports, corporate events, teleconferences, media tours and video news releases. The company has 11 strategically positioned KU-uplink trucks in key US cities, and a full-service studio, fixed KU uplink, Vyvx connectivity and digital post production facility at its Sacramento, California, headquarters. www.pacsat.com

PACSAT is a member of the AIB.

Not for your only



HDTV needs surround sound to create a compelling cinematic experience, says Jason Power, Market Development Manager, Dolby Laboratories

Without doubt HDTV provides a far more vivid, more involving entertainment experience. This is partly due to high resolution widescreen images, but without digital 5.1-channel surround sound the experience is not complete. 5.1 sound offers the viewer 3 front speakers for accurate reproduction of dialogue and on-screen action, 2 surround speakers behind the listener to immerse them in the sound of the scene, and a subwoofer speaker for impact from effects such as explosions that they can, quite literally, feel. Many consumers are already aware of the added benefit of 5.1 sound, thanks to the inclusion of the Dolby Digital format on DVDs.

Some countries in Europe are lucky to have 5.1 sound already on standard definition TV. For example, Premiere, Sat 1 and ZDF in Germany regularly broadcast films, sport and light entertainment shows in Dolby Digital 5.1 sound. An audience survey by Premiere found that Dolby Digital 5.1 surround sound and the 16:9 screen format were the main reasons their subscribers bought pay-per-view content.

Programming

With audience expectations already set by the 5.1 sound on DVD and even some standard definition TV, it's perhaps not surprising that the Dolby Digital format is being used by all the ATSC and DVB high definition services currently on air around the world. The wide range of programme types broadcast by these networks with 5.1 sound reflects the different focus of the operators – from pay-TV channels with movies to big networks focussing on live sports and entertainment series.

Looking to Europe, some of the German broadcasters are among the first major operators to launch HD services. Towards the end of last year, broadcasters ProSieben and Sat.1 both made demonstration

broadcasts in HD. The ProSieben and BBC joint production, *Pride – The Law of the Savannah*, was delivered in Dolby Digital sound, helping transport viewers into the stunning HD landscapes of the savannah. Shortly afterwards, the epic two-part movie, *The Nibelungen – The Curse of the Dragon*, was aired on Sat.1, again in HD with full Dolby Digital 5.1 sound, providing the viewers with the cinema experience in their living rooms. The broadcasts have continued this year, with blockbuster films such as *Spider-Man*.

Technology readiness

Fortunately, the capability to deliver 5.1 sound is included in both the DVB and ATSC transmission specifications, and support for Dolby Digital is a standard part of HDTV set-top boxes. The overall data rate required is relatively low – perhaps just 50% more than traditional stereo – and just one encoded audio stream can serve 5.1, stereo and even mono listeners.



Many of Europe's HDTV services are expected to take advantage of new video coding technology like H.264 (MPEG4 Part 10) in order to make the most efficient use of the limited data bandwidth available. Audio coding has also advanced, and the latest audio technology can offer further savings in data bandwidth, as well as the flexibility for future expansion with, say, alternative language audio, or to improve provision for the visually impaired. To help meet these requirements, the DVB recently added Dolby Digital Plus, a new extended version of Dolby Digital, to its broadcast specifications.

Managing audio/video delay

Just as in standard definition broadcasting, audio and video delays in the broadcast chain need to be managed carefully to ensure that audio and video remain in sync. Broadcasters often use a coding technology such as Dolby E to help carry 5.1 audio through their internal distribution infrastructure prior to transmission. Like all digital processes, encoding and decoding the 5.1 audio takes some time, but as long as the length of the delay introduced is

known, it can be managed. For example, Dolby E encoders and decoders introduce a fixed one frame of delay – as this is less than most video processing chains, the delay can normally be allowed for in the systems design without recourse to additional video delays.

However, broadcasters do face a new challenge – whatever kind of audio they are transmitting. The plasma and LCD flat screen displays that are becoming so popular with consumers have inherent video processing delays which are therefore out of the control of the broadcaster. In the future, we will need a mechanism in place for the display system to communicate the length of delay to the audio system in order to achieve perfect synchronization between the image and the sound. Fortunately, we are already starting to see high-end audio systems coming to the market which have this feature.



The future

Next year looks set to be an exciting year for HD in Europe. Sports broadcasting is expected to figure highly in offerings to European viewers, so broadcasters and their production teams will quickly have to acquire the skills and equipment needed for live 5.1 production and transmission. Fortunately, several have already gained experience at events such as the Olympic Games in Athens (broadcast in HD and 5.1 in the US) and Champions League football (broadcast in SD with 5.1 in Germany). There's every sign that 5.1 sound will be as important a part of HD in Europe as it's proved to be already elsewhere in the world.

For nearly four decades, **Dolby Laboratories** has been at the forefront of defining high-quality audio and surround sound in cinema, broadcast, home audio systems, cars, DVDs, headphones, games, televisions, and personal computers. Based in San Francisco with European headquarters in the UK, the company has entertainment industry liaison offices in New York and Los Angeles, and licensing liaison offices in London, Shanghai, Beijing, Hong Kong, and Tokyo.
www.dolby.com



More than three years after President Chirac mentioned the need for a major French international news channel “capable of competing with the BBC and CNN”, the network is not yet on air, its scope has been dramatically scaled down and the controversy and arguments surrounding the project are such that questions are now being asked about its feasibility and long-term sustainability. Joseph Londe looks at the state of play

Too many operators? A multitude of French operators are at present active in international broadcasting, often backed by different government departments (president's or prime minister's office, foreign or cultural ministries) and following distinctive agendas.

TV5 is a French-language general content international TV channel launched in 1984. It is financed by France (over 80%), public broadcasters from Canada/Québec, Switzerland, Belgium's French-speaking community, and advertising. TV5 has regional streams for Africa, Americas, Asia, Middle East, Europe, plus a special version for France, Belgium and Switzerland because of copyright issues. The channel reaches some 160 million TV households in 203 countries, and provides programmes from 10 networks, with subtitles available in up to eight languages. It has recently increased the volume and improved the quality of its international news coverage which was previously perceived as one of its main weaknesses.

CFI, Canal France International, is a programme bank set up in 1989 to provide French TV programmes to broadcasters throughout the world. In 1995 it introduced five regional streams and started pooling its resources with TV5. One year later, CFI and TV5 moved into joint premises to share facilities for broadcasting and production of programmes.

Other TV channels with an international reach or role carrying news and partly financed by France include the Franco-German ARTE cultural channel, the France Télévisions channels, widely watched

with a plan. Brochand recommended a channel jointly operated by public broadcaster France Télévisions and commercial TF1. Many observers commented that the government was keen to involve TF1, which is seen as close to President Chirac. The initial target audiences were to be the decision-makers and opinion-formers in Europe, Africa and the Middle East, which meant a need for programmes not just in French, but in English and Arabic too (following also the emergence of a number of pan-Arab TV channels). A large-scale venture.

Trouble ahead The project with its unnatural alliance of two operators with conflicting interests, ambitious goals, but inadequate funding is running into trouble before getting started. RFI, the only operator with a large network of international correspondents and language expertise, is not involved. Will priority be given to the CII, and RFI budget and operations be cut back in the longer term? Staff at TV5 are concerned that some of the resources allocated to the CII could be diverted from TV5. EuroNews, which faced serious financial difficulties and saw the project as a lifeline, is disappointed not to be involved. As for France Télévisions, it sees TF1 as its main competitor and is reluctant to work with it. In order to avoid squabbling between the two organisations, the government mooted the appointment of an outsider to head the channel's management team. However, both personalities mentioned in this context showed little interest in the position – not a sign of confidence in the CII's prospects.

“French CNN” – will it ever go on air?

in North Africa, and the pan-European France-based EuroNews (of which France Télévisions holds a 28% stake). France also possesses a well-established international broadcaster with Radio France Internationale, with an audience of 30 million. Radio Monte-Carlo Moyen-Orient, its Arabic-language service to the Middle East, reaches another 15 million.

Old objective, new solution For some time, the French authorities – and President Chirac in particular – have been mooting the possibility of setting up an additional TV [rolling news] service, to explain French policies to the outside world without being misrepresented by “Anglo-Saxon” media. In 1987, Chirac, while prime minister, emphasized that “broadcasting action is one of the essential components of the French presence abroad and of its influence.” The 1991 Gulf war made this need more obvious with nearly all TV images coming from CNN. In 1996 Chirac returned to the idea and the plan was given a new impetus following the September 2001 attacks on the USA and the war in Afghanistan and later Iraq.

In December 2002, a “joint information mission” was created in the National Assembly. In parallel with this, the prime minister's office established a working group and the ministry of foreign affairs launched a study on a French international news channel (CII or CFII in French). The parliamentary mission concluded that the CII would have to be headed by all the public operators – France Télévisions, RFI, AFP, TV5. “Our conclusions did not at all correspond to the president's wishes,” one of the deputies said at the time. The government then asked a deputy, Bernard Brochand, to come up

In scale the channel has been considerably reduced from its original plans: English and Arabic programmes have now been dropped to be replaced by subtitling of certain programmes, limiting the channel's reach mainly to French speakers in Africa. The budget, estimated at 70m euros a year, is totally insufficient and cannot compare with those of the channels the CII is meant to compete with. The network of France Télévisions and TF1 foreign bureaux is inadequate: both broadcasters have less than 10 foreign bureaux each, mostly in the same countries/regions, and the project envisages a staff of under 200. This does not compare favourably with the journalistic resources of either the BBC or CNN. The CII would have to rely nearly entirely on footage from agencies or the Eurovision news exchange service.

All this means that the final shape of the CII has not been decided yet. Its introduction has been constantly postponed: 2003, then 2004, 2005 and now 2006... One can reasonably wonder if the channel – object of so much government involvement – will ever go on air and, if it does, whether it will make any impact. A much more reasonable and cost-effective solution might be to reinforce existing operators and rely on their expertise.

The author is a UK-based writer on broadcasting issues and international affairs.



Two > one = SR International

Today, SR International's blend of international and multicultural broadcasting is an established public broadcasting concept in Sweden – but it wasn't always that way. SR International grew out of the “extreme makeover” of two very different services, an international world service, Radio Sweden, and a myriad of multicultural community language services. Binding the two units into a coherent new channel required some extreme “out of the box” thinking, as Mark Cummins, Managing Editor English Programming at Sveriges Radio/Radio Sweden, explains



Reflecting the world around us is one aspect of how most broadcasters would like to think of themselves. But keeping up with the dizzying pace of change is not as simple. That's the situation Swedish Radio's international programming found itself in the 1990s. For Radio Sweden, long priding itself on being an independent voice of a non-aligned Sweden in a world racked by “hot” and “cold” conflicts, the rapid disintegration of the cold war camps presented an existential problem.

For the community languages services, the advent of cross border satellite transmissions and round the clock news organisations reduced the need for home news services. Restructuring both services into one was the dictate – the task was to find a common denominator. The solution focused on the listener and the need for a new voice to reflect and channel the issues of the modern multi-cultural, multi-ethnic society that Sweden is today.

SR International currently transmits hundreds of hours of programming, including news, and a mixture of current affairs, interviews, and community information, sport and world music – in 17 languages – each month.

Radio Sweden, the information ambassador

The international service (Radio Sweden)

keeps Swedes living abroad up-to-date with events back home, and introduces Swedish news and current affairs, culture, history and perspectives to audiences around the world. Broadcasts are in Swedish, English, German, Russian, Belarusian, Estonian, and Latvian.

Radio Sweden offers its audiences a choice of how they can listen. Our programming is broadcast simultaneously on short and medium wave, via satellite, and rebroadcast on local radio stations around the world. Aside from our tailor-made programming, we also transmit SR International's domestic programmes in Swedish, as well as programmes from our community languages service, Assyrian/Aramaic, Kurdish, and Romany to an international audience. Radio Sweden pioneered Internet web-casting at Swedish Radio and our on-demand service allows web-listeners to access our programmes round the clock.

SR International's domestic: celebrating diversity

SR International's domestic programming is multi-ethnic and multi-cultural. Primarily focused on serving the communication needs of Sweden's varied ethnic and linguistic communities, it is working to enhance its role as a communication channel for all Swedes regardless of language and cultural background.

Broadcasts on SR International's domestic service are in Albanian, Arabic, Assyrian, Kurdish, Farsi, Polish, Serbo-Croat-Bosnian, Somali, Spanish, Swedish, and Turkish. The emphasis today is on programming which provides cross-cultural links and information lifelines to Sweden's diverse cultural groups, allowing them to adjust and participate fully in Swedish life and maintain their cultural identities as well.

New technology, new audiences

New technology is increasing the choice of how audiences listen to radio and how we produce it. The Internet already complements and enhances our programming content, but it has also widened our audience. Nowhere is there a better example than SR International's Assyrian-Aramaic web-casts which have been taken to heart by Assyrian-Aramaic language speakers around the world who otherwise lack a “national broadcaster”.

Meanwhile, DRM – Digital Radio Mondiale – is setting pulses racing at Radio Sweden. Programming has been carried on other broadcasters' DRM transmitters for some time, but recently tests have begun with our own dedicated transmitter. The potential boost for sound quality over short and medium wave is already well understood – as is the potential savings in broadcast costs. Our tests have revealed another surprise. What was planned as a small-

scale "laboratory test" with a modest 1KW transmitter over a limited reception area was picked up by listeners, in clear FM quality, thousands of kilometres away in Southern Europe. One transmitter to reach the whole of Western Europe? Perhaps not – but the results have fired our enthusiasm to evangelise for DRM. To that effect, SR International is hosting the DRM conference in Stockholm in June.

When the wind blows – some make windmills

2005 is a pivotal year for SR International, as Swedish Radio decides on an action plan for the next five years to 2010. With the rest of the organisation, SR International's focus, programming, schedules, staffing, broadcast channels, organisation, mix of languages are all under review. The challenges and possibilities are staggering.

SR International's future strategy is to focus on developing its relationship with the listener. Our multilingual programming has always strived to reflect diversity, but as the cultural and ethnic communities that make up modern Sweden add their own flavour to Swedish society, our former role as a foreign-language niche player has shifted into the mainstream as an alternative Swedish language forum for Sweden's

myriad of peoples and perspectives. SR International is determined to celebrate this new Sweden both domestically and internationally, break taboos, investigate social and cultural neuroses – and, importantly, break down prejudices and fear of the new and different.



The Swedish public service media sector consists of three separate and independent companies, **Sveriges Radio (SR)**, Sveriges Television (SVT) and Utbildningsradion (UR, the Educational Broadcasting Company). All three companies are entirely funded by licence fees and not permitted to carry advertising. SR International is the international and multicultural service of Swedish Radio with programmes in 17 languages, targetting Sweden's varied linguistic communities and Swedes abroad. The international service in Swedish, English, German, Russian, Belarusian, Estonian and Latvian is broadcast on short and medium wave, satellite and the Internet, and via partner stations worldwide.

www.sr.se

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A springboard for environmental science

Getting good science the media coverage it deserves is not easy but critical. The News World International Media & Environment Summit is looking to find the answers, as Project Manager Bess Manley explains

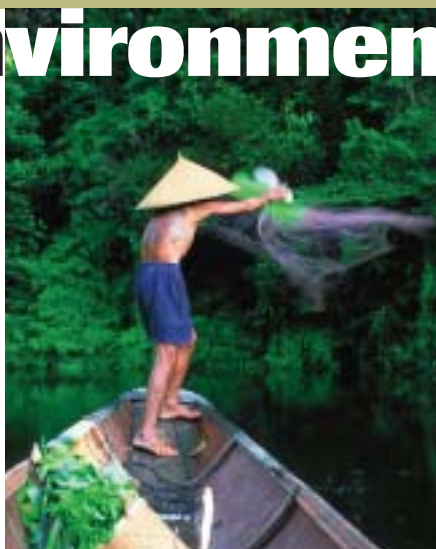
For me, sitting in on a biosymposium earlier this year made everything we're trying to achieve at News World International crystal clear. Some of the most distinguished experts in the scientific community spoke learnedly, and we were made familiar with astounding and far-reaching technologies. But the challenges of complex science seemed the least of their problems. There was one fundamental dilemma that no amount of science could hope to solve – how to communicate their science to the media in an attractive, popular and accessible way.

This is one of the critical problems of the 21st century. Environmental science, in particular, has never been more important, and the media – a global super-power in the business of influencing public opinion and action – plays a crucial role in communicating this area of science. This is the key dilemma that News World International will be addressing in the next three years of International Media & Environment Summits, beginning in November this year.

"Environment affects everything that is central to the existence of humanity," says Richard Peel, Chairman of News World International. "When we talk about environment, we are not just talking about cuddly animals; we are talking about the bigger picture. We are talking about poverty, climate change and global security. Nature can be cruel, as the tsunami shows, but it is most of the time benevolent and when it is benevolent it should be cherished more and understood better. That is one of the greatest challenges facing this planet's media, whether in print, broadcast or on the World Wide Web."

The News World legacy

News World International developed as a response to the explosion in quantity and



David Suzuki

importance of news broadcasters in the 90s. The brainchild of a group of industry analysts, it was the first ever conference and exhibition for the international broadcast news industry; a unique opportunity for the world's most important broadcasters and manufacturers to come together to discuss the issues that confronted them all.

When News World was launched in 1995, news broadcasters were on the brink of rapid and revolutionary change. A fast growing umbrella of satellites was making it increasingly possible to move news footage across the globe instantaneously – turning the exchange of news into an everyday occurrence and making news editors into information commodity brokers. These challenges, together with the looming threats and promises of the Internet, had never been debated in open forum before, and News World brought the most senior news executives from the BBC, CNN, ITN, CBS, NBC, ABC, ZDF, NHK, Reuters, APTN and many more European and Asian broadcast organisations together to agree on the way forward.

The News World conference has been held in Berlin, Barcelona and Dublin, and the organisation also recognised the need for a conference dedicated to the singular problems facing news organisations in Asia. News World Asia, launched in Singapore in

2000, drew journalists, senior politicians and heads of state from more than 40 nations in the region to debate the challenges of creating a free press in emerging democracies, how regional news operations could compete with the massively richer US and European broadcasters and what could be done to support journalists in countries where free speech was suppressed.

The environmental message

Simmering away underneath, over the years, has been the difficult but fundamental problem of broadcasting and reporting environmental news, current affairs and documentaries. In order to address this News World International is bringing together people from all over the world to find ways to strengthen three key communication bridges: that between the media and the environment; that between east and west, and that between the public and private sectors.

"Environment has become one of the most topical and pressing dilemmas facing the media today," says former BBC news broadcaster Alexander Thomson, now Managing Director of News World International. "The future of our environment is probably humanity's most urgent issue at present and the way in which messages about it are relayed and reported is a dilemma we have to resolve. We hope that our summits will give scientists, conservationists, media policy-makers and media practitioners the chance to debate and agree how they can work together more effectively for the benefit of people across the world."

How do you make the environment attractive and relevant? How do you translate good science into clear lay terms? What is the impact of human development on wildlife conservation? Do indigenous people need a stronger voice? How about corporate responsibility? What are the costs of habitat loss? How do you solve the challenges of telling marine stories? Eco-tourism – is it a bane or blessing? All these are topics on the agenda, and the first International Media & Environment Summit will attempt to find the answers at the highest level.

The first International Media & Environment Summit will be held in Kuching, Malaysian Borneo from 30 November to 2 December 2005.
www.newsworldnature.com

A lifeline for the INDEPENDENT VOICE

Where would newsgathering be without freelancers? Working on their own initiative, at great personal risk and with no certain financial reward, it is often the freelancers who capture the images that people remember. But what if things go wrong? There is an organisation they can turn to, says Tina Carr, Director of The Rory Peck Trust

Rory Peck, a great and respected freelance cameraman, was being interviewed in his Moscow dacha for the Azerbaijan News Service in 1992. Rory had worked in the world's hottest spots, captured some of the most enduring images of the late 20th century and, over a period of four years, made more than eighty trips to Afghanistan. When asked whether he had ever been injured, he replied "A bit of shrapnel. But that's all." He then raised his eyebrows and said: "I ought to touch wood, really". Smiling, he began to look around for a piece of wood to touch. The following year, Rory Peck was killed in crossfire while covering the October coup and demonstrations outside Moscow's television centre, Ostankino.

The organisation that bears his name was established by his widow and close friends two years later. The aims were clear. The Rory Peck Trust was to be more than a memorial to a great cameraman. It was to recognise and honour all freelance cameramen, no matter where, by presenting an annual Rory Peck Award, and to help the families of those who had been killed by raising funds to assist them.

The Trust has remained true to this aim and has, over the last ten years, made many charitable grants to freelancers and their families in need of help. It has grown into a more wide-reaching and influential organisation, extending its scope to include all freelancers working in print and the electronic media. The Trust is now an internationally recognized organisation, highly respected for the role it plays in promoting the right of freelance newsgatherers to do their work safely and in freedom. It is strongly supported within the broadcasting industry, enjoying the active involvement and support of an international committee of news broadcasters and agencies including ABC News, APTN, ARD, BBC, Bloomberg, BSkyB, Channel 4, CNN, ITN, CBC, CBS, NBC, Reuters, WDR, ZDF. It also works closely with other international media and journalists' safety organisations (CPJ, IFJ, INSI, RSF).



Rory Peck

Why freelancers are important

The news industry worldwide simply could not exist without the freelance community. Over the last year, almost the only news footage coming out of Iraq has been from local freelancers, with newsgathering organisations relying heavily – and at times solely – on their contribution. It could have been so easy to overlook the major stories unfolding in other parts of the world. However, freelancers were out there, making sure we knew about Darfur, about Haiti, about Gaza, Somalia, Laos; making sure that these stories appeared – and remained – on the news agenda. Freelancers play a vital role in free expression. In the developing world, it is the local freelancers who, struggling to do their work in the face of poverty, insecurity and repression, often represent the only independent voice – and they can't always leave town when things get hot.

How the Rory Peck Trust helps

The Trust makes charitable grants to freelancers or their families to help them with accommodation, education or re-training, medical needs, basic subsistence and has helped cases in Algeria, China, Cuba, the Philippines, Chechnya, Gaza, Egypt, Uganda, Colombia, Peru, Northern Iraq, Sri Lanka, Kenya. Take the case of Albert Momoh, a freelance news cameraman based in Sierra Leone. In December 1994 he sustained a severe head injury when his car overturned on his way back from a filming assignment. Although he was treated several times by doctors and surgeons in Sierra Leone, in 2004 he was still suffering the after-effects of the head injury. The Rory Peck Trust paid for Albert's medical treatment in London – he returned to Sierra Leone and has been able to continue working as a cameraman.

The Rory Peck Training Fund, created in 2000, enables freelance media workers to take specialist safety training courses. Supported by both corporate and individual contributions, it provides bursaries which cover approximately 75% of the course costs. The training is

Gunmen in Darfur: Philip Cox



Death of Mohammed El Durah: Talal Abu Rahmeh



Keeping

given by approved course providers, all of whom run courses both in the UK and overseas. The fund has been consistently supported by BBC News, Bloomberg, Channel 4 TV, CNN, ITN, The Guardian and The Financial Times. But the demand for safety training is ongoing and we ask a little from too few. The safety of freelance newsgatherers is a shared industry responsibility – everyone uses their pictures and their stories. With the support of other media organisations, we could do so much more to help freelancers do their work in safety. Alexandra Quade, freelance field producer and reporter, is one of those who received a training bursary. Her comments are typical: “Everyone in my group came away wondering how we’d ever managed to cover stories in hostile situations without the training... boy, have some of us been lucky! The opportunity you provide to freelance journalists, such as myself, is one way to help reduce the growing number of “job-related” deaths and injuries around the world. Thank you for trying to make a dent in that number.”

Where we are going

In 2003, a generous grant from The Sigrid Rausing Trust enabled us to extend our overseas activity, establishing relationships with individuals and organisations in order to reach and help local freelancers and their families. In learning about conditions for local freelancers, we have discovered whole new areas of need, freelancers at risk, suffering from persecution and unable to work in freedom. Some are too badly injured or traumatised to continue their work, others have been imprisoned or are in hiding or have simply disappeared.

As we continue to develop our programme of assistance, we will be exploring further ways to help freelancers. To those who support us already – thank you – and please don’t stop. To all the rest – The Trust will be developing its regional work, looking at working conditions and identifying the kind of situations facing those trying to do their work in oppressed or troubled areas. We will need your support and look forward to working with many more of you.



Beneficiary Albert Momo with Sorious Samura in London

The Rory Peck Trust, established in 1995, is an independent charity with an ongoing commitment to the welfare and safety of freelance newsgatherers. The Trust subsidises training in hostile environments for freelancers, advises them on insurance and provides financial support to the families of those killed, imprisoned or seriously injured during the course of their work. The Trust believes that by supporting the freelance sector it is supporting the independent view, press freedom and democracy. The Trust relies on sponsorship, charitable donations and grants in order to fund its work. www.rorypecktrust.org

There was no more stunning example of the power of communications technology than the recent news coverage of succession plans for the leadership of an organisation with more than one billion members worldwide. The organisation announced its news via an email to major newswires and then provided exclusive live video feeds from its own television centre. This breaking news was actually the Vatican’s announcement of the death of Pope John Paul II and its subsequent notices of events leading up to the election of his successor.

So even the Vatican has embraced modern broadcast communications in order to reach its target audience. Vatican Radio was founded in 1931, and its web site now offers live and on-demand audio programming in more than 35 languages. The Vatican Television Centre (CTV) was established in 1983 to provide daily live broadcasts, long-form video production and support services and facilities to other broadcasters, as well as to manage an extensive audio and video archive. However, requests to access those archives are still fielded by the CTV office via telephone, fax, email and regular mail. And the Vatican, like so many other organisations that have begun to harness the power of media asset management, has no scientific way to track usage of its content.

The journey from Rome to Charlotte, North Carolina is a world away both geographically and culturally. Yet, if you speak to Bob Horner, president of Charlotte-based NBC News Channel, about the challenges associated with managing an inventory of video content that is refreshed around the clock, it doesn’t appear to be such a quantum leap from the Holy See to NBC. “We were flying blind, despite our best efforts to keep track of our material,” said Horner, president of this division of NBC News that provides more than 300 live and taped news stories each day to NBC affiliates, MSNBC, CNBC, foreign broadcasters, and other news organisations. After a decade of searching for a viable solution, Horner turned to London-based Teletrax in 2003. Teletrax, the first and only global digital watermarking service, potentially holds the key to unlocking the value of video content for other broadcast and programming executives like Horner.

Launched in 2002 as a service developed by a joint venture between consumer electronics giant Royal Philips Electronics and Medialink Worldwide Inc., Teletrax’s patented technology embeds an imperceptible and indelible digital watermark into video whenever it is edited, transmitted, broadcast or duplicated. Once watermarked, a global network of detectors then captures all occurrences of the embedded video being transmitted via satellite, cable or terrestrially.

NBC News Channel originally signed on with Teletrax for international tracking including 85 markets in the US, but later expanded its coverage to the top 100 US markets. In 2004, the NBC News unit took Teletrax on the road to the





Teletrax MD Andy Nobbs believes that we are witnessing the transformation of an industry where services such as Teletrax are becoming must-have video management tools. With over 20,000 TV channels now broadcasting around the globe, video content owners want fingertip-control to make rapid and informed decisions



Athens Summer Olympics, using the unique technology on its distributions of live and taped news stories from its onsite broadcast operations. The achievement of critical mass in worldwide broadcast coverage was an important reason NBC News Channel chose Teletrax, as no other existing video monitoring technologies offer a truly global solution.

Unlike Teletrax, alternative tracking technologies falter when it comes to surviving the changes in video standards – PAL, Secam, NTSC – found in different regions. Teletrax's international network is comprised of 12 "listening posts" or monitoring stations in Europe, Asia, the Middle East, and South America, which monitor more than 200 channels being broadcast from nearly 50 nations. Its North American coverage includes Canada, Mexico and more than 700 television stations in the top 100 markets in the US, representing more than 85% of all US television households.

The Teletrax technology delivers on both accuracy and precision. Brief occurrences of video can be detected with split-second precision. Reports of individual broadcast airings are delivered online in near real-time to each client's custom-designed portal or in data file transfers. Broadcast activity is updated dynamically 24/7, enabling clients to respond immediately to reported results such as changes in end-user preferences or detections of unauthorised use.

Gaining access to the controls of such a powerful dashboard is of particular benefit to video content providers including news organisations such as NBC News Channel, as well as TV syndicators, motion picture studios, sport programmers, and major TV advertisers. Their business needs go beyond authentication or verification – rights management or proof of performance of advertising schedules – and instead have evolved into the more sophisticated application of media asset management. This varied group represents a significant ownership of valuable video intellectual properties, and they are keenly interested in protecting and leveraging content for maximum return on investment while ensuring good-quality client service. "Teletrax has enabled us to re-evaluate how our news items are produced and distributed," explained Horner. "It has become a vital component in our daily editorial process. Analysis of which stories are being used and, more importantly, which are not, has enabled NBC News Channel to gain an invaluable insight into the needs of our affiliates, leading to a more scientific approach to our news production and distribution."

In addition, video watermarking has grown in acceptance by this diverse group of content owners. World-class media and entertainment companies, legendary for demanding only the most pristine production results, have blessed the robust, yet innocuous technology offered by Teletrax and have begun to harness its

power to manage their video assets. "Teletrax provides up-to-the minute tracking information for all of our promos. The data is posted on their web site, which also has a unique search function that has been a tremendous resource for us," said Betsy Bergman, vice president, marketing and affiliate relations, NBC Universal Television Distribution. In 2004, the Los Angeles-based TV distributor inked a long-term deal with Teletrax to electronically monitor the broadcast of promotions for its entertainment shows by US TV stations.

In total, three NBC Universal entities – NBC News Channel, NBC Universal Television Distribution and The NBC Agency, the internal advertising agency for NBC Universal – are using Teletrax's comprehensive suite of video monitoring services. And they're not the only entertainment organisations with whom we have secured multi-year agreements; two Disney-owned companies, ABC Television Network and Buena Vista Television, have also signed on with Teletrax. This is in addition to working with world-leading news companies such as Reuters and the BBC.

We're also now seeing organisations beyond the news and entertainment space participate in trials of the Teletrax service. These include TV advertisers that have endured decades of dealing with cumbersome manual systems or impaired technologies to verify ad buys, as well as non-government organisations that are keen to ensure their advocacy messages are working effectively.

I believe that by providing transparency on what was aired, by whom, when and for how long, Teletrax contributes to a truly interconnected broadcast world. It reduces mystique and provides accountability and clarity. And with the growing adoption of digital watermarking, who knows, also Vatican City may take notice. Perhaps Teletrax holds the key to helping it unlock value from its own history.



Headquartered in London, **Teletrax** is a joint venture of Medialink Worldwide, Inc. of the United States and Royal Philips Electronics of the Netherlands. Teletrax is the world's first global video broadcast monitoring service for digital rights management. It provides clients with video watermarking services that enable them to precisely track and monitor where, when and how their content is being used. www.teletrax.tv
Teletrax is a member of the AIB.



More than a thrilling show

Since 1988, Cirque du Soleil Images has created original and innovative television, video and film products – more than 70 hours of content that reflect the spirit of Cirque du Soleil's shows. It has entered into partnership agreements with enterprises such as CBC/Radio-Canada, ZDF, 3SAT, ARTE, Bravo USA, L'Équipe Spectra, Galafilm, Granada International and Sony Pictures Home Entertainment, reaching an estimated 40 million viewers. In addition, much emphasis is placed on DVD production with original content which allows audiences worldwide to live the Cirque du Soleil experience. To name but a few recent productions from the catalogue:

Lovesick: a 90-minute documentary that follows over a period of 12 months an audacious group of artists who leave family, friends and home behind to take part in the creation of *Zumanity*, Cirque du Soleil's sensual cabaret in Las Vegas. *Lovesick* is co-produced by Galafilm and Créations Musca, a subsidiary of Cirque du Soleil Images.

Midnight Sun: this 90-minute programme is filmed live in HD on the streets of Montreal in 2004 before an audience of over 200,000 people. It celebrates Cirque du Soleil's 20th anniversary as well as the 25th anniversary of the Festival International de Jazz de Montréal. Co-produced by Amérimage-Spectra and Productions Conte IV, a subsidiary of Cirque du Soleil Images, *Midnight Sun* is also available on DVD.

Cirque du Soleil Fire Within: winner of a Primetime Emmy Award (2003) in the category Outstanding Non-fiction Programme (Alternative), as well as two Gemini Awards, this 13-episode series looks at the dreams, trials, and aspirations of a group of people involved in the preparation of the touring show *Varekai*. The complete series is available on DVD.

Cirque du Soleil Presents La Nouba: a 90-minute special of the resident show at Walt Disney World Resort in Orlando, Florida. Filmed in HD with 14 cameras, *Cirque du Soleil Presents La Nouba* was produced by Cirque du Soleil Images and is also available on DVD.

Solstrom: a TV series composed of 13 one-hour episodes, *Solstrom* draws inspiration from film, situation comedy, burlesque theatre, circus arts and Cirque du Soleil's live shows. *Solstrom* was produced by Productions Conte II, a subsidiary of Cirque du Soleil Images, and is also available on DVD.

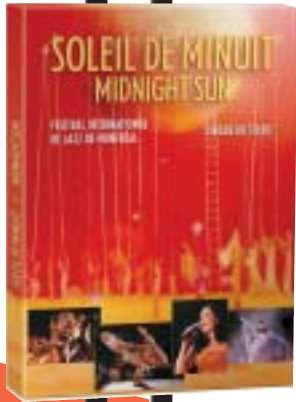
Other recent productions include: *Cirque du Soleil Presents Varekai* (a 90-minute TV special, filmed live in Toronto in 2002); *The Making of an Angel* (a one-hour documentary on the making of *Varekai*, 2002); *Run Before You Fly: A Portrait of Cirque du Soleil* (a one-hour documentary, 2002); *Cirque du Soleil Presents Alegria* (a 90-minute TV special, filmed live in Australia in 2001); *Cirque du Soleil Presents Dralion* (a 90-minute TV special aired in 2000, winner of three Primetime Emmy Awards); *Cirque du Soleil Journey of Man* (a 2D/3D large format film, 2000); *Cirque du Soleil Presents Quidam* (a 90-minute TV special, 1999); and *In the Heart of Dralion* (a documentary, 1999). For information on distribution of Cirque du Soleil Images programmes, contact info@cirquedusoleilimages.com.

Cirque du Soleil Musique

Music has always been a major element of Cirque du Soleil's shows. In September 2004, Cirque du Soleil announced the creation of its own record label, Cirque du Soleil Musique. The company's task is not only to create, produce and market the music associated with all Cirque du Soleil shows, but also to help emerging artists establish an international career. Cirque du Soleil Musique's 2004-2005 catalogue includes 13 albums, among them the four most recent releases: *Le Best Of*, *Tapis Rouge/Solarium*, *ZUMANITY* and *Solarium/Delirium*. The albums are available through retailers throughout North America, and a distribution agreement has been signed between Universal and Cirque du Soleil Musique for the European continent.

Cirque du Soleil is one of Canada's most famous exports – millions all over the world have seen its amazing shows. But, as Francine Landry explains, there is more to Cirque du Soleil than meets the eye

From a group of twenty street performers at its beginnings in 1984, **Cirque du Soleil** has grown to become a major organisation providing high-quality artistic entertainment. With its international headquarters in Montreal, Canada, the company has nearly 3,000 employees from over 40 different countries, including 700 artists. Cirque du Soleil has brought wonder and delight to more than 50 million spectators in over 100 cities on four continents and received such prestigious awards as the Emmy, Drama Desk, Bambi, ACE, Géméaux, Félix, and Rose d'Or de Montreux. In 2005, Cirque du Soleil will present 11 shows simultaneously throughout the world. www.cirquedusoleil.com



On the front lines of change



Alan Heil samples how government-funded international broadcasters observed and reported events as demonstrators rocked capital cities from Bishkek to Beirut

"Democracy is a fire in the minds of men." America's Librarian of Congress James Billington made that observation in the wake of revolutions that toppled communist regimes throughout Eastern Europe and led eventually to the fall of the Soviet Union. Late last year and this spring, the fires erupted once again in ways that reminded many of 1989. People power transformed the capitals of Ukraine, Kyrgyzstan, Lebanon, Egypt, Kuwait and other Persian Gulf capitals and either changed regimes or made authorities uneasy about the ferment unfolding before their eyes. Correspondents of the global media were eyewitnesses to the events and their reports were beamed via radio, television, the Internet and cellphones the world over.

The BBC correspondent in Kiev, Helen Fawkes, spoke of "an incredible feeling, knowing that we were witnessing something historic happening": "The poisoning of a presidential

There are important signs of established power structures being compelled to change by the force of will of their own people – people in the streets who risk imprisonment, retributive punishment, or even death by challenging and resisting their prevailing power elite. A threshold of fear has been crossed in Lebanon, Egypt, and Palestine.

Rami G. Khouri, editor, *Beirut Daily Star*

candidate, a rigged election, and then the so-called 'orange revolution.' I didn't expect my first year in Ukraine to be so fascinating. A few days into the protests, Kiev was paralysed, as opposition supporters took over the streets. Walking home at night, I passed hundreds of tents along the main road. I would get back smelling of campfires, with the protest pop songs still ringing in my ears."

In Ukraine and Kyrgyzstan, people power actually toppled governments. In Lebanon and Egypt, the voices of long silenced activists made an impact at the presidential or cabinet level. In Kuwait, there was the largest street demonstration for women's rights in the Emirate's history. This, in a region, as *Washington Post* correspondent Coll put it, "where mobile phones are common but candid public talk is not".

The combination of bolder popular street action and new technologies raise both challenges and audience building opportunities for publicly-funded international broadcasters. In Ukraine, for example, foreign radio share was much smaller (in single digits, percentage wise) than during the ouster of Warsaw Pact governments in 1989 or the dramatic popular overthrow of Serbian President Slobodan Milosevic in October 2000. But VOA Eurasia Division Director Lipien explains that the Voice's Ukrainian and Russian Services are meeting the challenge by expanding their TV and Internet services to the region while still producing radio programmes. During the Kiev uprising, Lipien says, VOA Ukrainian TV reached more than one in ten people (10.7%) in the cities, the most-watched international video service. He notes the contrast with Kyrgyzstan, where radio retained its historic significance. There, VOA Russian was

During the pro-democracy demonstrations in Ukraine, Ukrainian live TV dialogues between experts at Channel 5 in Kiev and VOA in Washington were produced on an almost daily basis and were watched on large TV screens on Independence Square in Kiev and on cable and Channel 5 TV stations throughout the country.

Ted Lipien, director, Voice of America Eurasia Division

relayed live on Radio Almaz even several months before President Akayev fled the country. Many Central Asians, Lipien adds, use Russian every day. They heard live Russian radio call-ins between Washington and Bishkek linking scholars, journalists, human rights activists or leaders of NGOs before and during the revolution.

RFE/RL's Kyrgyz Service, another Radio Almaz affiliate, is also relayed on Kyrgyzstan's 12-station network, KRIU. The Prague-based RFE/RL is on short wave five hours daily, the only Western broadcaster in the Kyrgyz language. It expanded its programmes during the collapse of the Akayev regime, complemented by an around the clock Radio Liberty Russian Service. "From 1991 to 1995," says RFE/RL Kyrgyz Service Chief Tchoroev, "local broadcasting was relatively

objective. Akayev ran an island of democracy in Central Asia. But now that island has destroyed itself." RFE/RL, as of January 2004, was reaching more than 14% of the Kyrgyz speaking population in the region each week.

A prominent American expert on Arab media, Marc Lynch of Williams College in Massachusetts, cites reaction in the Arab world to televised images of people power in the streets of Beirut. "The Arab media," Dr. Lynch says, "have done a lot to create the underpinnings of democracy. But the Arab media cannot substitute for the hard work of domestic politics and democratic change. They can help build the expectation, or the hope, or even a sense of urgency for democracy. But in the end, they cannot actually do all that much to bring it about."

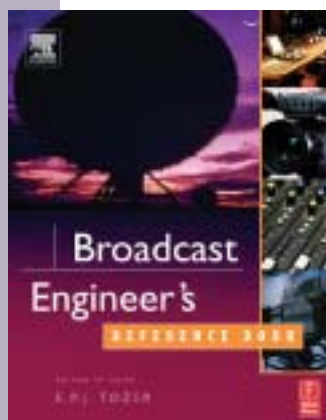
In faraway Beijing, the *Peoples Daily* cast a wary eye on the outbursts of street power. It said on April 3 that Georgia and other

Starting the day President Akayev fled Bishkek, RFE/RL relayed on local and national radio news of the street protests... everybody is listening to us, nationwide. Two independent Kyrgyz journalists were put in charge of the national networks... they immediately began to work on lively, objective programmes. **Tyntchtybek Tchoroev**, director, Radio Free Europe/Radio Liberty Kyrgyz Service

countries associated recently with so-called "colour revolutions" were what an editorial called "focal strike points for the Voice of America and other media organisations." The Chinese paper alleged that international media seek to "uproot the ideology and cultural foundations of other countries." But even the *Peoples Daily* conceded: "It is clear from the uprisings of Eastern Europe and the 'colour revolutions' that while the American media's ability to fan sentiment is not absolute, their influence cannot be underestimated."

Alan L. Heil Jr. is a former deputy director of VOA and author of *Voice of America: A History* (Columbia University Press, 2003)





Book review

The Broadcast Engineer's Reference Book brings together a wealth of information relating to essential technical and standards data and covers all aspects of television technology. As with all reference books of this nature (and thickness – it could easily keep a considerable door ajar), it is always daunting when you open the first few pages and peer into the real content and layout of the information within. It was therefore a delight to discover that the primary concepts and terms used freely within the industry are described in an easily digestible manner.

It covers: Quantities and units; Error correction; Network technologies; Telco technologies; Displays; Colourimetry; Audio systems; Television standards; Colour encoding; Time code; VBI data carriage; Broadcast interconnect formats; File storage formats; HDTV; MPEG 2; DVB; Data broadcast; ATSC interactive TV; encryption systems; Optical systems; Studio cameras and camcorders; VTRs and tape storage; Standards convertors; TV studios and studio equipment; Studio lighting and control; post production systems; Telecines; HDTV production systems; Media asset management systems; Electronic news production systems; OB vehicles and mobile control rooms; ENG and EFP; Power and battery systems; R.F. propagation; Service area planning; Masts towers and Antennas; Test and measurement; and Systems management

It's to Joe Tozer's credit, as editor, that the book has a real flow to it, despite the diversity of contributions. Tozer is an independent broadcast industry instructor and consultant who provides training and services for leading manufacturers and broadcasters around the world. He has given many presentations to professional bodies such as the IEE, AES and ITU and his past experience includes working for EMC Computer Systems, Tandberg Television, Sony Broadcast, BBC. This book would be a major asset to the "office library" of any engineer at the beginning of his career as well as an excellent source of reference for future systems for those who need to keep up with current trends and technologies. It is both contemporary and authoritative.

Anver Anderson reviewed *Broadcast Engineer's Reference Book*, edited by E.P.J. Tozer, ISBN 0-2405-1908-6, Focal Press/ELSEVIER, www.focalpress.com, www.elsevier.com



Book review

Without doubt, one of the hottest topics of discussion around the international broadcasting industry today is asset management. Digitisation of content delivery and networks has made it easier to repurpose content for the myriad digital platforms which currently exist – and those that are already on the drawing board. It is then vital that content is properly protected, catalogued and archived for future digital use. The author David Austerberry (Editor, World Edition of Broadcast Engineering magazine, and Director of Informed Sauce, a media consultancy and training provider based in London, UK) takes a non-partisan standpoint and focuses on the core principles that support the business case for digital asset management systems in this book. He provides a clear and thorough grounding in the basic components of DAM, such as indexing, searching, middleware, database and rights managements and web portals. From setting out the basics, the book progresses confidently to ingesting, storage management and archiving.

Contents include: What are assets?; What is asset management?; Why use asset management?; What is rich media?; What is streaming media?; Libraries and vaults; Re-purposing of assets: Three letter acronyms; Content management; Digital asset management; Convergence; Asset management systems: the database; the multi-tier architecture; Systems features; Co-authoring; Storage management and archiving; Multiple formats and versions; The catalogue and its index; Searching; The index; Unique identifiers; Result sets; Key-frame extraction; Audio transcription; Closed captions; Keywords; Ingest; Publishing; Data links; Scalability; Remote access; Rights management: contracts management; Anti-piracy

measures; Web client access rights; Digital asset management systems; What are the advantages of deploying asset management?; The Enterprise information portal; and Early adopters

By using plain and easily understood language, David Austerberry manages to demystify the black art of DAM and to explain clearly what is involved in processes and operations. The text is supported by unambiguous graphics which enhance and clarify.

Anver Anderson reviewed *Digital Asset Management – How to realise the value of video and image libraries* by David Austerberry, ISBN 0-240-51924-8, Focal Press/ELSEVIER, www.focalpress.com, www.elsevier.com

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