

SPECIAL *report*

Information Intelligence by  **cleverdis**



High Definition – Glass to Glass
by **SONY**

Next Generation Home Entertainment Systems



Editorial

Richard Barnes
Editor-in-chief, Cleverdis

High Definition has been long coming in Europe, and despite the fact that for some time now, HD Ready TVs have been available on the market, many potential clients rightfully asked the question, "what about content"? While High Definition broadcasting is now a reality, the true onset of HD in Europe could only happen once High Definition recording and playback were possible, and when consumers could rent or buy movies in High Definition. Two main media formats have emerged: HD-DVD and Blu-ray Disc. It has become evident that at this point the Blu-ray Disc format has the broadest support

from the electronics industry as well as from major film studios in Hollywood. Sony is placing the Blu-ray Disc at the heart of all its new generation of Home Entertainment equipment as part of a much broader High Definition approach by the company, which has a very long background in the development of HD and has established an entire HD "eco-system" – from the camera lens, through to editing (in the studio or at home), distribution and viewing. This Special Report gives you the full story behind Sony's HD eco-system, brought together with the Blu-ray Disc.

The High Definition Eco-System
by SONY

Contents

- 3 Blu-ray Disc – At the heart of the HD Home Entertainment System**
- 4 Top Sony Management from HQ Drive BD Message Home at IFA 2006**
- 6 Sony's new range of HD products**
- 7 Conclusion by Gérard Lefebvre**



Blu-ray Disc – at the heart of the HD Home Entertainment System



The strategic importance of PS3 is immense. Alongside its gaming console features, it represents Sony's first Blu-ray Disc (BD) player and will provide home users with full 1080 HD resolution image quality for the first time. So, while the various HD TV services are the first quantum progression in Europe this year, it will be when consumers can experience Blu-ray Disc for the first time that High Definition TVs will show their true capabilities.

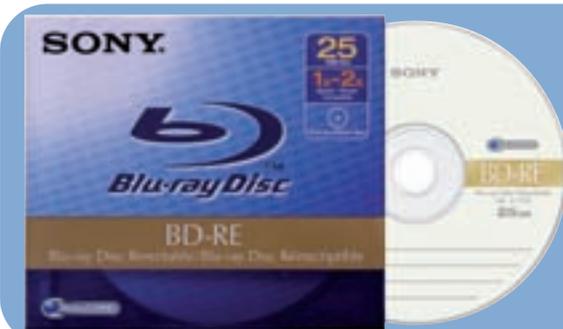
Only Blu-ray Disc will be able to offer these value-added options.

How does a Blu-ray Disc work?

High-definition content requires much more storage space than a regular DVD, so they also have a much larger capacity. A standard (single layer) Blu-ray Disc holds 25 GB (gigabytes). Dual layer Blu-ray discs hold 50 GB.

What's different about Blu-ray Disc compared to DVD and HD DVD?

With unrivalled industry support (over 170 companies back Blu-ray Disc including leading PC and electronics manufacturers), the Blu-ray Disc format opens the door to new applications, such as extra sessions on a disc that could be unlocked when a user's Blu-ray Disc player connects to the Internet, constantly updating high-definition bonus material and special features. With Blu-ray's large capacity, these extras can be included in high quality on the same disc, so there is no need for separate bonus discs to accompany the movie title.



Top Sony Management from HQ Drive BD Message Home at IFA 2006



Yukinori Kawauchi - Left • Akira Shimazu - Right

One of the main highlights of this year's IFA trade show in Berlin was the Blu-ray Disc stand in Hall 26. Sony was the dominant exhibitor at the stand, with a demonstration model player, a Vaio Blu-ray Disc equipped laptop, and the soon-to-be-released PS3 attracting a huge amount of attention. Representing Sony HQ at IFA were two of the people at the very heart of the company's Blu-ray Disc development and deployment, Yukinori Kawauchi, General Manager, Planning Department, BD Strategy Office and Akira Shimazu, Senior General Manager, BD Strategy Office. This interview thus gives us unprecedented insight into Sony's Blu-ray roll-out.

What is Sony's road-map for Blu-ray Disc?

AS: The first generation products are emerging. In Japan we already have a recorder on the market. Here in Europe, the VAIO has already been introduced. The Playstation 3 and our BD player will be launched in spring '07 in Europe.

Looking at the advantages of Blu-ray Disc, what do you see as being the biggest plusses?

AS: We feel that the main advantage is the capacity – up to 50 GB, and also we have superior transfer rates. For example, maximum video transfer is 40 MBPS. It gives us superiority when it comes to fast moving, difficult pictures that require a high bit-rate to be viewed properly. So ... we have better picture and sound quality and it's possible to have more bonus features because there is enough capacity. In terms of interactivity, we have Java and networking activities, which are not however exclusive to our technology... so the real benefits are in capacity and transfer rate.

YK: HD-DVD and Blu-ray Disc look similar when we glance at them, but we at Sony believe very strongly that philosophically they are completely different. Firstly, HD-DVD, by our understanding, is the evolution of the DVD. The construction is the same. The Blu-ray Disc is completely different from a DVD or a CD. It's a kind of a revolution of the format. As HD-DVD is simply a new version of the DVD, what they can do in the future must be limited. But Blu-ray Disc is just on the starting line, so we can do many things in the future. We are talking about plans spread out over ten years! So the disc looks similar, but conceptually and philosophically it's completely different. It's a 21st century format.

How important will Blu-ray Disc be as part of the future of home entertainment as Sony sees it?

AS: As you can see here at IFA, there are many HD TV's on display and importantly, Sony now has a number of Full HD (1920 x 1080 pixels) sets on the market. Both the input side and output side now has full HD resolution. But to really enjoy Full HD resolution, we need a carrier which will reproduce such theatre quality at home. So for playback purposes, Blu-ray Disc is the most appropriate carrier to reproduce a



movie at home. Broadcast recording is another issue. BD has a lot of capacity and a sufficient transfer rate, enabling it to record all kinds of HD sources. So for both playback and recording, Blu-ray is the best format for HD home cinema.

The next step for Sony is obviously the PS3. What has the feedback been about the capacity of this machine and how will this drive demand for HD content and hardware?

YK: Here at the IFA, as you can see, the crowd gathered around the PS3 display stand there transfixed by the beauty and precision of the images. The feedback from this show and other shows like CES demonstrate the massive interest for High Definition gaming. But the PS3 is not just a gaming machine, but also a Blu-ray video player. The big difference between PS2 generation and PS3 generation is the introduction time. In the case of PS2, it also played DVD, but it was launched three years after the introduction of the DVD format. It nevertheless accelerated the penetration of DVD. This time, PS3 will be introduced in the first year of Blu-ray, so we can expect a sharp rise in the Blu-ray market including players, the PS3 as well as BD software targeting consumers, PC owners and PlayStation owners.

How big, as a driving factor, will be the release of films on BD, and the fact that the Blu-ray Disc Association has a large number of agreements with film studios already?

... "for both playback and recording, Blu-ray Disc is the best format for HD home cinema" ...



AS: The support of studios for the Blu-ray Disc format is superior. Out of seven studios, all, except Universal, are supporting Blu-ray Disc, and in the case of HD-DVD, only three studios have given their support to date.

We have more than 80% share and they have around 40% share. When two products are launched at the same time, what is important is which one the customer feels safe to buy. I think the customers will feel that buying Blu-ray Disc is much safer because there is more support from the studios.

Looking at the Sony HD eco-system and the fact that Sony has such a long background in the development of HD TV, do you feel this puts Sony into a different position compared to other companies launching HD related products?

AS: Many companies have different divisions which will be involved in BD-related business, but as you say, in the case of Sony, almost all the divisions are involved in this format. For example, Sony Pictures, Sony Music, Sony Computer Entertainment and Games... Hardware, such as PlayStation, Players and the VAIO... In components, we are perhaps the majority supplier of blue lasers and components. We also have the recording media and disc duplication – not only for Sony but for other studios. So many divisions are involved, and all the divisions are supporting the establishment of Blu-ray Disc as we can see it will be a big industry.



Sony's new range of HD products

What's Available Today?

HD TV programmes are already being broadcast. Users can record home videos in HD with the Handycam HDR-HC3E, then turn footage into a movie with their VAIO RC-Series desktop or AR-Series notebook, then burn their memories onto Blu-ray Disc... After that, they can sit back and enjoy the results in Full HD on an X-Series BRAVIA television or on a massive screen with the VPL-VW100 Full-HD home projector. This is one of the most important points in Sony's current marketing tactic – "Whatever you want to do with HD, there's a way with Sony." For resellers, this philosophy offers a unique opportunity for the creation of Sony HD bundles.



BRAVIA and the X Factor – Adding Value to the HD Chain

Being at the end of the HD image chain, it's imperative that the television gives not only excellent High Definition images, but also has image processing and display technology capable of reproducing pictures approaching total reality. Through the introduction of the new X series HD TV range, Sony Europe has made a significant progression in LCD TV technology. The 46-inch KDL-46X2000U was the first BRAVIA model capable of displaying full resolution (1920 x 1080) progressive High Definition images through its advanced LCD panel. The BRAVIA X series delivers precision colour reproduction thanks to Live Colour Creation, which uses a wide spectrum backlight and the new BRAVIA Engine EX.

The HD Digital Home Now Has a Heart! The VAIO XL200-Series has arrived!

Following the success of the original VGX-XL100 Digital Media Center – the first of its kind to have HDMI - VAIO has created the XL200-Series. In anticipation of increasing demand for sophisticated HD-capable home entertainment systems, the new range is now available in Italy, Germany, Austria, France and the UK. Available in two versions, the VGX-XL202 incorporates Blu-ray Disc technology – meaning users will be among the first to watch the forthcoming wave of BD-format movies from Sony Pictures Entertainment.

Full HD - on Your Lap!

In May this year, Sony announced the VAIO AR-Series - the first VAIO notebook to have Blu-ray Disc - and one of the very few capable of playing Full HD video at Full HD resolution. With the AR-Series, users can not only play HD format movies, but can also capture and edit HD video from the current generation of HD camcorders, then burn it straight to double layer Blu-ray Disc!



Upcoming Opportunities for HD Bundles

PS3 and Players Set to Hit Market in Coming Months

Blu-ray Disc player/recorders, Playstation 3 and Sony VAIO computers with Blu-ray Disc Drive will all give users the possibility to enjoy Full HD on their various High-Definition capable screens.

We expect to be seeing the release of BD players (along with PS3) onto the European market in spring 2007.

This creates fantastic new opportunities for the creation of bundles and will greatly add to the value of Sony's overall offering in the field of High Definition.



Conclusion

Gérard Lefebvre
President & CEO, Cleverdis



Over the past couple of years, the onset of new TV technologies in Europe has come with many promises that were long coming in their realisation. The promise of High Definition has been a great driving factor behind selling-up from standard definition flat-screen (LCD, Plasma and new-tech RPTV) TV sets, however the biggest question of buyers has always been how to record in HD and how to get movies in HD.

As High Definition recording formats finally arrive on the market, it is important that the public understand the whys and wherefores of

their purchase decisions. Resellers will have their work cut out when it comes to advising buyers as to the wisest choice.

The fact that Sony has developed and integrated the Blu-ray Disc format within its unique global HD offer in itself will be a driving factor for sales. With the triumphal launch in 2005 of the BRAVIA range of LCDTV's and Projection TV's, Sony now appears set to continue on its wave of success.

Over the past year, one could say the "red sun has again risen" over Europe... and it looks like shining for some time to come!

A CLEVERDIS Publication • 116 avenue Eugène Mirabel, 13480 Cabriès • France • Tel : + 33 4 42 77 46 00 - Fax : + 33 4 42 77 46 01
E-mail : info@cleverdis.com • www.cleverdis.com • SARL capitalised at €128,250 - VAT FR 95413604471
• RCS Aix-en-Provence B 413 604 471 - 00024

Publisher: Gérard Lefebvre (gerard.lefebvre@cleverdis.com) • Publishing Director: Jean-Guy Bienfait (jeanguy.bienfait@cleverdis.com)
• Editor-in-Chief: Richard Barnes (richard.barnes@cleverdis.com) • Design & Page Setting: Valentina Russo (valentina.russo@cleverdis.com)
• Printing: Imprimerie Toscane, Nice France.
• With the participation of: Dominique Delours, Arnaud Monge, Raphaël Pinot, Bettina Spegele

© CLEVERDIS 2006 - Registration of Copyright November 2006

SONY

BRAVIA



Colour like no other

The BRAVIA X-Series is the ultimate achievement of our engineers' passion for high-definition colour. With its 1080 Full HD screen we've added over a million additional pixels to create our most detailed picture yet, bringing you the deepest and most vibrant colours.

www.sony-europe.com/bravia

Full HD
1080

HD
LIVE

Colour like.no.other™

Sony, BRAVIA and like.no.other are registered trademarks of the Sony Corporation, Japan.