



Proposal

The High Definition Television
Marketplace

The state of play today
Prospects for 2004-2006

A Study from Kane Consulting

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Mai 2004

1. Aims of the Study

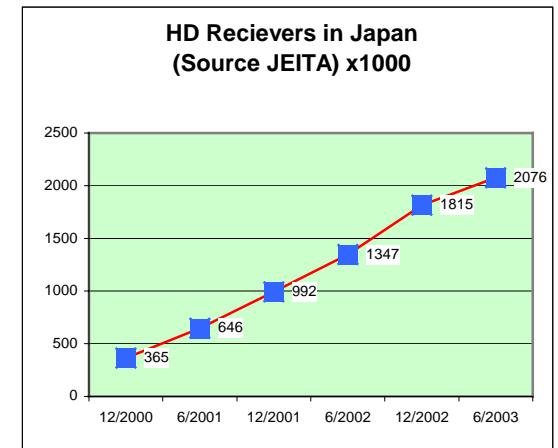
The **state of advancement of High Definition TV** in the world at the start of 2004: USA, Japan, Korea, Singapore, China, Australia, Brazil, Europe (Euro 1080, TF1, ...)

The study will cover the following areas:

- **The consumer equipment** in the USA and Japan, and in countries where an HDTV service has been launched, according to available statistics on sales, prices, screen-types and modes of reception. We will take note of forecasts and the speed of development, and will discuss in particular the impact of Blu-ray DVD HD and Playstation3/other games consoles.
- The **regulatory environment** which has permitted the emergence of HD in the USA and Japan, and the foreseeable situation in Europe, including the differing roles played by private and public broadcasters. We will identify the "virtuous circle" which has operated in favour of HDTV in the USA, Japan, and elsewhere (Australia, Korea, China, Brasil, Belgium, etc.), as well as **format issues**.
- **HD channels** available in the USA, Japan, and elsewhere in the world,
 - Program content of the different HD channels: ie the 8 HD US networks, the 4 Corean
 - Analysis of delivery methods (satellite, Digital terrestrial, cable); and economic model (subscription, Pay-TV, free-to-air).
 - The image formats used in production, distribution and reception (for instance distribution formats used in the USA, defined by the ATSC 'Table 3': i.e. 1080/60i (all channels), 720/60p (ABC, Fox)

- TV channels on ADSL, and opportunities for HD distribution on the Internet.

For instance 4% of homes in the USA are equipped with HD/HD-ready TV sets. Fig.1. in Japan:



Korean channels	#hours /day	Programs
KBS		
SBS		
MBC		
EBS		

- HD program available & produced in the world by category:
 - Films and catalogues
 - Drama, series, soap, documentaries,
 - Sports, shows, games, news,
- The **strategies adopted by the different media groups** who have launched HDTV channels, including the strategies being exploited by Telcos and ISPs regarding video content and distribution (SD and HD).
- **Technology:**
 - **What the main manufacturers are offering**, both professional and consumer level: cameras, servers, software, production systems for both TV broadcasting and other means of delivery, antennae, decoders, receivers).
 - **TVHD technical procedures:** the costs of production and delivery in comparison with those of standard definition (taking into account current and future compression technology).
 - **HD services and HD services providers:** outside broadcast, studios, post production, masterisation & laboratory, broadcast services...



Fig.2. The outside broadcast leader in the USA (National Mobile Television) has already 15% of its fleet in HD.



Fig.3. Comcast (Denver, Colorado, USA): cable operator and producer of new HD channels "INHD"

- The state of play with **standards initiatives** in the areas of HD video formats, decoders, and anti-piracy measures.
- An analysis of the positions of **the major European media groups** with regard to TVHD, their expectations in the area of regulation.

To sum up, we aim to evaluate the real state of affairs in the development of HDTV and of the opportunities presented by the sector in Europe. We will also identify new lines of thinking which the emergence of HDTV in other parts of the world may inspire in the European marketplace. These lines of thinking may well touch on the Internet, cable, or DTT; and we will also look at the conditions for a joint HDTV initiative on the part of the private and public TV channels in Europe. Will the development of HDTV in Europe result in the DTT? Are there alternative scenarios?

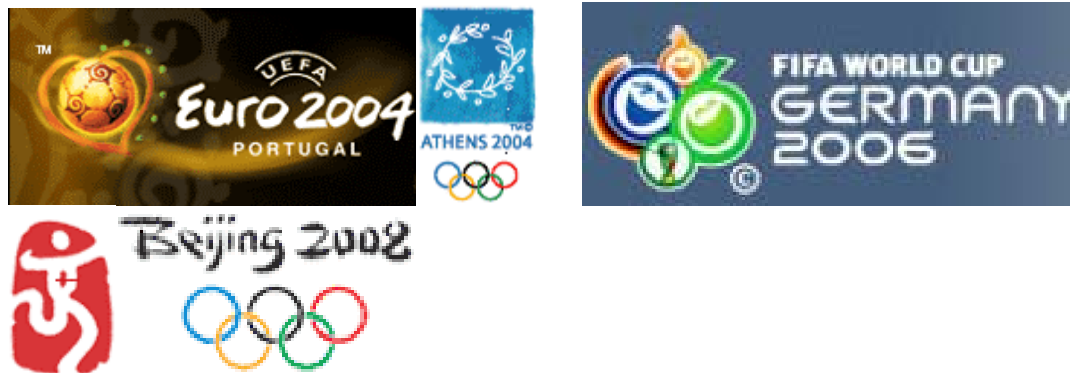


Fig.4. In the next 4 years, all big sports events will be captured and therefore available in HD. This could have a major impact for HDTV emergence, driving the uptake of HD in the home.

2. The proposal

We have completed a first version in April 2004.

The new release will be available at the end of December 2004, for a cost of 8000 Euros including the previous version. Two new updated versions will be available at the end of April 2005 and at end of September 2005 for the price of 4000 Euros each. As with its other studies, Kane undertakes to provide 2 update per year (for the period September 2004 – September 2006) in a sector where evolution is particularly rapid.

Kane publishes since 2001 a study on the computerization of TV news. Similarly Kane publishes a study on Digital Asset Management since 2002.

3. Method and interviews

RTBF	TV (DG)	Je
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Kane has devoted 100 man-days to the production of the study before April 2004, followed by 60 days since then. This has involved:

- Interviews and visits with American, Japanese, Chinese and European groups involved in HDTV
- Visits to manufacturers with relevant equipment on offer
- Attendance at conferences and exhibitions
- Study of relevant documents
- Discussion with the principal relevant media groups and organizations in the world.

3.1. Management

Green : Europe ; blue : North America ; yellow : Asia-Pacific ; brown : South America

Company	Category	Contact	Title	Country	Town	Comment
CNN	TV (DG))	Chris Cramer	CEO	USA	Atlanta	
Discovery HD theater	TV (DG)	Shana Vickers	Manager of Program	USA	Silver Spring-ML	HD Symposium
DSL TV	TV (DG)	Franck Abhissira	TPS Deputy General Manager	France	Lyon	Imagina
Euro 1080	TV (DG)	Gabriel Fehervari	PDG	Belgium	Hove	Imagina
France Télévisions Interactive	TV (DG)	Laurent Souloumiac	Directeur Général	France	Paris	Visit
Mediametrie	TV (DG)	Henri False	Président	France	Levallois-Perret	Imagina
Monaco TV	TV (DG)	Antoine Veran	Chief Executive Officer	Monaco	Monaco	Imagina
RTBF	TV (DG)	Jean-Paul Philippot	Administrateur	Belgium	Brussel	Visit
NHK	TV (DG)	Shinichi Kamiyo	Planning Division, Senior Off.	Japan	Tokyo	Chaîne info HD
NHK	TV (DG)	Yoshida Kei	News Director	Japan	Tokyo	Chaîne info HD
TF1	TV (DG)	Pierre Lavoix	Director of Quality	France	Issy les Moulineaux	Imagina

3.2. Producers

Company	Category	Contact	Title	Country	Town	Comment
ABC Australia	TV Producer	Marena Manzoufas	Head of Programming	Australia	Sydney	MIPTV
Australian Film Commission	TV Producer	Rosemary Curtis	Manager Marketing	Australia	Sydney	
BBC Worldwide	TV Producer	Hazel Wright	Executive Manager	UK	Londres	MIPTV
CBC Radio-Canada	TV Producer	Caroline Tyre	Sales Manager	Canada	Toronto	MIPTV
Discovery	TV Producer	Ian Sycamore	Production Manager	UK	Londres	HD Symposium
Euro 1080	TV Producer	Leonid Adamopoulos	Program Director	Belgium	Hove	HD Symposium
EuroArts	TV Producer	Elmar Kruse	Managing Director	Germany	Berlin	MIPTV
France TV Distribution	TV Producer	Hervé Michel	Directeur vente de droits	France	Paris 15	MIPTV
Gedeon	TV Producer	Stéphane Méllière	Président & CEO	France	Paris 11	MIPTV
Globo TV Internat.	TV Producer	Yana Ponte	Sales Manager	Brasil	Rio de Janeiro	MIPTV
Going Dutch Prod.	TV Producer	Marc Heijdeman	Managing Partner	Netherlands	Amsterdam	MIPTV
Ignition Films	TV Producer	Alison Sterling	Producteur	UK	Bristol	HD Symposium
Ignition Films	TV Producer	Terry Flaxton	Réalisateur	UK	Bristol	HD Symposium
MBC	TV Producer	Chin Haewon	Marketing Manager	South Korea	Séoul	MIPTV
Mico (NHK)	TV Producer	Hideaki Sakamoto	Senior Executive Manager	Japan	Tokyo	MIPTV
News12 (Cablevision)	TV Producer	Norm Fein	Sr.Vice President News Dev.	USA	Woodbury-NY	NAB
Pathé	TV Producer	Antoine Cochet	Sales Executive	France	Paris 8	MIPTV
Power Television	TV Producer	Eloise Tooke	Managing Director	UK	Londres	MIPTV
S4C	TV Producer	Alexandra Leadley	Internat.Sales Executive	UK	Cardiff	MIPTV
Shanghai Media Group	TV Producer	Maggie Zhou	General Manager Assistant	China	Shanghai	MIPTV
Télé Image International	TV Producer	Stéphane Fournier	Vice Président, Int.Bus.Affairs	France	Paris 8	MIPTV
TWI	TV Producer	Karen Mullins	Senior Intern.Vice President	UK	Londres	HD Symposium
TWI	TV Producer	Michael Miles	Directeur de la Photo. (freelance)	UK	Richmond	MIPTV

3.3. TV-channels technical management

Company	Category	Contact	Title	Country	Town	Comment
ABC	TV (DT))	David Converse	Vice President & Director Engin.	USA	Burbank	Responsible O&O
ABC	TV (DT))	Grafton Mouen	Senior Program.Analyst, SI	USA	New York	
BBC	TV (DT))	Andy Quested	Production Modernisation	UK	Londres	Projet Holby/HD
Carlton Television	TV (DT))	Simon Fell	Controller, Operat.&Engineering	UK	Londres	Techno. Émergent
CBS	TV (DT))	Nell Donovan	Director, News Marketing	USA	New York	Distribution affiliés
Comcast Media Center	TV (DT))	Fred Baumgartner	Director, Engineering	USA	Littleton-CO	
Comcast Media Center	TV (DT))	Tom Schomburg	Director, Engineering	USA	Littleton-CO	
Discovery	TV (DT))	Greg Larvenz	Director of Engineering	USA	Miami-FL	Projet centre HD
National Geographic	TV (DT))	A. Cody Claxton	Director of Technical Operations	USA	Washington-DC	Banque numérique
NBC	TV (DT))	Frank Accarrino	Vice Pres. News, Ent.&Fac.Ope.	USA	New York	
NBC	TV (DT))	Peter Smith	Vice Pres. Techn.Planning and E.	USA	New York	Projet centre HD
NBC	TV (DT))	Ralph C.Olsen	Manager, Netw.Ope.&Cont.Dist.	USA	New York	
NBC	TV (DT))	Richard Lahti	Director Engineering & Production	USA	Los Angeles	
NBC	TV (DT))	Ronald J.Lynah	Director, Program Operations	USA	New York	
NBC	TV (DT))	Todd Donovan	Manager, edit.Eng.&Maint	USA	New York	Projet news
News 12	TV (DT))	Milan Krainchich	Director of Operations	USA	Woodbury-NY	Chaîne info HD
NOB	TV (DT))	Rob ten Siethoff	Chief Technology Officer	Netherland	Hilversum	Centre diffusion
NTV	TV (DT))	Kenji Noshi	Tecnology Planning, Gal Mger	Japan	Tokyo	Chaîne info HD
Starz Encore	TV (DT))	James Porter	Execut. Direct. Post Prod.B.O.	USA	Denver-CO	
Starz Encore	TV (DT))	Tom Mikkelsen	Vice pres., Product.& Operat.	USA	Denver-CO	4 chaînes HD
SWR (ARD)	TV (DT))	Dr. Robert Fischer	Archive Manager	Germany	Baden-Baden	Groupe archive ARD
TSR	TV (DT))	Jean-François Sauty	Directeur des Systèmes	Switzerland	Genève	
TWI interactive	TV (DT))	Max Haot	Sen.Intern. Vice Pres.World.Prod.	UK	Londres	Filiale IMG
Warner	TV (DT))	Brian Mc Kay	Technical Manager	USA	Los Angeles-CA	
Warner	TV (DT))	Jinha Kim	Director R&D compression	USA	Los Angeles-CA	
Warner	TV (DT))	Kevin Froning	Director Engineering& Maintenance	USA	Los Angeles-CA	

3.4. Broadcast manufacturers

Company	Category	Contact	Title	Country	Town	Comment
Alcatel	Manufacturer	Pierre Barnabé	Vice Président	France	La Défence	Imagina
Avid	Manufacturer	Miguel Ferros	Eur.Product Marketing Manager	UK	Pinewood	Europe, HD Product
Avid	Manufacturer	Straker Coniglio	Broadcast Manager (ventes)	Singapore	Singapour	For Asia
BBC Technology	Manufacturer	Kevin Ivey	ex CNN, Chef du projet ESPN	USA	Meridian-MS	
Digicast	Manufacturer	Jin - E Kang	C.E.O.	South Korea	Séoul	
Envivio (France Telecom)	Manufacturer	Julien Signes	Président	USA	San Francisco-CA	Headquarter Rennes
ETRI	Manufacturer	Jin Soo Choi	Team Leader/ Senior Member	South Korea	Daejon	
EVS	Manufacturer	Jacques Galloy	Director & CFO	Belgium	Ougrée	
Harris	Manufacturer	John L.Delay	Director DTV Studio Products	USA	Mason-OH	
HP	Manufacturer	Glenn Hall	Media Industries Consultant	UK	Bristol	
KWS Electronic	Manufacturer	Helmut Schenk	C.F.O.	Germany	Grosskarolinenfeld	
Lumière HD	Manufacturer	Adrien Haubrich	DVHD/FinalCutPro	USA	Point Pleasant-NJ	DVHD/FinalCutPro
Lumière HD	Manufacturer	Frederic Haubrich	Specialist DVHD/FinalCutPro	USA	Point Pleasant-NJ	DVHD/FinalCutPro
Nokia	Manufacturer	Reider Wasenius	Senior Project Manager	Finland	Espoo	MIPTV (multimedia)
Omneon	Manufacturer	Geoff Stedman	Vice President of Marketing	USA	Sunnyvale-CA	
Panasonic	Manufacturer	Gilles Bribant	Sales Manager	France	Saint-Ouen	
Panasonic	Manufacturer	Nigel Wilkes	HD Business Developm.Manager	UK	Bracknell	
Panasonic	Manufacturer	John Funnell	Technical Product Manager	UK	Bracknell	
Ross	Manufacturer	Steve Romain	Nat.&Key Accounts Manager	Canada	Iroquois	Obvan & mixers

Company	Category	Contact	Title	Country	Town	Comment
Sony	Manufacturer	Kaoru Tachibana	BD Develop.Div. Gal Mgr	Japan	Tokyo	Blu-ray
Sony	Manufacturer	Kevin Wakeford	Head of High Definition business	UK	Basingstoke	Europe, HD Product
Sony	Manufacturer	Kozo Kaminaga	Chief R&D Strategy Officer	Japan	Kanagawa	Stratégie groupe
Sony	Manufacturer	Shigeru Kato	Broad.Disc Sen.Gal.Mger.	Japan	Tokyo	Blu-ray
Sony	Manufacturer	Shinji Hanatani	President, B&P Company	Japan	Kanagawa	Corporate Strategy
Sony Busin. Europe	Manufacturer	Niels Thomas	General Manager, Media	UK	Weybridge	
Sony France	Manufacturer	Gérard Bizeau	General Manager Broad.Busin.	France	Paris 17	
Sony France	Manufacturer	Hiroshi Tsukiji	General Manager	France	Paris 17	
Sony France	Manufacturer	Pascal Kerloch	Produit Cinealta &HD	France	Paris 17	HD Product
Sony France	Manufacturer	Patrick Ribourg	Senior Sales Manager	France	Paris 17	
Sony France	Manufacturer	Philippe Poels	PDG	France	Paris 17	
Thomson/Grass Valley	Manufacturer	Alexandre Arnodin	Sales North Asia	China	Pékin	
Thomson/Grass Valley	Manufacturer	Didier Huck	VP Public Affairs	France	Boulogne	
Thomson/Grass Valley	Manufacturer	Eric Dufosse	Director	USA	Beaverton	
Thomson/Grass Valley	Manufacturer	Matthew Allard	Product Mgr Servers&News prod.	USA	Beaverton	
Thomson/Grass Valley	Manufacturer	Patrice Thefaine	Sales Manager	France	Cergy	
Kondo Broadcast Systems	Integrator	Toshio Sakisaka	Sales Department	Japan	Tokyo	
Videodata	Integrator	Marcelo P.Blum	Application Manager	Brasil	Sao Polo	
FNAC	TV Retail	Victor Jachimowicz	Lab Test Manager	France	Clichy	15 countries
Astra	Telco	Thomas Wrede	Senior Systems Engineer	Luxemburg	Bersdorff	Imagina
EADS Telecom	Telco	Eric Theron		France		Imagina

3.5. Services providers & experts

Company	Category	Contact	Title	Country	Town	Comment
Altered Images	Post Prod.	David Johnson	Sales & Marketing Director	GB	Shepperton	HD Symposium
Evolutions TV	Post Prod.	Dave Tidey	Chief Operating Officer	GB	Londres	HD Symposium
Frontierpost	Post Prod.	Neil Hatton	Managing Director	GB	Londres	HD Symposium
FSL Value Solutions	Post Prod.	Peter Stanley	Assistant to CEO	GB	Londres	HD Symposium
Mikros	Post Prod.	Maurice Prost	PDG	France	Paris 10	
NATS	Post Prod.	Duncan Smith	Facility Director	GB	Londres	HD Symposium
RiffGLPipa	Post Prod.	Vincent Lamy	PDG	France	Paris 15	
Transatlantic Video	Post Prod.	Patrick Dumez	Directeur	France	Paris 15	
The Hospital	Post Prod.	Chris Collingham	VP Technology and Facilities	GB	Londres	HD Symposium
CTV (National Mobile TV)	OBvan service	Bill Morris	International Business Director	GB	Londres	HD Symposium
National Mobile TV	OBvan service	Mark Brooks	Directeur Technique	USA	Flushing Meadows-NJ	
Outside Broadcast	OBvan service	Ludo Kerkhofs	Managing Director	Belgique	Rotselaar	MIPTV
Outside Broadcast	OBvan service	Timo Koch	Commercial Manager	Belgique	Rotselaar	MIPTV
Television Mobile Ltd	OBvan service	Bart J.Arnold	Managing Director	Irlande	Cork	HD Symposium
VCF (Euromedia)	OBvan service	Hughes Stavaux	Directeur Technique	France	Saint-Cloud	
Ambassade de France	Experts	Arnault Vuillermet	Directeur de Production	USA	Los Angeles-CA	Imagina
Baskerville	Experts	Jessica Sandin	Mobile Location Analyst, Editor	GB	Londres	MIPTV
Cathay Consultants	Experts	Kevin Dauphinee	Managing Director	Chine	Pékin	
CNC	Experts	Jean Menu	Dir. Multimedia et Industries Tech.	France	Paris 16	
CST	Experts	Yves Louchez	Directeur Général	France	Paris 18	
EURO 1	Experts	Hardy Heine	Expert TV Numérique	Allemagne	Brème	MIPTV
Indépendant	Experts	Stephane Singier	Consultant	France	Paris	Imagina
TVB Europe	Experts	Reinhard E.Wagner	German Correspondent	Allemagne	Cologne	NAB

Société	Catégorie	Personne rencontrée	Titre	Pays	Ville	Commentaires
Altered Images	Post Prod.	David Johnson	Sales & Marketing Director	GB	Shepperton	HD Symposium
Evolutions TV	Post Prod.	Dave Tidey	Chief Operating Officer	GB	Londres	HD Symposium
Frontierpost	Post Prod.	Neil Hatton	Managing Director	GB	Londres	HD Symposium
FSL Value Solutions	Post Prod.	Peter Stanley	Assistant to CEO	GB	Londres	HD Symposium
Mikros	Post Prod.	Maurice Prost	PDG	France	Paris 10	
NATS	Post Prod.	Duncan Smith	Facility Director	GB	Londres	HD Symposium
RiffGLPipa	Post Prod.	Vincent Lamy	PDG	France	Paris 15	
Transatlantic Video	Post Prod.	Patrick Dumez	Directeur	France	Paris 15	
The Hospital	HD Facility	Chris Collingham	VP Technology and Facilities	GB	Londres	HD Symposium
CTV (National Mobile TV)	OB services	Bill Morris	International Business Director	GB	Londres	HD Symposium
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Baskerville	Experts	Jessica Sandin	Mobile Location Analyst, Editor	GB	Londres	MIPTV
Cathay Consultants	Experts	Kevin Dauphinee	Managing Director	Chine	Pékin	
CNC	Experts	Jean Menu	Dir. Multimedia et Industries Tech.	France	Paris 16	
CST	Experts	Yves Louchez	Directeur Général	France	Paris 18	
EURO 1	Experts	Hardy Heine	Expert TV Numérique	Allemagne	Brème	MIPTV
Indépendant	Experts	Stephane Singier	Consultant	France	Paris	Imagina
TVB Europe	Experts	Reinhard E.Wagner	German Correspondent	Allemagne	Cologne	NAB

4. Deliverables

The study will be delivered to subscribers at the end of December 2004.

Dublin, and will be a conference session producer at IBC 2003. He is European chairman of the Global Society for Asset Management.

5. Consultants/experts

4 consultants: Adrian SCOTT, Jean-François de LAUZUN, Charles BEBERT, Pascal BAP,

Adrian SCOTT has spent his entire career in the field of broadcast journalism and its technology. He majored in journalism at the University of North Carolina, and then returned to his native Scotland to join Radio Clyde as a reporter and presenter. He subsequently worked as a producer and presenter at LBC and IRN, before becoming part of the launch team at TV-am where he was Head of Planning, News Editor and Editor-of-the-Day (executive producer).

Having used an early version of the BASYS newsroom system at TV-am, he was recruited by ITN (who had recently acquired the BASYS company) as European Operations Director with primary responsibility for Sales and Marketing of the BASYS system. He was instrumental in increasing BASYS's turnover from zero to £6m in five years and the customer base from 2 to over 100.

When BASYS was eventually acquired by Avid, Adrian became Avid's European Broadcast Market Manager, and then when BASYS was spun off as iNews, VP of EMEA Marketing. In 2000 he joined Autocue as Director of Marketing, and presided over the rebranding of Autocue's newsroom products.

In mid-2002 he became an independent consultant, and now advises a variety of broadcasters and manufacturers on technology, journalism and workflow issues, especially news automation and Media Asset Management.

He is a member of the IBC Exhibitions committee, the Management Council of the IABM, and the Royal Television Society. He is a consultant to News World, produced the technology sessions at News World 2002 in

Jean-François de LAUZUN (born in 1950) is engineer of "Ecole Polytechnique" in France in 1970.

He has an early career in the process engineering at Technip, and then turned to IT technology services, where he founded and developed 2 companies in the area of optimization software for transport and for project management . He created a new project management system which was implemented in major banks and industries regarding multi-project scheduling of engineering and IT departments: Dexia, BNP, Matra Espace, BRED, Peugeot, ...

He created a transportation optimization software which is used by several regional bodies : Maine& Loire, ...

He then had a career in large IT project management for several major operations at France Telecom, PPR, ABN-Amro, SMABTP, Procter & Gamble.

He has participated in several projects for market sizing (Avid, BBC T, IBM) and for Kane's operation in HDTV studies.

Charles BEBERT (born in 1950) is engineer of the "Ecole Nationale des Mines de Paris" in France, and has a Master in Physics. He became a specialist of IT strategy and has since then worked as a consultant in 16 countries in the world. He founded Kane in 1986, based in Brussels and in Paris. In 1992, he started to work for the media sector: television, cinema (Babelsberg Studio in Germany), audiovisual service providers, audiovisual attractions in theme parks. He is specialised in benchmark studies regarding the media businesses as Kane produces and up-date several studies such as Newsroom, Media Asset Management, Location Based Entertainment, Digital Cinema...

He worked in 2002 inside the "Mission Couveinhes" regarding the evolution of the audiovisual services providers for Culture and Communication French ministers Mrs.Tasca and later Mr.Aillagon.

He is member of the Commission Supérieure Technique of the CNC in France and of the B.K.S.T.S. in the UK. He is European vice president of G-SAM.

Pascal BAP is an engineer, and a graduate of the Ecole Centrale de Paris. He is a specialist in post-production and digital imaging, and was a software development engineer at Thomson group in 1984, before becoming a co-founder of TDI (Thomson Digital Image) which developed Computer Graphic Image Design software and related services. He subsequently became founder and managing director of the graphics company **Ex-Machina**, which produces rides, high-end CGI films and special effects for films.

By 2000, Ex-Machina had a staff of 100 and Pascal established a subsidiary in Japan with Xavier Nicolas. Clients include Toyota, Dentsu, Panasonic, Sony Pictures, and Iwerks

He has produced many ground-breaking CGI films such as Trekken, Sub-oceanic Shuttle, and Mad Racers.

Pascal left Ex-Machina after the takeover by Ecoutez-Voir, and later became Development Manager of Duran-Duboi.

He has been a Kane consultant since 2001.

Pascal has produced conferences at Siggraph and at Imagina, and is a member of the CST.

5. Kane's references

Kane's references for comparable benchmark studies and reports are the following for 2001-2003.

- BBC Regions, BBC, France2, France3, France Télévisions, France Télévisions Publicité, Arte, RTLTVi, RTBF, TSR, ARD (Germany), Internews New York & Moscow, RFO, ORF (Austria), Newsworld, Newxchange, EBU among broadcasters
- Avid Europe, Dalet, IBM Europe, Harris USA, Sony Europe, Cap-Gemini/Ernst&Young Europe, Grass Valley (Thomson), Blue Order, Vizrt among manufacturers for the broadcast industry.

Kane 's development team is managed by Adrian Scott and Charles Bebert.

Our most recent assignment is to investigate server-based playout and production installations in the world for Avid Europe as well as Harris Automation in the USA. For Harris, we are also investigating MAM markets in broadcast, and secondary markets including sports, a driving force in TVHD.

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