



8th HbbTV SYMPOSIUM and AWARDS 2019

21st - 22nd November 2019

Athens MEGARON International Conference Centre



Hybrid TV - Better TV

Hybrid broadcast broadband TV (or "HbbTV") is a global initiative aimed at harmonising the broadcast and broadband delivery of entertainment services to consumers through connected TVs, set top boxes and multiscreen devices.

Almost a decade ago, industry leaders started to develop the dynamic industry standard HbbTV as an open, business neutral and flexible technology platform to improve the video user experience for consumers by enabling innovative, interactive services over broadcast and broadband networks. The specification uses elements of existing specifications from other standards including OIPF, CEA, DVB, MPEG-DASH and W3C.

HbbTV is a success story. Starting with five members in 2009, the HbbTV Association assembles today almost 80 broadcasters, CE manufacturers, technology, network, service and content providers. HbbTV has been adopted in more than 30 countries, reaching an estimated total of around 600 million people around the globe. The open platform undergoes a continuous development and is at the technical forefront of the next generation of TV and broadband services. The members of the HbbTV Association define and promote the specifications and standards by working together, sharing knowledge, technical expertise and market experience with other members, and contributing to a variety

of working groups. The resulting standards provide a rich set of business opportunities and enhancements for participants of the content distribution value chain – from content owner to consumer. Today, HbbTV offers and supports a broad variety of applications and key advantages for providers and users. IHbbTV:

- Enriches Broadcast Services
- Maximises Reach for Interactive Services
- Offers Simple Access to Enriched Services
- Enables Enhanced Digital Switchover
- Enables Targeted Ads on TV
- Improves Viewers' TV Experience with OpApps
- Reduces Costs and Accelerates Go-to-Market Deployment with HbbTV OpApps

If you would like to get more information and to participate in this exciting work, join the HbbTV Association by visiting our website www.hbbtv.org.



HbbTV-Members



Watching TV in a different way



On December 4th 2017 ERT launched its **Hybrid Services Platform**, ERT Hybrid. ERT hybrid is freely available to Smart TV sets HbbTV-ready, at the touch of one button. ERT Hybrid platform includes the following services:

- Catch-up video, containing almost the entire television program of ERT as aired during the past eight days
- Exclusive broadcasts of sporting events on our Internet channels Ertplay's
- Access to on demand video service, in which the user can enjoy television material broadcasted by ERT by selecting through thematic categories (through special search, youtube- like category) such as
 - Archive videos
 - Sports including Super league Greece football matches
 - News videos

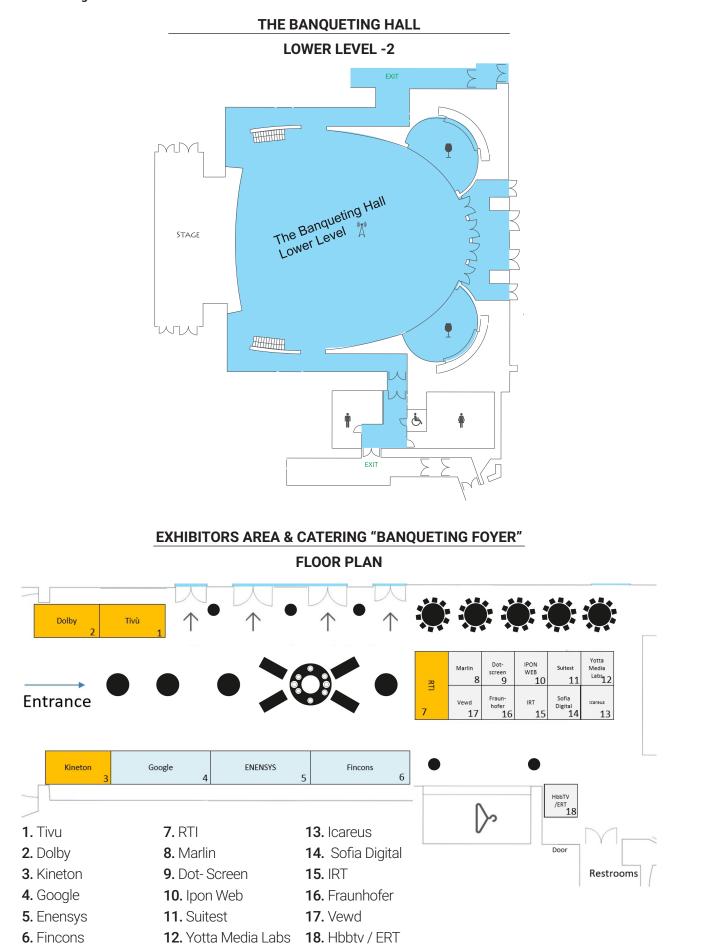
- Film Documents
- Possibility of listening to all 27 ERT radio stations, with useful information
- ERT channels program for the next hours and days, enriched with graphics, video and text material
- Interactive platform about the weather, in which the user will be able to choose the area of interest within Greece and the world
- Subtitles selection
- Multicamera viewing in a specific sport events like F1
- Already all services available from ERT world satellite channel



visit our website hybrid.ert.gr

8th HbbTV SYMPOSIUM & AWARDS

MEGARON ATHENS INTERNATIONAL CONGRESS CENTER (MAICC) http://www.maicc.gr/en



21 November 2019 Award ceremony

Guests interested in getting a small impression of Athens city center are invited to join our short panoramic city tour, departing from the entrance of the venue at 18:15 hrs. You will have the opportunity to see from a distance the highlights of the city including the fascinating Acropolis before the transfer ending at the restaurant "Istioploikos" www.istioploikos.gr, where the standing buffet cocktail and Awards ceremony will take place.

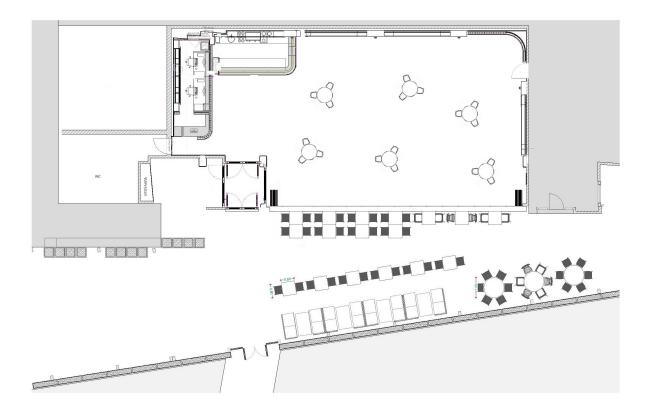
For those not interested , there will be an alternative bus departure from the venue entrance at 19:00 hrs with direct transportation to the restaurant.

"Istioploikos" is a modern restaurant, with distinctive style dominated by wood and earthy colours, located in front of the yacht Marina of Mikrolimano, giving its guests the opportunity to relax and enjoy the endless blue.



AWARD CEREMONY "Istioploikos restaurant"

www.istioploikos.gr Mikrolimano harbor / Piraeus



21 November – DAY 1 (10:00 - 23:00)

10:00 - 11:00	Registration, Coffee, Networking & Exhibition					
11:00 - 11:15	Opening & Welcome: Vincent Grivet - Chairman of the HbbTV Association					
11:15 - 11:25	Welcome: Giorgos Gabritsos - Managing Director ERT					
11:25 - 11:30	Welcome by the Diamond Sponsors					
11:30 - 11:55	Keynote: The Global TV Market Review - Paul Gray - IHS Markit					
11:55 - 12:20	Keynote: HD+ Operator App - where broadcaster and operator meet in paradise - Wilfried Urner - HD Plus					
12:20 - 13:20	Panel "HbbTV Success Stories"					
	Moderator: Dr. Jörn Krieger					
	Jon Ducker, Freeview: "Overview on Freeview Play's success"					
	Anders Hebert, SVT: "HbbTV as a Smart TV app solution"					
	Xavier Redon, Cellnex Telecom: "LOVEStv Lessons and challenges"					
	Stathis Michail, epeegee: "Launch of Open Beyond TV"					
	Yiannis Vougiouklakis, ERT					
13:20 - 14:20	Lunch, Networking & Exhibition					
14:20 - 14:40	Keynote: The State of Content Piracy Worldwide - Ron Wheeler, former SVP, Content Protection & Technology Strategy at Twentieth Century Fox					
14:40 - 15:50	Panel "Targeted Advertising - the Business State of the Art"					
	Moderator: Angelo Pettazzi, Mediaset					
	DrIng. Peter Neumann, CBC: "Expanding the Reach of Targeted Ads"					
	Oliver Botti, Fincons Group: "Obsessive (and successful) HbbTV market trials"					
	Moritz F. Wuttke, IPONWEB: "How to unleash the 20% additional TV Advertising revenue?"					
	Kai Mysliwiec, ProSiebenSat1. Media SE: "Scaling Adressable TV"					
	David Uhlmann, Google: "Programmatic TV Advertising with HbbTV"					
	Timocin Bilgor / BUBA Ventures: "Addressable TV in Turkey, experiences					

on ramping up new advertising"

- 15:50 16:30 Coffee, Networking & Exhibition
- **16:30 17:05** Panel "HbbTV Reports from Selected Countries"

Moderator: Paul Gray, IHS Markit

Fereidon Akhavanmalyeri and Fatemeh Fallahiviskaei, IRIB: "IRAN's HbbTV country report "

Daniel Grunt , FTV Prima: "Status of HbbTV market in Czech Republic and FTV's Prima experience in monetizing the HbbTV "

Mikko Karppinen, Icareus: "HiTV, the New National Lithuanian HbbTV Service"

17:05 - 18:00 Roundtable "Does HbbTV provide the right tools for Broadcasters and Operators?"

Moderator: Dr. Jörn Krieger

Thomas Follin, SALTO

Wilfried Urner, HD Plus

James Jackson, Digital UK

Alberto Sigismondi, Tivù

Robert Curwen, Google

Régis LE ROUX, ENENSYS

Francesco Moretti, Fincons Group

- **18:15** Three Buses departure from Megaron entrance Panoramic tour of Athens city center Istioploikos restaurant
- **19:00** Three buses departure from Megaron entrance with direct transportation to Istioploikos restaurant where Awards ceremony will take place

19:30 - 23:00 HbbTV Awards 2019 Reception and Ceremony

22 November - DAY 2 (08:30 - 16:00)

08:30 - 09:00 Registration, Networking & Exhibition

- **09:00 09:20** Keynote: The HbbTV Chairman's "State of the Nation" Speech Vincent Grivet HbbTV Chairman on the current state of HbbTV and its strategy for the future.
- **09:20 09:40** Keynote: The latest on HbbTV Specifications and Related Activities – Jon Piesing - HbbTV Vice Chairman
- 09:45 10:30 Panel "Beyond traditional broadcast"

Moderator: Klaus Merkel, IRT: "HbbTV usage in various contexts: managed IPTV, OTT, future DVB-I, 5G and others"

Peter MacAvock, EBU: "The EBU point of view on 5G broadcasting"

Jon Piesing, Chair DVB-TM: "DVB-I at par of "traditional" DVB delivery mechanism"

Michael Schäfer, Tara Systems: "HbbTV Application Signalling for OTT Services: Two Examples with DVB-I and ADB"

10:30 - 11:10 Coffee, Networking & Exhibition

11:10 - 12:10 Panel "The HbbTV value for Operators"

Moderator: Teun van der Veen, TNO

Alexandre Gabriel, TNO: "Making Operator Apps comparable with set-top boxes"

Martin Fähnrich, Panasonic: "HbbTV OpApp – Views from a manufacturer perspective"

Ralph Edeine, Eutelsat: "Different ways of using HbbTV as an OpApp"

Erik Gazzoni, SmarDTV: "OpApp in CAM"

Andy Carr, Freesat: "Beyond Operator Applications"

12:10 - 13:10 Panel "HbbTV and other Interactive Standards"

Moderator: Oliver Botti, Fincons Group: "Global TV and the need of global standards and solutions"

Madeleine Noland, ATSC Forum: "ATSC roadmap and initiatives"

Jerald N. Fritz, Sinclair: "Next Gen TV Isn't Just About TV"

Joe Winograd, Verance; "New Technologies for Targeted Advertising"

Raj Patel, Yotta Media Labs: "How do HbbTV and ATSC 3.0 compare and contrast"

Yvan Barbotin, ENENSYS: "Targeted Ad insertion in ATSC3.0: how does it work?"

- 13:10 14:05 Lunch, Networking & Exhibition
- 14:05 15:05 Panel "Improving the User Experience"

Moderator: Jon Piesing, TP Vision

Jason Power, Dolby: "HbbTV for enhanced audio video experiences"

Fabian Birgfeld, W 12 Studios: "More than TV: meeting expectations of the connected audience"

Louay Bassbous, Fraunhofer FOKUS: "Enabling HbbTV interoperability for Low Latency, DAI and 360° Streaming"

Chiara Pettinelli & Nicolas Afresne / M6 WEB: "How to develop an HbbTV application serving multiple customers and offering the best experience for each user "

Xinwen Xue, Seraphic Corporation: "What can AI do to reform HbbTV user experience on the big screen?"

15:05 - 15:55 Panel "Status Today and Ramp up for the Future"

Moderator: Yiannis Vougiouklakis, ERT

Tim Morgan, Eurofins: "A survey of approaches to logos, certification and compliance in various HbbTV regimes"

Francesc Mas, CCMA: "New HbbTV Apps, new trends "

Lars Friedrichs, TeraVolt: "Germany's first HbbTV DRM mediateque: Super RTL case study and insights"

Antonio Vince Staybl, COUCHPLAY: "Interactive TV can save the old TV Industry"

15:55 - 16:00 Chairman Closing Remarks - See you in 2020!



About ENENSYS Technologies

1.1 Solutions for Any Networks

ENENSYS Technologies designs and manufactures innovative professional equipment and software enabling **Efficient Video Delivery** over Terrestrial (ATSC3.0, DVB-T/T2, ISDB-T/Tb, HbbTV...), Satellite (DVB-S/S2/S2X) & Telecom Networks (4G/5G, IPTV, OTT). We also provide Test & Monitoring equipment with the TestTree brand.



We have the solutions and the experience to **optimize**, **secure** and **monetize** any type of Media Delivery Networks.

With the recent acquisition of Expway, a world leader for Mobile Phone and Set Top Box middleware, ENENSYS' solutions are now covering the entire Media Delivery Chain, from the head-end all the way down to the receiver. Mastering the complete delivery chain creates huge possibilities taking the Network to the next level. The origin of the ENENSYS name proudly means: ENd to ENd SYStems.

1.2 Efficient Media Delivery



We Optimize

We have a wide range of solutions to optimize the RF Spectrum (Advanced standards using SFN such as ATSC 3.0 or DVB-T2) or to avoid duplicating similar content over the delivery networks (LTE Broadcast, OneBeam, ...).

We Secure

Viewers are expecting the best quality. We offer advanced seamless switches and QoS/QoE Monitoring solutions to make sure the service is operational 24h a day, 7 days a week.

We Monetize

We will help the Network Operators to bring additional value to the delivered content, by enabling targeted Ad Insertion (more revenue per Ad) or local Ad Insertion (more advertisers), and by enabling hybrid services over their networks.



1.3 Our Customers



Thanks to ENENSYS Technologies, more than 1.5 billion people are receiving their video programs, on all types of networks (Terrestrial, Satellite, Mobile or Telecom). All in the best quality.

Our customers are the most prestigious Tier 1 Network Operators in the world:

- Telecom & Mobile Operators: Reliance, Telstra, NTT DoCoMo
- Terrestrial Operators: Sinclair Broadcast Group, TDF, Arqiva, MultiChoice, ThaiPBS, TV5, Cellnex ... Satellite Operators: Eutelsat, Globecast...

1.4 Serial Inventor

ENENSYS has a strong IPR portfolio, with more than 60 patents, all dedicated to the Video Delivery sector. Linked to this innovation work, ENENSYS is proud to be the first to introduce new technologies and solutions to support customers in their network optimizations and deployments.



1.5 Addressable TV solution - AdsReach HbbTV



AdsReach

ENENSYS **AdsReach** solution allows broadcaster to increase their revenue by operating the new massive connectivity of the TV receivers. It offers the following features:

TV DATA

- TV Consent Management platform
- Real time audience measurement
- API with DMPs

Dynamic TV Targeted Banners insertion

- Accurate Synchronization with your content or commercial
- Enhance your linear broadcast ad with targeted information
- Non-intrusive TV interactive advertising

Dynamic Video Ad Insertion

- Combine the best of Broadcast with the best of Digital
- Designed to fit into existing playout and AdTech ecosystem
- API with Ad Servers



The Hybrid TV business revolution

Michele Moretti, CEO of Fincons Group, and Francesco Moretti, Deputy CEO of Fincons Group, talk about the evolving requirements of the broadcast industry at a time of accelerating change.



With over 1600 employees worldwide and 36 years of international experience, Fincons Group is a leading IT business consultancy that provides services and solutions in strategy, digital, technology and operations to a diverse range of industries. In the broadcasting sector specifically, the Group has consolidated experience developing high-profile Hybrid TV projects and actively contributing to the definition of standards that merge broadcast and broadband technologies. Based on this strong experience, in Europe and more recently in the US, what changes have you witnessed in this industry over the years?

Michele Moretti: Until about a decade ago the pace of change in technology was much slower and the market was quite traditional. Now, however, technology is driving change. A decade ago, Europe witnessed the entry of big players with big content accessible to anyone, so broadcasters had to transform to compete. The effects of this market shake-up continue to trigger new strategies and innovation with the convergence between broadcast and broadband technology even leading to the development of new standards such as HbbTV in Europe and ATSC 3.0 in the US.

Talking about HbbTV, we have developed significant skills in Europe working on high-profile projects with top broadcasters, and then we have exported all this experience to the US, where we recently opened two locations, helping the market adapt to the ATSC 3.0 standard and build its own unique vision.

Francesco Moretti: Digitisation has certainly been the most disruptive change over the last decade, with European broadcasters trying to defend themselves from OTT natives such as Netflix by developing their own OTT service complementary to their traditional offering.

There has been acceleration in the past two years towards more viewer personalisation based on preference and interaction to produce better editorial and to fuel addressable and targeted advertising models.

What do you see as the key challenges facing broadcasters today?

FM: Broadcasters today need to find a way to ensure that they extract the intrinsic value of their content. One key strategy to achieve this is alliances: broadcasters typically invest in content for their local market which in turn has access to global content. Alliances, such as subscription video-ondemand joint ventures, Salto and Españolflix[™], Loves TV ES, Pro7-Discovery DE or Freeview UK as well as the partnerships between Mediaset-Pro7, RTL-Pro7 and Media4Europe are a way of breaking down orders and producing more international content.

What is Fincons' role in this changing landscape and how has the company had to adapt and evolve to respond to market demand?

MM: We have a clear vision of the future of television from long-lasting and successful collaborations with Tier 1 companies globally. These experiences have provided us with deep industry knowledge that we leverage to bring innovative solutions to the market and to help our clients. Some of our pioneering efforts in various areas of media tech have been in partnership with universities and supported by EU Commission funding for cutting edge research, alongside our own strategic R&D investment and future scoping. Our internationalisation strategy also plays a key role providing our clients with the most cutting-edge solutions, as we have been exporting the experience and skills acquired in Europe to the US and vice versa.

What role do partnerships play in your way of doing business and developing technology?

FM: We have selected partnerships that enable us to make targeted and tailored best-of-breed technology suggestions that respond to the client's specific requirements.

To cite a few successful examples, this is the process we applied working with our partner Comcast Technology Solutions on clients such as RTÉ and Mediaset, or with Operative and Mediamorph on brand and rights management. From a User Experience and front-end technology standpoint, we have partnered with 24i and You.i, while Irdeto and Nagra are valuable partners in delivering content protection solutions to integrate into our systems. Obviously, we also directly develop tailored systems for clients based on our own ad hoc solutions wherever this is required.

What strategies will you be focusing on to continue to support the media industry in the future?

MM: We plan to continue to provide our global clients with our deep and ever-growing

Next Gen TV

to go global?

now benefit from further hing from USA ATSC 3.0

standards ready

er laying the foundations for Hybric

knowledge of the sector based on expertise acquired directly in the field. To achieve this, we remain committed to growing internationally. The media sector is an industry that we know well. Our experience has helped to position and differentiate us in markets as competitive as the US.

In addition to this, we are continuing to expand in Europe thanks to our media capabilities and we have just opened a new office in Munich in Germany. This new opening comes on the back of several years of experience in the German market, based on the long and fruitful relationship with leading media companies such as Sky Deutschland and the more recent partnership with BurdaForward, a leading German digital publishing company that selected us on the basis of our experience in media and publishing and for our Southern Italy-based Smart Shore Delivery Centre, which has facilitated the establishment of BurdaForward's own product and development site in Bari, providing an incubator environment for this strategic operation.

WHITEPAPER

Next Gen TV standards ready to go global?

After laying the foundations for Hybrid TV in the USA, European broadcasters can now benefit

from further impulse coming from USA ATSC 3.0

Fincons Group has been instrumental in spreading the HbbTV standard in Europe and has actively contributed to the development of the US ATSC 3.0 standard as well as its promotion together with the National Association of Broadcasters.

Fincons' whitepaper helps European broadcasters benefit from emerging innovative trends being rolled out across the pond and provides a guide for revamping their systems so they are more competitive in a global market and ready to take on future market demands.



PICK UP YOUR COPY AT FINCONS' BOOTH OR SCAN THE CODE TO DOWNLOAD IT

Fincons' offices: ITALY | SWITZERLAND | GERMANY | UK | US

Reimagine the commercial break.

Google Ad Manager brings the power of digital to the magic of TV. Ensure your audiences get the best of both worlds with relevant and seamless ads across every screen.



Create a TV-like experience, everywhere.

Use Dynamic Ad Insertion to effortlessly deliver ads across your live, linear, and on-demand video streams without buffering or quality degradation wherever people are watching.

Make ad breaks smarter.

Maximize your revenue with ads that are optimized in real-time for every viewer in each ad break; while maintaining full control and brand safety protections.



Manage all your sales programmatically.

Reach more advertisers and get the true value of your inventory in your own programmatic marketplace. And use Programmatic Guaranteed to simplify your cross-screen reservations business.

Power better experiences with smarter insights.

Personalise ad experiences and effectively measure the impact your advertisers are having on your audiences. It's easier than ever with Google Ad Manager.

Google Ad Manager







CLOSE UP

NEXT LEVEL ENTERTAINMENT

ANIXE HD is building platforms for viewers all over the world. Our goal is the distribution of high quality content via our TV Channels **ANIXE HD Serie** and **ANIXE+** and our **HbbTV** On-Demand platform ANIXA. We offer a great variety of Feature films, series and documentaries - every single video is available **On-Demand for Smart TV** users. Our focus is to offer our broad viewership all benefits that HbbTV features can supply. Therefore our motto: **Next Level Entertainment**.

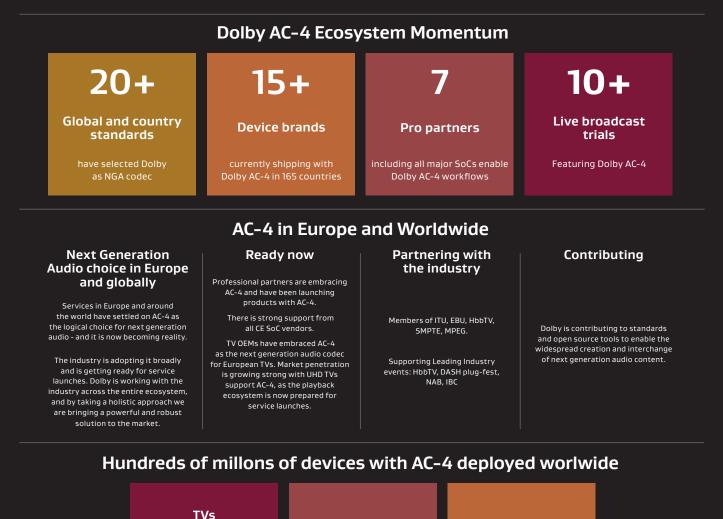
WWW.ANIXEHD.TV

WWW.ANIXA.TV



This year at HbbTV 8th Symposium and Awards Dolby Laboratories will show how Broadcasters can leverage HbbTV and Dolby AC-4 audio to deliver services that are more immersive and more personalised, targeting existing deployed TVs. The demonstration features an off-the-shelf TV model from Panasonic, offering a fully immersive Dolby Atmos sound experience without the need for any other playback equipment.

Dolby AC-4, the next-generation audio codec, is designed to address the needs of everyone in the entertainment ecosystem – from content creation to playback.



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Bang & Olufsen, Hisense, Huawei, TPVision, Vizio, LG, Panasonic, Sagemcom, Samsung, Sharp, Skyworth, Sony, TCL

Mobile Phones

Huawei, ONEPLUS 7 & 7 Pro, OPPO Reno, Samsung Galaxy

SoC and STB

Broadcom, Cadence, HiSilicon, Mediatek, MStar Semiconductor, Novatek, Realtek









Located in Italy by hardcore techies, Kineton works in the Media, ICT, and Automotive.

It has relationships with some of the major Italian universities and maintaining a meaningful connection to the academic world. Also, it offers an Academy Master Course through which recognizes the most brilliant students and helps them to maximize their potential and grow as professionals.

Being at our partner's side or running projects from our own state-of-the-art laboratories, we do it all – planning your goals, strategizing possibilities, taking care of problems with innovative solutions, we'll make sure that the future won't pass you by. Kineton is in the center of the ever-changing media and telco worlds and is member of HbbTV Association and HD Forum Italia. Having regard to the ever-increasing spread of the HbbTV standard, Kineton has invested in a new tool to provide a set of functionalities to their customers: the "KbbTV platform". It consists of a series of modules designed to simplify the management and the data collection of HbbTV applications. Through the application, all the data audience and all the interactions of the end user are traced and saved in an intelligent audience service with a view to understand its behaviour and to make user clusters based on geolocalization or preferences. Thanks to the KbbTV platform, the editorial team can manage magazine, participation and advertising applications. The platform allows the editorial team to manage contents, using the Platform Content Management System.

Kineton has also designed an innovative platform to meet the needs in software development processes.

"Kate" is a modular and user-friendly platform, able to support the DevOps practices and the production processes in order to:

- bridge the gap between business and technology by defining acceptance criteria using shared business terminology, simplifying the communication and collaboration between the different company teams, and allowing to quickly identify the goals to achieve;
- accelerate development executing your tests manually or increasing deployment frequency and continuous control of the results through regression and automation tests.
- optimize the development and testing steps managing the product requirements and specifications.

Please contact <u>media@kineton.it</u> to have more information.

Visit us at <u>www.kineton.it</u>

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Reti Televisive Italiane, part of the Mediaset Group, is the Italian broadcasting company managing the three largest Italy's free TV commercial networks and an extensive portfolio of free and premium thematic channels available on DTT, SAT, IPTV and OTT. They offer a broad range of content including original entertainment, TV series, movies, news and sport.

RTI has also expanded its operations on radio through its fully controlled subsidiary "Radio Mediaset" that operates the largest national radio stations (more information on www.mediaset.it/ corporate).

Since 2003, RTI was committed to develop interactive services on multiple screens, i.e. TV sets, PCs and mobile devices. In 2015, RTI became member of the HbbTV Association; since then, the HbbTV technology is RTI preferred technology to develop and exploit interactive services on TV sets.

HbbTV services are available all along RTI linear channels since 2017: today feature services include "Infinity", a SVOD service, and "Mediaset Play", an AVOD service offering viewers the restart feature, live clips, voting, an EPG, a recommendation engine, an extensive catch up library and a VOD catalogue, protected through DRMs, and the full radio Mediaset channels lineup.

RTI is using the HbbTV technology to offer advert enhancement and L-shaped addressable advert alongside all our linear TV channels; addressable advert substitution, or targeted advertising, based on HbbTV 2.0 core specifications, is ending the trial period and will be a commercial product available to our ad investors by the end of the year.

Our RTI booth will showcase:

- · the full "Mediaset Play" service;
- a proof of concept of a companion screen service with multiple use cases to be soon integrated in our SVOD and AVOD services;
- the "Mediaset HbbTV Reference Test Application".

Please, have the chance to look at them!







tivusat the Italian free to air satellite platform.



tivùsat, offering digital TV and radio services, gives free access to more than 100 television and 45 radio channels including fifty HD channels, five 4K Ultra HD channels and a large selection of HbbTV interactive services.

tivù has launched **HbbTV** application **tivù***on*, an open horizontal app providing access to free-toair catch-up content with a backward EPG across the 3 most important Italian broadcasters (Rai, Mediaset and La7), a complete forward EPG with detailed +7 days info and a service program guide with the whole FTA on-demand offer of the Italian TV networks, all together on the screen.



Rai Premium HD	MEDIASET	Rai Sport + HD	Rai Storia HD	Rai News 24 HD		SUPERTENNIS	Real Time HD	HD	Rai Scuola HD
RADIO T P FRECCIA	Radio TV Italia HD	RTE	HSE24	Giallo HD	<mark>Rai</mark> Gulрнd	Rai Yoyo HD	arte	RDS SOCIAL TV	
CADO BALLAR	HD	MOTOR TREND	English	ALJAZEERA HD			TRTW@RLD	WORLD H D	FRANCE 24 français
ENGLISH		00	euronews. HD	CGTN	CGTN DOCUMENTARY	KBS WORLD	《CTV/4 山文国际	SAMMARINO	TELEPACE

more info www.tivusat.tv



"Since its foundation CBC has developed into one of the leading TV production, IT, playout and distribution companies in Germany. The diversified portfolio with a clear customer- and solution-oriented requirement from broadcasting, studio production, outdoor production, postproduction, teleport, online services, system consulting and system integration enables flexible adaptation to individual customer and project needs. CBC is responsible for RTL, VOX, NITRO, RTL plus, RTL II, n-tv, RTL Crime, RTL Living, RTL Passion, NOW US and GEO Television. In addition, CBC is responsible for the production and broadcast of the international coverage of the Bundesliga on behalf of DFL.

CBC is an enterprise of Mediengruppe RTL Deutschland."



FOKUS

Fraunhofer FOKUS, based in Berlin, Germany, offers its partners the technical know-how and solutions for the realization of modern media applications. Research and development focuses on the implementation of machine learning for media technologies, the interoperable support of various media platforms, the personalization of services and the interaction with these services on a wide range of end devices. For this, Web-based technologies are used consistently. Fraunhofer FOKUS is active in corresponding standardization committees such as ETSI, HbbTV, DASH.IF, W3C and supports industrial partners in the development and evaluation of interoperable solutions. At the HbbTV Symposium 2019, Fraunhofer FOKUS will showcase three of its solutions, namely low latency CMAF based streaming on HbbTV TVs, 360° video for HbbTV, and server and client side ad insertion for HbbTV.

Fraunhofer FOKUS hosts the annual FOKUS Media Web Symposium, which is taking place since 2010. It developed into a well received expert meeting for all topics related to video technologies. The conference, tutorials and workshops of the 9th FOKUS Media Web Symposium on May 5-6, 2020 will cover deep insights in internet delivered media, discussing the newest developments in media meets AI, media meets 5G and media meets scale. In between, coffee breaks and lunch offer the opportunity to network and visit demos and exhibits of Fraunhofer FOKUS and event partners. www.fokus.fraunhofer.de/ go/mws





DOTSCREEN is a leading HbbTV application developer that has been working for most of the major European HbbTV Pay TV operators, namely Freesat in the UK, Freenet in Germany and Fransat in France. Our other HbbTV customers include TF1 & France Télévisions in France, Mediaset in Spain, SVT in Sweden, ERT in Greece and France24 worldwide.

Please come and visit us for a demo on our booth, where we will demo the latest version of Amazin'TV, our HbbTV OpApp User Interface that is also available on other devices (smart TV, smartphones,tablets, game consoles...)!

With headquarters in France and offices in Europe & US, DOTSCREEN is a leading specialized multi-screen application & UI agency. The company has completed hundreds of video applications for smart TV (HBBTV, Tizen, Orsay, Web OS, Netcast...), OTT boxes (Roku,

Apple TV, Android TV), set-top boxes, game consoles (Xbox, PlayStation), smartphones and tablets. Our customers include large and medium-sized pay TV operators (Vodafone, Orange, Telefonica, Freenet, Freesat, Andorra Telecom, Net+...) and TV/VOD companies (Disney, HBO, Fox, Turner, ESPN, Beinsports, TF1, CBS, Mediaset, France Télévisions...).





A groundbreaking new service by HD PLUS

Today's world owes much to the ancient Greeks and famous thinkers from Athens: democracy, the most tragic dramas and funny comedies, but also math lessons, world maps and much more. Could there be a better venue for the HbbTV Symposium 2019 to talk about innovations like the first HbbTV Operator App? Exactly!

HD PLUS has launched the world's first HbbTV Operator App in spring 2019. Now being directly integrated in 2019 TV sets of Panasonic and Samsung, the new HD+ is dramatically improving the user experience for customers with the all new "HD+ Komfort-Funktion" (value added services). It enables instant restart of selected programs, allows access to 7-day-catch-up TV services and provides an innovative, interactive TV guide including customizable search patterns. It is a game changer for exploring, finding and using content and finally bridges the gap between linear TV and non-linear services like catch-up TV services. Customers do not longer need to fiddle around with their remote control, switching between TV and non-linear services. This makes watching television in best HD and UHD quality via satellite easier and more convenient than ever before. As a result, we are lowering the entry barriers for HD, UHD and the use of non-linear offers via the TV all at once. Let's talk about this groundbreaking new service in Athens!

Join the hybrid (r)evolution of TV

BUILDING HYBRID TV EXPERIENCES

Video experience is hybrid, it is broadcast, it is mobile, it is web, it is SmartTV, and it forces broadcasters and TV operators to rethink their offering. The evolution is picking up speed. You can rely on our help to understand it. Discover our tools:

- Icareus Suite TV & Video Cloud
- Icareus Playout trusted broadcast platform
- Icareus Addressable TV Ad-tech platform
- Icareus Audience Measurement solution

Icareus is your partner for TV and Online Video solutions.

Let's work together for better video experiences!







IRT, the broadcast research institute of public broadcasters in Germany, Austria and Switzerland, has been one of the main founders of the HbbTV initiative, and since then plays a key role within showcase & service prototyping. IRT hosts interoperability workshops and provides intensive seminars on HbbTV and HbbTV 2 targeting decision makers and software developers.

At the HbbTV Symposium 2019 IRT demonstrates a number of advanced HbbTV showcases:

- a prototype of the new DVB-I standard working with regular broadcaster DASH streams and HbbTV broadcast services

 a cooperation with TARA Systems
- integration of OTT platforms and HbbTV which is based on the Inaris HbbTV Middleware for Android TV by TARA Systems



- synching IP delivered audios with broadcast video on both the TV device and a mobile device for multiple usecases (additional language versions, audio description, dialogue enhancement)
- the "universal launcher" which allows to push additional information and interaction components from a broadcasters HbbTV application onto a mobile device in a flexible and generic way
- targeted advertising using broadcast spot replacement

IPONWEB EMPOWERING THE FUTURE OF ADVERTISING

IPONWEB is a pioneer and global leader in the engineering of advanced programmatic, RTB, and media trading platforms across digital, TV, DOOH, and audio. We partner with major brands, agencies, broadcasters, media owners, and technology companies to solve the biggest challenges facing advertising today.

IPONWEB specialises in developing bespoke, data-driven platforms and technology solutions that help our clients put their proprietary data assets and advertising footprint to work by using machine learning to identify and predict user behaviour to achieve better marketing outcomes. With more than 15 years experience, driving innovation in the programmatic space, IPONWEB is the preferred technology partner that many of the world's leading industry players rely on to successfully power their advertising businesses.

White Label UI Including:

- Sales Automation Unified Decisioning
- Audience Management Yield Forecasting



IPONWEB has been developing Ad Technology solutions for the video, broadcaster & Advanced TV space since 2015. From pioneering the world's first programmatic TV SSP for Dish Networks, to Audience-Buying sales workflow and TV-buying platforms for broadcasters and agencies, IPONWEB is at the forefront of TV advertising technology innovation. We are focused on delivering solutions to empower local and regional broadcasters with the marketplace, tools and infrastructure required to navigate the business transition to audience based buying & selling - while maximizing the monetization of their disparate TV assets.

For more information on IPONWEB's solutions, please visit iponweb.com or contact our sales team at sales@iponweb.com.

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ABOUT MARLIN

Marlin DRM is an open-standard content protection system for audio-visual media distribution ecosystems and associated consumer devices and services.

Companies worldwide are involved in Marlin's membership as partners, adopters, developers, and trusted services providers.

HISTORY AND FOUNDERS

Marlin started in January 2005 when five companies—Intertrust Technologies, Panasonic Corporation, Royal Philips Electronics, Samsung Electronics, and Sony Corporation joined forces to develop a next-generation content protection technology.

Today, Marlin DRM is much more than a technology specification. Companies that want to deploy a content protection solution can work with one of several Marlin solution providers. For example, Intertrust offers a comprehensive Marlin-compliant solution that includes a hosted service and SDKs for mobile apps and embedded devices.

A THRIVING OPEN ENVIRONMENT

Several national initiatives and other standards bodies have adopted Marlin. YouView in the UK, TivùOn! in Italy, and the IPTV Forum Japan currently use Marlin DRM exclusively as their content protection technology. Since the Japanese initiative kicked off in 2007, Marlin technology has been used in the vast majority of popular Internet TV services in that country. Marlin is also the most widely deployed DRM in China and Southeast Asia.

In addition, a growing number of consumer devices, including set-top boxes, network Blu-ray players, and smart TVs from most major manufacturers, are Marlin-enabled. In all, there is a growing base of more than one billion Marlin-enabled devices in the global market.

MARLIN DEVELOPER COMMUNITY INNOVATION ENGINE

The Marlin Development Community (MDC) is the main organization driving the development of Marlin DRM through an open community development process. The MDC is responsible for publishing Marlin specifications and driving developer reviews, updates, and specification enhancements. This openness enables any member of the community to contribute code.

For more information please visit MDC at www.marlin-community.com.

MARLIN TRUST MANAGEMENT ORGANIZATION (MTMO)

The Marlin Trust Management Organization (MTMO) grants commercial licenses for deploying Marlin-based devices or services. The MTMO ensures that Marlin implementations are tested, secure, and market ready. It also ensures all Marlin solutions conform to appropriate standards and can interoperate.

For more information please visit MTMO at www.marlin-trust.com.





Suitest is the first and only object-based, codeless test automation and debugging tool for OTT apps. Our revolutionary technology allows for automating test scenarios on real retail living room devices. Automation is the key to scaling and maintaining the continuous quality of your OTT app. Suitest's approach to automation eliminates repetitive manual efforts. Instantly becoming a test automation expert with the codeless Test Editor or using APIs to integrate with an existing suite. Intuitive test authoring features and effortless execution across hundreds of local and remote devices enable QA teams of all sizes to dramatically improve their testing efficiency, coverage and feedback time.

www.suite.st

Sofia Digital brings your content and television services to various smart terminals. We specialize on open standard TV platforms, over-the-top streaming services and Internet technologies. Our typical projects consist of development of new TV services, made available both in broadcast and broadband.

Sofia Digital's HbbTV technology and applications are used for example in Finland, Spain, Germany, Hungary, Estonia, Turkey, Malaysia and Singapore. At HbbTV Symposium Sofia Digital is showing some interesting HbbTV case examples, for example: Spanish HbbTV based LOVEStv service provided by Cellnex, as well as Singaporean and Malaysian HbbTV services, multiple participation TV and program-related services from Finland and HbbTV Operator Apps. Recently Sofia Digital has upgraded our testing services for Smart TV and HbbTV. The core asset in the testing is Sofia Digital's TV laboratory with up to 100 television/ STB, and most of the Smart TVs / HbbTV receivers product families from the major manufacturers since 2015. The testing service draws from the experience of our NorDig logo testing regime since 2007 and from our extensive applications development in HbbTV and Smart TV.

Sofia Digital works in close co-operation with the TV industry and manufacturers. As an active member of the HbbTV Association we are able to provide the best possible level of interoperability for HbbTV and MPEG-DASH deployed in global TV markets.



PRESS THE GOLDEN BUTTON AND START YOUR CHANGE!







Book a meeting anytime – email marketing@vewd.com



Yotta Media Labs

BROADCAST

Now

Next

101 The Big Cam

Operator Applications as a Service

Key features and benefits:

- Pre-integrated with Panasonic & Samsung TVs, and Skyworth & Arion STBs
- Supports different CA vendors

BIGTN BIG TV

he Big Ca

- Supports online and offline operation
- Provides instant restart and catchup services through an integrated player

Roadmap features:

- Tailored to your brand, marketing and budget requirements
- Integration with existing backend services
- Advanced real-time analytics
 - Voice control & social media integration, remote control and network client management

Live Demo on the Yotta Media Labs Stand

> Yotta Media Labs are reimagining the global TV landscape with a bespoke offering including consultancy, services and products.

yottamedialabs.com

K NET TV

KINET TV has more than a decade of application development experience.

Our **KiNET CREATOR** is a **unique cloud-based solution for building custom HbbTV apps** with no coding knowledge required. Based on a set of predefined templates, the tool enables TV broadcasters to meet their clients' marketing needs at minimal cost. It is particularly suitable for advertisers who are completely unfamiliar with HbbTV advertising or want to save time and money on tailor-made apps. The tool contains templates designed with respect to the UX/UI specifics of HbbTV, app preview, automated approval process and analytics.

KiNET CREATOR is currently used by FTV Prima for the needs of their clients as well as self-promotion.

www.kinetcreator.com



www.pts.gr

PTS is a leading Broadcast Systems Integrator and Distributor in partnership with world-class Manufacturers.

Having more than 18 highly specialized staff, operating primarily in Greece and Cyprus, expanding in the Balkans and exploring Africa and Middle East.

Our Company offers state-of-the-art solutions and in-depth technical expertise focusing on customer's needs. As a team we can go across the entire value chain with the primary goal to offer value that matters to our clients, to provide high quality after sales service and to achieve long-term success. PTS, with more than 30 years of experience in implementation of tailor -made solutions, has successfully contributed to the Hbb TV application of ERT, the Hellenic Broadcasting Corporation, by providing and supporting OTT Encoders. Our Team can design, install and support encoding for HbbTV apps safely and effectively for Broadcasting Industry.

We are convinced that the hybrid technologies can move Broadcast to its future and we are dedicated to promote the most advanced Hybrid TV solutions being also committed to Premium Quality for our Customers and End-Users.

PTS is a Top Technology Team to Trust!



Telmaco SA is a leading European Broadcast And Audiovisual Systems Provider and Integrator based in Athens, Greece. The company has been operating very successfully since 1975 in Greece and Cyprus, with a branch office in Thessaloniki, Northern Greece.

After the Athens 2004 Olympic Games, Telmaco has expanded its operations internationally and is involved in Turnkey System Integration projects in Northern Europe, the Balkans, Middle East, Asia and Africa.

Using its highly-skilled personnel, recognised in their field of expertise, Telmaco can design, supply, implement and support complete turnkey systems. Telmaco's experience of over 40 years of operation plus its financial credibility guarantees the smooth implementation and support of the most demanding and prestigious project.

Telmaco enjoys the collaboration and partnership of most of the major manufacturers in the industry. Building on close relationships with both our technology partners and our customers enables the right flow of information and technology know-how necessary to design the appropriate solution for each requirement. At Telmaco, we pride ourselves on a high level of technical

support both during and following project implementation and attach great importance to feedback from our customers and partners in order to constantly improve our business operations. Telmaco is continuously adapting and implementing new technologies.

The last years has been involved in designing and delivering HbbTV and OTT solutions for our customers. Since few years now, Telmaco has allocated from their budget a special part covering the training at the manufacturers premises of all our engineers in new products and technologies.



We are ready to cover and properly support all the new developments and evolutions of the market.

VERANCE

Verance[®] digital watermarking solutions are at the forefront of entertainment innovation and set the industry standard for television, movies and music.

The Verance Aspect[™] platform provides a high-performance implementation of the watermarking technologies published in the HbbTV "Application Discovery over Broadband" specification and significantly expands the reach of advanced interactivity, targeted advertising and other hybrid services in markets worldwide. Aspect enables these services to be seamlessly delivered across all distribution paths, where they can be discovered and accessed on watermark-enabled HbbTV televisions, even when they are positioned behind set-top boxes not compatible with HbbTV.

Aspect support for HbbTV is available now and already expanding the reach of hybrid services across multiple European markets. Visit www.verance.com for more information.

SPEAKERS BIOGRAPHY

Our international speakers will provide a broad insight into the business and technology aspects of HbbTV. The speakers / moderators are listed in the order of appearance.



Vincent Grivet, Chairman, HbbTV Assocation, TDF

Vincent Grivet, is a graduate from Ecole Polytechnique (Paris France) and Paris Tech Telecom. He worked for eighteen years for the international activities of the Orange Group, including a time as Chief Executive Officer of Wanadoo, Orange's internet services unit in Belgium. In 2006, he was a co-founder of Maxtel, an entrepreneurial Wireless Broadband start-up which obtained significant spectrum rights in a competitive bid. He currently works for the TDF Group, where he is in charge of Broadcast Development and Innovation.



Giorgos Gabritsos, Managing Director, ERT

Giorgos Gabritsos is Managing Director of Hellenic Radio Television (ERT S.A.), a position he also held briefly in 2010. Gabritsos has been working in broadcasting and electronic media for nearly four decades. Following 9 years with the CBS television network in New York in the 1980s, he returned to his native Greece where over the past 30 years he made important contributions in establishing broadcast and pay television in the country. He has held leadership positions with the first private broadcaster MEGA Channel, with pay-tv operators NOVA TV and COSMOTE-TV, with digital terrestrial transmission operator DIGEA and with Greek public broadcaster ERT. He holds BS and MSc degrees in Electrical Engineering from NYIT and from New York University Tandon School of Engineering respectively.



Paul Gray, Research and Analysis Associate Director, IHS Markit

Paul Gray is a Research and Analysis Director within IHS Technology. Gray joined IHS in November 2014, when IHS acquired DisplaySearch, a leader in primary research and forecasting on the global display market. At DisplaySearch, he served as director of European TV research and also covered wearable devices, digital broadcast and semiconductor technology. He conducts in-depth analysis and forecasting of connected TV and 4K Ultra HD. He has over 20 years of experience in market intelligence, marketing and product management. His work includes forecasting, product strategy, investment and R&D decisions. He has been cited as an expert by Nikkei, Los Angeles Times, Le Monde, Financial Times, Electronics Times, The Korea Herald and other publications.



Wilfried Urner, CEO, HD-Plus GmbH

Wilfred Urner is CEO of HD PLUS GmbH, a wholly-owned subsidiary of SES, since May 2009. The company markets the product HD+, an additional range of high definition channels which can be received via the Astra satellite system in Germany. Users of HD+ have access to more than 60 HD channels as well as 3 UHD channels - including RTL UHD. Furthermore Urner has been appointed EVP Media Platforms and Product Development SES Video in October 2017, responsible for the development and marketing of alternative media platforms globally. From 1994 to 2002 the graduated economist was employed in the Kirch Gruppe. He directed the BetaDigital which rebranded to SES Platform Service in April 2012 to then turn into today's MX1, led by Urner until January 2019.



Ron Wheeler, Former SVP, Content Protection & Technology Strategy at Twentieth Century Fox

RONALD C. WHEELER was, prior to Disney's acquisition of 21st Century Fox, Senior Vice President, Content Protection and Technology Strategy for Twentieth Century Fox. In this role, he handled business and legal affairs for a wide range of cutting-edge content protection and technology projects, including the HDR10+ JV with Samsung and Panasonic, the China DRM technology and licensing regime, and, most recently, multi-industry efforts to develop a content protection technology and licensing regime for ATSC 3.0 broadcast content. Prior to taking that position, he was Senior Vice President, Content Protection, in the Fox Group Legal unit of Fox Entertainment Group (FEG) from 2001-16, where he built, and led, FEG's global content protection team, developed and executed FEG's global content protection strategies, counseled FEG's senior executives on all aspects of content protection, acted as Fox's primary liaison to the MPAA and MovieLabs (where he also represented Fox as a director), worked on a variety of domestic and international legislative and regulatory matters (including the FCC's "broadcast flag" regulation), and was a featured speaker at numerous conferences. He currently serves as Vice-Chair of the International Copyright Treaties and Laws Committee of the ABA's Intellectual Property Law Section. He earned his J.D., magna cum laude, from the University of Minnesota Law School, and his B.A. from Yale University, and is a member of the California and New York bars.



Dr. Joern Krieger, Freelance Journalist

Jörn Krieger has been working as a freelance journalist, specialised in digital media, broadcast technology, convergence and new markets, since 1992. His articles are published by German and international industry publications such as Broadband TV News, InfoDigital, Digitalmagazin, Cable!vision Europe and Medien Bulletin. Jörn also takes up University lectureships, conducts workshops and seminars and hosts panel discussions at industry events such as Deutsche TV-Plattform Symposium, ANGA COM, Medientage München and IFA Berlin.



Jon Ducker Head of Product Management, Digital UK

Jon Ducker is the Head of Product Management at Digital UK, where he is responsible for developing the proposition and product strategy for the highly successful connected TV platform Freeview Play. Jon joined the team earlier this year, and has spent the last 11 years in various senior product roles working on large scale video platform deployments, including Liberty Global's Horizon 4, Vodafone TV, YouView and Virgin Media's TiVo service.



Anders Hebert Product Owner, SVT

Anders Hebert is the product owner for SVT:s VOD service SVT Play on TV platforms. He has a background in engineering and has previously been working with video transcoding, metadata API:s and broadcast automation.



Yiannis Vougiouklakis Head of digital strategy, ERT

Managing a team of 80+ employees staff engineers journalists, electronics, production and post production staff, etc. with a budget over of 1.5 million euros. The company today boasts several technology projects that have been implemented to enable multimedia to enjoy multimedia content through a variety of devices and applications such as mobile phones, tablets, pc's, laptops, SmarTV, etc.

The pinnacle of technological developments is the deployment of hybrid TV (HbbTV) services by ERT for the first time in Greece but also in the Balkans. Hybrid TV and the interactive services it offers are now available to citizens by ERT free, interactive. We currently offer for free at least seven apps like: 24 Plus, On Demand, App for the 27 live radio stations, EPG, ERT-Play's (thematic channels), Whether app, App for the Football League. Latest we lunch services such as subtitles selection and multicam viewing of sport events. The ERT is devoted to making public service media. In a continues process my

vice media. In a continues process my division supports and strengthen public service media, provide first-class media services and offer our customers innovative solutions.



Stathis Michail Managing Director, epeegee

Stathis has a long history with OTT services starting back from the old Teletext days. He now manages Epeegee, a company that represents in Greece several leading software houses specializing in developing applications for smart phones, tablets, smart TVs, set-top boxes, game consoles and HbbTV.



Xavier Redon Hernández Product Manager, Cellnex Telecom

Product Manager at Cellnex Telecom, Treasurer and SG member at HbbTV Association and Associate Professor at Universitat Autònoma de Barcelona, Xavi Redon has been involved in Terrestrial Television evolution in Spain since 1996 moving forward projects like UHD DTT transmissions, TDT Híbrida certification, TDT SAT, ASO or the Spanish DTT network



Angelo Pettazzi Co-Chair of DVB CM-TA; Chair Marketing & Education WG HbbTV, Strategic Marketing Manager, RTI

Angelo is an experienced interactive media professional. He has worked in technical television departments focusing on digital technology and specifically on interactive TV. Angelo is overviewing the standardization bodies activities mainly in the interactive TV field; he is involved in the open technical standard designing working group of the DVB - the Digital Video Broadcasting Project for the delivery of digital TV - and of the HbbTV Association - the Hybrid Broadcast Broadband TV, a global initiative aimed at harmonising the broadcast and broadband delivery of entertainment services to consumers through connected TV devices.



Dr.-Ing. Peter Neumann Specialist, Platform Solutions, CBC / Mediengruppe RTL

Peter Neumann studied Electrical Engineering and received the Dipl.-Ing. degree (2009) as well as the Dr.-Ing. degree (2017) from Technische Universitaet Braunschweig (Germany). In 2010 he started his career as a researcher at the Institute for Communications Technology of Technische Universitaet Braunschweig, where his research interest was on system theory and technology for heterogeneous broadcast/broadband networks enabling cost-effective and spectrum-efficient content delivery (Dynamic Broadcast). In 2016 he joined the Platform Solutions department of CBC Cologne Broadcasting Center GmbH. Since then he has been working in the field of program distribution with a focus on hybrid broadcast/broadband TV (HbbTV) and addressable TV (ATV).



Moritz F. Wuttke SVP Commercial, TV Solutions, IPONWEB

Moritz, leads as SVP Commercial the business side of the TV Solution group inside IPONWEB. Until end of 2018, he was the Director Advanced TV at Group IMD-Honeycomb and previously COO of Honeycomb. tv, London, the leading Programmatic TV Video Distribution Platform. Previously he held positions as MD Asia, Adstream Holdings and on their Board from 2005 to 2009 and joined in 2010 as COO. Moritz has been on the board of several Chinese Advertising and Media companies, while he was working in China from 2005 to 2009 for Publicitas as CEO Asia. Beforehand he has been working and living in Switzerland where he was Member of the Executive Management Board of PubliGroupe (PUBN, Swiss stock exchange) and served on the boards of Yellow Pages, Online Classifieds, and several International Digital and Media Companies like 24/7Real-Media (ex-NASDAQ) or CPX Interactive.



Kay Mysliwiec Teamlead Development OTT, ProSiebenSat.1 Media AG

Kai works for ProSiebenSat.1 since 2004 in various roles and projects trying to connect the TV world with the digital internet cosmos. Basically he wants to make TV more interactive. Since 2012 he is responsible for the technical part of HbbTV and since 2015 he is heading the internal HbbTV development team with a focus on Addressable TV.

Before working for ProSiebenSat.1, Kai studied Physics at the Ludwigs Maximilan Unversity of Munich but he was so excited about the upcoming internet that he cofounded an internet agency in 1997 which had more than 20 employees 3 years later.



David Uhlmann Video Solutions Consultant, Google

David Uhlmann is a Video Solutions Consultant for Google EMEA. He is an expert on Dynamic Ad Insertion and its complexities for cross-screen ad insertion from the player to the cloud. Prior to working at Google, David was CTO of the social video streaming agency Streaming Tank and co-founder of the Spanish digital agency Ittakus.



Timuçin Bilgör President, BUBA Ventures

Timuçin Bilgör graduated from Boğaziçi University Business Administration Department and then studied Politics at Heidelberg University in Germany.

Bilgör, was among the founder partners of Yemeksepeti.com in the 2000s.which is Turkey's first and largest food ordering platform. Yemek sepeti was sold to Delivery Hero in 2015 at a value of \$ 565 million. In the same period, he founded Tim Contact Media Agency and MedyaClick; and afterwards, he was one of the investors of the DoubleClick company which was bought by Google. In 2004, he began to be interested in the patented technology and moved to the UK.

In 2014, Bilgör founded 'Boğazici University Angel Investor Network (BUBA) that is the first university-based angel investment network in Turkey. BUBA has become the strategic partner of Garanti Bank and Vodafone in the field of entrepreneurship. In December 2015, it received the best Angel Investment Network award in Southeast Europe. At the same time, he was a participant and sponsor of Intellectual Property (IP) Conferences initiated at Bogazici University to spread the intellectual, industrial and property rights throughout the country.

Timuçin Bilgör teaches entrepreneurship to senior students at Boğaziçi University Faculty of Business Administration since 2014.

Timucin is the investor of TVEkstra, having a long history in the industry. The pace of innovation has exploded, turning our industry upside down. Innovation is reshaping media: What we plan. How we purchase. Even how we define what we do. We want to affect this change! Not just follow to it. #The_era_of_Addressable_TV_ is_starting now!



Fereidoun Akhavanmalayeri Manager of Interactive TV, IRIB

Born in 07 jun 1972. Graduated in hardware engeeniering and worked at IRIB(Islamic Republic of Iran Broadcasting)from 1998 up to now. He was the IT manager of radio faculty of irib from 2006 till 2016 for ten years.he and his team designed and implemented the chain of product automation and archive in radio with SAAT company. He is the manager of development and protection of interactive tv in new media branch of technical faculty of IRIB.



Fatemeh Fallahivishkaei Senior Project Manager, IRIB

Fatemeh Fallahi works as a Researcher at IRIB R&D. She received M.Sc degree in electrical engineering from Tarbiat Modarres University in 2009. After that, she joined IRIB R&D . In 2014 she started research on IBB standards. She is one of the key members of HbbTV team in IRIB and she launched a trial of HbbTV in IRIB &D lab in 2017. Fatemeh is the director of the committee of specifying the HbbTV profile and minimum requirement of the digital receiver in Iran. She set up a test center in the laboratory to test HbbTV receivers. Fatemeh has HbbTV training courses in IRIB, too.



Daniel Grunt New Media Director, FTV Prima

Daniel Grunt started in FTV Prima in 2012. Before Prima he worked as New media Director in Sanoma Magazines. More than two years he managed online department in the biggest Czech TV – TV Nova, where he build the Internet division. Daniel managed the second largest Czech internet portal Centrum.cz and he also worked as Media manager in Nokia Czech Republic.



Mikko Karppinen Director & Co-Founder, Icareus

Mikko Karppinen is Icareus co-founder and was leading the HiTV project on Icareus side. He has extensive HbbTV experience from various countries and projects over the past 10 years.



Thomas Follin CEO, SALTO



James Jackson Technology Director, Digital UK

James Jackson is the Technology Director of Digital UK, where he is responsible for the management of the technology, specifications and systems supporting Freeview - the UK's largest and most successful TV platform. James spearheaded the successful technical development and delivery of the Freeview Play offering and today leads the technology team ensuring the platform continues to deliver the best possible viewing experience for millions of viewers. James has extensive experience of developing and managing distribution services. Prior to joining Digital UK in June 2015, he held a range of senior roles within the BBC's strategy, distribution and technology teams, encompassing commercial and engineering management.



Alberto Sigismondi CEO, Tivú

Alberto Sigismondi is an expert in digital television, he works for Mediaset as Director of Digital Platforms Development. In 2008 he has been appointed CEO of Tivù S.r.l., the JV between RAI, Mediaset, Telecom Italia Media. He has been working in television since 1978, with different roles including Strategic Marketing Director. He is 59, lives in Milan, married with two children. Graduated in Philosophy, he taught Media Studies at University of Milan. He has chaired the Free TV Alliance recently created among the main european free to air satellite broadcasters.



Robert Curwen Head of Broadcast, Go to Market Partnerships EMEA, Google

Robert joined Google in 2013, and as Head of Broadcast, GTM Partnerships, is responsible for developing the Google Ad Manager product & sales strategy for broadcasters in EMEA.



Régis LE ROUX President and CEO, ENENSYS

Régis started his career in 1997 at Wandel&Goltermann (today known as JDSU), as Product Manager for the Digital Broadcast product range and introduced the first Real-Time MPEG transport Stream analyzer on the market. In 1999, Régis joined Thomson Broadcast Systems as System Solutions Manager, focusing on innovative architecture for Cable TV and Video over IP Networks. In 2002, Régis was then hired by TDF as Marketing & Sales Manager to study the launch of new MPEG-2 monitoring methods developed in the TDF CCETT research labs.

Régis founded ENENSYS in 2004. In addition to his INSA degree in EEE, Régis holds a Master's of science in Telecommunications from the University of Strathclyde, in Glasgow, Scotland, and a Masters of Business Engineering from the Ecole Nationale Superieure des Telecommunications (ENST) de Bretagne, France.



Francesco Moretti Deputy CEO, Fincons Group

Francesco started his professional life in Fincons Group even prior to university when, alongside his father the CEO Michele Moretti, he lived and breathed the company's business culture and experienced its expansion throughout Italy and in Switzerland. After working in the USA he therefore naturally resolved to apply his skills to Fincons Group.

Working his way through the company, Francesco tackled different roles, actively taking part in consolidating the Group's business and market positioning and becoming Deputy CEO in 2013. In this role, he supports the CEO Michele Moretti in defining the company's strategic direction and is driving the Group's internationalization, managing the opening of the new office in the UK in 2016, in USA (New York and Los Angeles) in 2017 and in Germany (Munich) in 2019.



Jon Piesing Vice-Chair HbbTV, Chair DVB-TM, Director Standardisation at TP Vision, TP Vision

Jon Piesing is the vice-chair of HbbTV. He played a major role facilitating the convergence of the original French and German initiatives which together become HbbTV. He is a member of the Steering Board of the DVB project and the Steering Committee of the CTA Web Application Video Ecosystem (WAVE) project. Jon has been a leading figure in the development of specifications for integration of TV and interactivity for more than ten years. This has included being the chairman of groups in DVB, the Open IPTV Forum and the UK DTG.

Jon is now Director, Standardisation for TP Vision (who manufacture Philips TVs for Europe and a number of other territories). He has previously held senior positions related to standardisation in several different units of Philips.



Klaus Merkel Senior Engineer, Institut fuer Rundfunktechnik

Klaus graduated from the Technical University Munich in telecommunications engineering in 1992 and then joined the IRT as scientific engineer. Since 1995 he is engaged in various working groups in the definition and market introduction of open and interoperable platforms for digital interactive television.

With various standardisation activities being an important part of this work, he was deeply involved in the launching phase of the HbbTV initiative in 2009. He coordinates IRT's activities related to HbbTV and is still active in contributing to the further development of the HbbTV standard.

Beyond standardisation, many of his activities are related to the practical application of HbbTV in operational market environments. This includes support for both public and commercial broadcasters in all questions related to the practical use of HbbTV, specifically in the context of new service types or new HbbTV features.



Peter MacAvock Director EU Innovation R&D, LG Electronics; DVB Chairman, EBU Technology and

Development; DVB Peter MacAvock is Head of Delivery, Platforms and Services, EBU Technology and Development and DVB Chairman. At EBU, he heads the team responsible for innova-

ne neads the team responsible for innovation projects relating to delivery technologies, spectrum management and software platforms. Amongst other things, he is responsible for spectrum matters and high level projects related to Hybrid Radio and Television including HbbTV, DVB, RadioDNS and others. In July 2016, he was elected Chairman of the DVB Project, and retains a role as co-chair of the HbbTV Requirements Group. He is an Irish national living and working in Switzerland.



Michael Schäfer Software Engineer, Tara Systems

Michael joined TARA Systems in 2010 and was directly from the beginning involved in the development of TARA's HbbTV solution. During the specification phase of HbbTV 2, he participated in the working groups for companion screen and media synchronization. Today, Michael is responsible for TARA's HbbTV product and focuses especially on HbbTV deployments for OTT and hybrid services.

Michael holds an MSc degree in Computer Science from Munich University of Applied Sciences. He participated in various research projects related to HbbTV and MPEG-DASH with partners like IRT and Fraunhofer FOKUS.



Teun van der Veen Senior Consultant, TNO

Teun van der Veen is Senior Consultant in the Networks department in TNO. In this position he leads the Media Networking team and is responsible for R&D projects in the Dutch and European telecom markets. Teun chairs a number of informal European operator work groups on broadband and IPTV.

He leads the TNO-initiative on HbbTV Operator Applications and works with operators and manufacturers towards deployment in 2018 and beyond. He is supporting HbbTV in its marketing activities, for instance by driving the publication of the recent whitepaper on the OpApps standard. Teun has coordinated a consortium of HbbTV members to create and review test assertions for this standard.

He founded TNO's Ultra-fast Broadband seminar, a world-leading event on technical developments in broadband that celebrated its 10th edition in 2018, illustrating the fact that Teun has always enjoyed connecting people and knowledge.

Before joining TNO in 2003, he was lead photonic chip designer at C2V, Alcatel Optronics and Kymata Netherlands.

Teun holds an MSc degree in Applied Physics from the University of Twente in The Netherlands.



Alexandre Silva Pratas Gabriel Research Engineer in Media Technologies, TNO

Alexandre Gabriel is a researcher at the Networks department in TNO focusing on media technologies. He actively participates in a series of R&D projects ranging from EU research projects to collaborations with Dutch and European telecom operators. He has also contributed to standardization efforts such as 3GPP and MPEG. He has recently joined the TNO-initiative on HbbTV Operator Applications and works with operators and manufacturers towards deployment. He is supporting HbbTV in its marketing activities, driving the publication of the recent update to the whitepaper on the OpApps standard and helping in the organization of the 2019 symposium.



Martin Faehnrich Manager / Standardisation, Panasonic

Martin Faehnrich was born in 1967. After his degree in telecommunication electronics ('Nachrichtentechnik') in 1995, he started as development engineer in CCTV business, developing video hardware, embedded software, video compression, and network protocols for professional largescale CCTV systems. In 1999 he joined Panasonic, had been promoted guite guickly to senior engineer, then leader of a team for video signal processing. In 2002 he was promoted to assistant-manager and appointed to set-up a section for standardisation. Since 2008 he is manager of the standardisation section at Panasonic Langen Development Centre. Today he is with his team in charge of Panasonic's AV related standardisation activities in Europe at Panasonic Business Support Europe GmbH. He is also active in top level activities at various industry associations, including HbbTV Steering Group.



Ralph Edeine Direction des Nouvelles Applications, Responsable Technique FRANSAT & Equipements Grand Public, Eutelsat

Ralph EDEINE is currently in charge of the technical activities of FRANSAT, French DTH platform operator, fully-owned subsidiary of EUTELSAT, since june 2009. He has worked in the definition of the FRANSAT CONNECT HbbTV operator portal. He managed the development of additional FRANSAT CONNECT API features for the FRANSAT CONNECT Setup Boxes and implementation of the CI+ SAS resources within HbbTV to propose direct integration of linear and OTT pay tv offers for the FRAN-SAT CONNECT IDTV with CI+ CAM Modules. Prior to this, he developed the FRANSAT PRO specifications for the SAT>DVBT Head ends with CI CAM PRO modules (0.5 Millions of viewers) and the FRANSAT DTH specifications for IDTV with CI+ CAM modules. Ralph EDEINE is currently member of the French "FORUM AUDIOVISUEL NUMERIQUE" group, HbbTV requirement group and Free



Erik Gazzoni Director of Product, SmarDTV

TV Alliance technical taskforce.

Erik Gazzoni is currently in charge of Product Definition for SmarDTV Global. As such he's looking after the DVB-CIPlus roadmap to define next generation Conditional Access Module Product Line. Before he was Head of Cable and IPTV products where he led the Product definition for two-way networks. Prior to SmarDTV, Erik was Director of Marketing Digital TV for SCM Microsystems Inc., Fremont CA. where he managed several Digital TV projects (first WW USB/1394 PC DTV receiver, CableCARDs for both US and Korean markets). He has been involved in various Standardization/ Engineering committees and Working groups like Society of Cable Telecommunications Engineers (SCTE Digital Video Subcommittee), OpenCable to DVB-CI/CIplus initiatives. He received his Master of Computer Sciences and Electronics from one of the top of French Higher School of Engineering (Ecole Centrale).



Andy Carr Director of CE, Freesat

Passionate about television and technology, Andy loves delivering great products. In Freesat, overseeing the commercial relationships that drive the growth of Freesats product range. With more than twenty years experience in the technology industry, connecting people, technology and products to produce strong relationships with stakeholders. A track record of working closely with retailers to establish market demand for new and innovative products, providing clear commercial insight.



Oliver Botti Head of International Business Development and Innovation, Fincons Group

After 25 years divided among Research&Innovation, Operations and Sales&Business Development, Oliver is today in charge of developing international markets as well as portfolio innovation. In the Media sector specifically, he is involved in Omnichannel Video Distribution and Monetization, introducing OTT and Hybrid TV with both HbbTV and ATSC3.0, Addressable TV Advertising, AI/ML-based Video Augmentation and Accessibility Enhancement, Multimodal UX Design, VR/AR, Big Data and Advanced Analytics, and the application of these KETs to Audience Segmentation, UX Personalization and User Engagement.



Madeleine Noland President, ATSC-Forum

Madeleine Noland is the President of the Advanced Television Systems Committee Inc. Widely respected for her consensus-building leadership style, she chaired the ATSC technology group that oversees the ATSC 3.0 next-generation broadcast standard before being named ATSC President in May 2019. Previously, she chaired various ATSC 3.0-related specialist groups, ad hoc groups and implementation teams since 2012. A 15-year industry veteran, Noland held key technology management and standards roles at Backchannelmedia Inc., Telvue Corp. and LG Electronics. She received TV NewsCheck's "2019 Futurist" Women in Technology Award and was named one of 2018's "Powerful Women in Consumer Technology" by Dealerscope magazine. In 2016, she received the ATSC's highest technical honor, the Bernard J. Lechner Outstanding Contributor Award. She graduated cum laude from the University of Massachusetts.



Jerald N. Fritz Executive VP Strategic and Legal Affairs, ONE Media 3.0, LLC (Sinclair)

Jerry oversees long-term strategic planning and government relations for ONE Media 3.0, a subsidiary of Sinclair Broadcast Group. Jerry plays a critical role in supporting the adoption and deployment of the broadcast industry's "Next Generation" (ATSC 3.0) transmission standard both domestically and internationally, while shaping ONE Media's ideas for the new broadcast platform. Jerry's over 50year tenure in the communications industry includes stints as the long-time General Counsel and Strategic Planning head for a respected group-television station owner, as well as time on the Board of Directors for the National Association of Broadcasters, as an ABC Affiliate Governor, Chief of Staff to FCC Chairman Fowler during the Reagan Administration, private communications law practice and many years teaching communications law and policy at several universities and law schools.



Joe Winograd CTO, Verance

Joe Winograd is the Co-founder and Chief Technology Officer of Verance Corporation and has directed the company's development of watermark technologies and solutions since 1995. Dr. Winograd led Verance's efforts to establish the company's technology as an industry standard for movies, television, and music and has guided its deployment in hundreds of millions of consumer electronics and entertainment products. Dr. Winograd holds a Ph.D. in Electrical Engineering from Boston University and B.S. in Computer Science from the Georgia Institute of Technology.



Raj Patel CEO, Yotta Media Labs

Entrepreneur with over 25 years experience unlocking commercial value in the media industry, founder Raj Patel is now creating innovative new products for global audiences and collaborating with leading technology companies.



Yvan Barbotin Product Manager, ENESYS

Yvan Barbotin has over 10 years of experience in the Telecommunications industry. He joined ENENSYS Technologies in 2011 as developer for IP switches products. Starting in 2015, Yvan worked as developer and project manager for Targeted content solutions. Expert of this product line, Yvan is now Product Manager for AdsReach solution. AdsReach is ENENSYS solution for regional and household (HbbTV & ATSC3.0) ad insertion. Yvan holds an engineering degree from ENSSAT (Lannion, France).



Jason Power Senior Director, Commercial Partnerships and Standards, Dolby

Jason Power is Senior Director, Commercial Partnerships and Standards at Dolby, based at the European headquarters in London. In this role, he works to enable ecosystems for new content experiences, working with partners in content production, service distribution, consumer electronics and standardisation. His current activities focus on enabling the market success of next generation audio and high dynamic range video. Jason has previously led other successful efforts to introduce several new technologies within the European broadcast industry including 5.1 surround sound. His efforts to establish practical broadcast workflows for surround sound were recognised with a Technical Emmy Award in 2006. Jason is an active contributor to several industry forums including DVB, HbbTV and DTG, and currently chairs the DVB Commercial Module subgroup on Audio Video Content, CM-AVC. He holds a BSc in Applied Physics with Electronics from Aston University and an MBA with Distinction from London Business School.



Fabian Birgfeld Senior Director, Commercial Partnerships and Standards, W12 Studios

Fabian co-founded W12 seven years ago. He has grown it into a trusted partner in product strategy and service design for the world's largest service providers, broadcasters, content creators and consumer electronics brands including Intel, Verizon and Samsung. In 2018, W12 joined forces with Tata Consultancy Services (TCS) to establish TCS Interactive's centre of excellence for design. After graduating a Bachelors in Economics from Harvard and a Masters in Architecture from Princeton, Fabian worked as a management consultant. His interest in architecture translated into an interest in digital space and a career in UX Design. After roles in major New York agencies, Fabian served as Head of Service Design & Strategy at the BBC and Director of UX at Intel. Fabian has received the D&AD Yellow Pencil, the F1 Connectivity Innovation Award and the TV of Tomorrow's Individual Leadership Prize. He is also an Intel Capital mentor.



Louay Bassbouss Senior Project Manager R&D, Fraunhofer Institute for Open Communication Systems

Louay Bassbouss is a scientist and senior project manager R&D in the business unit Future Applications and Media (FAME) of the Fraunhofer Institute for Open Communications Systems (FOKUS). He works on Future Web Applications, Multiscreen Technologies & Standards, and 360° Video Technologies. Louay has actively participated in various standardization activities at W3C, particularly in the Second Screen Working Group. He is the test facilitator of the W3C Presentation API.



Chiara Pettinelli Product Owner HbbTV, M6 WEB

Chiara and Nicolas are teammates and part of the awesome M6's hbbtv team. Chiara is product owner, Nicolas is development team leader and they have +10 years of experience. Teamwork addicts, they are always thrilled to test something new, learn and share, they love addressing new challenges and turning obstacles into opportunities.



Nicolas Afresne Development Team Leader, M6 WEB

Chiara and Nicolas are teammates and part of the awesome M6's hbbtv team. Chiara is product owner, Nicolas is development team leader and they have +10 years of experience. Teamwork addicts, they are always thrilled to test something new, learn and share, they love addressing new challenges and turning obstacles into opportunities.



Xinwen Xue VP Product Management, Seraphic Corporation

Mr. Xinwen Xue is responsible of the product management and third-party partnership in SERAPHIC. He is an energetic expert with solid experiences in telecommunication multimedia and DTV technologies. Xinwen owns sharp sense and rich knowledge for DTV technologies and develops strong partnership for SERAPH-IC across Europe and APAC. He holds the master degree in engineering from Harbin Institute of Technology.



Tim Morgan Managing Director, Eurofins

Tim Morgan is the Managing Director for Eurofins Digital Testing UK, a worldwide leader in testing, quality assurance and certification services for the digital media markets. At Eurofins Tim has led the team that has pioneered the creation of new services and products to test devices for emerging technologies such as IMF, UHD, HDR, DVB-T2, DRM, OTT, HEVC and HbbTV.



Francesc Mas Peinado Engineering Research & Innovation, CCMA

Francesc Mas is Engineer Consultant & Project Manager at Corporació Catalana de Mitjans Audiovisuals (CCMA S.A.), Spain. He graduated in 2001 as Telecommunications Engineer, and upgrade his skills with a Master in Digital TV in 2002 and an Executive Master of Business Administration in 2007. He's specialized in TV & Radio News IP contribution, multi-platform delivery and broadcast & broadband TV services (DTT, OTT, Hybrid TV). Francesc Mas collaborated in TV-Ring European project focused on innovative multi-camera TV services and Hbb4All European project about TV accessibility for impaired people. He also took part in the project for the deployment of Digital TV and HbbTV in Colombia. Nowadays Francesc Mas is participating in two European projects, both focused on accessibility, with the target to foster wider availability of accessible media offerings including also the new immersive 360° contents.



Lars Friedrichs Director, TeraVolt

Director at TeraVolt, responsible for business development and TeraVolt's products SmartPages and HbbTV Suite. Lars studied business at the university of Hamburg and after his degree he worked for Axel Springer Verlag interactive media. Before he joined TeraVolt in 2015 he was 11 years at ProSiebenSat.1 Digital as a Director accountable for all Teletext activities and launched the HbbTV business of the ProSiebenSat.1 Group.



Antonio Vince Staybl CEO, COUCHPLAY Antonio Vince Staybl, CEO of Gofresh, started his career in the music and entertainment industry right after successfully finishing his Information and Design Degree. The 47-year-old Austrian born in the summer of 1969 cooperated strategically with 4 major labels and was a managing director of a ... music label. After the golden age of CDs the "Rethinker" entered the printing industry where he was publishing entertainment-, art- and music- magazines. After innovating in the real product world, Antonio decided to join the digital arena at Telefonica where he worked 3 Years as Digital Entertainment and marketing Manager at iobox and Terra Mobile. In 2007 he founded with Jukka Saarelainen "the best CTO in the world" how Antonio calls him. one ot the worlds first mobile social networks "itsmy. com", which had a peak of more than 2.5 mio users worldwide. In 2008 Antonio was nominated by the Mobile Entertainment Magazine in ÚK, along with 30 other international CEOs incl. Steve Jobs, as Mobile CEO of the year. 2013 he sold parts of the company and made a business switch to "the next multi billion plattform" the Connected TV world. Antonio Vince Staybl is crazy about innovation and dedicated to transform linear TV into a brand new interactive TV-experience for everyone via gamification of TV Formats and TV Advertising. His current plans are simple but big: "We are building Netflix for Games" said Antonio 2016 at the Smart TV Media Conference in Munich and the visionary added "we will completely focus on open standards like HbbTV and HTML5 as well as on strategic cooperations with all european TV Stations." Antonio Vince Staybl proofes his professionalism and expertise with inovative presentations and speeches to the audience continuously in Oxford, New York, Paris and London and many more cities all over te world.

Thank you all for your contribution for making the 8th HbbTV Symposium & Awards a great success!

Looking forward to seeing you at the 9th HbbTV Symposium & Awards, dates and location will be announced shortly.

