



## 2017 Trends in Broadcast



Wallonia/Belgium USA

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San Francisco

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## 1. Introduction:

Since almost two decades, Internet has reshaped the media world and especially the print media one. This highly widespread tool is now used by 3.8 billion people, that means half of the global population. A lot of things evolved in the broadcasting field leading media-related activities to change. Mobile operators are providing unlimited data access to its customers, television programs are gradually replaced by video on demand and web series are becoming more popular than traditional content. All these innovations drive people to look for the “next big thing”. This approach is really positive because it gives a chance to all broadcasters to have a try on the market. Last year, NAB Show hosted more than 103,000 attendees (26,893 of those representing 186 countries outside the U.S.) with 1,874 exhibitors covering 1,063,380 net square feet. This year, even more attendees are expected.

## 2. The NAB Show throughout history:

The National Association of Broadcasters was created almost at the same time as broadcasting itself. In 1922, Eugène F. McDonald founded the NAB, “a private trade association established for the purpose of serving the common needs of the broadcasting industry”<sup>1</sup>. The first National Association of Broadcasters Convention was held in New York in October 1923 and gathered only 23 members. The initial mission of the NAB was creating guidelines for self-regulation to establish codes of ethics within the broadcast industry. The first comprehensive legislation to regulate communication was the Communications Act of 1934. At this time, “broadcasting was recognized

as a unique form of communication that would require a different regulatory framework than that of common carriers such as telephony and telegraphy. All of this was then packaged with the philosophy that the broadcast media should serve the public interest, convenience, and necessity”<sup>2</sup>. The Federal Communications Commission (FCC) was also created by the 1934 Act. This agency is responsible for the regulation of interstate



communications by radio, television, wire, satellite and cable in the U.S. Before 1991, the NAB Convention was organized in different places firstly in New York, Chicago and Washington D.C., then in Las Vegas and Dallas, before finding its permanent home in Las Vegas.

Over the years, NAB has also been involved in public issues. The organism was consulted by court and its meaning helped shape the legal landscape of the entire industry (not only including

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<sup>1</sup> <http://www.broadcastbeat.com/nab-started/>

<sup>2</sup> Ibidem

broadcast, but also post-production multimedia and telecommunications hardware, software and services).

Apart from lobbying and bringing legal actions, NAB is providing other services to its members: a research library, experts consulting, a monthly newsletter (*NAB World*) and two weekly publications (*RadioWeek, TV Today*). Another mission of the NAB is educating American citizens about the principles of free speech and other subjects related to the broadcast industry. This project is carried on through the NAB Education Foundation. The best-known action of the NAB is definitely the NAB Show that yearly gathers thousands of broadcast professionals in Las Vegas.

According to NAB President and CEO Gordon Smith, NAB’s mission “has been and remains to support broadcaster’s ability to serve local communities, strengthen their businesses and seize new opportunities”<sup>3</sup>.

### 3. Technology evolution – major trends:

#### 3.1. VR, AR and 360 video



In 2016, immersive media technologies widely entered the market. *Oculus Rift*, *HTC’s Vive*, *Microsoft’s HoloLens*, *Sony’s PlayStation VR* and *Google’s Daydream VR* were on everyone’s lips. These new generation technologies draw the hope for great content to emerge. Spaces where people can share experience and content are flourishing in cities and these ecosystems will be the VR momentum’s breeding ground. Programs like *Convrge* (online VR

platform that allows multiple users to connect and interact with each other) will emerge and shape the modern broadcast industry. By the way, *Netflix* has recently announced its wish to bring its programming to the VR.

According to Manatt Digital Media, by 2020, revenue from VR and AR will generate 150 billion dollars.

VR and AR will also be integrated with TV. For example, NASCAR, the US Open Golf, and NBA, the US National Basketball Association, have already been streamed in VR on *Fox TV*. The AR on TV will make the viewing experience easier. “For example, people can understand complex rules of game, and sports action by viewing animations or listening to commentary from sports pundits.”<sup>4</sup>

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<sup>3</sup> Ibidem

<sup>4</sup> <http://www.rgbbroadcasting.com/2017/02/14/key-broadcast-media-technology-trends-2017/>

In order to fit with VR and AR technologies, televisions need to be upgraded to 3D or HD platforms. “Nowadays, Ultra HD televisions are gaining popularity. The Ultra HD refers to two resolutions – 4K Ultra HD (3840 x 2160px) and 8 K Ultra HD (7680 x 4320px).”<sup>5</sup> However, even if the price and the quality of the UHD screens are improving, these technologies are still in stages of infancy and it will take them time to become part of most people everyday life.

### 3.2. OTT

OTT providers like *Netflix* and *Amazon Video* are now releasing content in UHD. According to the Ericsson Mobility Report, by 2021, video will represent 70% of the mobile traffic and forecasters predict that by 2025, 50% adults under the age of 32 will not pay for TV. Thanks to OTT, people will have content available on their device anytime and anywhere. New SVOD, TVOD and AVOD services will also emerge this year and they will concentrate on the mobile revolution.

### 3.3. Streaming services

Streaming services such as *Amazon Prime* and *Netflix* are more and more popular amongst the younger generation. The trend shows that young adults prefer watching content on digital platforms than on TV. The streaming data broadcasters will follow the 4K trend and will film and upload their new content in this format. This dynamic ecosystem will continue to generate lots of investments in 2017. *Netflix*, for example, is planning to invest an additional one billion dollars in original content.



### 3.4. Advertising

Thanks to all the tools that exist to spy on Internet users, the advertising process has widely changed. Today, advertising is specialized and tailored. This trend will keep going on in 2017 as marketing advisers continue gathering information about potential customers and launching their advertising campaigns according to customers’ desires. Broadcasters will also redesign their advertisements for better revenues as live ad monetization standards will be established.

The packaging and distribution of the content will also change. Considering that customers can now choose precisely the content they want to consume, broadcasters will have to find new ways to get customers attracted and to retain them. They will focus on fulfilling their specific needs. Customers will feel unique and will tend to spend more money for this tailored service. Thus, the relation between broadcasters and their customers will be closer than before and this relationship will be strengthened by social platforms.

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<sup>5</sup> Ibidem

### 3.5. Big data analytics for viewer insights

Big data analytics will help broadcasters analyze viewers' choices and develop tailored content for them. Broadcasters will have the possibility to spy on customers and to realize behavioral analytics. The goal is to develop appropriate marketing tools and better advertising principles as well as to better understand the customers' needs and offer them the entertainment experience they are expecting.

Another breaking trend will be video analytics. Broadcaster will be able to judge audience reactions in real time and to make changes to contents or ads immediately.

### 3.6. Software defined broadcasting



The transition from hardware provided products to software provided products that begins in 2016 will go on this year. This evolution enables those who are building and managing broadcast systems to more flexibility and control. The shift will not be easy because the existing software designs will be redesigned. Software defined broadcasting is currently used for VR implementations, but will be expanded to microservices based architecture, and container based models.

### 3.7. Next generation IP

In 2016, there was a shift from SDI to IP based transport in broadcast and studio facilities. The first step was the development of protocol SMPTE 2022.6. Now, the industry is focusing on native IP implementation based on the work of SMPTE, AMWA, and VSF. “For this to work organizations must have a solid strategy in place to manage the transition. At this stage, such technology may seem cost-prohibitive, however as *Amazon Web Services*, *Google* and *Azure* continue to knock heads, we will see dramatic drops in the cost of storage and bandwidth. This will help ease the transition.”<sup>6</sup>

### 3.8. Better cloud

Cloud based services are constantly evolving and the offer is wider and wider. 2017 will welcome very sophisticated and scalable services on these platforms. The costs will be lower and the GPU more flexible.

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<sup>6</sup> <http://advanced-television.com/2016/12/22/ooyala-predicts-2017-broadcast-and-video-trends/>

### 3.9. Drone racing

“Until 2016, drones were used by major sports broadcasters to cover sports events. However, in 2017 the drone scene will become more entertaining. Major sports broadcasters like *ESPN*, *Eurosport*, and *Sky* – are gearing up for drone racing competitions to attract the young audience.”<sup>7</sup>

### 3.10. Internet of Things

“The broadcast industry is increasingly opening up to Internet of Things and beginning to see the benefits of connected broadcasting. Imagine your favorite program pausing by itself as your doorbell rings or you leave the room. Or taking cues from the surrounding like lighting and time of the day to choose program automatically based on your mood.”<sup>8</sup>



All these innovations look promising. Broadcasters will be in interaction with their customers and the programs will become more and more interactive.

## 4. Lexicon:

AVOD	= Advertising Video on Demand Advertising - or Ad-based - VOD is a model that is free for the users, in the sense that you will pay with your eyeballs instead of your credit card. Ex: YouTube <a href="https://www.linkedin.com/pulse/understand-svod-tvod-avod-terms-business-models-streaming-mads-kaysen">https://www.linkedin.com/pulse/understand-svod-tvod-avod-terms-business-models-streaming-mads-kaysen</a>
OTT	An over-the-top (OTT) application is any app or service that provides a product over the Internet and bypasses traditional distribution. Services that come over the top are most typically related to media and communication and are generally, if not always, lower in cost than the traditional method of delivery. <a href="https://www.techopedia.com/definition/29145/over-the-top-application-ott">https://www.techopedia.com/definition/29145/over-the-top-application-ott</a>
SVOD	= Subscription Video on Demand Subscription VOD is a type of service, where you enter into a subscription agreement, which will then grant you access to the

<sup>7</sup> <http://www.rgbbroadcasting.com/2017/02/14/key-broadcast-media-technology-trends-2017/>

<sup>8</sup> <http://www.mediaguru.com/6-key-broadcast-industry-trends-to-watch-out-for-in-2017/>

	<p>service - typically to watch until you drop, that means watch with no limits.  Ex: Netflix  <a href="https://www.linkedin.com/pulse/understand-svod-tvod-avod-terms-business-models-streaming-mads-kaysen">https://www.linkedin.com/pulse/understand-svod-tvod-avod-terms-business-models-streaming-mads-kaysen</a></p>
TVOD	<p>= Transactional Video on Demand  TVOD will normally not charge you anything to sign up for the service/create a user profile. Instead, you will pay an amount based on the content you watch. Most often this relates to movies, but is also used for series and in particular for sports and events.  Ex: iTunes  <a href="https://www.linkedin.com/pulse/understand-svod-tvod-avod-terms-business-models-streaming-mads-kaysen">https://www.linkedin.com/pulse/understand-svod-tvod-avod-terms-business-models-streaming-mads-kaysen</a></p>
UHD	<p>Ultra-high-definition  UHD television is a digital television display format in which the horizontal screen resolution is on the order of 4000 pixels (4K UHD) or 8000 pixels (8K UHD).  <a href="http://whatis.techtarget.com/definition/Ultra-High-Definition-TV-UHDTV">http://whatis.techtarget.com/definition/Ultra-High-Definition-TV-UHDTV</a></p>

## 5. NAB Show 2017 – Walloon companies

### 5.1. Barco Silex – Louvain-La-Neuve

Barco Silex is a micro-electronic design house that is providing design services and IP products for complex ASIC, SoC, FPGA and electronic boards, for various application areas: Image and video processing; cryptography; communications and interfaces for embedded systems; and IP Products.  
<http://www.barco-silex.com>

### 5.2. Dreamwall – Marcinelle

Brought to life by a partnership between DUPUIS Publishing and RTBF, DreamWall is graphic design and animation studio located in Charleroi.

We work on several areas:

- The “2D/3D Animation” market for TV, movie, advertising or web industries;
- The “TV Solutions” creating TV brandings, broadcast design, virtual sets and augmented reality;
- The “Corporate solutions”: all our skills available for your company communication (animation, motion design...).

<http://en.dreamwall.be>

### 5.3. KeyWall – Marcinelle

KeyWall is a production company specialized in the virtual business and augmented reality. We provide consulting, design, operations, production and training inside our own studios or abroad. We are able to integrate and operate on Avid/Orad, Ross, Viz-RT, Zero Density, etc.

<http://en.keywall.be>

### 5.4. Image Matters – Liège

Image Matters develops innovative high-performance hardware and software tools for extreme imaging applications. In order to support all audiovisual challenges, Image Matters paves the way toward efficient image compression (HEVC, JPEG 2000, TICO, ...) and easy image transport over internet. Image Matters provides electronics and software platforms to help audiovisual equipment manufacturers to jump faster and easier into new video dimensions. Using a modular approach, Image Matters' Origami product range splits the electronics into pre-validated subsystems and provides an easy-to-use software environment to customize and build complete systems.

<http://image.matters.pro>

### 5.5. I-Movix – Mons

I-MOVIX is the worldwide leader in extreme slow motion for sports broadcast (from 75 to over 5,000 FPS). The company's products are the first true ultra-slow motion systems, fully integrated for broadcast use, offering the unprecedented combination of very high frame rates and instant replay, or continuous streaming. The technology has applications in live sports and other live TV productions, as well as in commercials, documentaries, feature films, and scientific R&D.

<http://i-movix.com/#home-infinite>

### 5.6. intoPIX – Mont-Saint-Guibert

intoPIX is a leading provider of innovative image compression technology. The company is developing and marketing intellectual properties empowering and protecting visual communication between people. intoPIX is manufacturing flexible IP-cores (for FPGA or ASIC) and SDKs to compress ultra-high resolution (4K/8K) or high-speed videos using TICO Lightweight compression. This innovative technology is ideal for VR/AR/360 applications.

<http://www.intopix.com>

### 5.7. TICO Alliance – Mont-Saint-Guibert

TICO Alliance Members to help grow the UHD TV ecosystem. The consortium is a coalition of companies united to set the bar for next generation UHD TV 4K & 8K infrastructure by establishing TICO compression in the new IP-based Live ecosystem. Using the TICO compression and video

over IP standards, the group enables the industry to seamlessly update the existing SDI-based workflows to IP and UHD TV 4K without the cost of a complete renewal.

<http://www.tico-alliance.org>

#### 5.8. KENSU – Seraing

Kensu is building Adalog to foster Data Science Governance. Adalog collects all activities on data directly from the data science tools and their usage context. Adalog analyses the activities in real time and builds a knowledge graph connecting systems, people, data, performances and businesses. Adalog's Machine Learning and Artificial Intelligence capabilities deliver to Data Science team and Managers the confidence required to use Data Science in the Enterprise.

<http://www.kensu.io>

#### 5.9. Sonicpil – Liège

Established in 2006, the Pôle Image de Liège (PIL) is a federation of audiovisual service providers embracing the different target markets (films, broadcasting and corporate, etc.). Backed by private and public stakeholders, it seeks to use sector clusters to develop and structure this sound and image industry, thus creating a true centre of excellence. The PIL's activity does not just foster a spirit of networking, it also seeks to do everything possible to encourage audiovisual production companies to take up its services. Two main levers have therefore been created:

- A Tax Shelter department, tasked with searching for funding on behalf of the film producers, at lower costs and in order to encourage them to use the services of its members;
- Setting up specifically adapted facilities, as a former tobacco factory in the heart of Liège (Tabacofina) has been turned into an audiovisual technology centre.

<http://www.lepole.be/index.php>

#### 5.10. TWIST – Liège

TWIST is the business Cluster Cinema & Digital Media in Wallonia. It is the main business cluster active in the sector of digital audiovisual and multimedia technologies in Belgium. TWIST is mainly active on three markets:

- Cinema & Animation;
- Broadcast (development of technologies and facilities);
- Transmedia & Multimedia (communication, gaming, mobile applications, business intelligence, etc.).

<http://www.twist-cluster.com>

### 5.11. WNM – Seraing

WNM focuses on the sound for multi camera productions, ENG (electronic news gathering), intercommunication systems, analog wireless and digital transmission systems. WNM owns a large fleet of high tech equipment and provides technical assistance and consultancy services to organizers of large events (UEFA, HBS, OBS) such as the Football World Cup, Football European Cup or the Olympic Games. WNM also offers studio engineering services for radio and television, ranging from technical assistance to the acoustic of buildings. The company also organizes trainings for audiovisual service providers, TV stations and production houses.

<http://www.wnm.be>

## 6. NAB Matchmaking

<b>Belgian Company</b>	<b>Match Company</b>	<b>Features</b>	<b>NAB Location</b>
Barco Silex	Cinedeck	Cinedeck manufactures innovative recording systems for use in all video production environments.	South Hall (Lower) SL14805
	Arrow Electronics	The company specializes in distribution and value added services relating to electronic components and computer products.	South Hall (Upper) SU10726MR
	Ateme	ATEME is transforming video delivery providing end-to-end solutions for premium content video networks, broadcasters, and service providers.	South Hall (Upper) SU4410
Dreamwall & Keywall	3D Storm	3D Storm, Official Master Distributor of NewTek and LiveXpert products, is a leading player in the convergence of IT & the Broadcast industries.	South Hall (Lower) SL5421
	ICX Media	ICX Media is a digital video management and data analytics platform for media companies, brands, digital video producers, and creators.	North Hall N2433SP-C

	Imagine Communications	Imagine Communications empowers the media and entertainment industry through transformative innovation. Broadcasters, networks, video service providers and enterprises around the world rely on our optimized, future-proof, multiscreen video and ad management solutions every day to support their mission-critical operations.	South Hall (Lower) SL1516
Image Matters	Canon USA Inc.	Canon U.S.A., Inc. is a leading provider of consumer, business-to-business, and industrial digital imaging solutions to the United States and to Latin America and the Caribbean markets.	Central Hall C201LMR, C202LMR, C4325
	360 Designs	360 Designs makes broadcast quality 360/VR camera systems and live VR streaming equipment, including the world's first broadcast quality live VR drone.	North Hall N917VR
	Nokia USA Inc.	Nokia OZO is an innovative leader in Virtual Reality and the only single source solution of best-in-class VR hardware, software and audio technologies for creative professionals worldwide.	North Hall N1002VR
	Camera Motion Research, LLC	Camera Motion Research, LLC located in Raleigh, North Carolina, is a manufacturer and re-seller of professional gear for videographers.	Central Hall C10548
I-Movix	Broadcast Pix	Take Control with Broadcast Pix, which provides complete solutions for any live production environment.	South Hall (Lower) SL9721
	Joseph Electronics	Joseph Electronics is an authorized stocking distributor for more than	Central Hall C6648

	Digital Domain	<p>100 premier broadcast and pro A/V brands with stocking locations in both Illinois and California.</p> <p>Digital Domain creates transportive experiences that entertain, inform, engage and inspire. The company is a pioneer in many fields, including visual effects, livestreaming landmark events in 360° virtual reality, building situational awareness applications, creating “virtual humans” for use in films and live events, and producing original virtual reality content.</p>	North Hall N614VR
intoPIX	Ciphertex, LLC	Ciphertex solutions deliver high performance and easy accessibility, enabling HD media applications from editing and distribution to content archiving.	South Hall (Lower) SL7428
	FileCatalyst	FileCatalyst is a pioneer in managed file transfers and a world-leading accelerated file transfer solution. FileCatalyst is a software platform designed to accelerate and manage file transfers securely and reliably.	South Hall (Lower) SL10716
	360 Designs	360 Designs makes broadcast quality 360/VR camera systems and live VR streaming equipment, including the world's first broadcast quality live VR drone.	North Hall N917VR
TICO Alliance	Adtec Digital	Adtec Digital is a leading manufacturer of Broadcast, Cable and IPTV products and solutions. With over 30 years experience in compression and transmission technologies, Adtec Digital offers customers rock solid engineering, powerful features and unmatched customer service.	South Hall (Upper) SU7602

	Rohde & Schwarz	Throughout our 80+ year history, Rohde & Schwarz has stood for quality, precision and innovation in all fields of wireless communications, broadcasting included. From our roots in broadcasting, we have continued to evolve our support of all things audio and video, providing relevant solutions to broadcasters, studios, post-production facilities, cable TV and satellite providers, and consumer electronics designers.	South Hall (Lower) SL1205, SL1401MR
	GatesAir	GatesAir, the over-the-air broadcast pioneer, is celebrating 95 years in business this year. We offer the industry's broadest portfolio to wirelessly deliver and monetize content. Our exclusive focus on the over-the-air market helps broadcasters optimize services today, and prepare for future revenue-generating business opportunities.	North Hall N2613, N5035MR
	TRYO Communications	TRYO Communications, manufactures and installs professional equipment for digital TV, mobile TV and digital radio (transmitters, transposers, repeaters, radiating and receiving systems), as well as repeaters for GSM/UMTS telephony networks.	South Hall (Upper) SU10112
KENSU	OpenText	In today's customer-centric environment, managing digital media is imperative. OpenText Media Management, the industry-leading Enterprise Digital Asset Management platform, helps companies enhance their digital transformation investment in brand value and digital media.	North Hall N5034MR, N6806

	Panasas, Inc	Panasas drives innovation in media & entertainment by accelerating workflows and simplifying data management with ActiveStor®, a fully integrated scale-out NAS solution consisting of hybrid storage hardware and the patented PanFS® file system supported by Panasas DirectFlow® protocol for high-performance as well as NFS and SMB protocols.	South Hall (Lower) SL9724
Sonicpil	3D Storm	3D Storm, Official Master Distributor of NewTek and LiveXpert products, is a leading player in the convergence of IT & the Broadcast industries.	South Hall (Lower) SL5421
	Rohde & Schwartz	Throughout our 80+ year history, Rohde & Schwarz has stood for quality, precision and innovation in all fields of wireless communications, broadcasting included. From our roots in broadcasting, we have continued to evolve our support of all things audio and video, providing relevant solutions to broadcasters, studios, post-production facilities, cable TV and satellite providers, and consumer electronics designers.	South Hall (Lower) SL1205, SL1401MR
	AlterMedia	AlterMedia is a software company and the developer of Studio Suite. Studio Suite is the leading studio management software, meeting the fast paced requirements of over 7,000 users in production facilities in over 50 countries. Collectively, they quote, schedule, produce, finish, and deliver massive quantities of content, on time and on budget. Studio Suite tracks and manages contacts, resources, scheduling, projects, budgeting, invoicing, media assets, labels,	South Hall (Lower) SL7407

		equipment and media inventories, communications, maintenance, and much more...all in one comprehensive, customizable, cross-platform package.	
Twist	WASP3D	WASP3D offers end-to-end real time graphic production workflows including augmented and virtual reality, social media integration and elections. With hundreds of installations in more than 40 countries.	South Hall (Lower) SL9016
	OpenText	In today's customer-centric environment, managing digital media is imperative. OpenText Media Management, the industry-leading Enterprise Digital Asset Management platform, helps companies enhance their digital transformation investment in brand value and digital media.	North Hall N5034MR, N6806
WNM	Band Pro Film & Digital, Inc	For over 30 years Band Pro has provided the best new products and solutions for professional cinematographers. With offices in Burbank, New York City, Munich, and Tel Aviv, Band Pro offers the highest level of knowledge and expertise together with the finest equipment and accessories available.	Central Hall C10308
	DynaMount	DynaMount is the world leader in remote microphone positioners. Their products allow users to be in complete control of microphone placement. Microphone position can be remotely adjusted on multiple axes and positions can be saved for easy recall. After achieving success in the studio and live market and with great interest from top broadcasters, DynaMount	North Hall N6919

	Waterbird Systems	<p>is currently developing a new line of products geared directly to meet broadcasters needs.</p> <p>Waterbird Systems presents the world's first adjustable camera slider - the Multi Slider. Developed by professional cameramen the Multi Slider enables linear and curve camera tracks with one device. Within seconds the Multislider can be changed from a linear to a curve slider at any demanded radius. This innovative camera slider can be controlled manually or by mobile app, which makes it a perfect fit for cinematographers and photographers using Time Lapse effects.</p>	Central Hall C12632
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## 7. NAB Show 2017 – Other Belgian companies

Besides the eleven Walloon companies that will be present on the Wallonia Export and Investment Office booth, there would be other Belgian companies at NAB Show 2017. Based on our research on the NAB website, here is the list of the other companies from Belgium. Flanders Investment & Trade will also be there for the first time ever.

### 7.1. Actus Digital – Uccle

Actus Digital delivers industry leading technology solutions for video content logging, tagging, monitoring, analysis and repurposing. The company's easy-to-use web-based solutions are answering the broadcast media management needs of broadcasters government agencies; cable, satellite & IPTV providers; advertising, media agencies & content producers; around the world. Actus Digital provides user-friendly solutions which support an unlimited number of channel inputs, thereby facilitating greater functionality efficiency, and saving costs, while providing enhanced video productivity across our clients' organizations. Actus' solutions enable media monitoring and reporting; analysis of content, ads and ratings; legal compliance, and extensive automated exporting tools for repurposing and rebroadcasting linear broadcasts to the Internet and mobile. Actus provides its solutions to hundreds of customers worldwide, such as CNBC, Sky, Fox, Sony, Star, AMC Networks, BBC, Disney and more.

<http://actusdigital.com>

## 7.2. Alpha Networks – Braine l'Alleud

Alpha Networks is an innovative software company, specialized in backend software for Media Companies, IPTV and OTT operators. Alpha Networks enables IPTV, Multiscreen and OTT services by providing its comprehensive SMS/CMS software suite pre-integrated with a range of middleware's and consumer access portals. The Alpha Networks software allows integration with video infrastructure and has been already successfully deployed in worldwide projects that include, Mobistar (Orange Belgium), Liquid Telecom and many others. On the 1st of January 2016, Alpha Networks launched its new product named Tucano, a software solution to manage customers' video content through a simple API interface.

<http://alphanetworks.be>

## 7.3. Appiness – Aalst

Watch — match — interact — buy

We are a European start up working on an innovation that will transform the way you interact with video and tv content. Thanks to this app, customers can spott any type of content; browse series, movies, characters, products, brands and get updates.

<http://appiness.mobi/#/? k=zusiwv>

## 7.4. Azilpix – Hasselt

AZilPix Studio.One is a multi-camera video capture and production system enabling immersive broadcasting of complex events, at low operational cost.

<http://www.azilpix.com/index.html>

## 7.5. Deltacast – Ans

DELTACAST is dedicated to the next generation of virtual graphics for live sporting events. The company's products rely on a set of proprietary high-technology modules: sensor-free tracking, image processing algorithms, adaptive chroma-keying, and a high-quality 3-D engine.

<http://www.deltacast.tv>

## 7.6. Eurofins Digital Testing – Diepenbeek

Eurofins Digital Testing is the world's leading Digital TV Quality Assurance (QA) specialists, providing test tools and test services for manufacturers, standards organisations and Digital TV Operators - operating globally with test lab facilities in the UK, Belgium and Hong Kong. We provide specialised on-site test resources, testing tools and services to validate digital media delivery systems and device conformance for multiple standards and operators across the world.

<http://www.eurofins-digitaltesting.com>

### 7.7. EVS – Seraing

EVS is globally recognized as the technology leader for video production. Amid a rapidly evolving media landscape, our premium media technologies help broadcasters, rights owners and producers optimize live assets, engage audiences and increase revenue streams by monetizing content across multiple platforms. <https://evs.com/en>

### 7.8. Limecraft – Ghent

Limecraft offers a comprehensive collaboration environment for film and video production, designed for maximum productivity during the shooting, story editing and post-production processes. Production facilities, producers and broadcasters build their private cloud with our workflow solution that seamlessly integrates with existing storage and media asset management services. Our unique proxy-based approach increases productivity and allows the producer to explore new creative avenues.

<http://limecraft.com>

### 7.9. MediaGeniX – Groot-Bijgaarden

MediaGeniX develops and implements WHATS'On, a leading Broadcast Management System that is the backbone for media companies such as broadcasters, on-demand service providers, platform and telco operators. With this integrated software suite, MediaGeniX guarantees customers a state-of-the-art solution for VOD & Linear Scheduling, Contracts & Rights Management, Content (Lifecycle) Management, Media Management, Material Workflow Management, Compliance, Financials and Reporting.

<http://www.mediagenix.tv/en>

### 7.10. Newtec – Sint-Niklaas

For over 30 years Newtec has developed satellite communication equipment and technologies for broadcast, government and defense, IP trunking and consumer and enterprise VSAT. Our dedicated team meets industry standards with efficient, scalable and economical solutions. Through our expertise and in cooperation with our customers we make the world a safer, more informed and connected place.

<http://www.newtec.eu>

### 7.11. SDN Square – Ghent

SDNsquare guarantees performance, reliability and scalability for network, storage and data centers. Our software solutions are designed to ensure your mission critical environment is always performing - despite the increasingly large files, bulk data transfers and rapidly growing traffic

networks have to handle today. Our media & IT professionals have solved the challenges of intrinsic media behavior at the essence to provide cost-efficient and long-term scaling solutions for storage and network. SDNsquare was established to tackle the reliability and performance issues of 'large files' within IT systems and IP networks. The SDNsquare team brings together experience in network technology, storage systems and media applications.

<http://www.sdnsquare.com>

#### 7.12. Skyline Communications – Izegem

Skyline Communications is the global leading supplier of end-to-end multi-vendor network management and OSS software solutions for the broadcast, satellite, cable, telco and mobile industry. Our flagship DataMiner network management platform, which received various prestigious awards, enables end-to-end integration of the most complex technical ecosystems and has been deployed by leading operators around the world.

<https://skyline.be/home>

#### 7.13. Softron Media Services – Brussels

Softron has been providing Mac-based video and audio solutions for 35 years. Softron applications are in use by video professionals around the world. Softron applications offer intelligent and easy to use interfaces. The company is dedicated to providing the highest professional quality video support for Apple's Macintosh platform. Softron applications are available online and by Apple ProVideo specialists throughout the world.

<http://www.softron.tv>

#### 7.14. THEOplayer – Leuven

THEOplayer is the industry-leading HTML5 based video playback partner for delivering a world-class viewer experience with HLS and MPEG-DASH across different platforms and devices. With our video player solutions for VR/360, web, mobile web, Android SDK, iOS SDK and Chromecast Receiver App SDK, THEOplayer is a trusted video player partner for some of the world's premier telcos, broadcasters and publishers. THEOplayer has proven compatibility with industry-leading solutions for streaming, advertising, DRM and server side ad insertion... Our worldwide customer base includes companies such as CNN, Telenet, NBC, Twitter, Swisscom, France Télévisions, Telia, CERN, Nasdaq, Hudl, Cisco and Softbank.

<https://www.theoplayer.com>

#### 7.15. Zeticon – Ghent

MediaHaven is the Media Asset Management platform for any organization that wants to professionally manage and distribute its audio-visual material for marketing, training, and external

and internal communication. The user interface is designed to support novice as well as expert users in managing their media content. MediaHaven helps you manage the storage, retrieval, and distribution video, audio images documents etc. designed as a scalable solution from the start.

<http://www.mediahaven.com>

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