

BroadVision

BY INFOMIR

Your personal IPTV/OTT business advisor

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Learn how voice recognition developed, what voice assistants can do, and why Google Assistant is a principal advantage of Android TV™.



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We share our forecast on how the IPTV market will grow and why SVOD is the future. BroadVision experts explain how the COVID-19 pandemic has changed business for local and global operators.



What video codecs are for

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Discover why video needs to be compressed, how codecs came to be, why 4K and 8K videos depend greatly on them, and what the future of video compression technology is.



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An article on how local and niche content can make you more competitive even against the streaming juggernauts, and why small operators will always have subscribers.

Voice assistants: the new future

LEARN HOW VOICE RECOGNITION DEVELOPED, WHAT VOICE ASSISTANTS CAN DO, AND WHY GOOGLE ASSISTANT IS A PRINCIPAL ADVANTAGE OF ANDROID TV.



Author: Alexey Kuznetsov

Voice assistants are used on billions of devices, e.g. set-top boxes, media players, TVs, smartphones and tablets, watches, and even cars. Google Assistant for Android TV finds movies, TV series, and live channels from all apps at once. Users can adjust volume and control playback with their voice. These features allow operators to improve UX and increase subscribers' loyalty.

How voice recognition evolved

Voice recognition is the conversion of voice into computer code. The technology enables voice search, speech-to-text functionality, as well as interaction with computers and connected devices.

Soviet physicist Lev Myasnikov made the first steps in computer speech recognition. In 1942, he created a device capable of recognizing some vowels and consonants.

American company, Bell, introduced voice recognition of digits from 0 to 9 with its Audrey 'automatic digit recognizer' in 1952.

In 1962, IBM developed its Shoebox computer that had voice recognition capabilities and recognized 16 words, 6 digits, and 10 math instructions.

In 1990, the Dragon Dictate suite emerged, becoming the first commercial speech-to-text solution. The program listened to the user and translated their speech into text. Despite its hefty price tag of \$9,000, the recognition speed was relatively slow though, and the output riddled with mistakes. By 1997, the quality of its speech recognition was improved, the recognition speed increased to 100 words per minute, and the price reduced to \$600. Only then did the product become popular.

Microsoft was the first to introduce consumer voice recognition, integrating the feature into its Office XP suite. The system became a mass product, paving the way for Google's future voice projects: Voice Search, Google Now, and Google Assistant.

Evolution of voice

In 2011, Apple presented Siri on their iPhone 4S. At its user's request, Siri could order a taxi, read the weather forecast, plot a route on the map, set the alarm, and add entries into the smartphone's organizer.

Siri became one of the first voice assistants — apps that combined Artificial Intelligence (AI), voice input, and search. These assistants can learn and even respond to their user.

In 2014, Microsoft rolled out Cortana, the Windows 10 voice assistant. At the time of launch, Cortana worked on PC, mobile devices, and Xbox One. It now has Android™ and iOS support too.



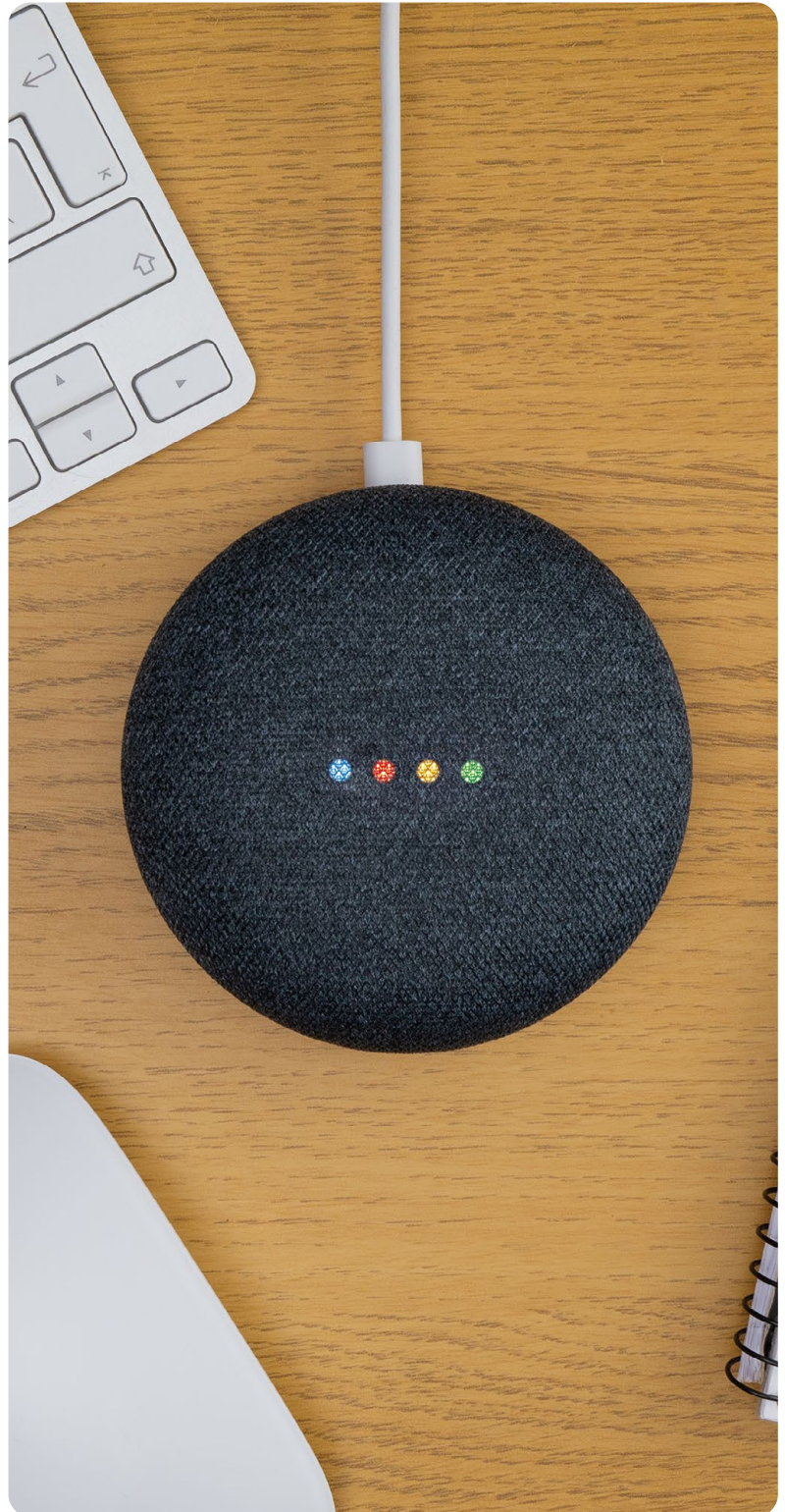
Amazon released its own voice assistant, Alexa, the same year, first as a smartphone app, and later as the world's first smart speaker, Amazon Echo. The device not only responded to questions and ordered food, but became a smart home control hub. Amazon Echo could control lighting, air conditioners, audio systems, and other devices.

Apple and Google soon followed suit with smart speakers of their own. Siri was running on the former's HomePod, and the latter developed Google Assistant for its Google Home.

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According to Statista, 4 billion devices worldwide are running voice assistants already, and their number will double in three years. Over the same period, the voice recognition market will grow from \$2.4 billion to \$5.4 billion.

In 2018, Russia's Yandex jumped on the bandwagon, presenting its Alisa voice assistant with features on par with its Western competition, such as, responding to questions, content recommendations, application control, and weather forecasts.



Voice of business

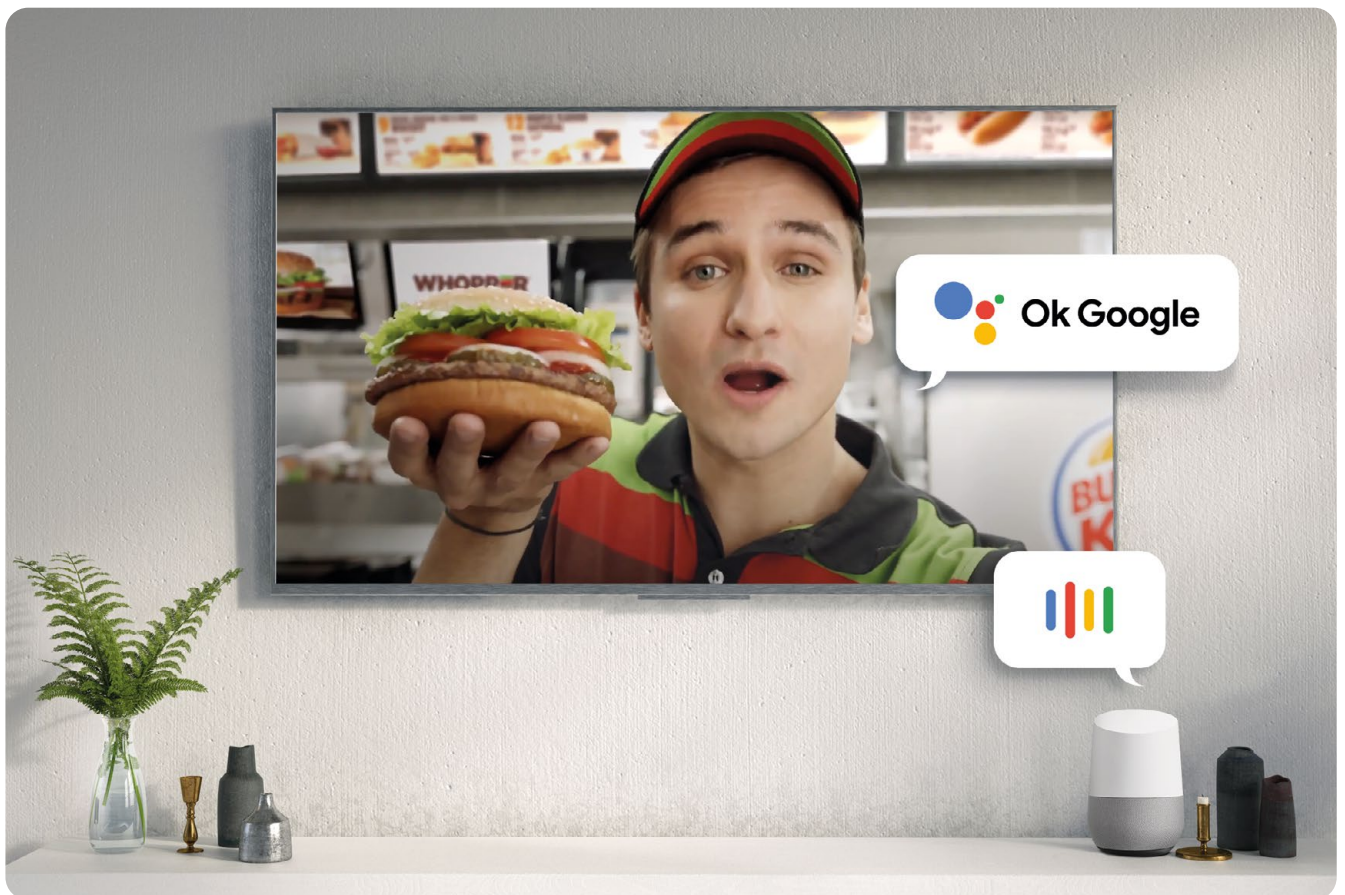
Voice recognition has found applications in business, too. In 2016, Johnnie Walker, a Scotch whisky producer, released its voice assistant app for Amazon Echo, Amazon Tap, Echo Dot, and Amazon Fire TV. The voice assistant could find out the user's preferences, recommend a whisky, and suggest the closest store to buy it.

In 2017, Burger King pulled off a clever stunt during its Whopper burger campaign. The TV spot ended with the phrase: 'OK Google, what is Whopper burger?' If the viewer had a Google Home smart speaker near their TV, the voice assistant started reading aloud the Wikipedia article about the burger. The US media called Burger King's campaign disgusting, annoying, and brilliant.

Users often look up the address, working hours, and directions to their destination. If you say 'OK Google, where can I have pizza?', the voice assistant will present you with a list of the nearest pizza parlors, first naming the top-rated ones according to Google.



According to the BrightLocal agency, voice search is most often used to find information about cafés, restaurants, delivery, hotels, and grocery stores. The searches related to services from small businesses account for 48% of such inquiries.



Voice assistant features

Voice assistants can do much more than read Wikipedia articles or order sushi. They can help clean your house, protect it from burglars, resolve children's disputes, teach you something new, and watch your car.

House cleaning

If the user has a Neato smart vacuum, they can command Google Assistant: 'OK Google, start vacuuming kitchen,' and the vacuum will start cleaning.



Protecting from burglars

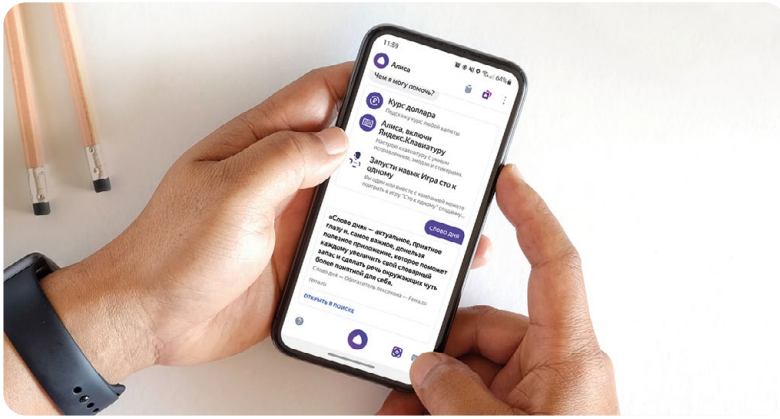
With Alexa, you can switch on security cameras with 'Alexa, guard home' command. If someone rings the doorbell or tries to break in, the user gets immediately notified about this. Also, Alexa can switch on the alarm to ward off the intruder.



Resolving children's arguments

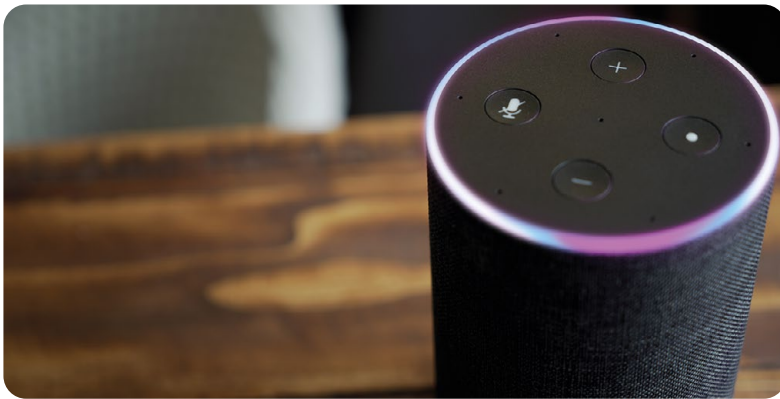
The 'Alexa, open Kids Court' command turns the voice assistant into Judge Lexi, who will listen to the pleas of the parties, question the witnesses, and suggest a fun way of settling the dispute.





Teaching something new

The 'Alexa, teach me new words' command activates the Word of the Day skill. The assistant will suggest six new words to learn: professionalisms, slang, or rare expressions.



Saving lives

AI is not just about education and entertainment, though. If you ask Alexa what the signs of stroke are, it will list the main symptoms and provide first aid information for stroke.

Google Assistant and Android TV

Assistant is a smartphone and smart home virtual assistant. In 2017, it arrived in Android TV, NVIDIA SHIELD TV becoming the first streaming media player to feature it.

Google Assistant is also available on a bunch of other devices: Google Home smart speakers, Android TV media players and smart TVs, Android smartphones and tablets, iOS smartphones, watches, and even cars.



Google Assistant on different devices



TVs



Smartphones



Smart speakers



Laptops



Smart displays



Cars



Watches



Headsets



Smartwatches



Gaming consoles



Smart home devices

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Google Assistant is available on any Android TV device: smart TVs, media players, projectors, and soundbars, all of which come with remotes with voice control.

Google Assistant for Android TV looks for films, TV shows, channels, and broadcasts in all apps at once. Voice commands can be used to adjust volume and control playback.

Android TV can also adjust lighting or control air conditioners and other smart home devices. Google's voice interface recognizes English speech with 95% accuracy — it's almost as if you are talking to a real human.



Speech recognition and voice assistants make their users' life easier. They improve UX and change how people consume content. While global operators spend millions of dollars on the in-house solution development, Android TV enables voice search even for small IPTV/OTT services already.



MAG500A

Android TV device
for modern IPTV/OTT operators



Android TV



Chromecast built-in



Google Assistant



4K, HEVC and HDR



Built-in Wi-Fi
2.4 and 5 GHz

LEARN MORE

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Post-pandemic television

A young woman with vibrant pink hair is sitting on a bed, wearing a red hoodie. She is holding a remote control in her right hand and a potato chip in her left. In front of her is a clear glass bowl filled with potato chips. The background is a simple, light-colored wall with a piece of light-colored fabric hanging from the top.

LEARN HOW THE IPTV MARKET WILL GROW AND WHY SVOD IS THE FUTURE. BROADVISION EXPERTS EXPLAIN HOW THE COVID-19 PANDEMIC HAS CHANGED BUSINESS FOR LOCAL AND GLOBAL OPERATORS.

The COVID-19 pandemic has had a powerful impact on the internet television market. Over several months, the industry has jumped years forward. Films are now premiering on streaming services, online traffic has increased substantially, and operators have gained numerous new subscribers. The events of spring 2020 have defined what the industry will look like in 5 years.

Author: Hennadii Mitrov

Internet traffic on the rise

With people staying home, engagement with home entertainment increased in Europe and the USA. Users stopped travelling, started postponing expensive purchases like watches or jewelry, and started cooking and watching more TV. In March 2020, Austrian and Spanish viewers were already consuming 50% more content than previously.

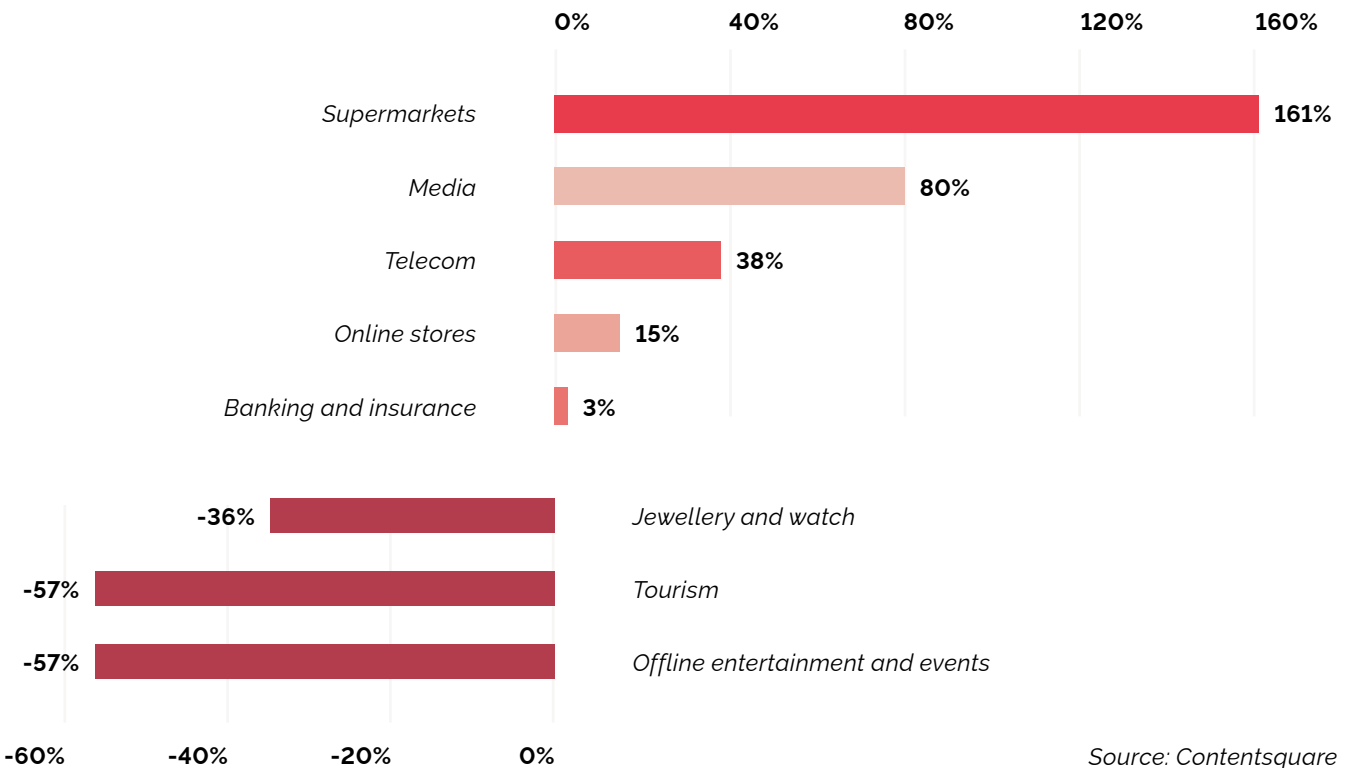
Streaming services doubled down on compression to avoid network overloads. In March 2020, some governments and ISPs asked Netflix to reduce traffic temporarily, and it managed to achieve a 25% optimization without sacrificing video resolution and service quality.



In May 2020, mobile traffic increased by 47% year-on-year in the USA, smart TV traffic by 60%, and set-top box/dongle traffic by 39%.

Source: Comscore

The pandemic's effect on internet traffic by industry (USA)



Source: Contentsquare

Filming stops globally

Between March and May 2020, all cinemas worldwide closed their doors, and filming was suspended on all film and TV show projects. New arrivals increasingly premiered on streaming services, whilst screenwriting, voice acting, and post-production teams were going remote.

This abrupt stop in filming had a big impact on millions of people, not just actors and film crews, but also electricians, carpenters, drivers, as well as other film industry workers. Over 120,000 people lost their jobs in Hollywood alone.

In April 2020, Netflix transitioned part of its team to remote working and hired 2,500 tech support specialists to maintain the quality of its customer service. Production was halted on the current film and TV show projects. Screenwriters, voice actors, post-production, and VFX teams were working on two hundred new projects.

Cinemas closed, but the film industry persevered. Streaming services became the go-to destination for premieres, but many films were postponed by months or even years.

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Universal Pictures screened 'Emma' and a few of its other films on streaming services, and Pixar's 'Onward' premiered on Disney+.

Sports content gets scarcer

Most games and championships were cancelled or rescheduled, so viewers became hungry for sports content. Operators were streaming matches with no fans, and recordings of last year's events.



When the number of verified COVID-19 cases reached 11.4 million worldwide, the Tokyo 2020 Summer Olympics were postponed. The International Olympic Committee and then Prime Minister of Japan Shinzo Abe agreed it would be best to hold them in 2021.

The International Tennis Federation announced that half of its staff were furloughed because of the coronavirus, and 900 matches worldwide were postponed.

After two months of uncertainty, the German Football League held its Bundesliga championship without fans. Formula 1 races held in Austria, Hungary, and Azerbaijan were also held in front of empty stands.

As fresh sports content became scarcer, many pay-TV operators started streaming reruns. Amazon Prime offered recordings of 30 Major League Baseball games from 2019, and almost 80 NBA Hardwood Classics basketball matches to its Prime subscribers in the USA at no additional cost.

The audience still craves sports, so big and small operators will stick with re-runs until the pandemic is over.

Streaming services broadcast news

Many streaming subscribers have forgone linear TV, only using it to watch the news. Over 45% of Hulu viewers don't watch cable and satellite TV, preferring VoD-only subscriptions. For all its users to catch up on the news, the service added the ABC News Live channel to all its plans for free in March 2020.

In April 2020, Amazon Prime added to its offering CBS News, a 24/7 news channel, and also over 30 free HBO TV shows and films. The content is available to all Amazon users in the USA and requires no Prime subscription. All you need to do is to log into your Amazon account.

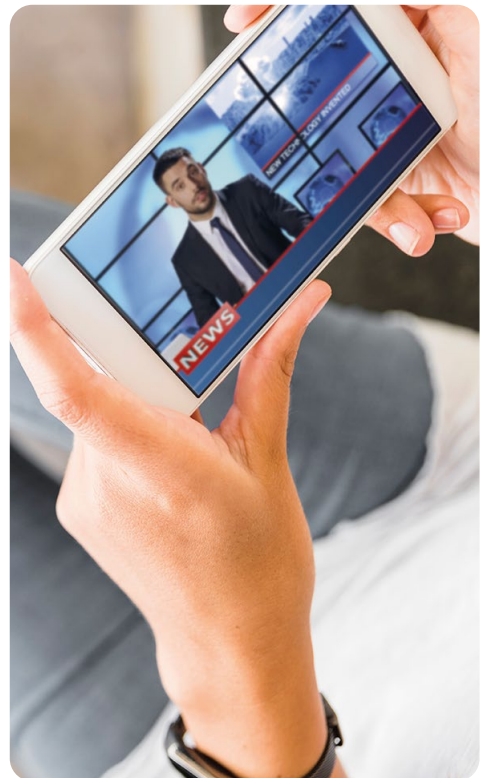
Operators are extending their service plans and adding free content. This way, they cultivate customer loyalty and stay competitive in their fight for the audience, which is especially important in the saturated American and Canadian markets.

SVOD model to stay dominant until 2025

The inflow of subscribers due to quarantine exceeded streaming services' expectations. In Q1 2020, Netflix anticipated to attract 7 million new subscribers, but the numbers doubled because of the pandemic. The growth was mild in North America, with most new viewers coming from the Asia Pacific.

SVOD will remain the dominant monetization model in the market over the next five years. It will account for 58% of streaming services' revenue until 2025. AVOD projects are growing fast, but it will take time for this model to become as widespread.

Unlike AVOD, the subscription model would suit both major and local operators alike. Subscriptions guarantee stable, predictable, and scalable revenue for the business. Local operators never go with the advertising-based model, because it requires a substantial viewer base.



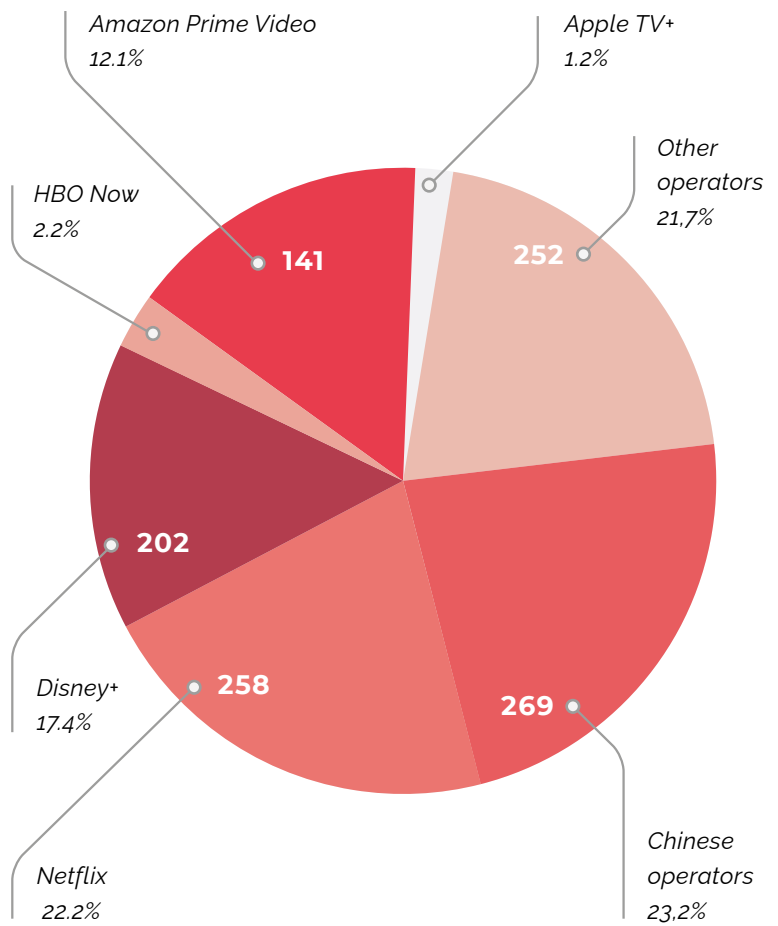
Streaming operators that use the advertising-based model attract users much faster than subscription-based services. In January-April 2020, SVOD services' audience grew by 5% and AVOD ones' by 9% in the USA.

Source: Comscore

Social distancing has boosted the Western-European SVOD market. The primarily pandemic-driven gains reached 45 million subscribers there in 2020. The number of SVOD viewers is expected to total 197 million by 2025, double the 2019 level.

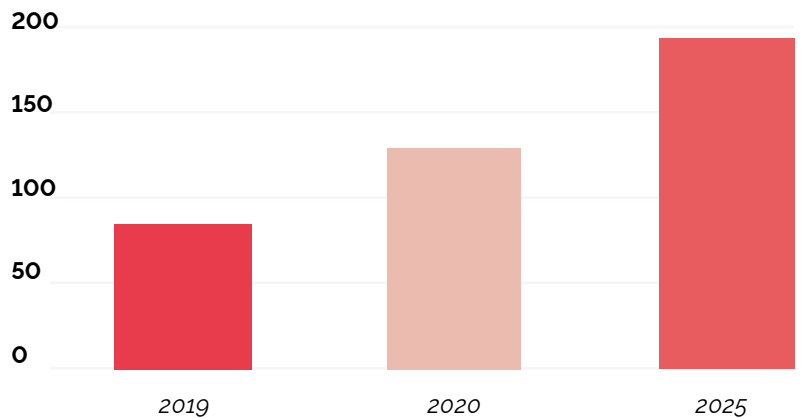
Cinemas will rebound, but will find it even more challenging to compete with streaming services. Increasingly more titles will premiere online, so the viewers will be able to enjoy the latest releases in the comfort of their own homes.

Forecast SVOD subscriber headcount by 2025 (by operator, mln)



Source: Digital TV Research

Forecast: SVOD subscriber headcount in Western Europe (million)



Source: Digital TV Research

IPTV market to rise

More subscribers will switch from the satellite and cable television to IPTV, the pandemic being a major contributing factor. Nowadays, the audience is increasingly willing to forego traditional TV in favor of IPTV.

By 2025, it is estimated that over 1 billion households will have switched to pay-TV. IPTV services will increase their user base to 84 million over the next five years, expanding their share to 37%. Satellite TV will lose 4 million subscribers, its share contracting from 21% to 20% while that of cable TV will shrink to 47%.

IPTV operators continue to expand their service offerings. Now, they include linear TV, VoD, telephony, video surveillance, and even Smart Home. And this strategy does attract new subscribers, as cable and satellite operators cannot offer anything like it.



In 2025, there will be 391 million IPTV service users. Two years ago, the volume of this market was estimated at \$40.85 billion, and by 2025 the figure will rise to 104.25 billion. The IPTV market is growing by 16.9% annually.

Source: Mordor Intelligence



The pandemic changed the IPTV/OTT industry but only for the better, with both global and local operators thriving in its wake. COVID-19 caused an increase in online traffic and closure of cinemas. Filming was halted all over the world. Streaming services resort to re-runs of sports events and start offering more news channels to their subscribers. Meanwhile, SVOD will remain the predominant monetization model, and the IPTV market will show substantial gains over the next 5 years.



What video codecs are for

DISCOVER WHY VIDEO NEEDS TO BE COMPRESSED, HOW CODECS CAME TO BE, WHY 4K AND 8K VIDEOS DEPEND GREATLY ON THEM, AND WHAT THE FUTURE OF VIDEO COMPRESSION TECHNOLOGY IS.

Codecs are used during the filming, editing, delivery, and playback of video content. Without this technology, content delivery to subscribers and video conferences would be impossible. The codec's purpose is to reduce the file size of videos. So let's dive right in and see how it works and why compression technology is so important.

Author: Darya Pozharskaya

Why video has to be compressed

Videos take up much more space than images or music, as they may also include an audio track (sometimes multiple), a video track, and subtitles. In addition to all that, their metadata holds service information and audio/video sync data.

A video track consists of frames, each frame is made up of pixels, and each pixel consists of three subpixels: red, green, and blue. Subpixel color data is 8 bits (1 byte).



It takes 3 bytes to encode a pixel in one of the 16 million colors. A regular FullHD frame is built of over 2 million pixels, so an entire film would take up hundreds of gigabytes.

Even more space is required to store uncompressed high-resolution/high-framerate videos, such as 4K (4096×2160) or 8K (7680×4320). Therefore, content like this is unfit for streaming.

Video compression is used to optimize storage and streaming over regular networks. There is a variety of methods for this: mathematical algorithms, prediction, trimming of redundant data, rounding of absolute values, and color processing by channel.

Compression is sometimes referred to as encoding. The reverse process is called video decoding or decompression.



A 90-minute FullHD 24-fps video would require 750 GB of space without any audio whatsoever.

Source: VideoProc

What video codecs are

Codecs are hardware and software tools for video encoding. The term is derived from the English **CO**der/**DEC**oder.

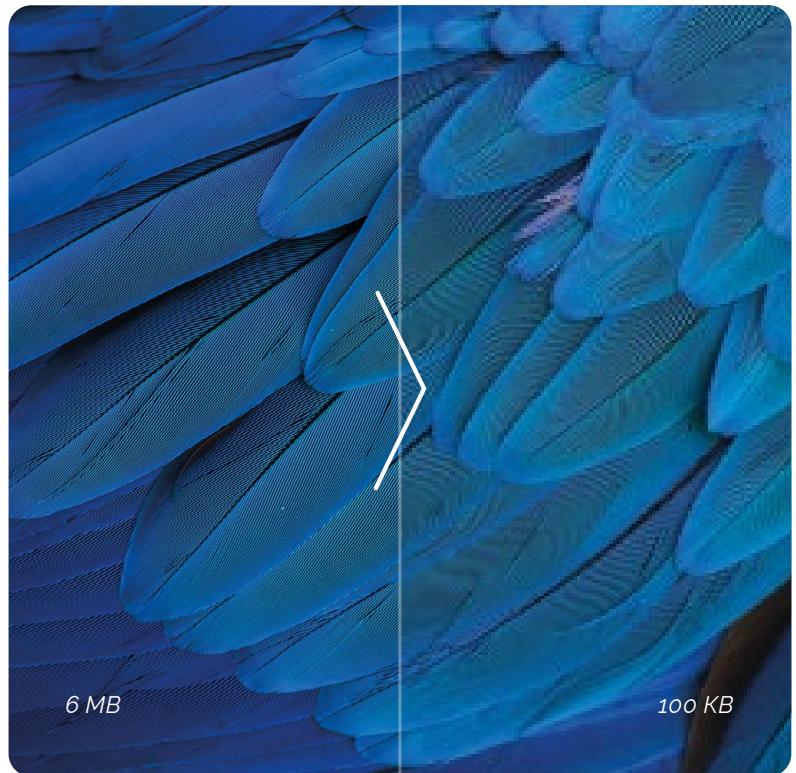
After lossless encoding, the original data can be restored in full. However, it comes at the cost of compression rate. This compression type is used in video filming and post-processing.

Lossy compression is applied during the delivery of video content to client devices: TVs, media players, computers, and smartphones. The stronger the compression, the lower the video quality, and the smaller the file size is.

Codecs trim redundant data on two levels: within the frame and on the frame sequence level.

Intraframe compression

During intraframe compression, codecs process every frame separately. It's akin to how JPEG images are compressed. The algorithm divides the frame into the luminance and chrominance components, reduces its level of detail, and marks similar areas. As a result, you get an exponentially smaller file with minimal loss of quality.



Symbol	Code	Occurences
00011001	00	825 paз
10011101	10	223 paзa
11000010	010	110 paз
01010010	110	60 paз
00000011	0110	30 paз
10100000	0111	20 paз

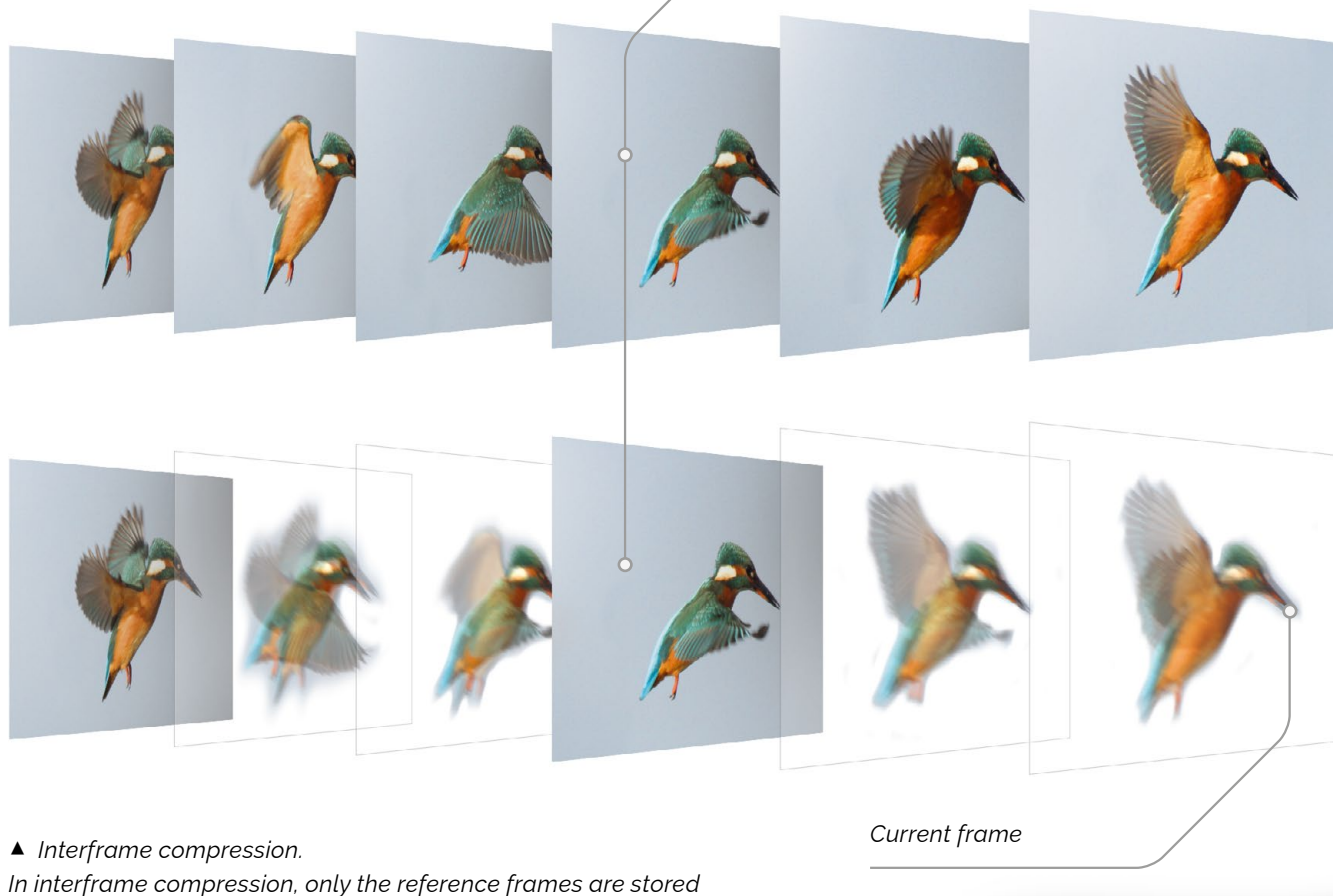
▲ Codecs compress data much like numbers are factored out in maths: instead of 20 zeroes, it's enough to show how many of them there are.

Interframe compression

Often, successive frames look almost identical, so they don't have to be preserved in their entirety. Codecs remove all the repeating information from the image, leaving only the areas that differ. Motion compensation algorithms operate in a similar way.

The interframe difference method works by comparing frames. The resulting file contains only the difference between frames. The motion compensation technique is based on prediction: only reference frames are stored in full, and the frames between them are predicted.

▼ Intraframe compression



▲ *Interframe compression.*
In interframe compression, only the reference frames are stored completely, and the current frames are predicted by them.

To see what interframe compression looks like, just pause any video during an action-packed scene. If you don't pause on a reference frame, the areas with moving objects will be blurry. It's just that the human eye can't make it out at regular playback speed.



The history of video codec

The history of digital video compression began in 1988 with the release of **H.261**. The codec benefited from motion compensation, previous frame referencing, color compression, and 8×8 array sampling.

1993

MPEG1



In 1993, MPEG1 took the front stage. The technology relied on future and past reference frames for prediction and supported HD video. The MPEG1 standard was developed for 352×240 video but supported resolutions up to 4095×4095 pixels. Since MPEG1 supported only progressive scanning, it was quickly replaced by newer codecs.

1996

MPEG2



Three years later, one of the most popular video codecs out there came out—MPEG2. It was used in digital TV and DVD. The technology opened new possibilities for audio encoding: the codec supported compression of files with up to 6 audio tracks. MPEG2 maintained high video quality but offered little in the way of compression because it was designed for low-performance devices. It is even still used in the on-air broadcasting, as well as cable and satellite TV.

1998

MPEG4



In 2020, data transfer speeds average 33.7 Mbps on mobile networks, and 76.94 Mbps on cable, which is not enough for 4K H.264 video playback.

Source:
Speedtest Global Index

In 1998, MPEG4 saw the light of day. With its help, a 90-minute film could be put on a regular CD. The codec handled 2D and 3D objects in the frame, supported DRM, as well as, audio and subtitles. Still, MPEG4 was not fit for FullHD video streaming.

2003

H.264



In 2003, the H.264 era began. The technology compresses video twice as efficiently as MPEG4, enabling FullHD video streaming over 5 Mbps network channels. Although it's still among the most popular nowadays, the codec falls short when it comes to 4K video compression for streaming, especially on mobile networks.

The codec of the future

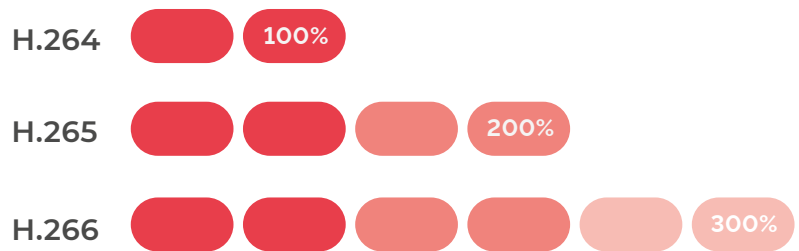
In 2012, the Joint Collaborative Team on Video Encoding developed the HEVC (H.265) codec. The technology was built on H.264 but offered compression twice as powerful while maintaining the same video quality.



While relying on H.264 techniques, HEVC also brings something new to the table, e.g., parallel processing, which enables the processing of frame areas simultaneously.

The only technical drawback of H.265 is its resource-intensiveness: to encode and decode video, it needs 3–5 times as much processing power than H.264. H.265 is not used as widely as H.264 yet, but it is already supported by many set-top boxes, smart TVs, smartphones, and other devices.

HEVC speeds up the adoption of 4K, and its evolution — FVC (Future Video Codec) — may become a vehicle for 8K video streaming. The developers promise that the new codec will be 50% more efficient in video compression. In October 2019, a draft international standard for H.266 was released, and the first hardware codecs will follow by June 2021.



▲ *H.266 will be three times more efficient than H.264*



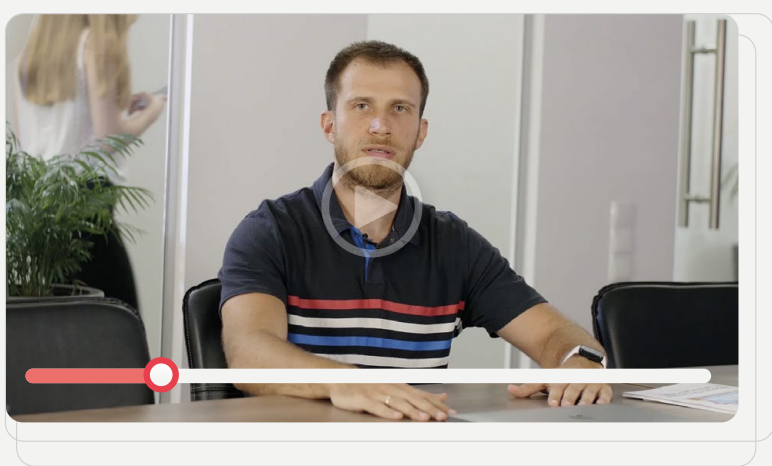
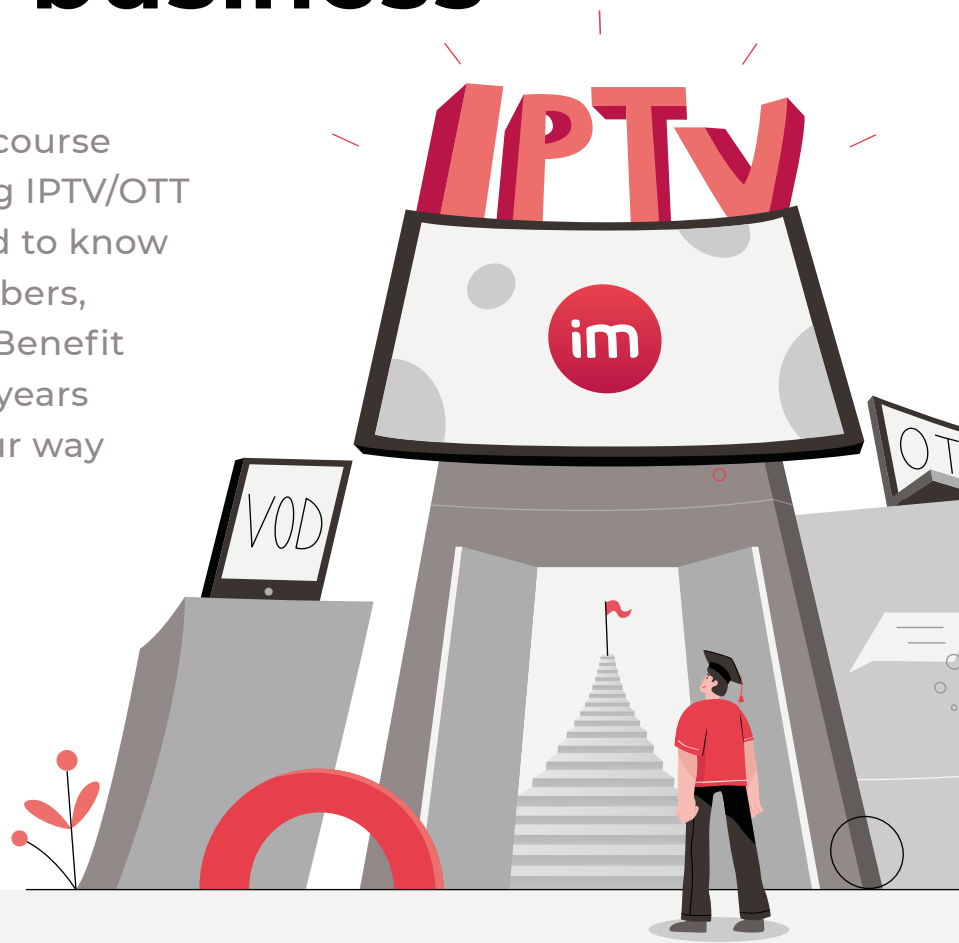
Without codecs, video storage and delivery would be impossible. New compression technologies enable major and small operators to deliver high-quality content without having to upgrade their network infrastructure endlessly. With codecs, high-resolution video can be streamed even on comparatively low-speed connections: a 15 Mbps channel is enough to watch 4K films on Netflix.



Develop your IPTV/OTT business

Infomir Academy is a free course on building and developing IPTV/OTT projects. Learn all you need to know about the industry, subscribers, software, and equipment. Benefit from our experience of 20 years and avoid all pitfalls on your way to success.

START NOW



In this video, Infomir marketing director Igor Oklander explains what Infomir Academy is about, and why modern operators need this course. Click the image to watch the video on YouTube.



There are enough subscribers for everyone



DISCOVER HOW LOCAL AND NICHE CONTENT CAN MAKE YOU MORE COMPETITIVE EVEN AGAINST THE STREAMING JUGGERNAUTS, AND WHY SMALL OPERATORS WILL ALWAYS HAVE SUBSCRIBERS.

More and more streaming services, IPTV/OTT operators, and studios are fighting for an audience, they attract subscribers with quality service, original, local, and niche content. We tell you how small services compete for viewers and give examples of successful niche projects.

Author: Hennadii Mitrov



What viewers want

Local content

By the end of 2020, OTT services' subscriber base exceeded 1 billion people, of which 60% live in the Asia Pacific. These viewers will be interested not just in the USA- and Europe-oriented Hollywood films but in local content too.

Viewers from developed countries also need local content. Almost half of the American viewers subscribe to local streaming services, and it's mostly people aged 18–44 that watch locally-produced content.

Local OTT service viewer share

Age	People watching local streaming services	People watching free or AVOD services
All age groups	47%	46%
18–34	63%	62%
35–44	57%	55%

Source: The Harris Poll

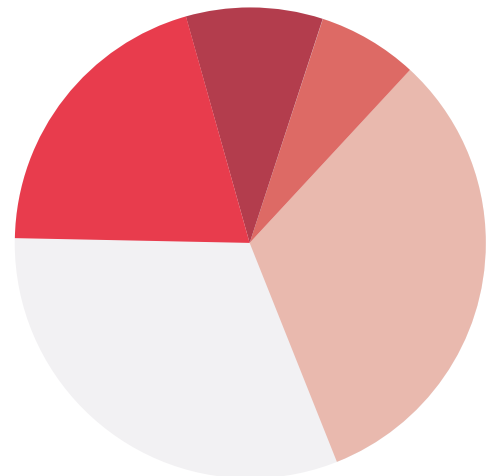
Niche content

Niche content is a segment from which small players are nearly impossible to oust. While global streaming services create mass content, the topical ones define their audience much more precisely. For instance, they may gather content libraries for classic, documentary, and sports lovers.

A great example of a niche project with AVOD monetization is Dust. This service focuses on sci-fi content, and it already has over 400 original movies, TV shows, shorts, and podcasts in its library. Its user-base is 1.9-million strong.

People are ready to pay for specialized content: 64% of the audience don't mind paying for topical OTT subscriptions as much as they would for the regular ones. However, users need to be sure that the service will roll out at least 30 hours of original content monthly.

Money viewers are willing to pay for a niche service compared to a regular one



- ◀ Slightly less — 23.8%
- ◀ Much less— 7.3%
- ◀ Much more — 5.0%
- ◀ Slightly more — 31.5%
- ◀ Same price — 32.4%

Source: Digital TV Europe, Magine Pro

According to Omdia, the SVOD monetization model fits most niche projects. Children's streaming services will be better off with the subscription model as parents don't want their children to watch ads. Meanwhile, the projects focusing on documentary and sci-fi content fit equally well with SVOD or AVOD. According to 44.3% of viewers, hobby and lifestyle content is not worth paying for. Therefore, the services that distribute will have to go with the AVOD model.

Niche streaming services occupy 6% of the OTT market, and their revenue will reach over \$2.8 billion in 2020.

Source: Omdia

The best monetization models for niche services

49.7% 26.5% 9.6% 14.2%

▲ Sports content (various sports)

45.2% 24.2% 16.9% 13.7%

▲ Cartoons and other children's content

34.2% 32.9% 21% 11.9%

▲ Single-sports content

30.6% 35.2% 13.2% 21%

▲ Entertainment content for expatriates

27.8% 33.8% 23.3% 15.1%

▲ Documentary

25.6% 35.6% 19.6% 19.2%

▲ Single-genre films (e.g., horror, sci-fi, art-house)

27.4% 32.9% 18.3% 21.4%

▲ Single-genre TV shows (e.g., historical, horror, fantasy)

15.1% 44.3% 16.4% 24.2%

▲ Hobby, music, and crafts



Subscription



Advertising



Transaction model
(pay-per-view)



Hybrid model (a free plan with ads and a paid no-ads one)

Source: Digital TV Europe, Magine Pro

Original content

Original content provides a substantial advantage when competing for an audience. According to Omdia, for two-thirds of users, it's one of the determining factors when choosing an OTT service.

A Bulgarian national operator offers 13 channels of its own, including sports, local news, and movies. It even broadcasts local sports events, an indisputable advantage over its competition. Netflix and Amazon Prime can never do that.

Large studios often sign contracts with major companies, e.g., internet providers. In this case, the studio gets a new audience, and the provider can offer added value to its clients.

Asia, a prospective growth market

India is one of the principal regions for streaming services. The volume of the OTT market will reach \$5 billion there soon. The rest of the Asia Pacific is also becoming a battlefield for global and local services.

In 2018, Netflix tweaked its mobile app to run on budget Android smartphones and launched a mobile plan specifically for India. For \$3 per month, users can access the entire content library in SD — a plan like that would be three times more expensive in the US.

Hotstar, one of India's largest streaming services, is owned by Disney. Two-thirds of Hotstar's original programming, films, and TV shows are produced in Hindi, and one-third in English. Some content is also available in Tamil and Telugu.

Both launched in 2015, Hooq (Singapore) and iflix (Malaysia) now dominate SE Asia. The services offer a mix of locally-produced and Hollywood content for a monthly fee of \$2–3. Most subscribers in Asia are ready to pay precisely that much for such services.

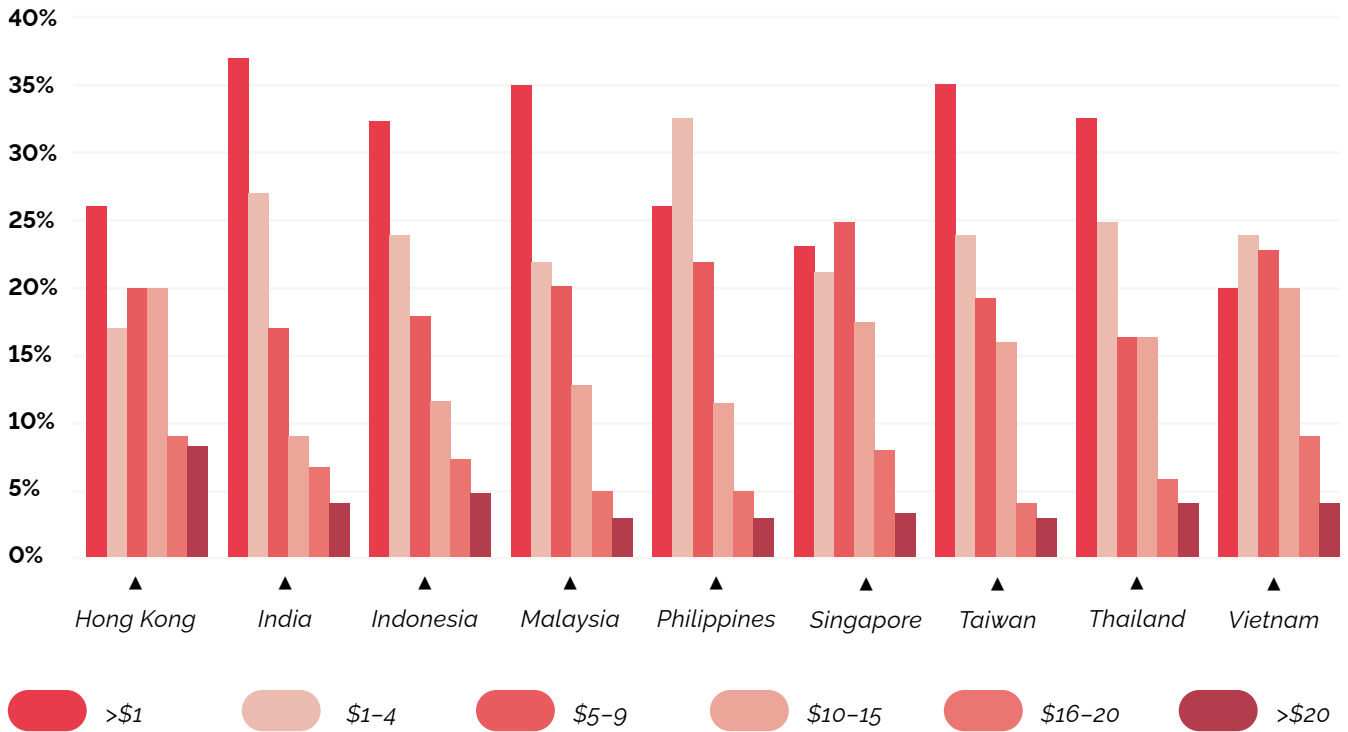
Hooq was launched in Singapore and is owned by Warner Bros., Sony Pictures, and Singtel. The service offers 68 self-produced films and TV shows, and over 35,000 hours of content from other studios available anytime, anywhere.

i

It is content that determines whether your viewers will move to your competition. Outdated VoD library and expensive subscriptions are the main reasons why users unsubscribe from streaming services.



Money Asian users are willing to pay for a monthly subscription



Source: Brightcove Asia OTT Research Report 2019

i

In developing countries, OTT can charge subscribers from their mobile balance.

As of 2017, only 19.5% of the Earth's population used a credit card whilst twice as many owned smartphones.

Source:
The Global Economy, Statista

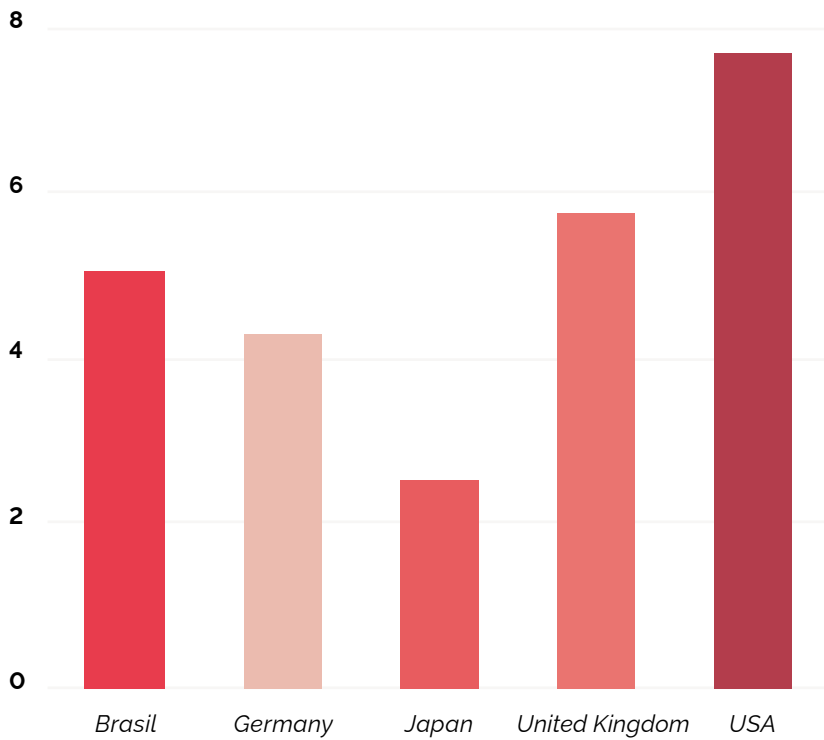
There are enough subscribers for everyone

Users prefer to mix and match subscriptions to watch the content they like, so local operators are unlikely to lose audience to global players.

An average OTT household uses 2-3 paid subscriptions. And if you factor in FVOD and AVOD services, it's as many as seven subscriptions that they use.

However, the market is far from being saturated. If a viewer pays for a streaming service, they can easily subscribe to another one. According to Omida's study, over 60% of global streaming services' users are ready to subscribe to niche services also.

Subscriptions per an OTT household in 2020



Source: Omdia



Local content and picking a niche are small OTT projects' best bet if they want to compete with large companies. Don't fear global players — many viewers are ready to run multiple subscriptions. Unlike cable and satellite TV, the OTT segment keeps growing, so there will be enough subscribers for everyone.



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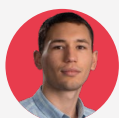
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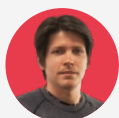
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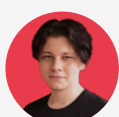
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