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#12



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To establish and support any project, an entrepreneur must become intimately familiar with the industry, calculate risks, and analyze market demand.



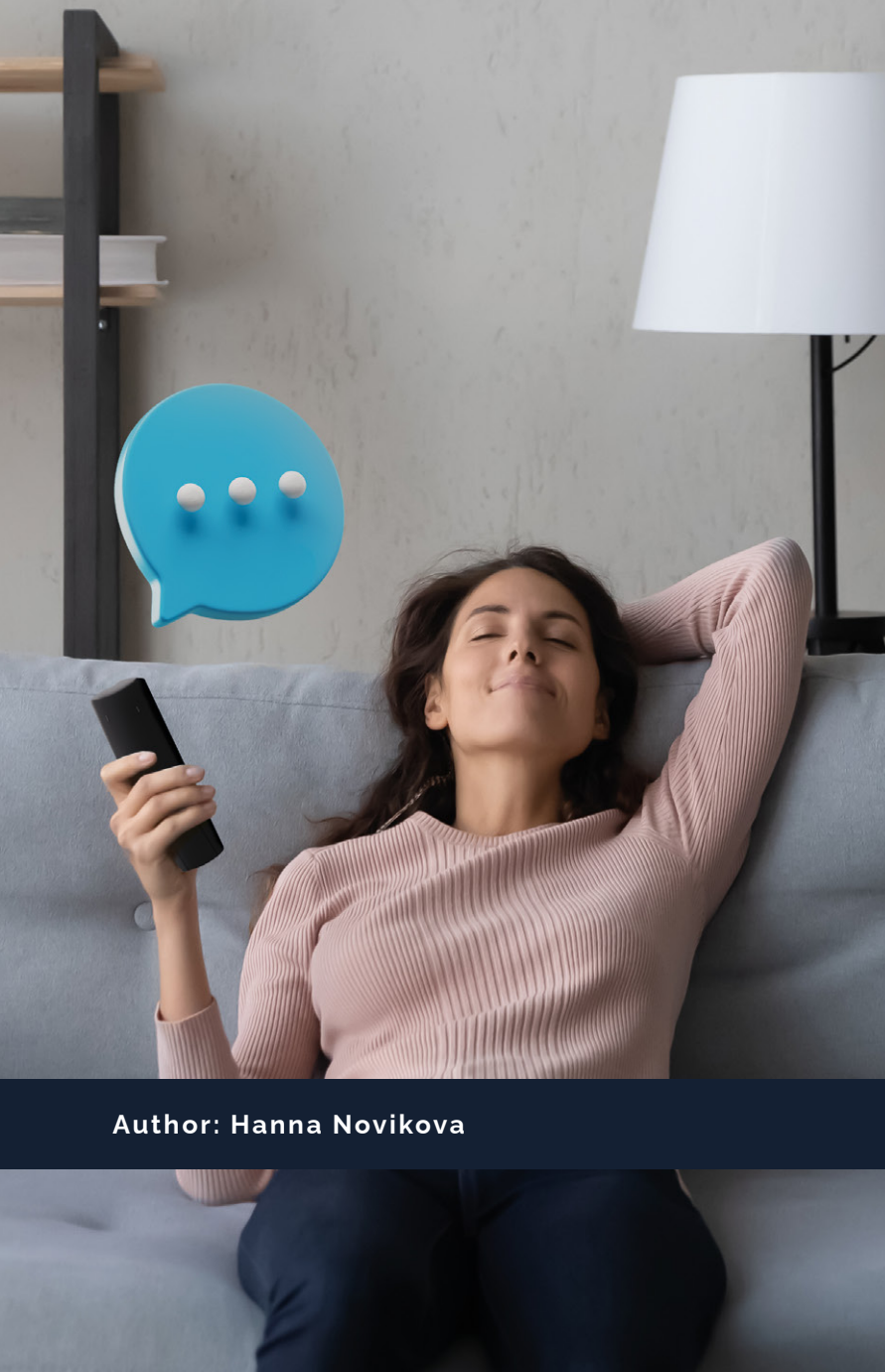
Trending: what set-top boxes are now best-selling and why?

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This article spells out which STBs are the most popular among retail customers and which are most commonly purchased by operators.

Say the word: How voice search benefits viewers and operators

THIS ARTICLE DISCUSSES
THE ADVANTAGES VOICE
CONTROL BRINGS
TO IPTV/OTT SERVICES.



Author: Hanna Novikova

Voice assistants are permeating many areas of our life, making text input easier and online searching faster.

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The weakness of TV remotes

Imagine a regular evening in the life of a big city dweller. Smart devices are all around them: the intelligent car they drive on their way home from work; the smart home system in their apartment; the virtual assistant ready to dim the lights; the crockpot preparing dinner and warming it up ready for their arrival; etc. Only the TV still requires effort, making them tediously navigate the on-screen keyboard with a remote to enter a movie name in the search bar.

Modern smart appliances have user-friendly control systems and execute commands in no time. In this light, the functionality of remote controls looks pretty limited. Anyone who's tried using a remote to do something besides channel surfing probably felt disappointed.

Peripherals, such as a mouse, keyboard, or a smartphone hooked up to the TV can do only so much to simplify playback control.

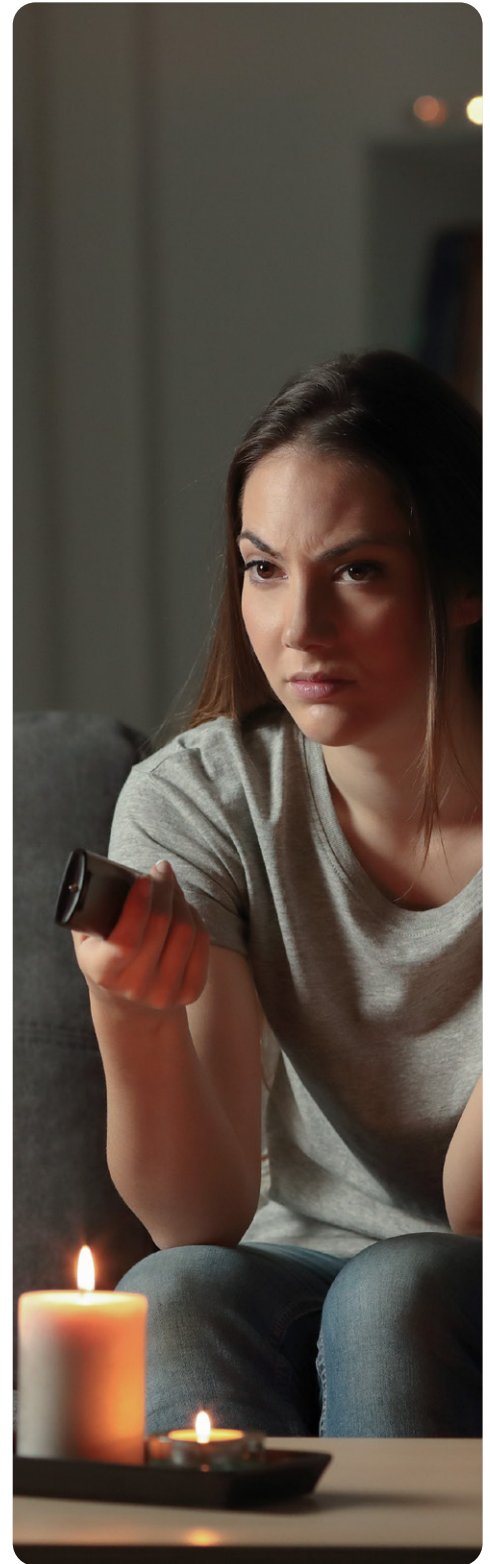
Inconvenient searches costs operators their subscribers

Surveys show that most viewers end up turning off their TVs if they can't find the content they want. During one such survey, 85% of respondents said they had turned off the TV at least once for this reason. Of those respondents, 63% did this in over 20% of cases. In other words, every fifth search came to nothing.

Difficulties while entering search queries are among the top reasons viewers give up on watching TV. Over 70% of the respondents were unhappy with their TV providers' search implementation, and only a minor portion — less than 5% — put up with the inconvenience.

In the viewers' opinion, the on-screen keyboard made interaction with the TV no easier. Moreover, they considered this input method complicated and impractical.

The addition of T9 made it a more viable option. However, the respondents noted that it was at its most practical when combined with system-wide autocomplete. T9 speeds up text entry, ensuring that the user doesn't have to mash the remote's buttons too often, plus it eliminates typos and misspellings.



The respondents recognized voice input as the easiest and the most viable way of interacting with a TV or set-top box.

Beghaviors and attitudes of users towards their current pay-TV search features

Laborious to input search terms



Had a bad experience using search



Want an easier way to find content



- Agree
- Neutral
- Disagree

Voice control – a radically different user experience

Without voice recognition, a TV remote's functionality is limited to switching channels, adjusting volume, seeking forward and backward, and changing TV settings. When it comes to typing, users are stuck with the on-screen keyboard. And it gets even worse with the lights off.

Voice control makes interaction with the TV fast and user-friendly. The user only needs to activate the remote control and say a command outside the TV's menu navigation. For instance, the user says: "Watch 2021 comedies," and the TV will comply and offer a selection of available content sources. Additionally, voice search puts users mere seconds away from the content they want.



Voice search gains particular importance for people with disabilities. Some users may find it challenging to enter search queries on the physical or on-screen keyboard. In this case, voice search becomes the only acceptable method of interaction with the TV.

How voice recognition works

A TV, let alone a remote control, hasn't enough computational power to process voice commands on its own. Thus, modern devices do voice recognition in the cloud.

Launched by a user, the voice control app digitizes their voice and sends it to remote servers. There, the voice data is converted into a text query for the search command. You can learn more about the algorithms converting voice into commands that computers can understand from the article "Your Wish Is My Command" in BROADVISION #9.

Internet connection is key to controlling a TV or set-top box with voice commands because it links the devices to the cloud infrastructure. All you need on the TV remote side is a microphone, an appropriate codec, and RF support.

Why the remote?

You might ask, what is the point of having a remote if the TV or set-top box is already connected to the Internet? Why not control the device by simply talking to it? Indeed, some manufacturers do make remotely controlled devices with built-in mics. However, this path has its problems:

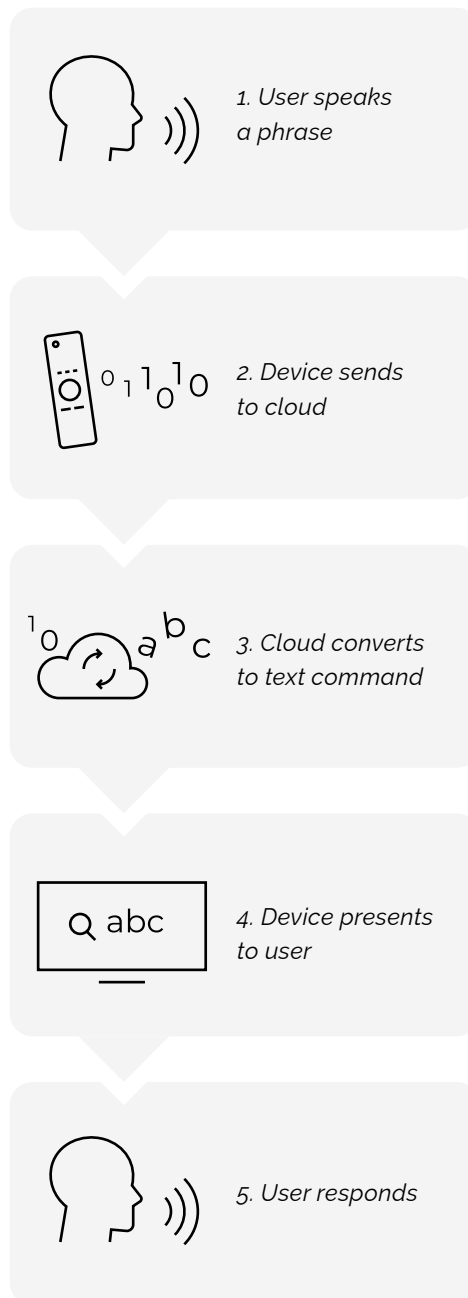
Privacy breach

To react to voice commands without a remote, the TV should constantly listen for them and send all the captured voice data to the cloud. Besides potentially disclosing the user's personal information, it puts an excessive load on the data network.

Problematic query recognition

The device will have difficulty identifying the commands directed at it amid the constant noise and background conversations. Any phrase may sound like a query to the system.

With a remote, it's up to the user to decide which commands to say and when. The user holds the remote and doesn't have to shout at it from several feet away. It helps with increasing the accuracy of voice recognition, too.



▲ Simplified diagram of voice command recognition

All you need to get started

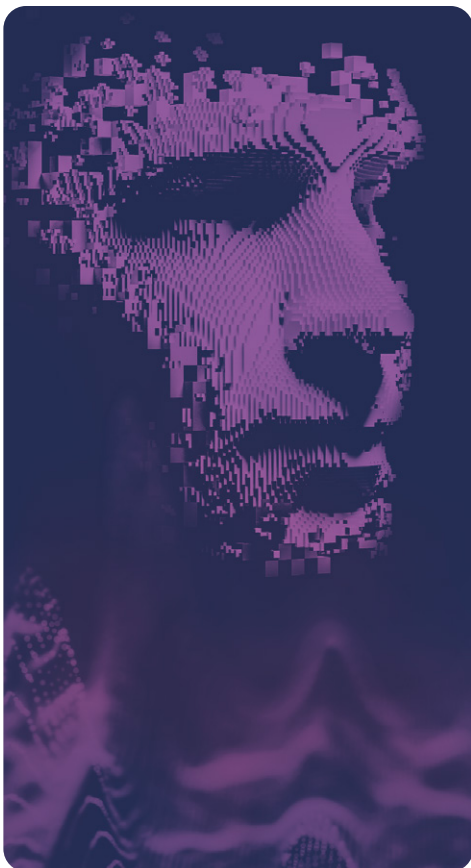
To integrate voice control, an operator should consider and ensure two key factors:



Infrastructure

Set-top boxes need to support voice recognition on the hardware level. Subscriber devices should have everything necessary for recording and communicating commands (microphones, codecs, Internet connection). The software capable of converting text into commands to execute is a must, too.

The MAG500A set-top box manufactured by Infomir is an excellent example of such a device. It has a modern remote supporting voice input and both wired and wireless Internet connectivity. The unit uses Android TV™ to ensure accurate conversion of the user's speech into the commands for the device.



Technology

Even the most advanced voice recognition algorithms have room for improvement. For example, command analysis is still problematic for users with speech disorders or a strong accent, even though the problem has been mostly offset as neural networks and cloud computing continue to develop.

It remains to be seen which wireless technology is best suited to transferring voice data from the remote without draining its battery. Frequent use of voice control calls for large bandwidths to transmit commands to the cloud and back. Devices supporting powerful codecs are necessary to tackle this problem. Data compression allows fast data transfers at lower speeds while enabling long battery life for the remote.

Does voice control pay off?

It takes new equipment, a cloud system for voice recognition and content suggestions, and a microphone-enabled Bluetooth remote for recording queries to integrate voice search. To get all of that, the operator will have to pay up. Therefore, one should make sure the innovation will make a difference and pay off before initiating such an upgrade.

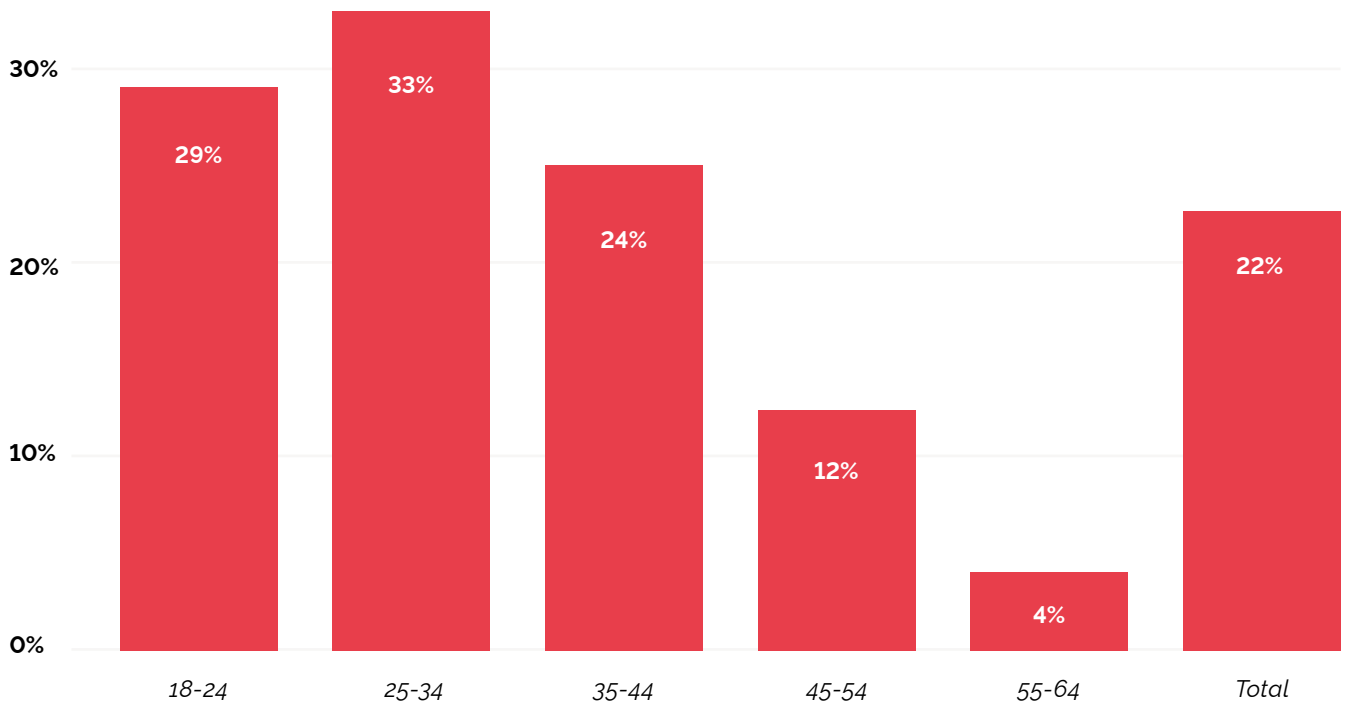
Surveys show that viewers are interested in voice control for TVs. With the advent of smartphones, people are becoming accustomed to voice interfaces (VUI). Voice input is no longer a luxury but a means of navigation. According to the latest data, 60% of smartphone owners use the feature regularly, and they want to use it on other devices, including TVs. Pay-TV operators providing voice search functionality to their subscribers will stand out from the competition.

Numerous surveys corroborate this. According to IHS Markit, more than 20% of all users interacted with their TV or set-top box via voice commands in 2019. Another 30% of viewers didn't use voice but were interested in the technology.



The feature was more desirable among young people: 33% of viewers aged 25 to 34 used voice assistants while watching TV. With the young generation gaining purchasing power and getting their own smart devices, this percentage will only grow.

Percentage of viewers interested in operating their TVs using voice commands



% of population

Source: IHS Markit

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Over 70% of the respondents said they would consider changing their provider if a competitor offered voice control. And more than 80% of respondents would value their provider more if it integrated voice control for their devices.

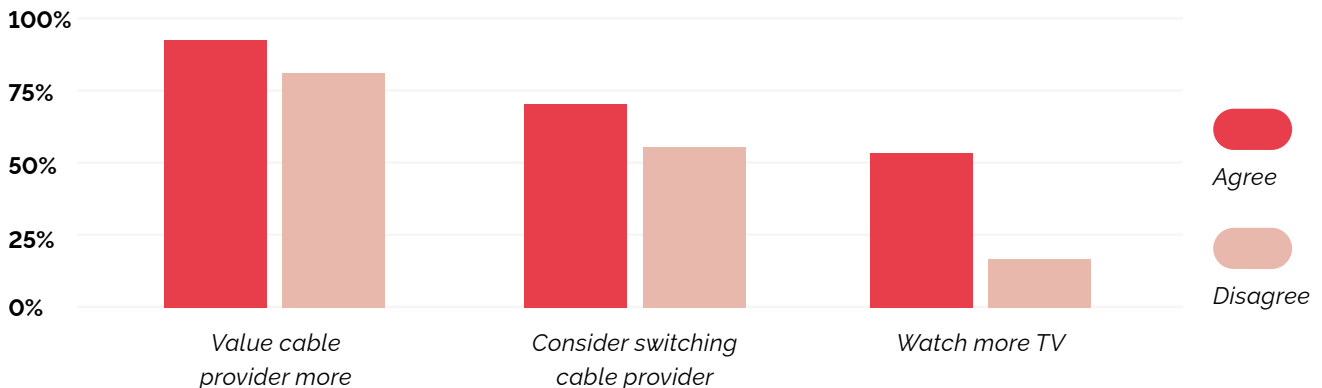
Availability of voice control often nudges users toward making a purchase. According to a Parks Associates survey, voice control was an essential feature for 43% of American households in the market for a new media player or smart TV.

During another survey focussing on user attitudes towards voice search and voice interfaces, respondents showed a favorable view of both technologies. According to 60% of them, the technologies significantly improved the TV's search experience. Users also found voice commands helpful, saying the conversational interface took their watching experience to the next level.

The survey participants considered the simplicity and speed of content search experience to be the key factors determining their screen time. Besides, the viewers noted that voice control improved user experience and encouraged new views.

There is another reason for the positive attitude of viewers toward voice search. The technology looks up content for them to enjoy by themselves and also in the company of their partners, families, and friends. This means content picking becomes a more social, interactive, efficient, and snappy experience.

User attitudes towards voice-based search solutions



Voice input is gaining momentum and has already penetrated the telecom industry. Viewers prefer IPTV/OTT operators that offer this technology because voice control provides a quick and user-friendly way of looking up content. Additionally, viewers can finally relax and forget about tediously entering text with the on-screen keyboard.

MAG522 MAG522 (W3)

4K-CAPABLE LINUX SET-TOP BOXES
WITH HEVC



Linux 4.9



HEVC and 4K



API for
integrations



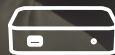
Dolby Digital Plus™
eight-channel audio



4 GB eMMC



1 GB RAM



Micro2 design



Wi-Fi module
MAG522w3 only

GET THE LATEST MIDDLEWARE UPDATE

Solutions powered by MAG522/522w3 and Ministra TV Platform can be updated to the latest version 5.6.8 for free. Our experts will advise you on how to update your middleware or help you do that remotely.

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Why hotels need in-house IPTV/OTT services

FIND OUT HOW IN-HOUSE IPTV/OTT SERVICES HELP HOTELS PROVIDE BETTER SERVICE, MAKE ADDITIONAL PROFITS, AND REDUCE STAFF LOAD.



Author: Marina Sukhova

Almost every hotel suite has a TV with several channels, although it is not usually seen as a means to make a profit. But if guests can watch streaming services, pay bills, and order room services, hotels will earn more thanks to the improved quality of their services and reduced staff workload.

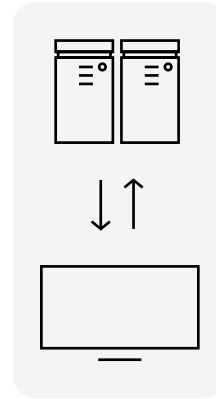
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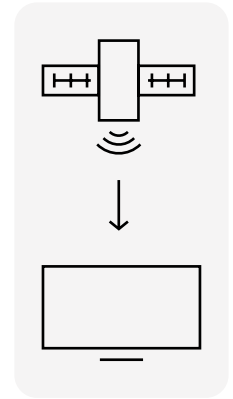
IPTV — streaming content in a local network

IPTV is a technology for streaming video in a local network via an Internet protocol. IPTV services and client devices have a two-way connection: a viewer requests and then receives content.

Cable and satellite operators almost always provide one-way communication with the clients, which means the viewer only watches what is broadcast.



▲ IPTV



▲ Cable and satellite TV

Why hotels need in-house IPTV/OTT services

In a hotel with cable or satellite TV, guests can only watch a scheduled broadcast and cannot stop, rewind, or rewatch videos.

▼ An example of a movie catalog on a hotel TV. Besides the content, the screen shows information about the suite number, hotel name, weather, and email notifications.





With IPTV, hotels can offer their guests not only channels with the TimeShift option (pausing or rewinding content) but also TV archives and videos on demand. Additionally, IPTV solutions can integrate with hotel PMS systems — hotel-managing software — and therefore provide even more features:



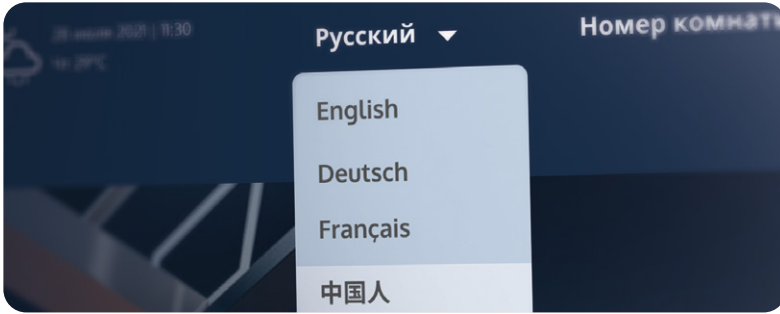
Using a TV to order services

IPTV helps companies provide more services. For example, guests can order room cleaning or find out if the hotel has a swimming pool using their remote controls.



Hotels advertise their services

Everyone benefits: while guests get their services quickly without distracting the front desk, the hotel advertises its restaurant, bar, or fitness center.



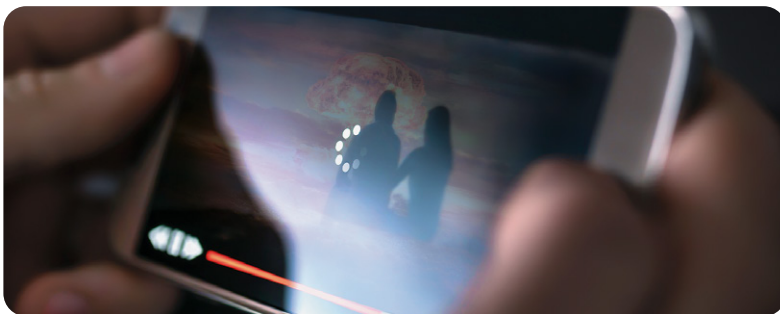
Best service for foreign guests

Your foreign guests can change the TV interface language or select their audio language to watch a channel or a movie. Also, guests can call a taxi or book a table in the restaurant using an app in their language.



Hotels earn from showing content

Your company can also make money from content, e.g., by putting access to TV channels and streaming services on the bill.



Easy multi-screen integration

Guests can watch IPTV/OTT content not only from a set-top box in their suites, but they can also install the client app on their phones and watch TV outside the hotel so long as they have internet access. This is especially attractive where the Netflix library has regional restrictions.

Not only channels and movies

Apart from content, IPTV also allows hotels to show their guests welcome messages, send notifications and give them access to guides, maps, weather forecasts, bill details, and provided services.



In 2020, guests in hotels watched TV 49% more often than they did in 2019. As a result, there was increased demand for TV channels and streaming services — Netflix, YouTube, and HBO Max.

Source: Enseo

Welcome message

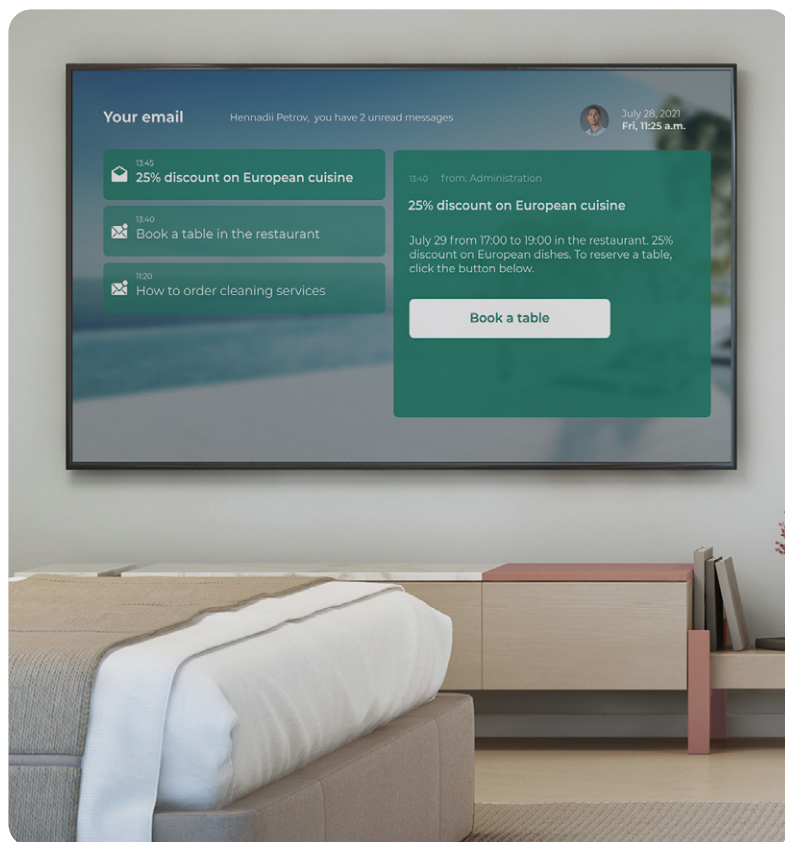
When turning on the TV in their suite for the first time, guests can learn about the services the hotel provides and how to order them.



► The welcome message says that the hotel has a restaurant, while guests can use the app to watch TV or movies, call a taxi, or check the weather forecast

Notifications from the front desk

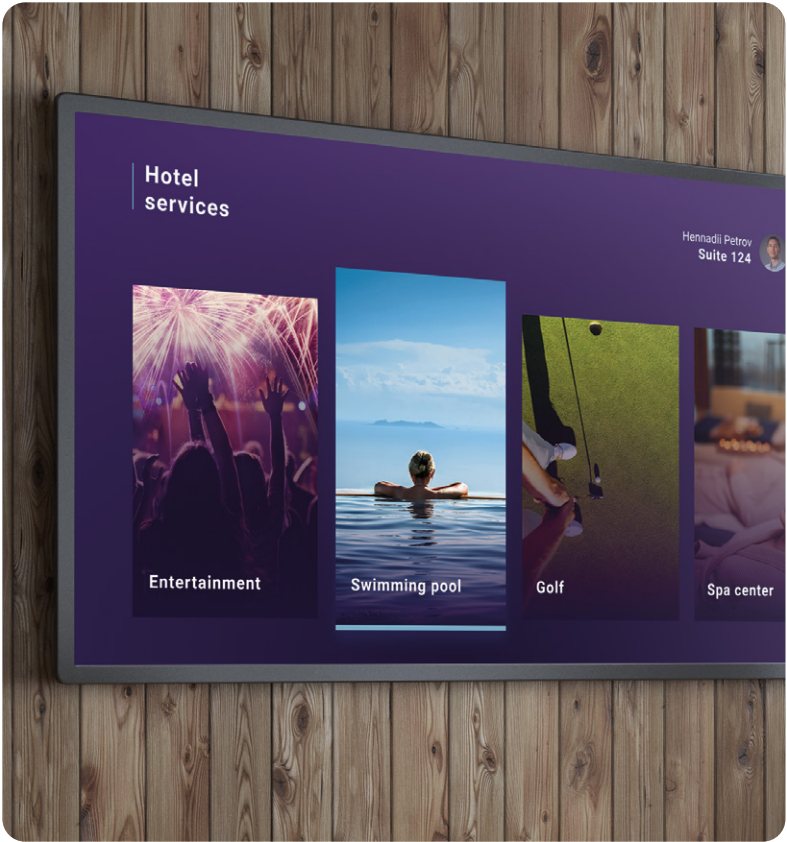
Notify all guests simultaneously about available tables in the restaurant, plus they can book them from the app. Additionally, guests will receive a notification if they need to pay the bill or check out before a specific time.



► Right on the TV screen, guests will see news about discounts and bills.

Additional services

Many hotels have restaurants, gyms, spas, saunas, laundries, conference halls, and other facilities. Any service can be booked and paid for from the app.



◀ Here is how a hotel services page may look.

Room service

Guests do not have to call the front desk to order food, housekeeping, or ask for an extra pillow or towel.



◀ In some hotels, guests can order food to their room from the TV screen.

Guides, maps, and weather

Every day, guests ask hotel managers hundreds of questions. IPTV can help free them up time for more important tasks by not having to deal with less important ones.

► From their TV screen, guests can check the weather forecast for the coming days, which will help them plan their stay in a foreign city or country.



Information about suite bills and provided services

Some hotels give their guests access to bill information. It is promptly updated with details of new services added automatically.

Hotels can enable the fast check-out option, allowing their guests to click just a few buttons and pay the bill with a credit card to check out. Also, hotels can assign personal identifiers to their guests and offer tailored services at their next visit.

Partner advertising

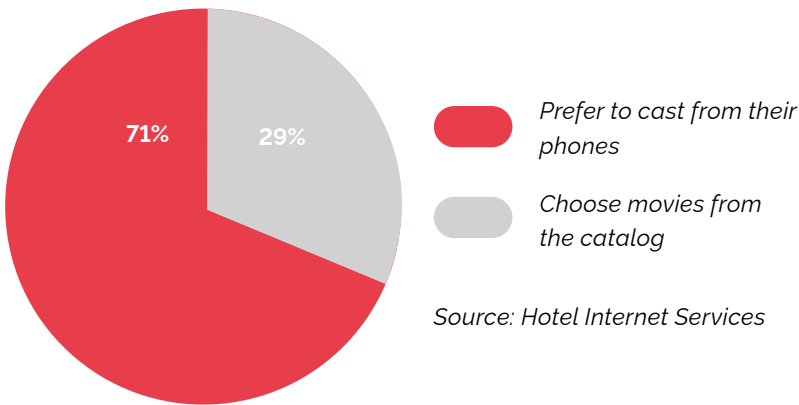
Hotels work with numerous companies, such as food delivery services, taxi providers, tour companies, transport operators, and theaters. Advertising their services can bring more profit from finder's fees.

What guests and owners think

In 2020, Hotel Internet Services, a technological solutions supplier, interviewed 212 hotel owners and 720 guests to learn about their expectations from hotel TVs. It turned out that increasing numbers of people wanted to watch streaming services, visit social media sites, order additional services, and cast content from their phones to the TV screen.

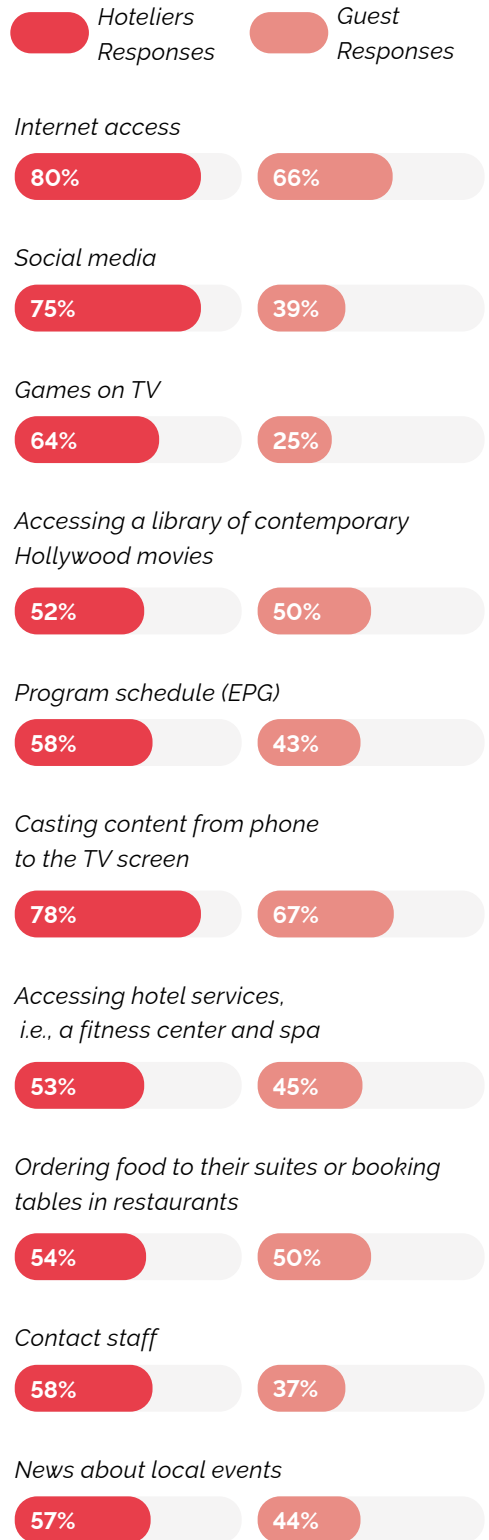
Integrating video on demand in the hotel IPTV can be profitable, but only 39% of the respondents stated they would be willing to pay to access the movie library. However, in 2020, 71% of guests wanted an option to cast content from their phones to the hotel TV screen.

Number of guests wanting to cast content to the TV screen



For hotel owners, in-house IPTV service is an opportunity to serve their guests better and earn more while also reducing the staff load. A hotel with IPTV channels and video on demand attracts more guests and provides higher-quality service.

What features are important to owners and guests in a hotel TV



Source: Hotel Internet Services

The first-ever course on launching IPTV/OTT services

INFOMIR'S EXPERTS HAVE DEVELOPED A FREE COURSE FOR BEGINNER OPERATORS AND IPTV/OTT SERVICE OWNERS.



Author: Marina Sukhova

To establish and support any project, an entrepreneur must become intimately familiar with the industry, calculate risks, and analyze market demand.

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A new business without system management is like a traveler without a compass

When preparing to launch an IPTV/OTT service, an operator needs to understand many things:

- What equipment he needs and where to buy it
- How to check the project's competitiveness
- The kind of content the audience prefers
- Where to find subscribers and how to retain them
- How to maintain the accounts
- Decide if he should provide subscriber-end devices

And the list goes on and on. However, freshly minted operators have a hard time looking for competent answers. There are simply no centralized repositories of industry knowledge, and experienced colleagues are often reluctant to share their experience with potential competitors. Furthermore, it's impossible to find a one-size-fits-all solution, as projects may differ wildly in audience coverage, content type, casting methods, etc.

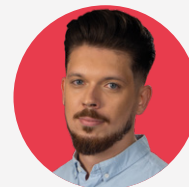
Infomir has decided to create the first – and so far the only – course on building and launching IPTV/OTT services effectively and risk-free. In it, Infomir employees share with newcomers and existing operators 20 years' worth of expertise in hardware and software development and experience in co-operating with hundreds of operators and projects.

This is the audience Infomir targets with its free educational offering—Infomir Academy. The course contains all the latest information from the IPTV/OTT solution integration, promotion, and support practitioners. Our authors discuss the experience of telecom industry experts and provide actionable advice for launching new or enhancing existing IPTV/OTT services.



Previously, no one taught how to become a pay-TV operator. To launch an IPTV/OTT project, one needed to wade through all the details themselves. Operators had to learn from their own mistakes, losing precious time and money. Infomir decided to change this.

Using existing companies as examples, we show how real-world projects are set up. New operators worldwide will thus be able to avoid mistakes and launch successful services.



Oleksandr Vlasenko

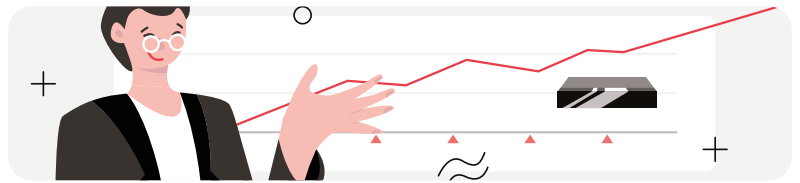
*Project Manager,
Infomir Academy*

For IPTV/OTT business newcomers and experienced players

The course starts with the basics, so even those unfamiliar with IPTV/OTT industry will find it helpful. For experienced operators, it has exciting case studies, expert advice, and the latest information.



Infomir Academy summarizes all the knowledge required to launch and support a project. Readers will discover what IPTV/OTT industry is in general, what hardware and software powers it, who IPTV/OTT service users are, financial matters, marketing, and analytics.



Business owners coming from other industries

get another opportunity to boost profits. The very first lesson of the course teaches the fundamental concepts and shows how to integrate a new service fast, even if the reader has already discovered IPTV/OTT for themselves.



Veteran IPTV/OTT operators

can brush on their existing knowledge and discover new ways of expanding and retaining their audience.



Newbie operators

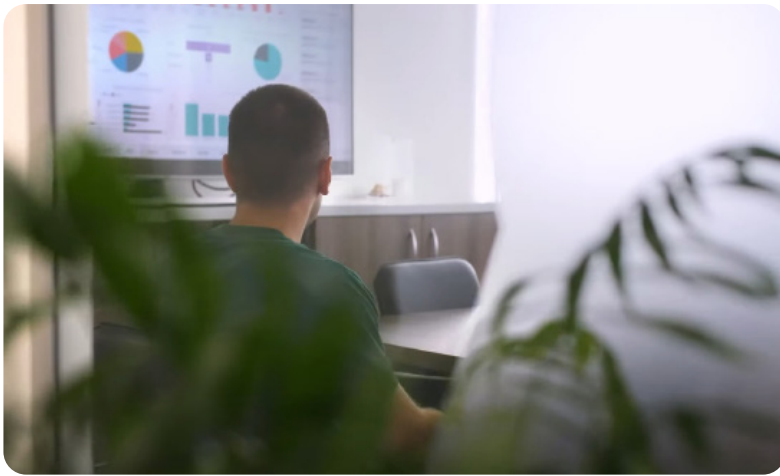
will enjoy plenty of practical advice on deploying projects. Newcomers to the telecom industry will enjoy real-world case studies from the existing operators who have carried their services from launch all the way to success and want to share their experience.



Junior IPTV/OTT operators

can structure their knowledge and fill in the gaps, with the experience of senior peers helping them avoid unfortunate mistakes.

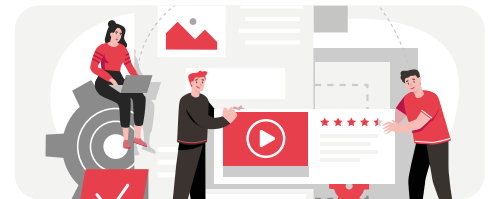
Infomir Academy, a unique educational project



Usually, IPTV/OTT operator training has the format of personally attended intensive sessions. Even online courses require participants to register and pay for access. Usually, intensive sessions span 2–3 days, meaning that the specialist can't work while participating. Also, one day of such a session may very well set you back \$1,000 or more.

Infomir Academy is available online for free, with no registration required.

All the lessons are available online without limitations — the materials are available for reading in any order at any time. Those familiar with the foundations of the industry can jump to the sections of interest to them.



Every lesson takes 15–20 minutes, during which you will get the latest comprehensive information, expert opinions, advice from experienced operators, and answers to the most common questions.



All lessons are rooted in the experience of the IPTV/OTT industry experts, including engineers, developers, project managers, brand managers, and technical support personnel.



Feedback from experts and peers. Should you have any questions while undertaking the course, you can discuss them with the community or ask Infomir's experts.



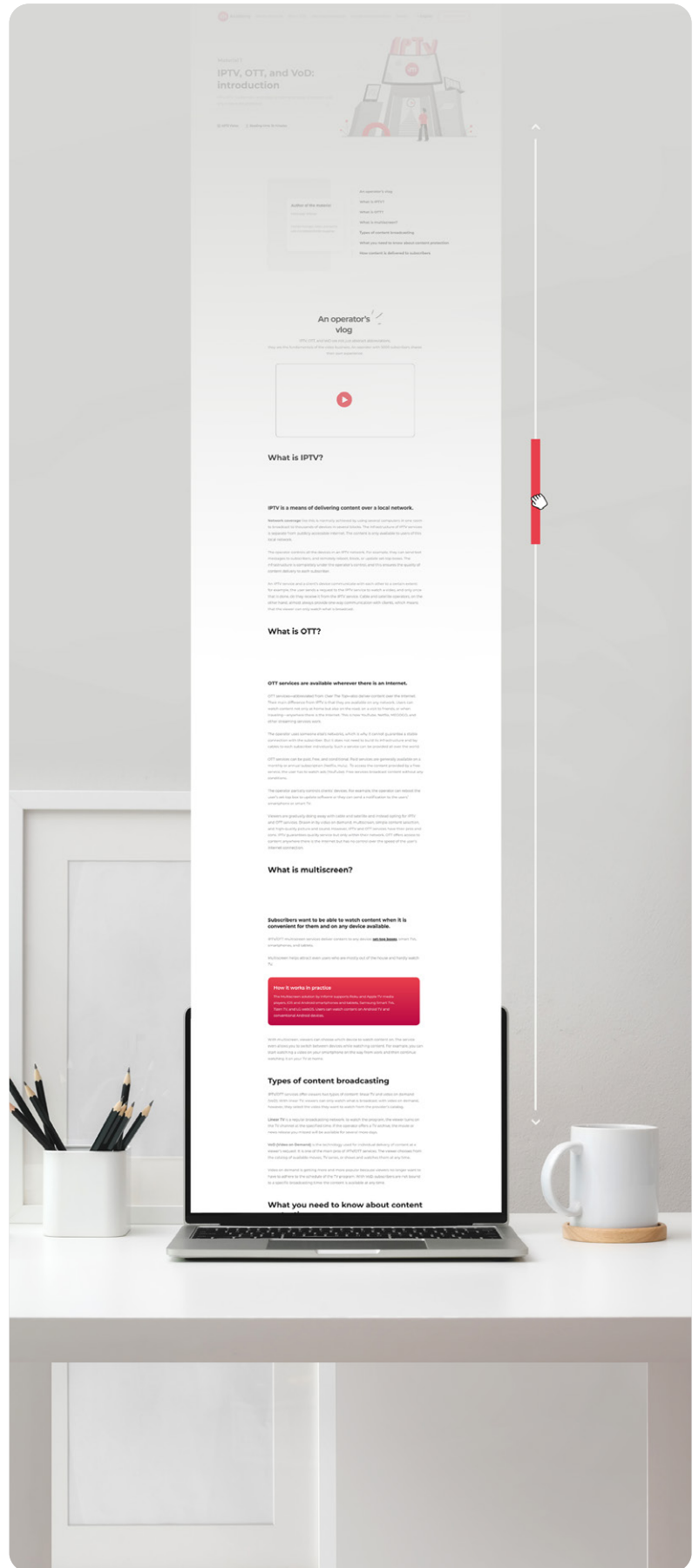
The course is free and available to individuals and enterprises. Infomir Academy's experts share their experience to enable as many companies as possible to launch and enhance their services.



IPTV/OTT Basic Course: from project launch to audience retention

Every lesson in the course focuses on one topic only: from the definition of IPTV and OTT to launching the project and analyzing the project's audience.

The Basics section of Infomir Academy includes 16 lessons. The project's website already lists the articles and interviews on IPTV and OTT working principles, project architecture structure, middleware as the core of every service, line TV, VoD, and playback control.



The course authors will also discuss the necessity of content protection, what depends on CAS/DRM, choosing between Android™, Linux, and Android TV™, and the factors determining the set-top boxes' price and specifications. Infomir Academy's experts will talk about staffing for modern IPTV/OTT operators, specifics of streaming service monetization, and creating subscription plans.



From the experience of the currently active operator, the readers will discover the decision-making process behind the IPTV/OTT project launch and what advantages multi-play operators have. Some materials will be dedicated to the importance of the network's last mile, audience retention, and viewer preference analysis.



New materials will be released bi-weekly or monthly, and the entire course will become available in spring 2022.

Every lesson: expert experience distilled

Sometimes, it's hard to apply abstract knowledge to real-life situations. With the Infomir Academy course, you will discover how to put theory into practice.

Most materials include case studies

rooted in the experience of Infomir, an internet and TV provider. These will point out to newcomers to the IPTV/OTT business the many mistakes to avoid when launching and developing their projects.

Infomir has been manufacturing smart set-top boxes, developing IPTV/OTT solutions, and integrating them since 2001.

Over the 20 years of Infomir's operation, its specialists have accumulated tremendous experience in architecture, technical implementation, product promotion, and business development.

Meet the course's team:



Viktor Artiushchenko,
*Commercial Director
at Infomir Group*



Igor Oklander,
*Head of Marketing
at Infomir Group*



Anatoly Filatkin,
*Head of After-Sales Service
and Customer Support
at Infomir*



Vadim Kolesnyk,
*Director at IPTV operator
Infomir*



Denys Vasyliev,
*Head of Tech Support
and IPTV/OTT Solution Integration
at Infomir*



Serhii Volyanytskyi,
*Lead Engineer, Broadband
Portfolio Management
at Infomir*



Infomir Academy is a unique project drawing on 20 years of IPTV/OTT solution integration and development experience. The course is designed to make launching new services easy and fast for industry newcomers and show new development paths to experienced operators.

[START COURSE](#)

MAG524

MAG524 (W3)

HIGH-PERFORMANCE LINUX SET-TOP BOXES
POWERED BY AN AMLOGIC CHIPSET



Linux 4.9



HEVC
and 4K HDR



API for
integrations



Dolby Digital Plus™
eight-channel audio



4 GB eMMC



1 GB RAM



Easy-to-use
IR remote control



Wi-Fi module
MAG524w3 only

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Trending: which set-top boxes are now best-selling and why



Author: Alexey Kuznetsov

THIS ARTICLE SPELLS OUT WHICH STBS ARE THE MOST POPULAR AMONG RETAIL CUSTOMERS AND WHICH ARE MOST COMMONLY PURCHASED BY OPERATORS.

To better understand the market situation, Infomir's experts looked into the main features of IPTV set-top boxes available in 2021. The study included Android TV™ devices and Linux/RDK devices.

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In the first half of 2021, all the world's leading semiconductor manufacturers faced a global shortage of microchips. The crisis affected the manufacturers of PCs, tablets, smartphones, household appliances, and even cars. As a result, the companies had to optimize their production and reduce or discontinue the release of their products. Furthermore, this shortage affected the manufacturers of IPTV/OTT equipment as well.

Pandemic and sanctions

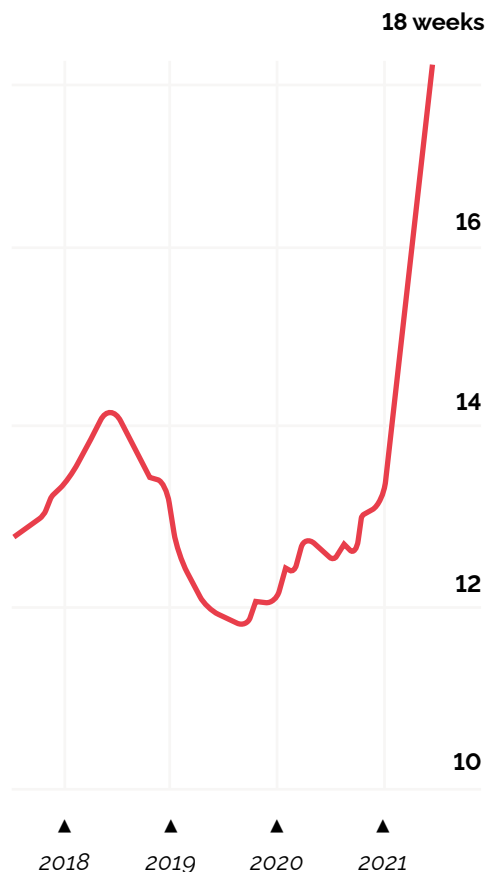
In 2020, most countries worldwide imposed lockdowns due to a pandemic caused by COVID-19. As a result, many people switched to remote work or education, and lots of them had to buy some additional equipment—more powerful computers, laptops, and convenient monitors—to make working from home more comfortable. A surge in demand for electronics gave rise to a higher demand for the components, i.e., chipsets. Unfortunately, chip manufacturers could not handle the rush of orders, while the major device manufacturers ran out of components for their devices.

The chipset industry was also affected by the sanctions imposed by the US on one of China's largest electronics manufacturers—Huawei. The U.S. government's actions resulted in a halt of cooperation between the Chinese company and TSMC (Taiwan Semiconductor Manufacturing Company)—the largest microchip supplier. At their facilities, Huawei made HiSilicon chipsets used by other manufacturers in their smartphones, computers, and IPTV set-top boxes.

The company had to seek other chipset manufacturing facilities while its clients were left without components for their products. As a result, these manufacturers were forced to shift towards the chipsets from other suppliers and release devices with different characteristics.

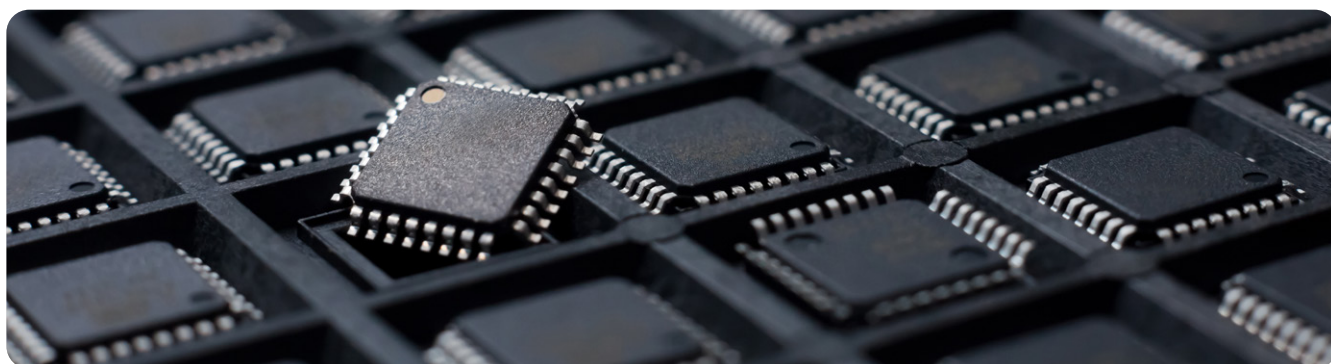
Lead times blow past previous peak

The gap between ordering a chip and delivery is still growing



▲ In May 2021, the chip lead time achieved 18 weeks, which was four weeks longer than the previous peak in 2018.

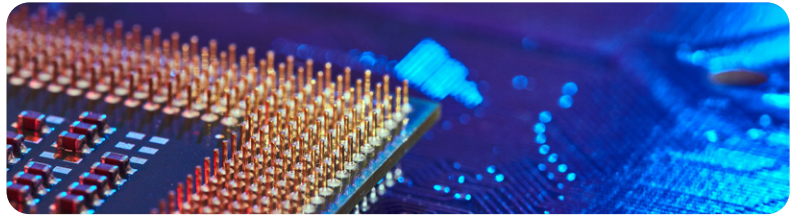
Source: Susquehanna Financial Group



Which devices are trending?

At the beginning of 2021, Infomir researched how the "semiconductor crisis" affected the market of IPTV/OTT equipment. For this purpose, the company's experts examined the characteristics of more than 300 operators and 100 retail devices available in the market released between 2014 and 2021.

We analyzed characteristics such as the chipset, RAM and ROM amount, device form factor, remote control, Wi-Fi adapter type, and connectors and interfaces. The result was a summary specification of set-top boxes for operators and retail customers that are the most popular in 2021 and will be in demand in 2022.



Characteristics

The basic characteristics for retail and operator devices are similar in 2021: S905X set-top boxes are the most common. The most popular amount of RAM is 2 GB, with ROM being 8 GB.

These characteristics enable users to view content conveniently. Operators, in turn, won't be overpaying when purchasing large quantities of devices.



Operating System

Most devices are designed to be powered by Linux OS or RDK platform only. However, some manufacturers offer the same model powered by the two OSs (Linux or AOSP).

Linux devices are preferred thanks to their seamless operation, easy maintenance, and usage.



Form factor

Mainly, the devices are still manufactured in a standard STB (set-top box) casing. However, dongles are becoming increasingly popular among end-users. These devices are cheaper and easier to use as they can be connected to a TV like a regular USB drive. Yet, such solutions are unsuitable for the growing operator: the devices can be unstable and do not have the basic network interfaces, e.g., Ethernet and USB ports.



Remote control

To understand what a trending remote control for an IPTV box looks like in 2021, we examined the standard sets of the devices offered by ten popular manufacturers, including Nvidia Shield, Roku, Mecool, Xiaomi, Apple TV, and others.

The analysis revealed that an ideal remote control for a consumer is a convenient and simple gadget featuring Bluetooth and voice recognition. Besides the standard functional buttons, the remote control must have dedicated and programmable buttons for the following:

- Streaming services (retail boxes)
- Operator services (operator boxes)
- Voice search
- Bookmarks

The remote controls made from environmentally friendly materials—recycled products with buttons with antibacterial coating—are becoming increasingly popular.



Ports and interfaces

The study also showed that most of the STBs selling in 2021 are equipped with a series of additional interfaces, ports, and adapters:

- Dual-band Wi-Fi adapter (2.4 and 5 GHz)
- 100 Mbit/s Ethernet port
- Two USB ports (2.0 and 3.0)
- HDMI 2.1
- AV/RCA
- S/PDIF output
- Power button

These options are popular among buyers and will continue to be offered on devices for the immediate future.



A stable client device and a convenient remote control are not only key to the subscriber loyalty but also your free marketing communication channel. Additionally, set-top box customization enables operators to retain their audience, stand out from competitors, and strengthen their brand.

Using the device daily, subscribers will always see your brand's logo.

However, the logo position on the device casing may vary depending on the model. Therefore, we recommend paying attention to this option when choosing the equipment supplier.



Irina Omelchenko

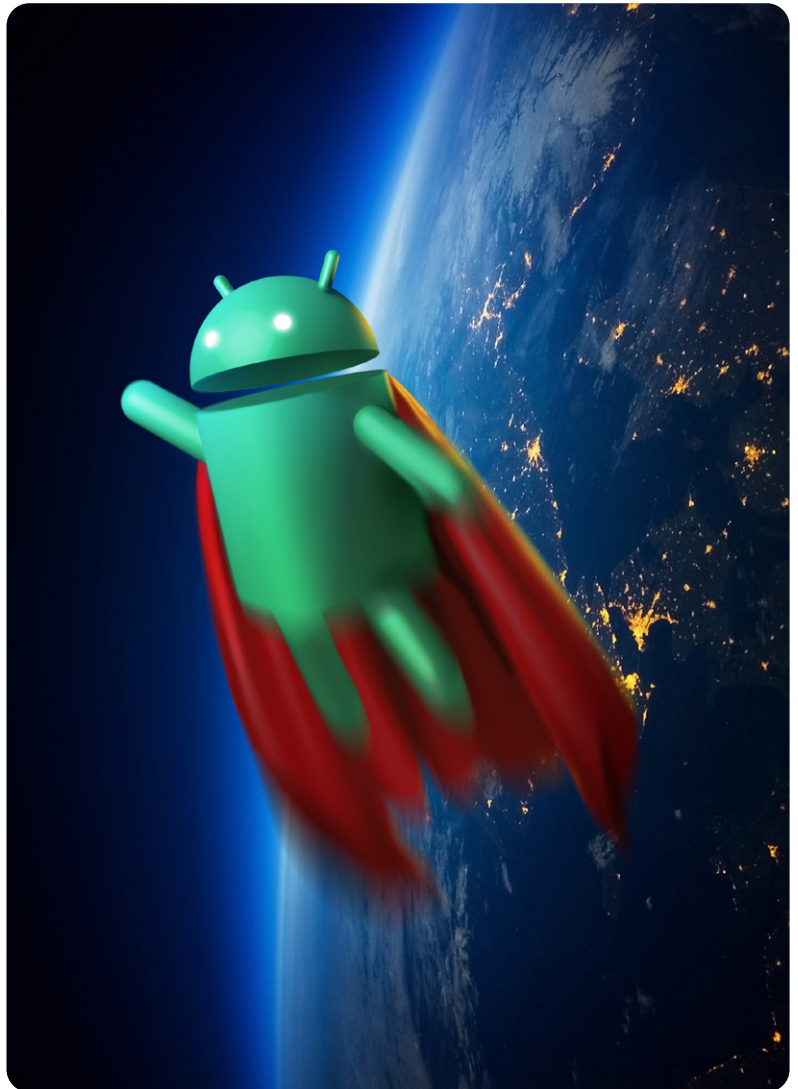
*Product Marketing Manager
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Where the market is heading

In 2021–2024, most retail set-top boxes will be powered by Amlogic S905X4. This chipset boasts an optimal price and performance ratio and supports all modern interfaces.

The operator boxes will mainly be using Amlogic S905Y4. This chipset is usually offered as a cheaper and less powerful option, as it does not support USB 3.0 and Gigabit Ethernet. However, its performance is sufficient to solve the main IPTV service tasks.

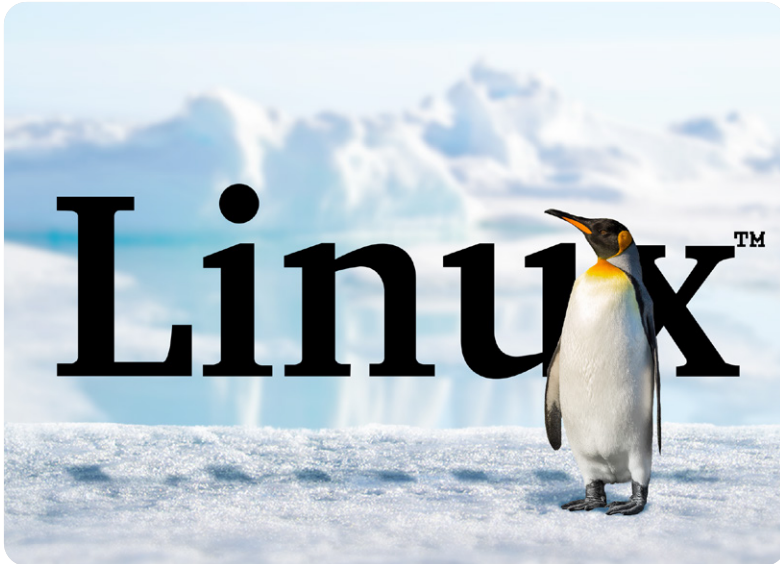
Most STBs will still offer 2 GB RAM and 8 GB ROM. It is an optimal balance between the operating system requirements, applications, and device pricing. Manufacturers can install more memory, but end users will probably not be using the excessive resources, while the device price will turn out to be unreasonably high. The above ratio between RAM and ROM will remain relevant over the next 2–3 years. After that, everything will depend on the operating system requirements and the set of applications used by customers at the time.



In the next 3–5 years, Android TV devices will take over the market. These feature a more advanced interface, a stable operating system, and a wide range of applications and functions: voice search, personal recommendations, Chromecast built-in, and Play Market (over 7,000 licensed games and applications).

Linux and RDK will remain in demand also. They will be used by major operators having private networks. Devices powered by this OS allow linking a subscriber to a single service only.

Eventually, all analog and optical interfaces will become outdated, but the digital HDMI will strengthen its position.



Major operators purchase up to 100 thousand devices. Accordingly, a one-dollar price difference between two models may either increase or decrease the budget by hundreds of thousands of dollars. That is why, when developing the set-top boxes, manufacturers are trying to keep the best balance between performance and device pricing.

To save on budget and satisfy the viewing requirements, choosing a set-top box powered by an affordable yet high-performance chipset is preferable. The device should provide an optimal RAM and ROM ratio, not to mention wireless data transfer interfaces.

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S/PDIF and RCA ports will no longer be installed in TV set-top boxes as they will become outdated along with other legacy technologies. Instead, manufacturers will begin to use the new Wi-Fi 6 protocol and HDMI interface that will probably switch to a wireless protocol too.



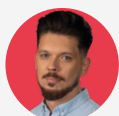
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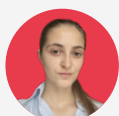
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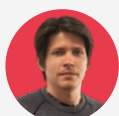
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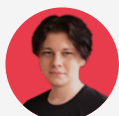
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Editorial

BROADVISION magazine is a quarterly online magazine devoted to the IPTV/OTT industry and modern technologies produced by Infomir's marketing specialists. We're happy to present our twelfth issue.

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