

Whitepaper

Stream Casting in hospitality

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Mehmet Bacak (mehmetb@nevotek.com)



What is stream casting

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"Casting" and "Mirroring" are two frequently confused common terms. Mirroring stands for creating a replica of the cell phone or the tablet screen on a nearby TV or large screen. Although mirroring is also a form of streaming content, it is different than Casting.

When one mirrors his/her cell phone screen on a larger TV screen, everything on the cellphone screen is made visible on the large screen, including all controls, icons, etc. It is like sharing your desktop at a Zoom or Webex conference. Major disadvantage of mirroring is the loss of resolution. When you mirror your cell phone screen, it is mirrored at the resolution of the cell phone, which is far less than the resolution of the large screen TV. Therefore, the image quality on the large screen is far less than what you experience on your cell phone.

On the other hand, Casting reflects only the output of the selected casting enabled application on the cell phone, ignoring whatever else is running on your cell phone. When casting, the stream adapts to the resolution of the target large screen, thus the resolution is limited only with the resolution of the stream and the large screen TV. This delivers a far better visual quality and better user experience.

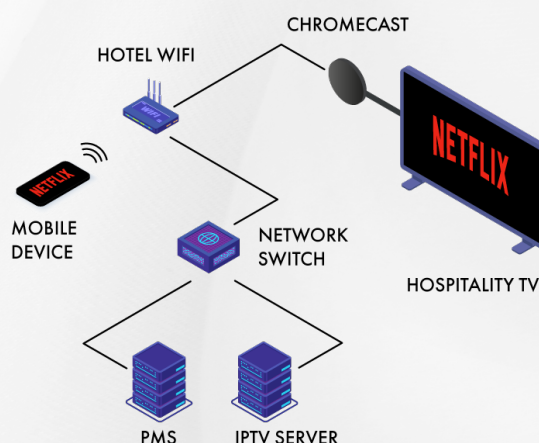
While casting, the user is able to use the features of his/her cell phone. Only the casted screen is reflected on the large screen TV, everything else stays on the phone.

Casting is becoming more popular every day and most people have casting supported end points at their homes such as Google Chromecast, Apple TV, Roku or casting embedded smart TVs. Anyone enjoying watching streamed content in high resolution at their homes naturally demands to have a similar experience at a hotel where he will be staying temporarily. This drives the demand for casting at hotels.

Growing demand for casting in hospitality

Today's travelers are looking for a user experience technology at a hotel similar what they have at their homes or offices. Hoteliers try to make their guests comfortable by providing technology that understand and predict their habits. Monitoring choices from previous stays like the temperature set, choice of beverage or food, etc. However, providing the same soft pillow or putting extra decaf coffee is not always enough. Today's travelers are much technology enabled than a few years ago.

Traditional Casting Solution



It is very challenging for hoteliers to provide content for all guests coming from different geographies and different cultures. Hotel guests end up bringing their favorite streaming services or content with them into the hotel room. As watching favorite movies or shows on a small cell phone is not much fun, availability of technology for streaming own content becomes mandatory for today's hospitality.

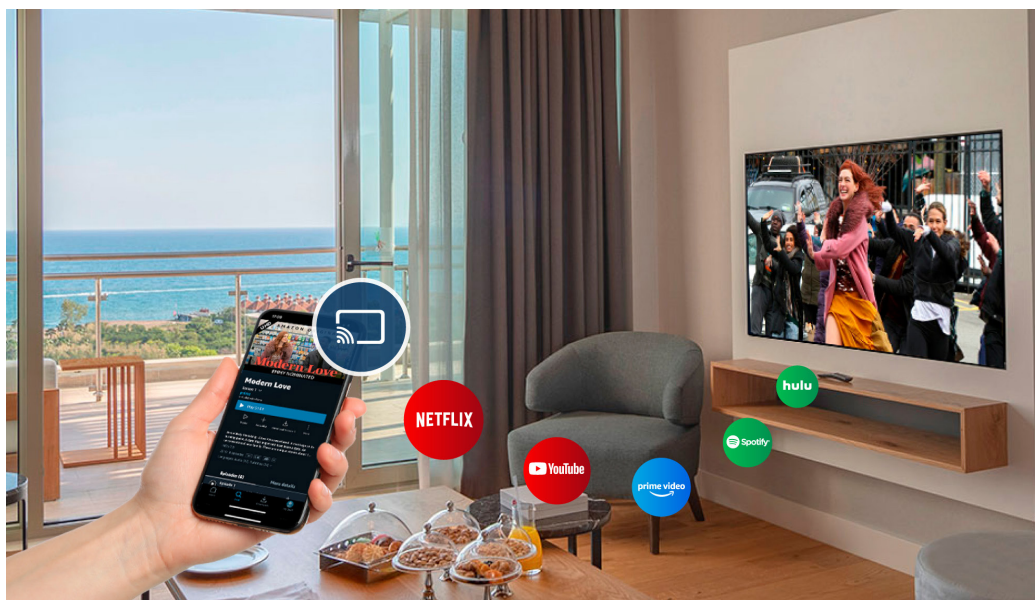
This growing demand on casting personal content and streaming to hotel TV lead the hospitality tech providers to look for reliable and secure options for streaming. Hospitality TV manufacturers approach to this demand is by including streaming app clients in their hospitality TV's. Examples are the Netflix app or YouTube pre-installed in hospitality smart TV's. Major threshold for this approach is the concerns about guest privacy. In this solution guest needs to enter his/her credentials on the Hotel TV, which most guests are very concerned.

Based on Netflix policies guest details needs to be wiped out after check-out. This requires a seamless integration with the hotel's PMS system. Hotel TV vendors such as Philips, LG and Samsung chose NevoEdge to complement their products. NevoEdge enables hotel TV's to be compatible with requirements from streaming vendors like Netflix. NevoEdge with its more than 65 integrated PMS interfaces became the platform of choice for most TV systems. Although this is a solid solution, still a lot of guests keep worrying about privacy and stay away from such services because they are concerned about typing in their credentials in an app on the hotel TV.

To achieve full guest satisfaction and a seamless and simple streaming experience at a hotel, most viable solution turns out to be casting these days.

Privacy matters at hotels

Hotels should be premises where you have all needs are taken care of while traveling. Some services a traveler needs may be on a common server like information about your surroundings or the hotel facilities and some services require strict privacy. While using the hotel internet, guests want to be sure hotel takes guest privacy requirements seriously. Another example is when guests use the in-room phone, they expect that call history and voice messages will be erased after check-out and their personal communications are not visible to anyone else.



When hoteliers try to implement stream casting into a hotel environment, main concern becomes guest privacy. Casting devices are designed to be used at home environment. Users normally are not concerned too much about privacy when devices are connected to home Wi-Fi which is their personal network. When casting devices are connected to common Wi-Fi like at a hotel, there is potentially a major risk in privacy. For casting to work, personal devices such as mobile phones or tablets need to find the associated casting device in their rooms.

However, as the casting device in each room are connected on the same IP network, all casting devices in neighboring guestrooms are visible to every guest. Potentially, any guest may cast his/her own content to any TV on the same network. This raises a major privacy concern. Guest privacy may be breached by an innocent mistake. But there might be also eyes that you need to keep your privacy away from. Privacy breach incidents at hotels are quite common and a major headache for hoteliers.

For the above reasons, it is imperative for hoteliers to take required precautions in their network so that a guest in a particular room may only see the casting device in his own room only, but not any other casting device in neighboring guestrooms. Although this sounds very logical and simple, technically it is a quite challenging problem.

Because personal devices are required to find casting device on same Wi-Fi for discovery purpose which should not be happening on hotel Wi-Fi where hundreds of castings and personal devices are connected. Seeing on personal device what next room is watching totally against to privacy. Also, people like messing around with hotel system and there might be guest sending inappropriate content to other rooms.

Hotelier's approach

Typically, a hotel approaches to any requirement or a service delivery in three steps

- Can this be delivered as a service?
- Is it financially viable?
- Is the technical solution reliable and hassle free?

Any service to be offered to guests needs to be simple enough that guests of every background should be able to use it without intimidation. Therefore, the technical solution in a hotel room for casting has its own challenges. Different vendors have approached to these challenges with different solutions. All of them have their own pro's and con's.

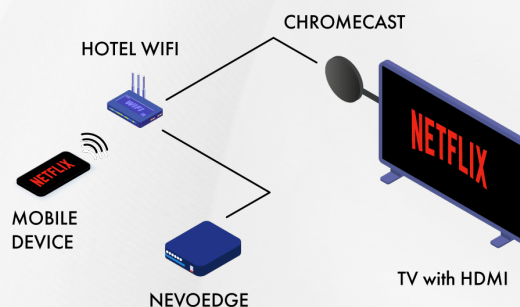
Nevotek has been working on casting solutions in guest rooms since casting devices hit the market. Developing a casting solution for hospitality that will fulfill all the requirements mentioned above takes a lot of experience, know-how and understanding guest behavior. Nevotek's latest casting solution for hotels opens a new era of convenience and simplicity for guests while keeping the costs at a minimum for hoteliers.

How NevoCast for hospitality works

Nevotek casting solution does not require a dedicated wi-fi network for each guest room. Network configurations are managed by Nevotek smart appliance. This gives unparalleled flexibility and security.

All streaming devices in the guest rooms are connected to the guest wi-fi. Using the NevoEdge casting appliance, which is installed in the IT room, all guest devices and in room casting dongles are isolated from each other through NevoCast software.

Casting with NevoCast



Any guest, without needing to go through a complex and sometimes intimidating process of connecting his/her cell phone to the casting network, simply scans the QR code displayed on the in room TV. As soon as this QR code is scanned, through the NevoCast appliance, only the casting dongle in that guest's room is made visible to that guest. No other casting dongles in the hotel network are visible.

The guest pairs his/her cell phone or tablet with the in-room casting network very easily. The next step is to launch his/her favorite casting enabled app like Netflix and start enjoying his/her own content.

Guest privacy is protected reliably because the guest does not need to enter his/her credentials in the hotel TV or in any other server of the hotel. The guest's user credentials remain in the guest's personal device and not share with anybody else. This is not only safe but also gives a good feeling to the guest that his/her credentials are safe.

Purpose designed NevoEdge casting appliance is the heart of this solution. It gives a seamless, secure, and cost-effective technical solution for the hotelier while offering a smooth and secure casting experience to the guest, this improving guest satisfaction.



www.nevotek.com
sales@nevotek.com

About Nevotek

Nevotek is an all-in-one guest technology platform that encompasses all the pieces of in-room technology. This includes in-room phone, IPTV and personal device casting, Wi-Fi login, mobile apps, virtual texting assistant and a range of guest services, environmental controls and ordering functionality from a single system. The company has been in the hospitality industry since 2001 and has over 2000 hotels using their products worldwide.