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Hotel Location(s): Hyatt Regency San Francisco and Sir Francis Drake (San Francisco)

Participating HTNG Vendors: SONIFI Solutions

Describe the situation. What was implemented at the hotel?

SONIFI and its hotel partners recognized an opportunity to change the manner in which guest entertainment is delivered within the guest room by leveraging technologies that are gaining rapid adoption in the consumer marketplace. While it is nearly impossible to characterize the expectations of the "average" hotel guest today, we do know that at home one has the ability to create an entertainment environment that meets their personal taste. Hoteliers understand they need to dramatically improve guest in-room entertainment and create a home-away-from-home experience, but they are in the increasingly difficult position of needing to anticipate what delivery mechanism provides the widest set of desired services with a manageable cost of ownership. SONIFI and partners had four key objectives:

     1. Free the hotelier of the burden to pick content application winners by building a solution that would leverage consumer hardware and applications with which guests are familiar.

     2. Ensure the solution could evolve rapidly and not become stagnant by leveraging the eco-system on media and technology application development.

     3. Keep the guest in control of personal information and ensure guests of security without requiring overly complex systems.

     4. Ensure as broad appeal as possible with a solution that will be agnostic to the devices carried by hotel guests, particularly iOS and Android independent.

The Consumer Electronics industry has offered a variety of hardware devices in the form of set-top boxes (STB), media servers, software media players and small media "sticks" to view the expanding set of content available to consumers. SONIFI provides solutions to view over-the-top (OTT) content through three architecture options: STB, Smart TV, and its new service called SoniCast.

There has been a rapid expansion of streaming media services on the internet which are commonly referred to as "over the top" (OTT) services which the user can access through their internet service independent of the provider of internet access. These services are increasingly accessible through mobile devices. Content can be enjoyed on the mobile device, or increasingly "cast" to a TV screen with a variety of technologies. Google Cast is a leading technology for this application, provided with chromecast.

The OTT applications enables the user to find and enjoy relevant content through intuitive interfaces that are increasingly feature rich. They often include personalization and convenience features that rely on personal information such as viewing history and preferences.   Guests may be hesitant to log in with the Smart TV or STB apps because they enter their credentials into the hotel-provided device to access their OTT accounts. Consumer devices do not have the enterprise management features needed in a

hospitality setting that would allow for clearing this personal data. Therefore, it is left to hospitality technology vendors and system integrators to add value by implementing solutions to fill this need.

SONIFI's SoniCast solution offers a more integrated and secure guest experience than other solutions. At its core are Google Chromecast devices managed by the SoniCast Network Controller (SNC). This choice meets the desire for low cost, a robust application development ecosystem and safeguarding guests' personal information which resides exclusively on their personal devices. A wired or wireless Chromecast device is installed in each guest room encapsulated in a tamper and theft resistant enclosure. It is inserted into the HDMI port of the commercial TV and is powered by the TV USB port, or with a power plug in the rare occasion that the TV does not have a powered USB connection. The SNC is a network appliance consisting of commodity server computing and networking hardware in a 1-U rack-mountable enclosure. The system is Linux based running SONIFI's proprietary application software. The solution also contains a web services application programming interface (API) as an integration point for on or off-property guest internet provisioning system and/or property management system (PMS).

To use, guests simply connect to the hotel Wi-Fi, pair their phones or tablets to the SoniCast service, then authenticate and interact using their own devices. (See Figure 1). As a result, casting via SoniCast does not require a guest to log into hotel-provided devices, keeping personal information on their personal devices. SoniCast continues to evolve to make the casting experience more similar to the guest in-home experience by automatically pairing the guest device. Alternatively, in properties where SONIFI integrates directly with the hotel property management system, guests could enter a simple code.
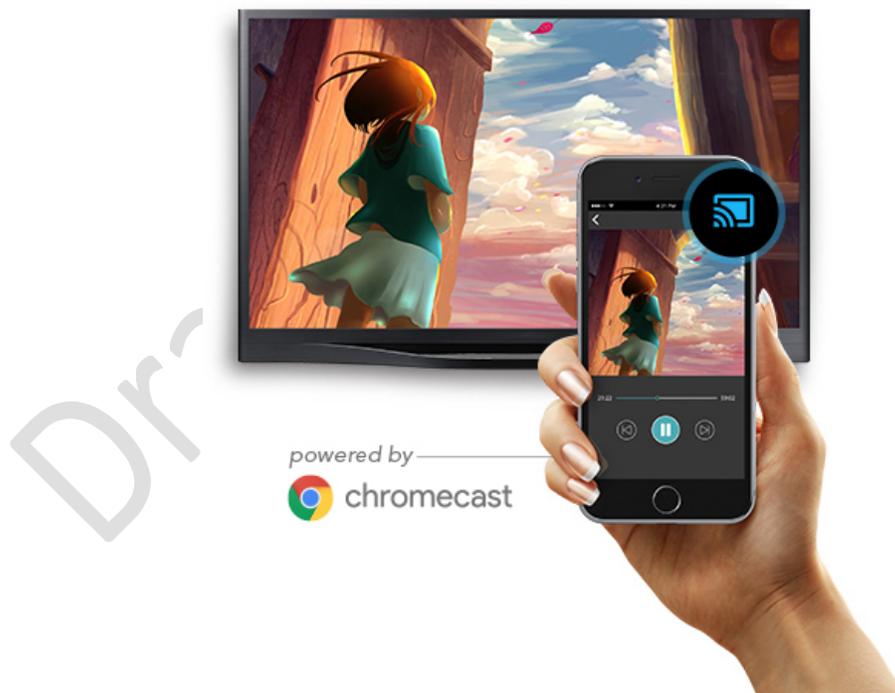

Figure 1: An example graphic displaying the television and guest device casting

What HTNG standards were utilized with this success story, and how were those standards used at this property (benefit to the hotel, time frame to installation, cross-vendor participation)?

HTNG standards and participation were instrumental in the SoniCast implementation. The design of the SNC web services API is meant to integrate with PMS interfaces compliant with the HTNG specification "Guest & Room Status Messaging Specification 20011B". This specification is the key standard to allow disparate systems to react appropriately to guest Check-in and Check-out. The SoniCast system allows casting only with a legitimately checked-in room for guest devices.

Our experience is that installations are very quick. They required the hotels' guest internet access (GIA) providers to make simple changes to the existing configuration to allow our SNC to function. Hotels' IT teams prepared networking ports within their switches. On separate installations, guest internet operating services companies Single Digits (HQ: New Hampshire) and DCI – Design Communications LLC (HQ: Syosset NY) prepared the GIA distribution plant for the install, and at one site a quick consultation with HTNG member Ruckus proved invaluable. Systems are remotely monitored from SONIFI's Sioux Falls based network operations center (NOC). Installations were completed on time and on budget.

How did HTNG participation improve the project (product compatibility, contacts, ease of integration)? Please include any measurable metrics supporting your statement.

HTNG participation has been valuable to SONIFI throughout its history. SONIFI participates in all the HTNG workgroups relevant to its business. The Personal Area Network (PAN) workgroup was a forum for identifying the importance of network isolation and utilization of hotel or guest-provided technologies. In the end, SONIFI focused on a more narrow solution than providing a generic PAN in the guestroom. HTNG group participation improved the project because it framed issues and pitfalls, ultimately focusing project scope and improving integration. Further, HTNG standards give SONIFI confidence that future installs will not require new development. A variety of technologies are in development in the consumer electronics and networking industries for the type of device isolation required to enable the use-case presented in this paper. As the PAN continues its work documenting best practices with respect to these technologies they can make a valuable contribution to the hospitality industry.

How has the project affected the guest or operational experience?

Hyatt Regency San Francisco launched the SoniCast service to 50+ guest rooms in December, 2015 and Sir Francis Drake launched the service to 60+ rooms in January 2016. The technical trials have been in continuous operation since installation.

Guest experience has been enhanced in two ways. Guests are not limited to only those applications typically found on commercial STBs and Smart TVs; guests can stream content from any of the Google Cast[1] capable applications on the web[2]. Regardless of which OTT casting application is used, the guest has not been required to enter account information into a hotel provisioned Google Chromecast, nor has the hotel needed to test and verify that user credentials are deleted at the end of the stay.

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[1] A growing list of cast capable applications can be found at www.google.com/chromecast.

[2] Availability may dependent on regional content right. This is not a fact unique to casting.

While these implementations are relatively recent, the real-world usage aligns with our expectations of how guests would react to a platform giving them significant entertainment choices. To date 62 different applications have been accessed illustrating how interested guests are in utilizing a system that enables them to recreate an in-home experience in their hotel room. Figure 2 shows the relative frequency of applications used to date, as well as categorizing them by the type of application.. The largest usage – measured by sessions and hours watched – are portals to exclusive and curated content which are cast-capable such as Hulu[TM] and Netflix[TM] along with user-generated content on YouTube[TM] . Increasingly, premium channels provide a casting option using authenticated credentials from a guest's home television subscription to stream both catch-up and live content from channels that may not be available in a particular hotel's FTG lineup; both HBO GO and SHOWTIME ANYTIME are examples. Personal pictures and movies can be cast directly from their device or from personal web portals such as Google Photos. A final application type that are being used with SoniCast are home personal media servers such as "Plex" that stream content to the hotel directly the guests home. The application eco-system is also rich with browser based appications which allow a guest to still enjoy casting content from websites which do not yet have a cast capable application. So far, 10 such different applications have been used with SoniCast.
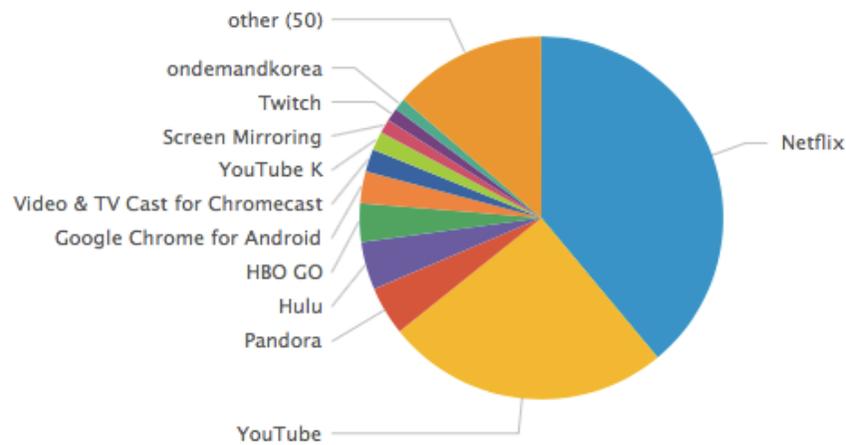

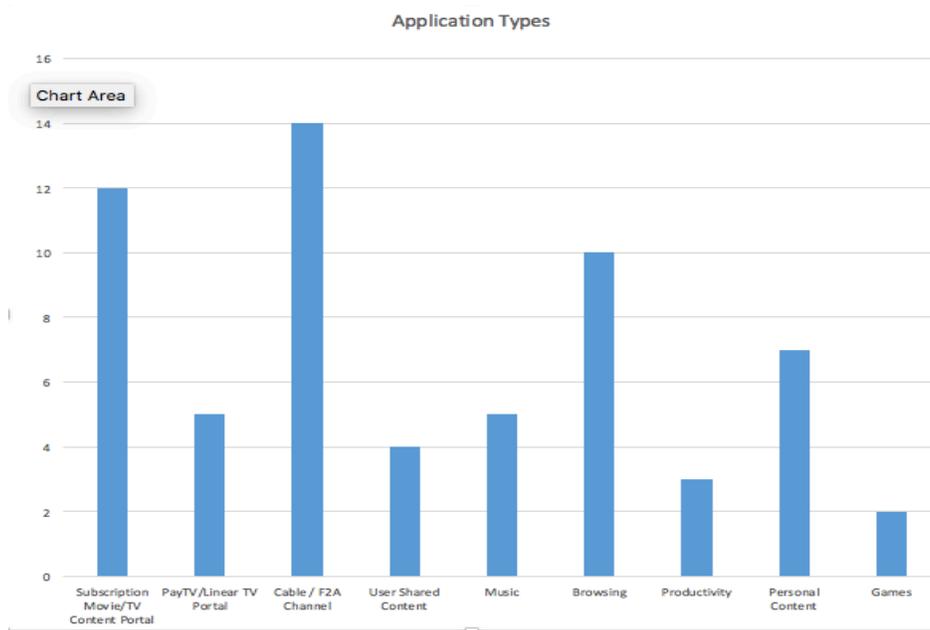*Figure 2: Relative frequency of OTT applications used by guests to data*

Figure 3: Types of applications used by guests to data

While these implementations are relatively recent, Hyatt Regency San Francisco and Sir Francis Drake are pleased to already have anecdotal reports of guest satisfaction and confidence. Both hotels have indicated their satisfaction with the implementations and intentions to make the technology a part of their differentiated guest experience if our initial successes are sustained. During the drafting of this paper, Hyatt Regency San Francisco progressed to full deployment to all 804 guest rooms, making it the first large hotel in the world with 100% of guest rooms enabled with Google Cast technology.