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BITMOVIN CASE STUDY

Telekom Slovenije

Leveraging Bitmovin's streaming video capabilities for the next generation of home entertainment.
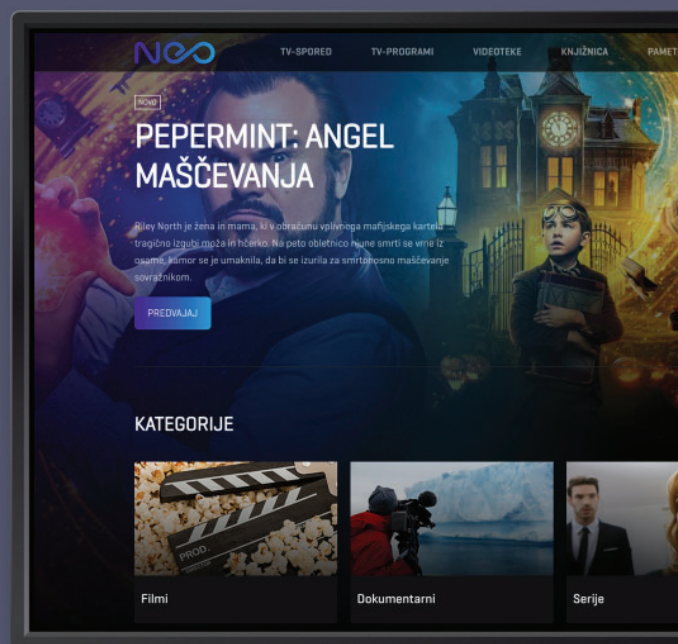
BITMOVIN

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INTRODUCTION

Founded in 1995, Telekom Slovenije is one of South-Eastern Europe's leading telecommunications companies. For over 20 years, it has been a pioneer when it comes to introducing and developing new generations of mobile and fixed communications services, system integration and cloud services, and multimedia content.

In late 2018, Telekom Slovenije launched NEO, a next-generation home entertainment platform that integrates an open, secure, cloud-connected, state-of-the-art smart home solution, which also supports Pay-TV services, gaming and e-commerce. It provides its users with the ability to centrally manage all TV/web content through the use of voice commands in their native language.

The NEO smart living and entertainment platform offers subscribers a simple way to watch and discover content, simple management of smart home devices, online shopping on the TV screen, and gaming without a console. The concept, architecture and technical design of the platform was made by Telekom Slovenije's experts, who then completed the development in collaboration with established local and international partners.

As an OTT platform, NEO can be tailored for use with different operator infrastructure and can be integrated into various CRM, billing systems, and content libraries.

ABOUT TELEKOM SLOVENIJE

Telekom Slovenije operates the highest quality telecommunications network in Slovenia, as well as one of the most complex backbone networks in South-Eastern Europe through its subsidiaries in Kosovo, Bosnia and Herzegovina, Croatia, Macedonia, Serbia, and Montenegro.
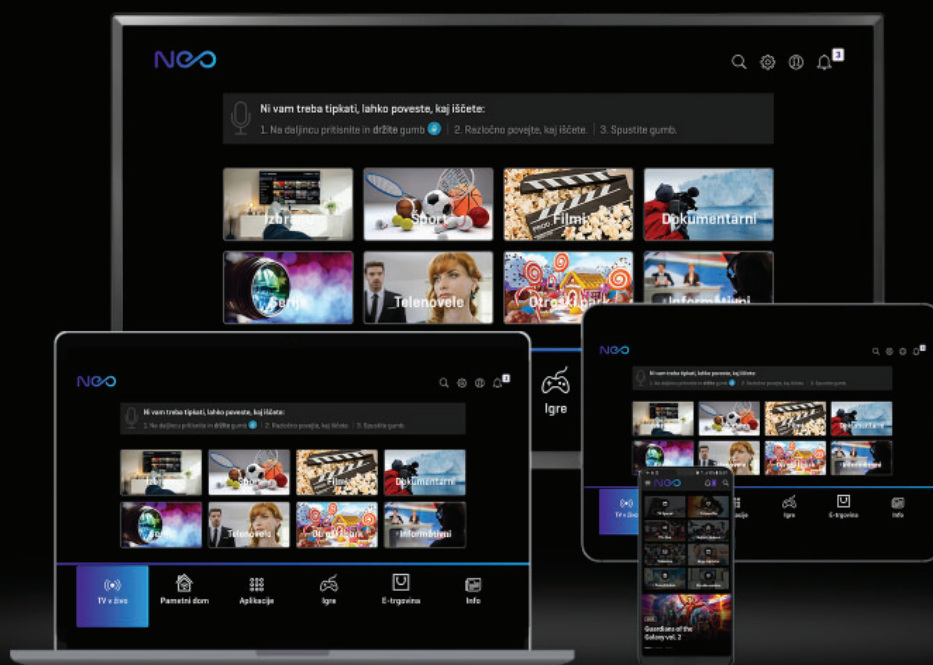
CHALLENGES

Telekom Slovenije was one of the first operators in the world to offer its users the option of managing TV content and smart home devices via voice control in the local language. It adds a new layer of ease and convenience when it comes to searching and viewing content. However, the journey towards a simple and more cohesive viewing experience consisted of a number of complex challenges that Telekom Slovenije could only solve with a cutting edge technology.

Telekom Slovenije needed a player that was able to offer high-quality online experiences by seamlessly delivering streams to all major browsers on different devices, such as TVs, Smartphones, Tablets, PCs. The number of devices being used by consumers to access NEO led to another challenge: the ability to provide customizable UIs that are consistent across all devices.

Finally, Telekom Slovenije needed all content to adhere to the stringent content protection standards required by broadcasters and studios. Telekom Slovenije previously had challenges with multi-DRM integration via open source players. What the operator needed was a multi-DRM player that could simplify the process, while ensuring that premium content was fully protected.

To guarantee that NEO would run at the highest possible standard while complying with all these requirements, Telekom Slovenije needed insights into their quality of service (QoS). They were searching for a tool that could help them improve the quality of service by providing greater transparency into the performance of the whole streaming workflow.

> *Innovative technologies are central to our ability to provide the best customer experience. Bitmovin has some of the most disruptive products on the market and helps us offer our users a truly differentiated experience. The Bitmovin Player ensures that we deliver high-quality streams to any device while still adhering to the Hollywood grade content protection standards that broadcasters and studios require. The Player is also fully flexible, making it easy for additional features to be built onto the framework and removing the need for us to heavily invest in our own solutions. We also use the Analytics tool to monitor playback and make real-time decisions that optimise the quality of our service. The standard of technology and the level of support we receive from Bitmovin has been nothing short of exceptional, and they are one of the reasons why we have retained our competitive edge.*

Marko Kroflic
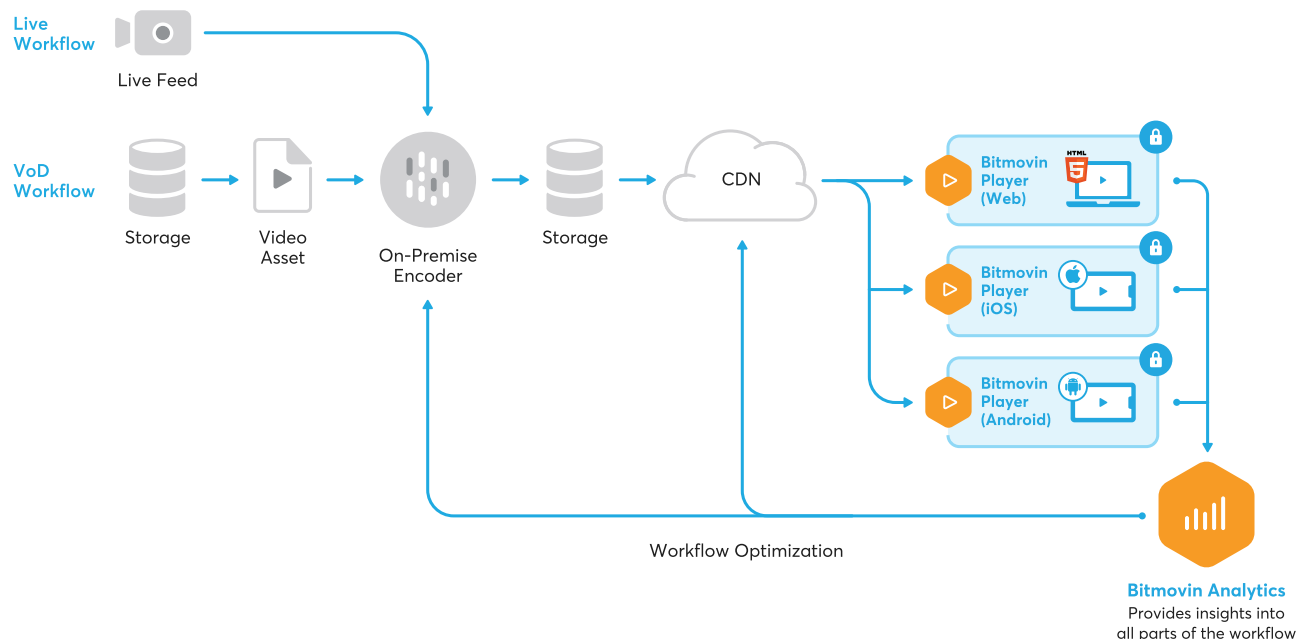Multimedia Services
@ Telekom Slovenije

THE SOLUTION

Telekom Slovenije was already using Bitmovin's technology for its TVIN OTT service. While researching the market, the operator identified that Bitmovin could provide the right functionality and capabilities. This led Telekom Slovenije to opt for Bitmovin's Player and Analytics for NEO.

The Bitmovin player was chosen for its multi-DRM support and cross-platform compatibility, which enables NEO's users to seamlessly stream content, regardless of which device they are using. The unified API approach of the Bitmovin Player and its SDKs for iOS and Android were also a deciding factor, allowing Telekom Slovenije to bypass specialized, disparate player stacks for the initial development and ongoing support.

This enabled the Telekom Slovenije engineering team to focus on developing unique features on top of Bitmovin's technology. Close collaboration between the development teams ensured the compatibility of these features across all platforms.

Bitmovin Analytics was chosen as a complementary tool to Bitmovin's Player to provide Telekom Slovenije with insights into how its customers were using NEO and help them optimize workflows accordingly. This included being able to improve total startup time and learn more about the most common errors across the NEO platform.

Bitmovin Analytics also provided Telekom Slovenije with key information about peak-viewing times, which helped the operator optimize its CDN delivery for periods of increased traffic.

TELEKOM SLOVENIJE END-TO-END SOLUTION

The end to end solution built by Telekom Slovenije starts with assets stored on the operator's servers. This content is then sent on to be encoded. During the encoding phase, DRM encryption (Widevine, Playready, and Fairplay) is added to all assets to guarantee that the streams will be protected. The newly encoded asset is moved to the CDN for distribution to the viewer. Each asset can be delivered to viewers using any flavor of the Bitmovin player – web, Android, iOS – for the best quality of experience.

Using a flexible API for all platforms, Bitmovin's player is DRM-enabled to comply with Hollywood grade content protection standards. In addition, the declination of native SDKs for all platforms enables NEO to utilize the full capabilities of each individual device.

During playback, Bitmovin Analytics is applied to monitor and optimize workflows based on Quality of Service in real-time.

In addition, this data gives insights into all parts of the workflow. For example, it allows Telekom Slovenije to optimize their encoding profiles using the bitrate ladder metric. Moreover, data about peak-viewing times helped them to optimize their CDN performance, by adjusting their live and VoD streams, resulting in a 20% faster average startup time and significantly reduced buffering.

Telekom Slovenije fully took advantage of the Bitmovin products and its combined feature sets to improve NEO's end-to-end performance, resulting in a 30% decrease in online streaming-related support tickets.

BENEFITS

Launching an incredibly complex service that reaches many devices and provides content in multiple languages was a huge success for Telekom Slovenije, who sustained its position as a highly innovative operator.

With NEO, Telekom Slovenije took the boundaries of multiscreen services to the next stage, enabling users across multiple geographies to watch the content they want, on the platform they want, whenever they want. As the cord-cutting phenomenon continues to grow, being able to innovate through services that consumers truly want to use was a real game-changer for Telekom Slovenije. The use of Bitmovin's Player and Analytics also enabled Telekom Slovenije to focus its effort on activity that truly makes a difference.
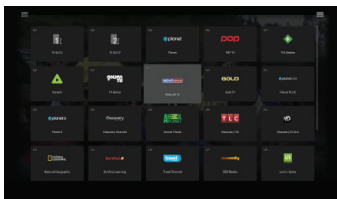
Building innovative features on top of Bitmovin's API that secured them a competitive advantage for the years to come.

With NEO, Telekom Slovenije delivers such a great Quality of experience that it was honored with multiple awards and recognitions: At CES 2018, NEO received the Honoree award in the Tech for a Better World Product category. At the CIA, NEO was shortlisted in the Advanced TV Innovation of the Year category, while at the CSI Awards 2018 it got two recognitions, with NEO receiving the Highly Recommended mark for services in the Best IoT/Smart Home or 5G Technology category, and was also shortlisted in the Best TV everywhere or multi-screen video category.
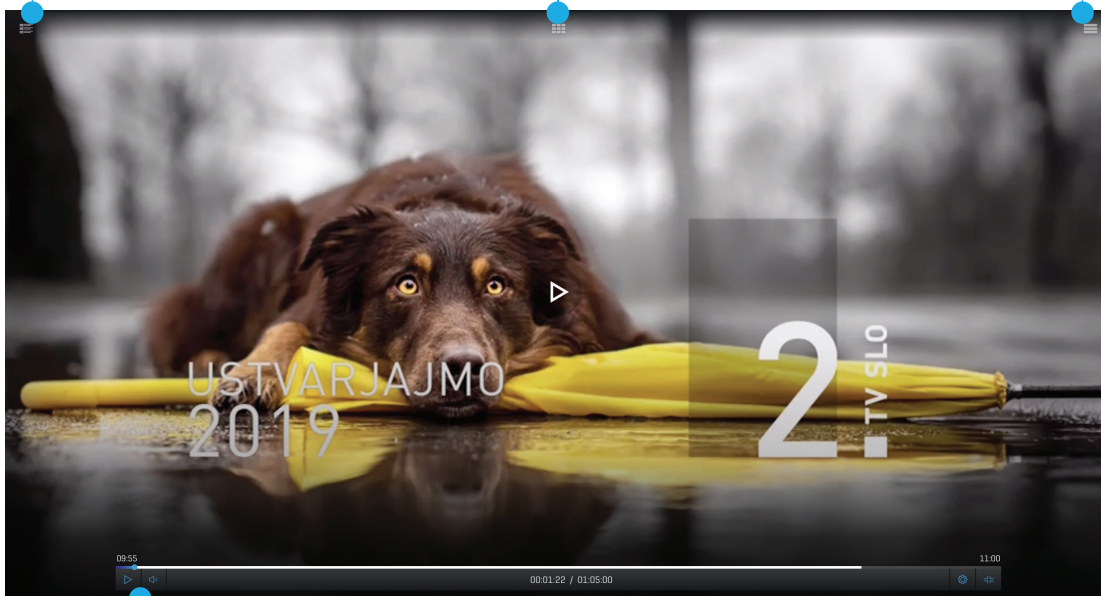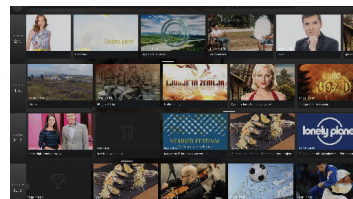
UI side menu showing other channels

UI icon channel grid

UI icon catch-up

Customized player bar

ABOUT BITMOVIN

Bitmovin is a leading provider of video infrastructure for online media companies around the world. The company has been at the forefront of all major developments in online video - from building the world's first commercial adaptive streaming player to deploying first software-defined encoding service that runs on any cloud provider or in a data centre. Bitmovin works with media companies across the globe to build innovative video products.

Bitmovin has been a first mover in almost every significant development in online video, including building and deploying the world's first commercial adaptive streaming (MPEG-DASH/HLS) HTML5 Player. Bitmovin customers collectively deliver several billion videos to consumers every day.

To find out more, please visit www.bitmovin.com

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Shaping the Future of Video