



BITMOVIN CASE STUDY

Eventive + NAGRA & Bitmovin

Adapting and collaborating to create industry leading anti-piracy and video quality standards for virtual cinema and film festival experiences.



eventive



The Eventive Backstory

With roots in independent filmmaking and festival organization, Iddo Patt, joined by his son Theo, founded, built and launched Eventive in 2018 as a festival pass and ticketing hub with scheduling and film guides. Early partners saw dramatically increased engagement and attendance and by January 2020, their audience management platform, complete with online balloting, was serving over 130 festivals and exhibitors around the world. Soon thereafter, the COVID-19 pandemic arrived, causing a total shutdown of cinema exhibitions as theaters closed, premieres were postponed and festivals cancelled.



From ticketing to streaming

Eventive was determined to find a streaming alternative, but soon discovered that a complete solution for a virtual festival experience did not exist and they would need to build their own.

In April 2020, the Eventive Virtual platform launched with studio-grade multi-DRM protection and grew exponentially to serve millions of viewers. In parallel, a major surge in online piracy was observed in the early days of (and throughout) the pandemic.

Eventive's success brought new challenges, as their ability to deliver the highest quality, most in-demand film screenings also drew the attention of digital pirates and it quickly became clear that a level of security beyond DRM was needed to fully protect their clients' content and bottom line. This was an urgent situation that required a swift integration into their existing platform and after evaluating available options, NAGRA multi-DRM and NexGuard forensic watermarking paired with Bitmovin's encoder emerged as the best combined solution to reduce their time to market and securely elevate their clients' and viewers' experience.

from serving



130

organizations for in-person events

to

1,000+

virtual and hybrid events

A higher standard of security and quality

“COVID-19 accelerated the need for these solutions,” said Sander Van Leeuwen, Commercial Director at NAGRA. NAGRA is a global leader in security and media solutions for the delivery of digital and interactive content, with a suite of rights management, watermarking, and cybersecurity solutions.

NAGRA NexGuard is among the most mature and robust forensic watermarking solutions available, and when deployed with a server-side A/B approach, can scale to any size audience, making it a natural fit for the Eventive platform. With NAGRA Multi-DRM managing access and NexGuard deterring and catching illicit activity, Eventive would have a complete solution for protecting the revenue and integrity of their service in place, but to make this workflow possible, NexGuard forensic watermarking needed to be integrated with the Bitmovin encoder.

“**4K content really benefits from our split-and-stitch architecture and can be processed almost 100x faster than real time.**”

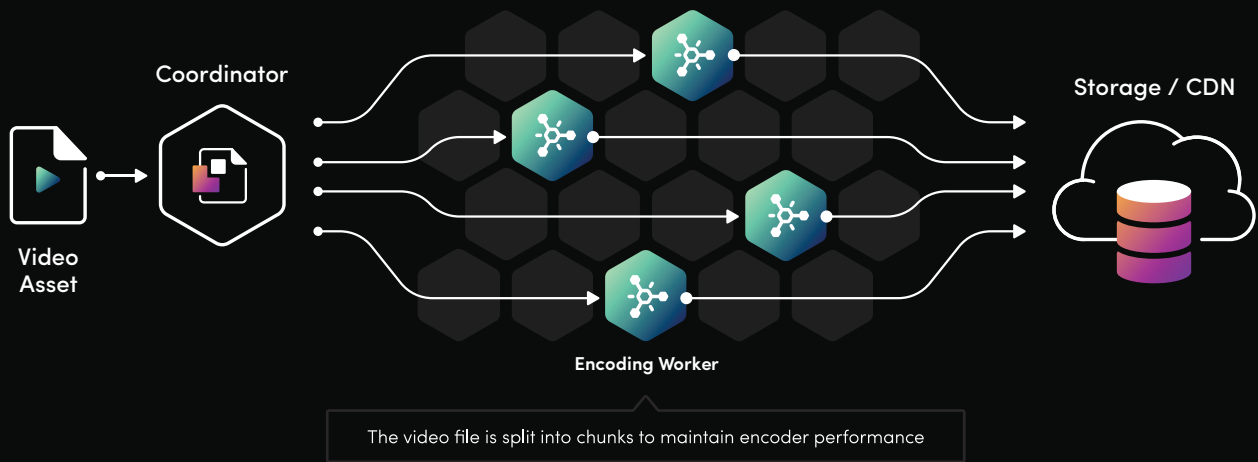
Markus Hafellner
Encoding Product Manager, Bitmovin

“**NAGRA offers the most secure content protection technology available for content streaming, making their solutions the obvious choice to protect our films and ensure an unmatched online experience for audiences and organizers alike.**”

Iddo Patt
Co-founder, Eventive

The integration details

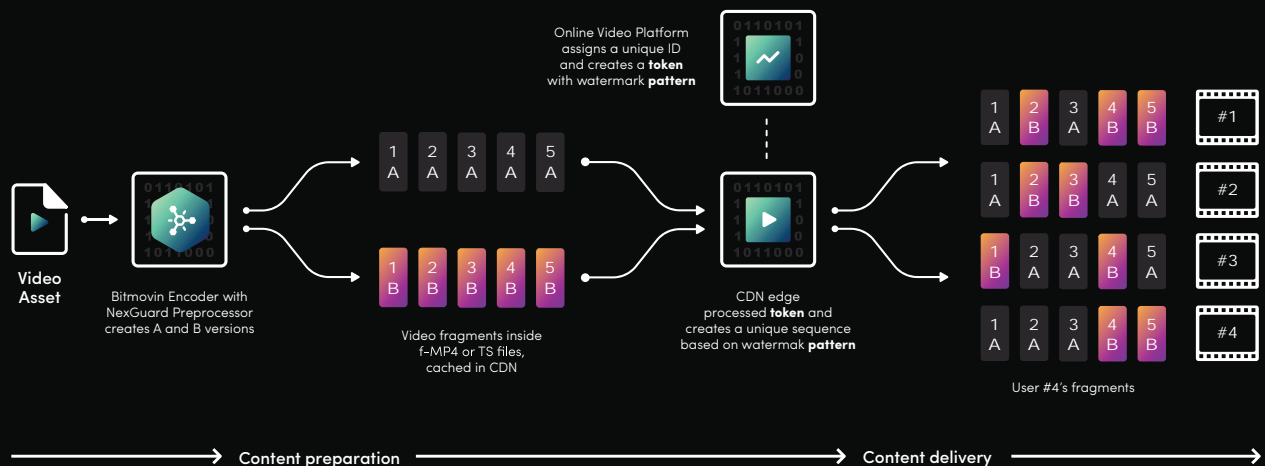
The Bitmovin encoder utilizes cloud-based, split-and-stitch technology to divide the video into many small chunks that can be processed in parallel, dramatically reducing encoding times. It also employs Per-Title optimization, analyzing and customizing the adaptive bitrate ladder for each piece of content, delivering remarkable quality without wasted overhead data. Eventive’s Patt shared, “Obviously we are looking to provide the highest quality viewing experience and are very excited about the per-title optimization and UHD components of the Bitmovin encoder.” All-in-all, Bitmovin’s encoder was the perfect choice, with parallel processing creating the A and B variants of the video segments in the requested resolutions, codec (H264, HEVC) and bitrates.



“At Bitmovin, working with partners on integrations is a big part of what we do on a daily basis,” said Hafellner. “It’s really about bringing solutions to our customers in a complete form they can use right away, instead of puzzling all the pieces together.”

The first task was integrating the NAGRA NexGuard forensic watermarking solution with Bitmovin’s split-and-stitch architecture. After that came fine-tuning of the video segmentation approach. The time needed for

watermark identification is defined by the HLS or DASH segment length, so it was crucial to find the sweet spot to minimize detection time without sacrificing quality or performance. One of the strengths of server-side A/B forensic watermarking is its complete transparency to the player, both visually and functionally, with the player requesting segments from the CDN sequentially as it normally would. The CDN edge server delivers a unique pattern of A and B segments to each user, creating an individual delivery “DNA” sequence.



The project went from initial evaluation to production ready in just over three months, and as a result of that effort, the time to market is greatly reduced for future customers. “We were able to set up direct engineering to

engineering communication that helped us evolve our integration into something that is really a blueprint for anybody who wants to use it,” Hafellner commented.

A complete solution, proven in the wild

With their Advanced Antipiracy service in place, Eventive’s enhanced virtual screening platform was a hit, giving viewers premiere and festival experiences at a time when gathering in person was not possible. It also provided vital revenue for independent filmmakers, theaters, and festivals that had seen their livelihoods threatened by the pandemic. Eventive has successfully used the NAGRA watermark to identify and remedy content leaks for their partners, receiving immediate results from the NAGRA NexGuard Detection Service about the offending user, their IP address and other

relevant logs. “It’s really terrific to be able to get that information so quickly,” said Patt. “We don’t want people to rip anything at all, but when they do, it’s great that they can be caught right away.” These instances have been more rare than one might expect, an encouraging surprise that Patt credits to the deterrent effect of their pre-screening warning.

“We’ve added a warning before every screening, so viewers know that there is an invisible forensic watermark and any unauthorized reproduction can be traced back to the original user. This has a powerful deterrent effect on anybody that is potentially inclined to do something they shouldn’t,” he highlighted.



**This screen is protected by
an invisible forensic watermark.**

Any unauthorized reproduction can be traced back to the original user.

Eventive's platform has grown exponentially, successfully delivering millions of streams for over 1000 different partner organizations, including festivals and year-round exhibitors. Patt reported that some festival partners have reached 10 times the audience that they would have in person, adding "Content creators and exhibitors have seen the value of extending the audience beyond in-person. Some events are starting to come back in person, but virtual will continue alongside that in serving the ultimate goal of connecting more people with this content than ever before. In order to protect the ecosystem, it's critical to protect every piece of content."

According to an investigative report developed by Digital Citizens Alliance in collaboration with NAGRA, the video piracy ecosystem generates over one billion dollars of revenue annually

in the U.S. alone, so solutions like Eventive's Advanced Antipiracy platform are crucial for preventing lost revenue and jobs.

"Piracy is a global issue and we are strong supporters of alliances and collaboration. Everyone in the value chain is affected and has a role, so it's critical for content owners, rights holders and technology providers to come together in the fight," NAGRA's Van Leeuwen concluded. With this collaborative effort between Eventive, NAGRA and Bitmovin, a new standard has been set for the rapidly growing virtual cinema and festival industry, giving content owners and event organizers the confidence and the peace of mind that their most valuable assets are protected against piracy.

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Sander van Leeuwen
Sales Director, NAGRA

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 the 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
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