irdeto

Case Study

MediaKind and Irdeto

Securing contribution and distribution of premium live and VOD content

MediaKind

MediaKind is a global change leader in media technology and services with a mission to deliver transformation by building a continuously better media universe alongside its customers and partners. Its end-to-end media solutions portfolio includes Emmy award-winning video compression for contribution and direct-to-consumer video service distribution, advertising and content personalization, high-efficiency cloud DVR, and TV and video delivery platforms.

The company selected Irdeto as their security partner for their **Director 128** solution. **Director 128** offers service providers powerful and effective end-to-end management of their contribution/distribution network.

Irdeto is the world leader in digital platform cybersecurity, empowering businesses to innovate for a secure, connected future. Building on over 50 years of expertise in security, Irdeto's services and solutions protect revenue, enable growth and fight cybercrime in video entertainment, video games, and connected industries including transport, health, and infrastructure.

A Saturated Streaming Market

As the streaming industry becomes more saturated and the cost of acquiring and developing content becomes increasingly more expensive, focus on and attention to the customer and the customer's journey takes on much greater importance.

Protecting premium content has become even more critical for the entertainment industry as well as for operators, and content distributors. With digital rights management (DRM) a mandatory component for licensing premium content, and forensic watermarking being used everywhere, anti-piracy measures have become a standard part of the operational process when delivering high-value live and VOD media content.

For broadcasters and content owners, protecting their assets starts at the contribution and primary distribution level. They need to ensure that security measures are active throughout the entire content consumption lifecycle.

The Premium Video on Demand Challenge

The economic damage of premium content piracy to businesses is real. Despite industry efforts to deter piracy, premium content theft continues and results in billions of dollars of lost revenue every year. The immediacy of Premium Video on Demand (PVOD) release cycles and the emergence of live sports streaming has unintentionally expanded the attack surface, and cybercriminals are quickly researching and discovering all manner of means to get hold of this high value content.

To secure and manage the primary distribution of content to secondary broadcast operators, the industry needs a solution to identify threats and help broadcasters and content owners prohibit the unauthorized streaming and broadcasting of their high value, live, and on-demand content to consumers.

The Solution Presented by MediaKind and Irdeto

As history has shown that in previous difficult times within the media industry, challenges often present new opportunities that drive innovation and accelerate market delivery.

In the face of the industry challenge of premium content protection, particularly within contribution and distribution applications, MediaKind and Irdeto, long-time partners, collaborated to offer a state-of-the-artfully integrated, end-to-end solution for the secure delivery of premium live and VOD content over contribution and primary distribution networks.

The joint solution combines MediaKind's advanced video compression technology, MediaKind Encoding Live, its award-winning and market leading distribution receivers, RX8200 and RX1, and its end-to-end primary contribution and network management service, **Director 128**, which is secured by **Irdeto Cloaked® CA (CCA)**, an industry-leading cardless content protection solution.

Irdeto Cloaked® CA

Irdeto Cloaked® CA, introduced over 25 years ago, is the most advanced and widely deployed cardless conditional access system for broadcast and IPTV operators worldwide. It has been deployed in 55 million CCA devices by more than 80 operators globally.

Irdeto's CCA is the cardless solution of Irdeto's original **Cloaked® CA**. It has secured digital assets for more than 10 years and is differentiated through built-in diversity and renewability features. The solution offers operators uncompromised security on smart card solutions and Ultra-HD services, providing more control, increased agility, and full deployment scalability and flexibility.

Compared to retail CA solutions, **Irdeto Cloaked® CA is superior across many security areas.** According to industry experts, the royalty-free retail CA solution is integrated into decoder software at the decoder factory, instead of being embedded into the hardware root of trust at the chipset factory. This makes its keys more vulnerable to tampering by bad actors, and it also makes it harder to trace the source of any breach and undertake applicable countermeasures.

By contrast, Irdeto's use of the chipset hardware root of trust, installed only in factories approved by its experts, helps to ensure the keys are strongly protected from tampering, even once installed on the operator's premises.

Though the content-encryption of both solutions is based on AES 128 and DVB CISSA, **Irdeto CCA provides three key layers instead of one, meaning that hackers would need to circumvent three layers of security instead of one. No keys, secrets, or credentials are shared between different customers, so a breach of one content owner or operator has no impact on any other.** By comparison, in many retail solutions, the same root key is used for all Data Transfer Objects (DTOs). If one company's root key is compromised, all other companies using the retail CA are at risk. Furthermore, with

Irdeto CCA, session keys are cycled by default at intervals decided by each Irdeto customer (up to every 30 minutes at no extra cost). Breaches are over quickly, often before being detected, and force hackers to start all over again.

A further benefit of the Irdeto Cloaked® CA is the **reduced total cost of ownership** (TCO). **Irdeto Cloaked® CA (CCA)** doesn't require third-party integration to encoders/decoders, eliminates the logistical expenses and complexity associated with the smart card distribution and replacement by substituting the need for smart cards, which results in a vastly reduced TCO of up to 40%. Managing entitlements are simplified with CCA. A subscriber management system (SMS) tool is provided to the content owner to manage the list of those entitled to each type of content and is a convenient way for the content owner to review and manage its operator customer base. Adjustments made here are automatically applied over the broadcast signal to each decoder.

Shane McCarthy - Chief Operating Officer at Irdeto, says content rights protection at the contribution and distribution levels is essential. "Through the partnership with MediaKind, we are combatting content piracy at the early stages of the content lifecycle by delivering a much higher level of security through state-of-the-art conditional access technology."

MediaKind's State-of-the-Art Encrpytion and Security

In addition to offering Irdeto's conditional access technology, **Director 128**, developed by MediaKind, provides robust and secure end-to-end management of contribution and primary distribution networks. It delivers enhanced content protection with IP and satellite support and is simple to use, making it a complete content security and receiver management solution.

The product utilizes advanced 128-bit encryption coupled with forensic watermarking technology, such as Irdeto TraceMark, to deter, detect, and prohibit piracy of high-value content from the broadcaster/ content owner's distribution network, while better protecting subsequent copies or streams. It provides control over who can view content, including affiliate networks that wish to receive and access this premium content.

Director 128 also delivers the flexibility for individual and group management of remote professional receivers, including entitlements, forced tuning to avoid satellite sun outages, forced channel selection for automated blackout management, and over-air software download for network-wide updates.

Part of the MediaKind robust contribution and distribution product suite, the **MK RX1**, a low-latency, multi-codec, multi-service integrated receiver decoder (IRD), offers separate essence-based IP transport of fully uncompressed video, audio, and data. It is a future-ready platform simplifying content network operations while operating over SDI workflows to enable new commercial and revenue potential.

It also includes one of the best-selling IRDs globally, the **MK RX8200**. It enables broadcasters and satellite operators to achieve optimal bandwidth efficiency gains through the full support of the DVB-S2X international open standard, while also offering backward compatibility with HEVC 4:2:2 encoding.

Allen Broome, CEO, MediaKind, said: "We are delighted to partner with Irdeto and combine our end-to-end primary distribution network management service, **Director 128**, and award-winning distribution receivers MK RX1 and RX8200, with its conditional access technology. Together, we are enabling all

broadcasters, operators, and service providers to respond to the evolving needs of the streaming landscape by preventing emerging threats to content security and protecting the integrity and value of premium live and on-demand content."

Into the Future

While the technologies have changed over time in how the industry protects premium content, the focus has always been on the end-user. As the industry adapts to new concepts of content distribution in addition to satellite, like fiber, it has also to stay ahead of evolving piracy methods. Piracy is alive and well, and the war isn't ending soon.

Nowadays, because there is value in piracy, pirates are looking everywhere in the ecosystem to find and steal premium content. The solution presented in this case study exists to close that possible opening for pirates, protecting content from day one.

With all of these technical capabilities pre-packaged into a single service, MediaKind and Irdeto are reliable partners, ideally placed with the right integrated solutions for content owners, broadcasters, and media operators with ambitions to deploy a high-quality, robust streaming service and protect premium live and VOD content that will scale to reach large, global audiences.

Irdeto is the world leader in digital platform cybersecurity, empowering businesses to innovate for a secure, connected future. Building on over 50 years of expertise in security, Irdeto's services and solutions protect revenue, enable growth and fight cybercrime in video entertainment, video games, and connected industries including transport, health and infrastructure. With teams around the world, Irdeto's greatest asset is its people and diversity is celebrated through an inclusive workplace, where everyone has an equal opportunity to drive innovation and support Irdeto's success. Irdeto is the preferred security partner to empower a secure world where people can connect with confidence.