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**JOURNAL**

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# PROTECTING DIGITAL REVENUE WITH DISTRIBUTOR WATERMARKING

Content will be pirated. Identifying the who, how and where is more crucial than ever

**ABSTRACT:** The increased ease of access to content across platforms, combined with day-and-date releases of new releases in theaters and via premium VOD services, has content pirates chomping at the bit.

**By Miguel Bielich, Global Director,  
Product Marketing,  
Irdeto**

Without question, the COVID-19 pandemic has impacted almost every aspect of life for the foreseeable future. As the world works toward getting back to “normal,” how we socialize, work, educate and entertain ourselves has shifted, primarily to the digital realm.

At the onset of the pandemic in March 2020, with most movie theaters closed and people under stay-at-home orders, Digital TV Europe noted that the total average online video viewing time increased by 29 percent. And now, despite the easing of restrictions, many major theatrical releases are delayed, and studios are instead opting to send new films straight to premium VOD services, following the success of initial trials. If we add the growth of direct-to-consumer streaming services, the collective appetite for digital media has never been greater.

While video streaming offers the flexibility to distribute content across multiple devices and platforms to meet consumer demand, this ease of access also gives the pirates prime opportunity to steal and illegally rebroadcast high-quality digital assets. During the same March 2020 early pandemic timeframe, Irdeto observed an increase in pirate activity, including searches for “free” movies online, higher traffic to top pirate streaming sites, and a steep increase in peer-to-peer (P2P) network traffic. While piracy always ebbs and flows, the increased reliance on revenue from digital distribution makes protecting content against illicit redistribution more critical.

Creating or licensing original content is costly, making end-to-end security key

to protecting revenue streams and gaining the highest return on investment possible. Many content owners are now requiring more stringent protection measures in their licensing agreements. In addition to standard content security measures, such as digital rights management (DRM) and conditional access systems (CAS), forensic watermarking plays a key role in any comprehensive content security tool kit.

Watermarking has a variety of important uses for content security depending on the type of watermarking deployed, from identifying individual unauthorized sessions to disrupt pirate streams at the source, to identifying security weaknesses in distribution channels.

In the case of distributor watermarking, once implemented, some of the key benefits for content owners include the ability to:

- Identify piracy platforms, despite logo obfuscation or substitution of audio feed
- Secure global revenue through selective and/or timely distribution strategies
- Expand insight into pirate sourcing patterns
- Gain leverage for commercial negotiations
- Audit contractual compliance of distributors

While the benefits of distributor watermarking are clear, there are some key challenges and concerns facing studios, operators, and broadcasters when implementing this process to safeguard content. Often there's a general reluctance to disrupt existing processes (some of which were years in the making), a lack of resources for the implementation of any new or complicated integrations, along with the fact that watermarking solutions typically follow a costly, one-size-fits-all business model, which may not work in every circumstance, for every stakeholder, for a variety of reasons.

Irdeto and IBM Aspera have partnered to tackle these key challenges, creating a cloud-based, pre-integrated, "pay-for-use" solution for watermarking. The Irdeto/IBM solution eliminates the expensive integrations associated with on-premises set-up, taking the complexity and high cost out of the watermarking process. This solution is primarily aimed at companies who need to distribute high-quality or mezzanine-quality content during pre-production or post-production

***UNFORTUNATELY, even with every security measure in place, the reality is content will be pirated. Therefore, it's crucial to include processes aimed at protecting content throughout the value chain. Watermarking alone can provide the insights that allow for targeted business and strategic distribution decisions.***

workflows, covering the need to target these efforts where they're most needed.

Cloud-based distributor watermarking provides on-demand access, with quick deployment. Source content is read and analyzed to determine the best place to insert the watermark. Sections are then watermarked as an A and B version and stored as a variant file, which contains the binary differences between the watermarked video and the original encoded source. The variant file can be stored for as long as individually watermarked copies are needed and the pre-processing step need only be done once, allowing for cost-effective, scalability. The dynamically embedded watermark provides traceability which enables the identification of illegally re-distributed content to a specific distributor.

When combined with Irdeto's online piracy detection (OPD) services, watermarking is an extremely effective solution for protecting digital content. OPD provides the critical discovery phase across the global piracy landscape, rapidly collecting and identifying any infringing content. Potentially infringing content is then analyzed for a watermark, determining the source of the pirate copy, and allowing appropriate action to be taken.

Unfortunately, even with every security measure in place, the reality is content will be pirated. Therefore, it is crucial to include processes aimed at protecting content throughout the value chain. Watermarking can provide key insights, allowing for targeted business and strategic distribution decisions. ■



*Miguel Bielich is the global director of product marketing for Irdeto. A commercial executive with 20-plus years of international experience in the video entertainment and broadband industries, he joined Irdeto in 2020 to drive the global product marketing activities for its media and entertainment solutions. [miguel.bielich@irdeto.com](mailto:miguel.bielich@irdeto.com) @Irdeto*