

A Robust End-to-end Antipiracy Solution

Piracy is not new. From bootleg VHS cassettes to today's sophisticated streaming platforms and devices, pirates continuously adapt with technology to illegally redistribute content and steal valuable revenue. This global threat does not discriminate, affecting operators, studios, and sports rights owners alike. The value of pirate video services accessed by pay TV and non-pay TV consumers has been projected to exceed US\$67 billion by 2023 (Park Associates).

Pirates are not restricted or constrained by licensing rights or geographic location. Using a variety of methods to rip copyrighted content, they can aggregate and share any film, television series, or live broadcast all in one place; thereby enabling subscription weary consumers to easily watch what they want to watch, when they want to watch it, and often for free or at a much lower cost.

To protect brand reputation and revenue, content security strategies must evolve in line

with changing market dynamics. In today's world, any legitimate insecure device can be abused for piracy and pirated services can be streamed from anywhere. Fighting online piracy requires more than just technology alone. Securing content from theft while preventing pirates from profiting at content owners' expense requires a holistic, end-to-end approach that includes preventative techniques that help deter piracy as well as proactive monitoring and enforcement of current piracy threats.



A SUITE OF SERVICES FOR MAXIMUM REVENUE & BRAND PROTECTION

Employing preventative measures to secure content, platforms, network, and data makes it more difficult for pirates to steal content. The minimal first step to protecting content is to ensure content is encrypted with industry standard Digital Rights Management (DRM). DRM prevents illegal content redistribution “in the clear”. Once content is encrypted, the goal of DRM is to only permit authorized users (someone who has the key) or authorized devices to decrypt the content and watch it.

But only using DRM is not enough. Determined pirates have found ways to circumvent DRM technologies, therefore it is important to monitor DRM deployments and adjust security measures when necessary and then address piracy threats.

The winning formula to fight online piracy requires a combination of:

- State of the art forensic watermarking technologies which identify the source of pirated content and allow for its immediate shutdown or the mitigation of security weaknesses
- Proactive monitoring and enforcement of infringing content across thousands of pirate sites worldwide
- Targeted investigative services aimed at identifying and prosecuting the parties involved in large commercial piracy networks
- Global partnerships with law enforcement, industry bodies and agencies as well as consumer and technology providers

Irdeto’s End-to-end Antipiracy Solution provides robust protection for live sports, broadcast events and video on demand . Our services are fully integrated with fingerprinting technologies as well as our forensic watermarking solution, TraceMark™ for rapid identification, verification and enforcement of infringing content. Our data-driven discovery process provides critical intelligence and tooling for detecting and disrupting a wide range of internet piracy.

Included in our End-to-end Antipiracy Solution is our Cyber Services unit, which provides a wide variety of complementary services that include but are not limited to covert infiltration and investigation of high-profile targets, copyright and trademark infringement detections, threat intelligence gathering, security management and more.

TraceMark™ Watermarking

Tracemark™ forensic watermarking overlays a unique, persistent, and invisible watermark. The integrated watermark is inserted into the provider’s workflow for both live and on-demand content. Depending on when the watermark is embedded, providers can identify individual streams which facilitate the disruption of piracy at the source or can pinpoint security weaknesses in distribution channels.

Tracemark™ also:

- Enables robust identification of illegally distributed content
- Embeds an invisible identifier in video content without affecting quality
- Offers a self-service detection portal that can ingest live rebroadcast pirate streams or files and fully integrates with Irdeto Online Piracy Detection services
- Provides both B2B (Distribution) and B2C (OTT and Broadcast) solutions for file-based distribution (DWM), OTT streaming (head-end and client-side) and Broadcast (OTT and CAS).

When watermarking is used in conjunction with Online Piracy Detection services, watermarking is an extremely effective solution for protecting copyrighted content. Antipiracy services provide the critical discovery phase across the global piracy landscape, scouring tens of thousands of pirate sites, platforms, apps, the bitTorrent network, blogs and social media to rapidly collect and identify infringing content. Infringing content is then analyzed for a watermark to determine the source of the pirate copy. This allows the content owner or rights holder to determine the appropriate action to take whether its enforcing infringing content or addressing security breaches.

Watermarking is particularly critical in protecting the value of live content where time is of the essence. The value of the content is high before and during the event but is lost once the game is over. By identifying the source of the pirated content using watermarking and removing unauthorized streams quickly, maximum revenue protection is ensured.

Online Piracy Detection

One of the most important tasks in the fight against piracy is the discovery and identification of illegal activity and pirated content. This step is crucial to revenue and copyright protection. Our Online Piracy Detection service helps maximize subscription and viewership revenue by safeguarding live events and on demand content from unauthorized access and redistribution.

Leveraging innovative proprietary crawlers, combined with piracy expert oversight, our team quickly identifies and enforces infringing content. The search process supports all languages so that we do not miss historically high piracy regions that are not Latin language based. This solution offers content owners and operators multiple mechanisms to quickly identify and disrupt pirate streams across various distribution platforms.

The discovery process includes searching top Kodi add-ons, search engines, social media, UGC sites, torrent, linking sites, encrypted apps and blogs. Pirate sites are prioritized based on web traffic statistics to ensure we are always searching the most popular sites as they evolve. In addition, geographic targeting is done to collect important regional sites that may not rank highly when looked at only on a global level.

We facilitate fingerprinting of content owners' stream into YouTube ContentID and Facebook Rights Manager systems for immediate takedown of unauthorized streams on those platforms. We are also partnered with Akamai CDN to provide immediate takedowns on Akamai-sourced streams.

In addition to standard piracy monitoring and enforcement services, Irdeto's Crisis Coverage Service is intended to meet urgent or unexpected content protection needs. Whether it's monitoring for NDA leaks of an upcoming game release, the resale of keys or accounts, the early upload of the new episode of a popular television series or leaked set photos or plot spoilers for an unreleased film, Irdeto's Crisis Coverage Service offers rapid and aggressive protection for valuable assets.

Cyber Services

Combining operational best practices, meticulous planning, advances in cybersecurity pioneered by Irdeto, and an extensive network of security experts, the Cyber Services unit provides proactive, comprehensive antipiracy protection.



The services include:

- Use of actionable intelligence to detect, analyze and identify piracy, brand and cybersecurity threats.
- Investigations and evidence gathering to support civil and criminal enforcement actions against identified threat actors.
- Identification and removal of infringing advertisements from e-commerce and social media sites to protect brand reputation and revenue.
- Platform security assessments and cybersecurity resilience programs to manage and reduce cybersecurity risk.

The Cyber Services team includes investigators, legal specialists, law enforcement specialists, cryptography experts, forensic analysts, security software engineers and content security thought leaders. Their strong technical, network, social media and security skills have successfully identified, investigated and supported clients in civil and criminal prosecutions and even police raids and referrals.



FIGHTING PIRACY REQUIRES A HOLISTIC APPROACH

Digital piracy is much more sophisticated and complex, with more attack vectors than ever before. Previously, there were fewer distribution channels to monitor, such as investigating the hacking of set-top boxes or catching individuals camcording a movie in a theater and selling pirated DVDs.

However, today's cloud-based delivery provides immediate access to high-quality content not only for consumers, but also for pirates. Video feeds and files move from video shoots, UHD digital cameras, remote sites, studio facilities, post, production, storage and mezzanine quality content goes immediately into distribution, oftentimes skipping the previous distribution models. All of these access points are vulnerable to penetration by thieves.

An end-to-end holistic approach is necessary to not only proactively protect against threats, but continue to monitor and adjust as these threats adapt with changing technologies. A robust content security solution such as DRM helps deter pirates, making it difficult to steal the content, however once it is stolen (and it will be stolen) a combination of monitoring, verification, and intelligence helps content owners continuously find and address new threats.

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.