Watermarking is much more than just an anti-piracy tool

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Product Marketing Director (Watermarking)
IRDETO IS THE WORLD LEADER IN DIGITAL PLATFORM SECURITY

+5 BILLION DEVICES AND APPLICATIONS SECURED

SERVING 400+ CUSTOMERS IN 75+ COUNTRIES

247 PATENTS & 483 PATENTS PENDING

NEARLY 1,000 SECURITY EXPERTS EMPLOYED

+15 LOCATIONS COVERING 6 CONTINENTS
IRDETO EXPERIENCE IN ANTI-PIRACY

2015
Member of the DWA, SVA, UHD-forum, and DASH-IF with a focus on watermarking

2011
Forensic watermarking solutions

2002
Established strong long-term anti-piracy relationship with major studios

1969
Anti-piracy solutions and services
How big is the piracy problem?

“52% of respondents said ‘I have consumed pirated content’

source - Irdeto Global Consumer Piracy Survey 2017
Many ways to consume content illegally

- Torrents
- Illegal Fully Loaded Kodi Boxes
- Social Networks Live Streams
- Web-Based Redistribution
- Pirate Set-Top Boxes (STBs)
- Other Forms of Piracy
Best way to fight piracy is with a 360° approach
There are a number of ways to mitigate the impact of piracy.

**Technology and Services**
- Content Protection
- Piracy Detection
- Distributor Watermarking
- Session-based Watermarking

**Legal options**
- Criminal Prosecution
- Site blocking
- Civil Action
- Enforcement and Investigation
What is digital watermarking?

The art of hiding information in a robust & invisible manner

Content is changed by adding a watermark. So what are the trade-offs:

- **Data payload**: amount of bits encoded
- **Fidelity**: the distortion that the WM introduces must remain invisible to the human observer
- **Robustness**: ability to extract the hidden information from altered data and survive all kinds of transformations (attacks) that the pirates apply
- **Algorithmic complexity**: impact on speed of embedding and detection
Digital watermarking is essential for any anti-piracy program

- Only way to identify the source of the pirated content
- Meets the MovieLabs Enhanced Content Protection requirement for early release, premium studio content
- Sports rights owners are also now starting to mandate watermarking
What are the different types of watermarking?

**Distributor**
- Watermarking focused primarily on early release content (movies, etc.) and enable content owners to determine source of content leaks by uniquely identifying a broadcaster even in the absence of a logo.

**Session-based**
- Watermarking focused on linear TV for broadcast networks (Broadcast watermarking)
- Watermarking for VOD & Live on IP networks (OTT watermarking)
Distributor watermarking architecture

Can be deployed on premise or in the cloud.

On-the-fly watermark insertion for each distributor

Real time with no impact on delivery

PREPROCESSING

POSTPROCESSING
No hardware or software changes needed. Supports all devices (even legacy)

Embeds watermark, outputs one stream with interleaved watermarked variants

Session manager implicitly available on STB

Patented headend method supports broadcast networks

Watermark identifies pirate subscriber
OTT watermarking architecture

Head-end deployment means content is delivered watermarked before reaching the consumer.

Watermark integrated either in encoder or post-encode.

Works with managed and unmanaged devices.

Watermarking for VOD and live on IP networks.
What’s the role of watermarking in piracy management?

- Gives content owners intelligence and control over their licensing and windowing
- Enables distributors access to premium content and windows
  By providing robust forensic identification of piracy sources through watermarking

Actionable insights
Actionable insights for better decisions
Intelligence to shape content distribution strategies

<table>
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<tr>
<th>Country</th>
<th>Region</th>
<th>CAM</th>
<th>Distributor #1</th>
<th>DVD</th>
<th>Distributor #2</th>
<th>Blu-ray</th>
<th>Grand Total</th>
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Accurate piracy intelligence drives better business decisions

**Content Owner**
- Technology decisions
- Content distribution strategy
- Identify leaks within distribution network
- Protection from revenue erosion

**Distributor/Broadcaster**
- Pricing
- Content acquisition strategy
- Understanding source of pirated content
- Content promotion
Q & A
THANK YOU!