



The Intellectual Property and Royalties Landscape

Blu-ray Licensing

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The Landscape

- Copy Protection and Forensic Marking
- Blu-ray Disc Format Patents
- Video Encoder Patents

Copy Protection and Forensic Marking

Blu-ray discs can have up to 2 layers of content protection and 1 forensic mark. Each has its own unique licensing requirements.

- › Advanced Access Content System → MANDATORY
- › BD+ → OPTIONAL
- › BD-ROM Mark → MANDATORY

Copy Protection Licensing: AACCS

Advanced Access Content System (AACCS)

- Developed in 2004 by AACCS Licensing Administrator, LLC (known in shorthand as AACCS LA). A consortium consisting of:

***D*isney**

***I*ntel**

***M*icrosoft**

***M*atsushita (*Panasonic*)**

***W*arner Brothers**

***I*BM**

***T*oshiba**

***S*ony**

Copy Protection Licensing: AACS

Why is an AACS License Needed?

- All replicated discs must contain what's called an AACS Media Key Block and a Content Certificate in order to be playable on Blu-ray devices
- The Media Key Block and Content Certificate are components of the AACS encryption scheme and must be obtained from AACS LA

Copy Protection Licensing: AACCS

Who Needs an AACCS License?

- **Licensed Content Producers**
 - › Defined as anyone who engages in mastering or authoring digital data and/or uses such data to produce a glass master (or equivalent) as intermediate steps towards the production of pre-recorded physical media
 - › Must sign Interim Adopter Agreement
 - › Must pay a \$15,000 annual administrative fee to AACCS LA

Copy Protection Licensing: AACCS

Who Else Needs an AACCS License?

- **Content Providers**

They have a choice of 3 licensing schemes:

- › **Basic Content Provider:**

- » Allows modest-sized providers to obtain lowest rates

- › **Volume Content Provider:**

- » Allows larger providers to receive quantity discounts

- › **Content Participant:**

- » Allows larger providers to receive quantity discounts & the right to bring action against other AACCS licensees (such as device manufacturers) that breach their AACCS licenses

Copy Protection Licensing: AACCS

Licensing & Fees for “Basic Content Providers”

- Must sign AACCS Content Provider Agreement
- Must pay **one-time \$3,000** administrative fee to AACCS LA
- Must pay \$500 per master for the Content Certificate and an \$800 per master Content Certificate “order fulfillment fee” – total of **\$1,300 per master**
- Must pay **\$.04 per disc** royalty, and a **\$10 per master** “order fulfillment fee,” for the Media Key Block

Copy Protection Licensing: AACCS

Licensing & Fees for “Volume Content Providers”

- Must sign AACCS Content Provider Agreement
- Must pay **annual \$15,000** administrative fee to AACCS LA
- Must pay \$500 per master for the Content Certificate and an \$800 per master Content Certificate “order fulfillment fee” – total of **\$1,300 per master**
- Fees for Media Key Block are based on volume

Copy Protection Licensing: AACCS

Licensing & Fees for “Volume Content Providers”

- For Media Key Block, must pay \$.04/disc royalty or an annual fee based on number of discs produced per year

# of Discs Per Year	Annual Fee
< 500K	\$12,000
< 2M	\$40,000
< 5M	\$80,000
< 15M	\$200,000
< 70M	\$600,000
< 120M	\$1.4 million
< 170M	\$1.9 million
< 250M	\$2.3 million
> 250M	\$2.5 million

Copy Protection Licensing: AACCS

Licensing & Fees for “Volume Content Providers”

- Payment of the annual flat fee for the Media Key Block is made at beginning of each year
- If content provider underestimates annual production, it must pay the difference between the fees paid and the fees owed for the volume category applicable to the actual units shipped

Copy Protection Licensing: AACCS

Licensing & Fees for “Content Participants”

- Must sign AACCS Content Participation Agreement
- Must pay **annual \$40,000** administrative fee to AACCS LA
- Same royalties and fees as a Volume Content Provider
- Primary benefit of being Content Participant: third-party beneficiary rights

Copy Protection Licensing: AACCS

How Do The Content Provider Fees Get Paid?

- Annual administrative fees typically are paid to AACCS LA directly by the content provider
- The Media Key Block and Content Certificate royalties and order processing fees usually are paid to AACCS LA by the disc replicator and then billed through to the content provider

Copy Protection Licensing: BD+

What Is BD+?

- An optional layer of enhanced content protection.
- All licensed playback devices must meet BD+ specifications, but decision of whether to use BD+ on a given title is up to the content provider.
- Content providers must enter into a license agreement, pay an up-front authoring fee per mastered title, and pay a royalty fee per replicated disc.
- All licensing is done through BD+ Technologies, LLC – a joint venture between affiliates of Panasonic, Sony and Fox.

Forensic Mark Licensing: BD-ROM Mark

What Is The BD-ROM Mark?

- A mandatory system for protecting replicated Blu-ray discs
- Requires specialized hardware (the “BD-ROM Mark Inserter”) to embed a physical identifying mark on the disc
- Panasonic, Philips and Sony administer the BD-ROM Mark licenses. The hardware is only available to those who have obtained a license
- Without this mark, a compliant Blu-ray player will not decrypt the content on the disc.

Forensic Mark Licensing: BD-ROM Mark

Provides Tracking Capability

- The physical mark is unique to each title and to each manufacturing facility. This is why it's called a "forensic" mark.
- As a result, the BD-ROM Mark can also be used for tracking purposes in the event that pirated discs are discovered, because each manufactured disc is irrevocably tied to the mastering facility.

Blu-ray Patent Licensing

Licensing of Blu-ray Disc Format Patents

- There is not yet a one-stop licensing clearinghouse for the Blu-ray disc format patents
- Steve Jobs said: “*Blu-ray is just a bag of hurt ... the licensing of the tech is so complex.*”
- Up until February 2009, Blu-ray’s multiple stakeholders were working to establish MPEG LA as a one-stop Blu-ray licensing authority.

Blu-ray Patent Licensing

New BD Patent Pool

- In February 2009, plans were announced to form a new entity to create comprehensive Blu-ray patent pool.
- Likely result will be a per-disc royalty fee. News reports indicate that planned rates are 11 cents on making each Blu-ray disc, 15 cents for each rewritable disc and 12 cents for a recordable disc.
- Estimated that the average royalty savings will be 40% compared to costs of pursuing the patents individually.

Video Encoder Patent Licensing

Overview of Video Encoder Licensing

- Disc replicators must pay a per-disc royalty for the video encoding patents used on the discs they replicate
- The Blu-ray format specification permits MPEG-2, MPEG-4 or VC-1 video encoding
- The choice of which to use is made at authoring stage
- MPEG LA coordinates the patent pools for each

Video Encoder Patent Licensing

Patent Pool Licensing Fees

- **MPEG-2**
 - › \$0.03 per disc; or
 - › \$0.01 per disc if 12 minutes or less of video
- **MPEG-4**
 - › \$0.02 per disc or 2% of retail sale price, whichever is less
 - › No fee owed if 12 minutes or less of video
- **VC-1**
 - › \$0.02 per disc or 2% of retail sale price, whichever is less
 - › No fee owed if 12 minutes or less of video

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