

Asset Identification Through EIDR In a World of Entertainment Everywhere

Exploring the ABCs of EIDR and tracking its progress and growth so far.

By Don Dulchinos, Executive Director,
Entertainment Identifier Registry (EIDR)

Abstract: The Entertainment Identifier Registry provides a top level Universal Media ID for all movie and TV content. EIDR's mission is to drive out inefficiencies in the supply chain, while enabling new business models and workflow processes to support the increasing opportunities in digital distribution of content. This article will explore the value proposition of EIDR's global unique identifier in the entertainment industry supply chain. It will describe how using a standard content identifier streamlines implementation of multi-platform digital delivery, and will illustrate the value of EIDR in case studies for online retail distribution including UltraViolet.

In the new world of entertainment distribution in the digital age, a key landmark was achieved in August of 2010 with the formation of the Entertainment Identifier Registry, or EIDR, by founding members MovieLabs, CableLabs, Comcast and Rovi. EIDR provides a top level Universal Media ID for movies, TV shows and other video content. EIDR's mission is to drive out inefficiencies in the supply chain, while enabling new business models and workflow processes to support the increasing opportunities and complexities in digital distribution of content.

Now in the summer of 2012, the EIDR consortium numbers 34 member companies, with new members being added every month. Equally significant, many of those member companies have embarked on proof-of-concept exercises using the registry, with several members moving directly into integration of EIDR within their standard commercial workflows, processes and distribution systems.



The case studies in this paper will explore the value proposition of EIDR's global unique identifier in the entertainment industry supply chain, including how using a standard content identifier streamlines implementation of multi-platform digital delivery. The paper summarizes use cases already being implemented across a range of distribution channels, and focuses on the value of EIDR in many use cases: online retail distribution, the new UltraViolet electronic sell-through channel, and the cable industry's Video-on-Demand distribution system.

Laying the Groundwork

Since the founding of EIDR, many different implementation exercises have been initiated by all the major studio members and many other supply chain members of the EIDR consortium.

The first activity to follow the birth of EIDR was a registry "seeding" exercise. After the Registry was developed and stood up, but with no records or ID numbers yet assigned, founding member Rovi began a monthly seeding process for new movie/TV records. Rovi used its extensive database of movie and television program records, comprising a large percentage of mainstream content, to create a large number of records in the registry, with EIDR IDs assigned and with enough metadata to uniquely identify those assets (e.g. title, release date, runtime, primary language, director, lead actor, etc.).

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This seeding exercise jump-started the registry and enabled other EIDR members to start many types of implementations. Several proof-of-concepts were completed early on by our studio members, while some are still in progress with the goal of matching internal IDs to EIDR IDs that were created in the system based on Rovi seeding activities. Disney, Warner Bros., NBC Universal, Sony, and Fox have been working in this area. EIDR membership facilitates this process as it entitles the content owner to make use of a "de-duplication" tool in order to help automate this process.

EIDR membership also allows access to a set of Application Programming Interfaces (APIs) through a Software Development Kit (SDK), that provide automated access to the registry via commonly understood Internet protocols. Several members (Disney, Warner Bros., and NBC Universal) have already integrated the API into their standard internal workflow systems while others are actively working and planning their integrations, including Shaw Communications, Sony, Fox, HBO, and Internet Video Archive.

Alternate IDs and Value-Add Metadata

Other content owners and record holders have also jumped into similar matching exercises, including HBO, a premium television content producer, Shaw Cable of Canada, the British University Film & Video Council (EIDR is international in scope) and Baseline Research, a premier provider of film and television information. Baseline's membership in EIDR, together with Rovi and Red Bee Media in the UK, underscores how a universal identifier, targeted and focused as EIDR is, can preserve and indeed extend the business of value-added information and metadata providers.

These value-add business models have driven another current activity, which is the addition of unlimited alternate IDs to existing EIDR records. Disney, Warner Bros., Sony and Baseline are all engaged in adding their internal title IDs to the EIDR registry. EIDR allows the addition of alternate IDs in a defined field such that searches

of the registry can allow users to match multiple IDs and translate among them.

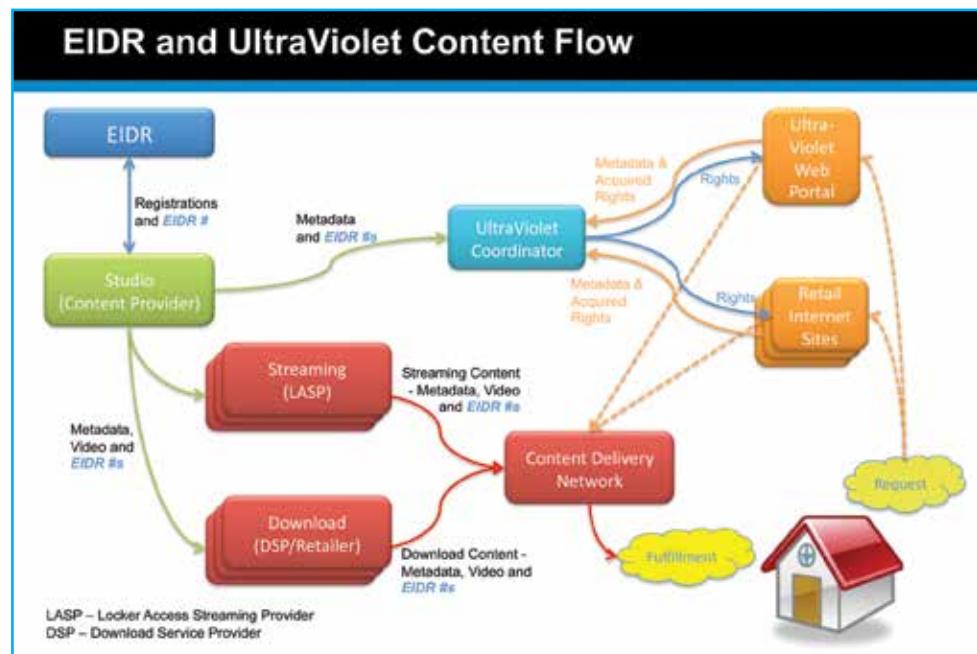
As more members join and an increasing number of records are populated into the EIDR system (almost 250,000 and climbing), together with deeper information such as the alternate IDs, it becomes an increasingly powerful tool that can be integrated into the existing workflows and systems used in entertainment distribution today.

Digital Distribution

The ongoing blending of Hollywood and Silicon Valley has led to new distribution channels on devices that were not initially conceived

of as displays for movies or television episodes. As one example, Microsoft entered the video game market in a big way with the Xbox, and then within a few years redefined what a video game console could be with their Xbox Live entertainment environment. Customers can use Xbox Live to find not only games, but also entertainment content ranging from ESPN3 to Comcast's Xfinity Video-on-Demand library.

This is one of many examples of new outlets and consumer devices through which customers enjoy content. Warner Bros. is engaging with Microsoft and other online distributors to test workflow integration of EIDR for the online retail distribution of entertainment assets.



This chart shows the flow of content between EIDR and UltraViolet.



Don Dulchinos is responsible for growing and extending the use of EIDR as the top level Universal Media ID for all movie and TV content. EIDR is an independent non-profit entity with Founders including Cable Television Laboratories, MovieLabs, Comcast, and Rovi. Dulchinos is on loan to EIDR from CableLabs, where he serves as Senior Vice President, Advertising and Interactive Services.

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Other content owners are similarly exploring how EIDR facilitates the rapidly evolving digital distribution environment.

UltraViolet

UltraViolet is one solution to unlock the huge opportunity of electronic sell-through of movies and other entertainment products. UltraViolet, which shares many common members with EIDR (including EIDR Board members Sony, Warner Bros., and Neustar), provides an ideal opportunity for studios to begin their transition to the EIDR universal identifier.

In what started as a proof of concept, but has quickly moved into a standard workflow/process, several studios including Sony, Warner Bros., NBC Universal, and Fox are creating EIDR IDs for titles and individual edits derived from the titles in order to support UltraViolet digital distribution.

In a typical workflow, the EIDR ID, along with associated metadata, is pushed from a content owner's internal title management system to a Content Distribution Network (CDN) provider. The CDN provider might pair the asset with the EIDR and other metadata, and then push the package into the UltraViolet workflow. The UltraViolet coordinator (EIDR member Neustar) does the set-up for digital rights locker management. The coordinator publishes to retail partner sites, where customers then buy rights to the movie or TV titles. When customers go to a UltraViolet-enabled streaming provider, the EIDR gets matched and the customer enjoys the streamed entertainment.

TV Everywhere and Anytime

Cable service providers Charter, Comcast, Cox and Shaw are all members of EIDR. These companies are very focused on evolving their distribution platforms to embrace multiple consumer devices – tablets, PCs, phones – in a trend known as TV Everywhere. In support of TV Everywhere, cable providers have also been focused on enhancing the value of their current Video-on-Demand (VOD) platform, which contain

thousands of movie and TV episodes, many of which are free along with the customer's subscription to different broadcast and cable networks. The key is to track the VOD assets as they traverse back office, distribution, and consumer/device environments, and EIDR provides a key solution.

One EIDR proof-of-concept now in progress is a test of VOD asset tracking end-to-end. Partners include MSOs, content networks, on-demand delivery partners and usage measurement vendors. In this POC, the studio/programmer registers content with EIDR, and then delivers those assets, metadata and the associated EIDR to an on-demand delivery partner. That delivery partner in turn retrieves EIDR metadata directly from the registry, and provides EIDR IDs in the feeds to the MSO. In this implementation, VOD assets adhere to the CableLabs VOD Asset Distribution Interface (ADI) specification, an industry standard which incorporates use of EIDR.

In the MSO environment, the cable provider brings the EIDR ID into its internal database and correlates asset metadata utilizing EIDR, linear vendor IDs and others. The MSO provides VOD results with EIDR to a usage measurement vendor, which produces VOD usage/purchase reports utilizing EIDR for better reporting and measurement results.

EIDR Momentum Continues to Build

The EIDR as universal identifier was a long awaited concept. It has not taken long for various interested parties to develop numerous use cases for the identifier, setting the stage for efficient, streamlined work flows to support the new world of entertainment everywhere, anytime, on any device. Additional content owners, service providers and media services companies continue to join the EIDR organization every month. Membership information, tools and resources are available at www.eidr.org. ■

Dell

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because we have Dell ProSupport on the machine, the motherboard was received and replaced within an hour and a half of failure. That turnaround by Dell ProSupport was absolutely fantastic."

Creating stellar animation ToonBox artists who work mostly with Autodesk SketchBook Pro, Adobe® Photoshop®, or Adobe Premiere® Pro software received Dell Precision™ T3500 workstations. For artists who work primarily in Autodesk Maya, eyeon Fusion, or Pixologic ZBrush, ToonBox provided Dell Precision T5500 workstations. "They are very powerful machines that facilitate the type of work our artists are doing," says Pearce.

Most of the company's back-office functions run in a virtual environment enabled by VMware® virtualization software. More than 30 virtual servers run on two Dell PowerEdge R710 hosts and one PowerEdge R510 host. "Intel Virtualization Technology for DirectedI/O (Intel VT-d) enables the processor to split up resources for different virtual machines managed by the VMware layer," says Pearce. "It works fantastically. Our Dell and Intel hardware is enabling us to make excellent use of the resources we have without flooding our server room with excess equipment, power consumption, and heat."

To see that it selected the right hardware partner, ToonBox looked no further than its high-definition, stereoscopic animations. "In our teaser for *The Nut Job*, the image quality was so high that people couldn't believe we did it in the time frame we did with the resources we had," says McPhillips. "That validates our decisions, because a high image quality is the top of the pyramid. To get to that level, you need great people, great technology, and fantastic hardware. Dell computers give us one level of the pyramid." Furthermore, ToonBox's state-of-the-art equipment has helped the company recruit animators. "When you're on the cutting edge of what can be done in animation, you need a solid backbone," says McPhillips. "Selecting Dell as our hardware partner was one of the best decisions ToonBox has made. It has been a fantastic relationship." ■