

## Introduction

As media companies everywhere expand their businesses into the new arena of digital media over the Internet, the challenges of filling the content demands of users while establishing viable and practical business models are becoming more obvious. It's clear that the existing approaches to digital media rights management have fallen short of the expectations of both media companies and consumers.

At RealNetworks, we believe that the business models of the various stakeholders should drive usage rules that govern media playback, and that these usage rules should be associated with all digital media. We call on content owners; retailers and technology providers to support a standard interchange language to be used ubiquitously between disparate rights management systems for the description of business models and the usage rules used to enforce those business models.

## The Digital Media Explosion

Traditional media distribution is estimated to be an over \$170 billion a year market in the United States alone in 2002, according to Kagan World Media. Since the mid-90s, the delivery and consumption of digital media over the Internet has grown at a phenomenal rate, far outpacing growth rates in traditional delivery mediums. As a result, many media businesses are expanding their focus to include digital media distribution.

Although today's Internet content is largely free, users widely acknowledge that they are willing to pay for access to compelling content. A majority (70%) of Napster users have indicated their willingness to pay a reasonable monthly fee for a digital music subscription service. Over 200,000 RealNetworks customers subscribe to GoldPass, a monthly subscription service.

The dramatic progress in the quality of audio, video, and rich media presentations; as well as the advancement in technology for delivering these presentations, have introduced new challenges related to the widespread adoption of the new mass medium by businesses. In particular, the work needed to preserve content owners' interests in an era of increasingly ubiquitous and effortless digital media distribution is still in its early stages.

The question remains, how will content owners monetize their vast catalogs of highly valued content to transform today's digital media distribution into tomorrow's meaningful commercial venture? Clearly, great opportunities exist to transition existing business models, such as rental, subscription, or ownership, to the new medium. Beyond these, a new set of opportunities arises in the digital era, such as promotion-oriented distribution, peer-to-peer distribution, or "video on demand" services.

However, today's lack of industry cooperation and standardization on a codified set of common business rules has stifled the evolution of new business models such as those mentioned above, all of which are based on combinations of discrete business rules. The

industry is missing a standard method of describing, for instance, the business rules that would comprise a digital “rental” model, which might be based on rules governing the duration of playback allowed, the number of plays allowed during that time period, and when the rental period begins (e.g., from the date of payment, or from the first play of that content). The absence of standards has spawned conflicting proprietary approaches to describing business rules, leaving the industry with a costly, inflexible, non-standard approach to what could be a much simpler problem to solve.

## **Mapping this vision onto today’s Digital Media Commerce Ecosystem**

Today there are many vendors offering digital rights management systems. These systems have some similar features and functionality (in certain ways) and offer compelling differences (in other aspects). Most systems implement features for handling the description and enforcement of rules/rights, but no two systems implement these features in the same way. Some systems offer back-end solutions for integrating media usage enforcement systems with eCommerce and web site systems, but again, no two systems ascribe to the same method for accomplishing that integration. Other systems offer turnkey solutions that appear to include all the necessary piece-parts, but in doing so, legislate the business model, commerce and web systems that must be used. The majority of systems were designed with security and enforcement as their primary focus, not business rules. Businesses that attempt to implement these systems are left with a collection of partially useful tools that don’t quite add up to a solution that either addresses their business goals or integrates smoothly with their existing systems.

As a result, artists, media companies, record labels, motion picture studios, broadcasters, composers, content syndicators, publishers, and a wide range of other companies are forfeiting tremendous opportunities in the new growth phase of digital media distribution.

What businesses need is a common mechanism for describing their business rules, and the usage rights that make up those business rules; and a commitment from digital media commerce systems to support those rules in a consistent and predictable manner. The introduction of a standardized interchange language that back-end commerce systems could feed into existing rules/rights enforcement systems would allow media owners and distributors to deploy complete solutions built from the best of breed components of these various media commerce systems.

## **A new way of looking at Digital Media Commerce**

A hierarchy of imperatives is driving the next mass medium through this critical phase in its development:

- Almost any effort to distribute digital media in the future will be based on a business or service model, in one form or another (e.g., video-on-demand, subscription, rental, retail, loan, etc.).

- Every business and service model, and therefore its associated media content, requires business rules to govern the content's lifecycle throughout the distribution network and support the model's viability.
- Technologies, products and systems are needed to manage and enforce those business rules without making business-rule enforcement an end in itself.
- For content having high commercial value, or content that is otherwise at risk of theft, a high level of security and trust must be embodied in the technologies, products, and systems.
- Because business rules, and in some cases security, are fundamental to media distribution, they should both be integrated tightly with the systems used to deliver media.

This vision represents a unique approach to the challenges of digital media distribution today.

First, it places the business model, and by association the business rules and ultimately the consumer's enjoyment of the content, at the center of the discussion on how to construct an end-to-end media delivery system. Previous approaches to high-value media distribution have placed security and rule enforcement in the primary position, causing the resulting solution implementations to be too restrictive from a user experience standpoint, too inflexible from a business model standpoint, and thus a failure for consumers and publishers alike.

Second, it proposes that all media content has business rules (implicit or explicit). Attaching business rules to content isn't necessarily about enforcing payment or maintaining security. It is equally valid for a content creator to want to allow free loans of the content or to prevent others from charging for the use of their digital media.

Third, this vision recognizes that each of these components (the business model, the business rules supporting that business model, the security, the delivery and playback system itself) are separate and distinct entities, which, in combination, make up the media ecosystem. In this way, a flexible value chain is created, through which publishers and technology providers can mold a solution to fit the needs of businesses and their business models by placing the appropriate level of emphasis on each link in the value chain.

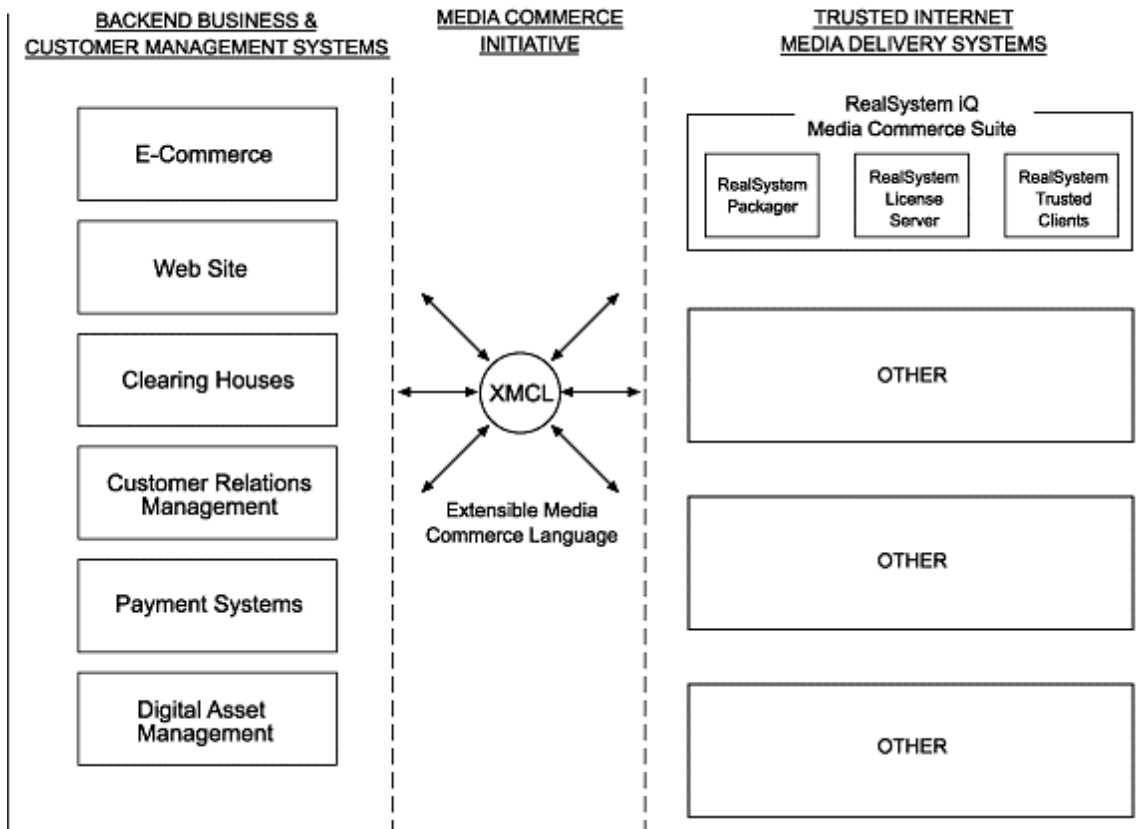
## **An Opportunity for Standardization**

Digital media in a rights management system flows through a number of steps on its journey to a consumer's eyes and ears. The steps are: create, package, publish, distribute, license, and consume. At least a subset of these abstract steps is implemented by all rights management systems today. The service or business owner that manages one or more of these steps varies widely depending on the relationships negotiated for a specific piece of content. However, there is a natural break between the back-end systems for publishing and licensing and the trusted system that packaged the content and enforces

the business rules for the content. This division is between the systems that describe the business rules for the content and the specific implementation that enforces those rules. There exists an opportunity for a standard business rule definition language to bridge the back-end systems and the specific implementations.

Today, choosing a Digital Rights Management System (DRM) often locks you into a limited usage space for the content protected by the DRM due to limitations of the client software that plays back the content. To give customers what they want and allow broader usage, publishers and e-tailers have to offer the content in multiple formats, protected by multiple DRM systems. With the lack of a standard business rule definition language, these publishers or e-tailers have to specify the business rules separately for each DRM system they support.

A standard business rule definition language would bring all of these DRM systems together on the back end and reduce the cost for the publisher/e-tailer. Most importantly, a standard business rule definition language would enable the e-tailer to become independent of the particular implementation choices of any single DRM vendor and any single back-end system. Interoperability at this exchange point between back-end systems and trusted delivery systems increases the ease of use of rights management systems for the back-end operator; reduces the risks of mistakes in the setting of the business rules that could violate the rights the publisher had acquired from the content creator; and will accelerate the growth of the digital media industry as a result.



Why not extend full standardization to the DRM enforcement systems themselves? It is not appropriate to standardize the implementation or functions of the trust system associated with enforcement since that would fundamentally compromise the trust of those systems. If a standardized trust system was to be proposed, the strength of such a standard trusted system is only as strong as its weakest implementation. Instead, supporting and encouraging the existence of multiple interoperable enforcement systems allow vendors to innovate at an appropriate level and provides freedom of choice for their customers.

## A Call to Action

For a standard business rule definition language to be truly successful it must be an open standard developed by the industry through the appropriate standards organizations, where the ideas and interests of the entire content ownership and rights management community can provide contributions and feedback. Standards such as these will be rapidly and widely accepted by industry.

To further ensure wide and rapid adoption, such a standard should be licensed on a royalty-free basis. Most successful standardization efforts are at the level of interchange of information between systems. The interchange of business rule definitions between

back-end management systems and enforcement systems is the clear and obvious place to standardize rights management.