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Rights Information Management

The Key to Flexible, Scalable Commerce in Digital Content

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Executive Summary

Information about content rights is an often overlooked component of digital asset management (DAM) for successful exploitation of consumer content. Lack of rights information associated with content results in bottlenecks to building new products and services to reach audiences through a variety of channels and on a variety of devices.

In this article, we motivate the opportunity for *rights-driven content commerce* and show how it relates to emerging value chains for digital content distribution. In particular, we show how rights and product information are becoming more and more important, relative to distribution of the actual content, in configuring content value chains. We then give several examples of third-party service providers that are enabling rights-driven content commerce in various market segments, including games, music, text works, and images.

We then discuss *rights information management* and the need for appropriate infrastructure at content providers. We describe efforts to standardize on content identifiers as well as rights information metadata.

We show how rights information management differs from digital rights management (DRM) and how it should integrate with both DAM and back-office systems such as financials, royalties, and ERP. Finally, we describe three different strategies for building rights information management systems at content providers – including in-house development, off-the-shelf software deployment, and use of outside service providers – and discuss their tradeoffs.

The Need for Rights Information Management

The market for digital content is certainly growing at a phenomenal pace. But perhaps ironically, the slowest-growing part of the digital content market is for copyrighted works from media-producing organizations. One reason for this is the media industry's lack of infrastructure for handling content rights.

Content providers paid lots of attention to getting content online – creating it, digitizing it if necessary, and moving it around. Less attention is paid to metadata for searching, categorization, recommending, and licensing. There's a lot of lip-service on standards adoption, but little actual activity, and content providers have had precious little success incorporating metadata creation into creative workflows.

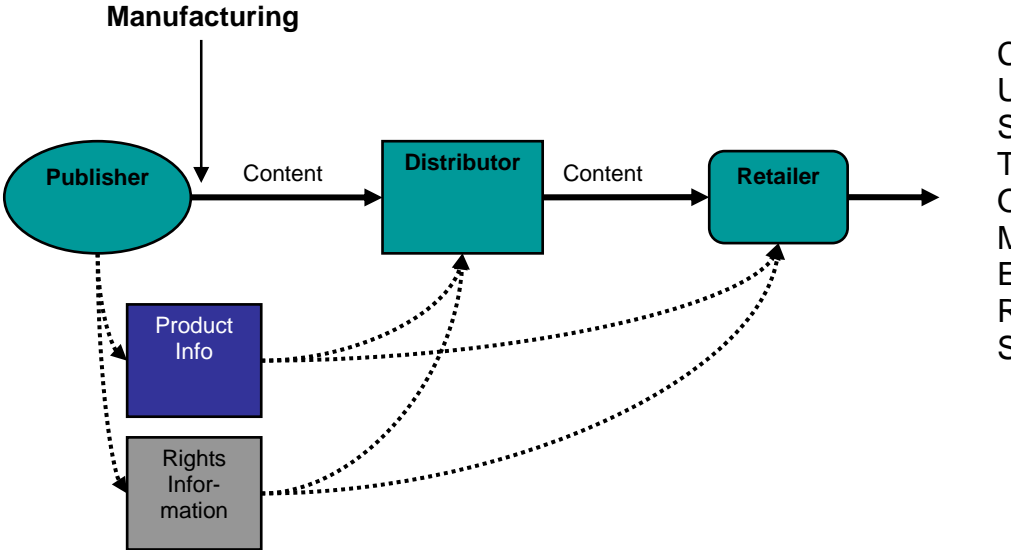
The least attention is being paid to content rights information. The process of assigning identifiers and rights information to content is often an afterthought as well as laborious and imprecise. Solving these problems can help a content provider increase revenue by developing new and customized products faster, without having to build expensive, inefficient “silos,” in order to reach new audiences and increase revenue and brand awareness.

When digital content is distributed to consumers, it is usually done through license agreements, which are not considered to be the same thing as copyright. License terms are often encapsulated in EULAs (end user license agreements), a/k/a clickwrap agreements. With proper rights information, the conveyance of such terms to user software and hardware can be automated, as can enforcement of the terms through digital rights management (DRM) if necessary.

Proper metadata can facilitate automation of product packaging – not just of digital but also of physical products – so that more customized and personalized products can be offered. One example of this is the Print-on-Demand (POD) paradigm for customized textbooks, also known as CoursePacks, in which a customer (e.g., a college professor) can select from a list of chapters or modules, and the result is paginated into a contiguous document and made available to the students in the professor’s class. This requires that each module has pre-cleared rights and that automation exists to properly compensate all rights holders – textbooks could have hundreds or thousands each – whenever an order is placed.

Such automation requires rights metadata. In fact, one could go further and say that a transaction on content is really a transaction on rights facilitated by metadata. Once this is understood, a new model for the content value chain emerges – one that we call *Rights-Driven Content Commerce*.

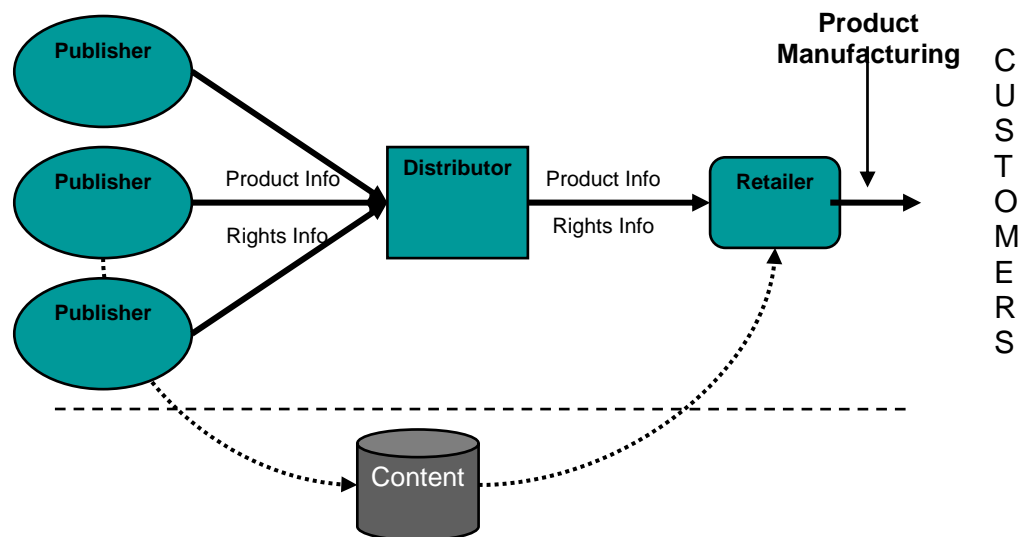
Figure 1 shows a view of the traditional value chain for physical content. A publisher packages content and sends it to a distributor, which in turn sends it to a retailer. That is the principal activity; meanwhile, somewhere off to the side, the publisher sends product and rights information to the downstream participants. In the book publishing industry, product metadata (which optionally includes rights info) is often sent to distributors and retailers using the ONIX metadata standard¹. The music industry leaves this to third parties such as All Media Guide and Muze, which create and distribute metadata entirely independently of the product distribution channel.



• Figure 1: The traditional content value chain.

The emerging value chain for rights-driven content commerce is shown in Figure 2. Here, publishers feed product and rights information downstream to distributors, who feed it to retailers. Content is stored in a repository somewhere and fulfilled (digitally or physically) wherever and whenever the customer asks for it. The downstream value chain participants need not handle the content at all.

¹ <http://www.editeur.org/onix.html>.



• Figure 2: The emerging digital content value chain.

Three types of information must be communicated down the value chain in order to make this happen:

- Content identification: unambiguous identifiers must be assigned to content at packaging and/or fulfillment time.
- Product metadata: information for marketing purposes that makes customer-specific product assembly and e-commerce possible.
- Rights metadata: information for enabling automated rights clearance and compensation of rights holders.

Examples of Rights-Driven Content Commerce

Several examples exist today of service providers who implement substantial portions of the rights-driven content commerce idea; we describe some of them here.

Rights-Driven Content Storefronts

Navio Systems (www.navio.com) is a Silicon Valley startup company that offers an infrastructure for rights-driven content commerce, the AV Commerce service. Content providers can use it to offer rights to content, encapsulated in objects called Digital Bearer Instruments, which consumers buy and store in digital lockers. Digital bearer instruments can contain a wide variety of rights, including the right to download content in a certain format for a certain device, the right to restore content after a disk failure or lost device, the right to share content with up to N friends, and so on. Navio need not handle the actual fulfillment of content, but instead can integrate with other service providers or the content owner's website to do so.

Recently, Navio has achieved particular success in two areas: the mobile content arena, where content formats and DRM schemes are fragmented, and on sites that offer content from a single brand in a wide variety of formats.

For example, the Atom Entertainment's Shockwave.com has a mobile games portal (www.shockwave.com/mobile) that features downloadable games for multiple devices on multiple wireless carriers. A user selects her mobile carrier, handset manufacturer, and device; and the site responds with a list of games available for that device. When the user makes a purchase, Navio records it in the user's rights locker. The user can charge the purchase to her mobile phone account, and then Navio hands off to the wireless carrier to deliver the game to the user's handset. In theory, if the user switches handsets (for the same mobile phone account), she could download the version of the game for the new handset.

Another example is Fox Sports (foxsports.av.net), where users can download mobile games, handset wallpapers, ringtones, and video clips. They pay for them through a single interface, and the content is fulfilled through multiple sources as transparently to the user as possible.

Film and TV Rights Licensing

Rightscenter.com (www.rightscenter.com), a South Carolina-based company in business since 1999, has attempted to create an online exchange for subsidiary rights to book content. Subsidiary rights – or subrights for short – are rights to book content other than the primary right to publish the book in print in its home country; typical subrights include geographic distribution (outside the home country), language translation, serialization, product licensing, and film and television rights.

Rightscenter.com is one of a handful of online subrights licensing companies that started during the vogue for online B-to-B exchanges in 1999-2000 – and is the only one to have survived the bursting of the dot-com bubble². Although rightscenter.com originally offered a number of different subrights as well as the ability to actually purchase rights online, it has narrowed its offerings to film and TV rights. Its core offering is the Film Rights Directory, a database of over 40,000 book titles. Paid subscribers can look up books that have film rights and get information about the rights available, although they cannot purchase them on the site.

An analogous service in the music industry is Sony Music Finder (www.sonymusicfinder.com). This site is geared toward people who are looking for music to license for so-called sync rights, which are rights to use the music as background in movies, television shows, or advertising.

Users (television producers, producers at ad agencies, etc.) must register for the site and thereby establish their credentials. They can search the Sony Music catalog according to such attributes as tone and mood in addition to artist, title, and so on, and then listen to full-fidelity music tracks in their entirety. Like rightscenter.com, Sony Music Finder only provides information about sync rights licensing for each track and does not enable users to obtain the rights online.

One reason that neither rightscenter.com nor Sony Music Finder has online transaction processing capability is that terms in both types of rights licensing are typically negotiated;

² The others included SubRights.com, RightsWorld.com, and Permissions Direct.

prices are rarely fixed or standardized. Yet even providing information about what rights are available and whom to contact about them is helpful in lowering transaction costs of rights licensing and increasing awareness of available content, thereby making the processes more efficient.

Automated Text and Image Rights Licensing

Other types of content rights can be obtained automatically online. Text and image content are the most highly evolved areas.

The Copyright Clearance Center (CCC) is the text publishing industry's rights collecting society in the United States; analogous organizations exist in other countries, such as Copyright Agency Ltd in Australia and VG Wort in Germany. CCC was set up in the 1970s as the result of publishers' complaints about copyright infringement through photocopying. Its primary function is to facilitate rights clearance, i.e., to make it as easy as possible to respect copyright. CCC has a database of over 1.7 million works from almost 10,000 publishers, primarily periodicals and STM (scientific, technical, and medical) journals.

CCC has the most sophisticated online rights clearance functionality of any similar organization worldwide. It offers pay-per use rights clearance for businesses, academic course instructors, and other types of content. Available rights include photocopying, digital use on websites, republishing in print, and various others. Its website www.copyright.com makes these rights available automatically and collects payment. CCC does not fulfill content.

There are several providers of custom textbooks and CoursePacks that enable course instructors to select and order materials online. One of the best-known is XanEdu (www.xanedu.com) from ProQuest Information and Learning. XanEdu maintains a repository of pre-cleared rights to a large selection of educational content, including periodical articles, textbook chapters, out-of-print books, and business school cases. It also offers a service for clearing rights to other content.

XanEdu separately offers production and fulfillment services for CoursePacks containing the content to which it has rights; it can fulfill in print or digitally. Students can log in to the site directly to view the content or purchase printed materials.

Online image licensing is also really a rights licensing business. There are many online stock image agencies; the largest are Corbis (www.corbis.com), Getty Images (www.gettyimages.com), and Jupiterimages (www.jupiterimages.com).

From a rights and e-commerce perspective, digital images fall into two general categories: royalty-free and rights-managed. In the latter case, image users (e.g., website designers or art directors at advertising agencies) pay fees for specific uses of images. Users can pay for rights to rights-managed images on these companies' websites. In contrast, royalty-free images are available at flat fees or as part of services that charge monthly subscription fees for access to repositories of royalty-free images.

The key point is that rights-managed images are typically delivered to the customer in the same way regardless of the rights the customer has obtained – even if the image is simply a free copy for evaluation purposes. Rights-managed images nowadays are typically protected by forensic digital watermarks, but their access is governed by contractual terms, not DRM.

Rights Information Management Challenges for Content Providers

Notice that the examples in the previous section have a common thread: with the exception of Sony Music Finder, none of them are content owners; they are content aggregators and service providers³. Content owners have historically done a poor job in managing rights information to a good enough extent that they can easily engage in rights-driven content commerce.

Content owners face the challenge of managing rights to their content internally, so that service providers like the above don't have to do it for them. They need efficient ways of communicating rights information to downstream value chain participants, such as distributors, aggregators, and retailers. They also need to integrate rights information with business systems, to promote automation and efficiencies in collecting payments, compensating rights holders, and even requesting rights for content needed from other sources to make up offerings.

Rights information management is not the same thing as DRM. Whereas DRM typically refers to encrypting content and controlling access to it through hardware or software, rights information management means building, maintaining, and leveraging a repository of rights information that helps answer questions like these:

- What rights do we have to this content?
- Who provided those rights to us⁴?
- What do we have to do to clear rights for this use?
- What rights will we provide to others?
- What do we want in return for those rights?

These functions are performed now in most media companies by back-office departments. They go by names that differ from one media industry segment to another. For example, the television industry calls it "syndication," the music industry calls it "licensing," book publishers call it "rights and permissions," and magazine publishers call it "reprints." These departments typically use spreadsheets, hardcopy documents, or at best small desktop databases to track rights. Rights licensing activities are also a primary focus of several trade shows, such as the NATPE (National Association of Television Programming Executives) conference for TV and the Frankfurt Book Fair for book publishing.

If we go back to Figure 2 (p. 4), there is an apparent need for standards for expressing and communicating product and rights information from content publishers to distributors and then to retailers. Unfortunately, standards initiatives in these areas are woefully lacking.

The most basic level of standards required is for unique, unambiguous content identification for media products. ISBN numbers in book publishing are an excellent example of product-oriented content identification from the physical world.

³ The image licensing agencies own some, but by no means all, of the images they offer online.

⁴ Note that this is different from "who owns this content?", which may be beside the point.

The good news is that many ID standards for digital content currently exist. The bad news is that few of them apply to content as products (equivalent to SKU numbers in traditional retailing); instead they apply to abstract pieces of intellectual property or even individual copies of content.

The other bad news is that the existing standards generally do not interoperate. For example, the music industry has a number of different ID standards, including ISWC (International Standard Musical Work Code)⁵ and the newer GRid (Global Release ID)⁶. The film and television industry has ISAN (International Standard Audiovisual Number)⁷, the Japanese consumer electronics industry has cIDf (Content ID Forum)⁸.

The publishing industry proposed a standard called DOI (Digital Object Identifier)⁹ in the mid-1990s, in an attempt to solve the ID interoperability problem. The DOI could subsume most other ID standards (including all of the above) by embedding them in DOI numbers. DOIs have particularly gotten traction in STM publishing, where they are incorporated into a standard called CrossRef¹⁰ for reference linking, i.e., linking from a journal article to other articles referred to therein.

Beyond content identifiers, standards for rights information description do not exist at all. At least two failed attempts have been made in the past. One was an ad-hoc effort among publishers in 1996 which grew out of the Association of American Publishers Enabling Technologies Committee¹¹. A more recent one was the Content Reference Forum (CRF)¹², a group established in 2003 to address standardization for multi-tiered distribution of content, such as music and video. CRF's truly useful contribution was to develop a Contract Expression Language to describe rights and other terms passed from one link in the content value chain to the next. The group has been quiescent since 2004.

A current promising effort towards rights information standardization is ONIX for Licensing Terms¹³, by EDItEUR, the Europe-focused organization that contributed to the original ONIX (see p. 3). ONIX for Licensing Terms is primarily (though not exclusively) meant to apply to content from book publishers. ONIX for Licensing Terms is incomplete at this writing.

Standardization in this area is admittedly difficult. Here are some of the reasons for this:

- Terms involved in content rights commerce are often complex, ambiguous, and not entirely comparable to one another. Many rights licensing deals are created in an ad-hoc fashion, such as on the proverbial cocktail napkin.
- Content providers have evolved processes for managing rights over time; they diverge widely from one content provider to another in terms of organizational structures, terminology, workflows, and so on.

⁵ <http://www.iswc.org/>

⁶ <http://www.ifpi.org/site-content/grid/index.html>

⁷ <http://www.isan.org/>

⁸ <http://www.cidf.org/>

⁹ <http://www.doi.org/>

¹⁰ <http://www.crossref.org/>

¹¹ The author participated in this unofficial effort. The AAP ETC recognized the need for such standardization but elected to tackle identifiers only, resulting in the DOI standard.

¹² <http://www.crforum.org>

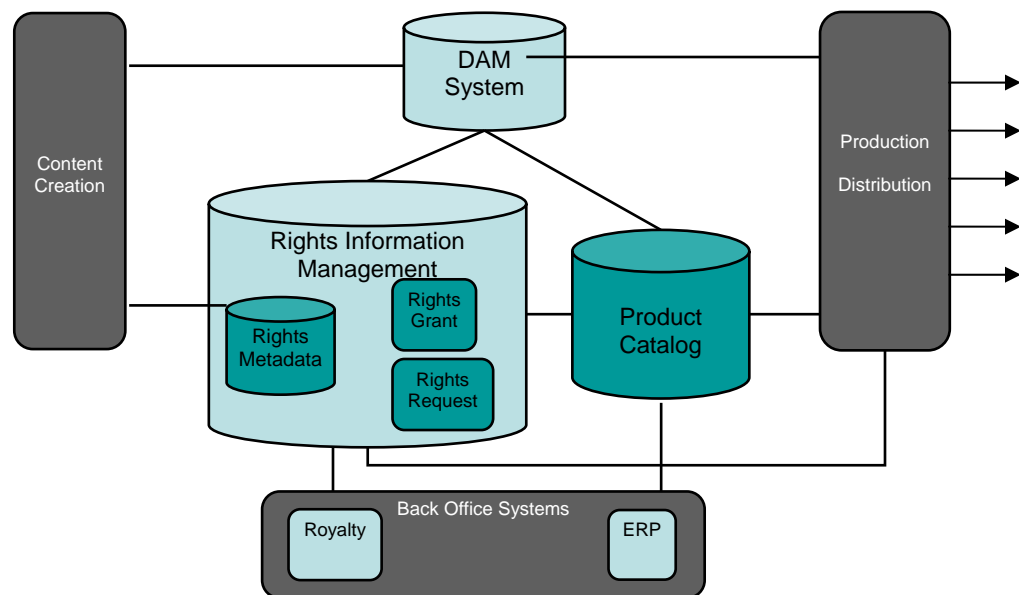
¹³ http://www.editeur.org/onix_licensing.html

- Rights management processes must coexist with back-office systems, such as royalty payment and financial systems, as well as content management or DAM systems. This forces certain conventions on those processes that may well clash with standardization efforts.

Rights Information Management Architecture and Strategies

The need to integrate rights information management with other systems gives rise to the architecture shown in Figure 3.

The Rights Information Management system in the figure contains rights metadata, which arises out of content creation processes. It also contains functionality to grant rights to downstream packaging (production) processes, and to request rights to content that is packaged but that the content provider does not own. For example, a video clip may contain music for which sync rights need to be cleared; a custom textbook chapter may contain an illustration or quote from another work.



• Figure 3: Architecture for integration of rights information management.

Product Catalogs contain product metadata, i.e., information about what's available for distribution. These could be components or finished products, which are collections of components. For each content component, rights information should include the following:

- Rights holders – identifiers corresponding to content creators or licensors in an ERP or equivalent system.
- Rights request terms – financial and other business terms (e.g., time window, geography, formats, exclusivity) associated with obtaining rights to the content component.

- Actions necessary – manual or automated steps that must take place to clear the rights, possibly including workflow routings (legal or financial approvals), permission letters, attribution requests, financial transactions, etc.

Ideally, the above information would be created at content creation time or fed from outside sources.

Unique content identifiers (discussed above) provide the primary “glue” that ties together the rights information management, product catalog, and DAM systems. Back office systems include those for outbound rights holder compensation (e.g., royalties) and financial systems.

Content providers planning to implement architecture like the above have three possible strategies to pursue, with tradeoffs among them.

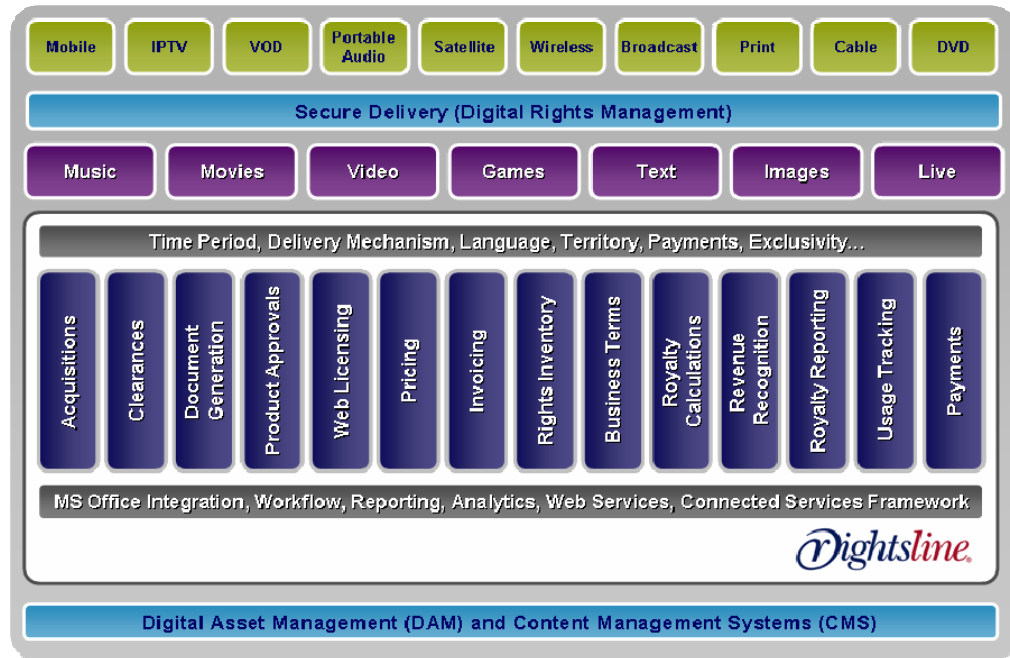
The first option is to build a system for managing rights information in-house. This approach has the advantage of resulting in a system that fits the organization’s structure, processes, and systems well, thereby reducing disruptiveness, speeding the learning curve, and being most responsive to the business case for rights information management. The disadvantage of an in-house system is that it tends to “pave the cow path,” that is, deny the organization the opportunity to revamp workflows for greater efficiency and flexibility. In addition, systems developed in-house are generally more time-consuming to develop and deploy than off-the-shelf systems, as well as more expensive to maintain and extend over time.

Several content providers have built their own rights information management systems, but few if any of these are truly comprehensive. They generally implement the “low hanging fruit” processes and stop there.

The second approach is to adopt an off-the-shelf rights information management system. Several such systems exist today, including Jaguar System 7 (www.jaguartc.com), Rightsline (www.rightsline.com), RightsLogic from RSG Media (www.rightslogic.com), and Sophoi iPLS (www.sophoi.com). These products provide rich sets of functionality as well as all the usual benefits of off-the-shelf solutions: an outside vendor to extend and maintain them, a community of users, and so on. They may cost less than an in-house effort, depending on the scope of functionality, size of user base, and so on.

Figure 4 shows a typical example of the functionality these systems provide; it is a functional diagram of Rightsline. The system supports Acquisitions (rights requests) and Clearances (rights grants), as well as the processes and information that go with them, such as Document Generation (e.g., permission letters), Product Approvals, Pricing, Business Terms (other than pricing, such as time periods, geographic territories, and exclusivity), and Invoicing. The Rights Inventory functionality enables searching and browsing of the rights repository. The system also includes financial and reporting components.

As the diagram shows, the Rightsline system is intended to integrate with DAM or content management system as well as web services, database reporting tools, desktop applications (e.g., Microsoft Office), and content distribution.



• Figure 4: Components of Rightsline's off-the-shelf rights information management system. © 2006 Rightsline Inc. All rights reserved.

Systems like this can make a big difference in a content provider's ability not only to manage rights information but to turn the task from management overhead to a direct revenue source. These applications are pre-configured with functionality that makes it easy to implement new rights-oriented content business models without having to build "silos."

At the same time, off-the-shelf rights information management systems have drawbacks. As is the case with DAM systems, they usually meet many but not all of the needs that a content provider typically enumerates in a requirements-gathering exercise. Although the software cost per se may be lower, that cost may be overshadowed by the costs of process re-engineering, training, and business disruption, not to mention the real costs of customization and integration with existing financial, DAM, and other systems.

The disadvantage of both of the aforementioned approaches is that they benefit individual content providers, not the entire value chain. Content providers still have the problem of feeding rights and product information to downstream entities. Lack of rights information standards exacerbates this situation.

This brings us to the third approach to rights information management, which is to use outside service providers. There are no current examples of outside service providers that actually manage all of a content provider's rights information. However, some consumer or B-to-B services actually end up as de facto managers of a subset of content providers' rights information. CCC in the text publishing industry (see p. 6) is probably the best current example of this.

Having an outside service provider manage rights information benefits from economies of scale and is more directly responsive to the needs of licensees – who, after all, usually license content from a multitude of different providers.

Because there are no standards for rights information, outside service providers will need to maintain proprietary schemes. Of necessity, these will be more in line with the needs of licensees than of licensors, and they afford content providers less control.

At the same time, using an outside service provider does not eliminate the need or benefit of managing rights information internally. In fact, the two are synergistic: well-organized internal rights information management should make it easier to feed rights information to outside service providers in coherent formats.

Conclusion

We have discussed how rights-driven content commerce is a paradigm that facilitates more and more content distribution opportunities, and how effective management of rights information – as opposed to digital rights management – is the key to being able to leverage an organization's content to the fullest extent. Most current examples of rights-driven content commerce involve content aggregators and service providers rather than content owners.

The ability to manage rights information successfully leads to the ability to launch new products and services based on an organization's content at a cost that is only incremental and does not involve building "silos" of processes and functionality. Rights information management capabilities can come from systems developed in-house, off-the-shelf software, or outside service providers. Content owners owe it to themselves to investigate these approaches and implement the one that makes the most sense.