



Economic Benefits of Digital Object Identifier Applications in Content Marketing

An EPS White Paper Series
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II. Using the DOI to Improve Profitability In *Content Distribution*

A Framework for ROI Analysis

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By **Steve Sieck**
Managing Partner, EPS-USA LLC

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Executive Summary

The immediacy and reach of the Internet enable prospective buyers to act “at the point of need.” To be most effective, online marketers must gain exposure wherever their target customers choose to go on the Web. For digital content providers, that exposure is most effective when content is presented within an appropriate context: at the point of need, or in relation to preceding or adjacent subject matter.

This White Paper examines how the Digital Object Identifier (DOI) can increase the profitability of content distribution strategies. It describes how the DOI can enhance current distribution channels and enable new distribution approaches, and explains how MultiLinks™ can “internalize,” from within a content object, a dynamic network of ongoing distribution relationships that can drive incremental revenues -- and attractive returns on investments in DOI adoption. In the following pages, four primary DOI-enabled content distribution paradigms are portrayed. All four leverage a single investment in registering the key content elements of a typical vertical B2B information business. Each suggests opportunities for substantial new revenues enabled by distribution arrangements with other information industry players:

Syndication to direct content partners The DOI enables content providers to extend their reach into many more places than would otherwise be possible. We show how it can make development of new content partner channels more productive. A realistic business development scenario for a vertical business-to-business information content provider generates first year net incremental revenues of **\$340,000**.

Optimization of aggregator channels Content owners can use the DOI to drive additional usage revenue from aggregator services, generate ancillary revenues, avoid opportunity costs of required setup processes, and improve their ability to track results driven by different aggregator channels. A scenario that combines enhancement of an existing arrangement, and acceleration of the benefits of a second, prospective deal, generates first year net incremental revenues of **\$140,000, an increase of over 70%** compared with the non-DOI alternative.

“Virtual Aggregation” models By using inter-company MultiLinking, providers of related, complementary content can create “virtual aggregation” offerings without the need for an intermediary aggregator, and with no technical or implementation costs to the partners. The benefits of the expanded distribution presence enabled by a relatively simple bi-lateral linking arrangement suggest incremental revenues of **\$400,000**.

Superdistribution and “Viral Marketing” DOI-enabled content can be widely disseminated, and made available for uncontrolled redistribution with confidence that the links are always current. Although difficult to quantify, the returns associated with the extension of such low-cost, high-potential-reach methods could be significant.

Allowing for the effect of overlapping benefits from the first three distribution strategies by applying a 20% discount against the total, our analysis shows an **overall net revenue impact of more than \$700,000** (without including the potential “viral” benefits of superdistribution), for a **hypothetical ROI ratio of about 7:1**. In assessing this outcome, and the economic scenarios described in the following pages, it is important to bear in mind that these economic returns on DOI adoption in most cases will leverage already “sunk” investment in DOI creation as part of digital asset management, product development, and more effective direct e-commerce operations. Assigning and registering a DOI creates potential benefits in all of these areas, as well as in the distribution strategies that are the focus of this White Paper.

Introduction

This White Paper is the second in a series examining the potential return on investment in using the Digital Object Identifier. It explores the economic benefits of the DOI as an enabler of *profitable content distribution strategies*, by developing realistic scenarios for distribution-driven return on investment (ROI) in DOI implementation.

The previous white paper, [Using the DOI to Improve Profitability in Publisher E-Commerce Operations](#), described the way in which MultiLinked™ content objects can extract and externalize the essential navigational structure of content e-commerce websites. It then showed how implementing DOI technology can achieve a 12:1 ROI over 1 to 2 years by improving discoverability, contextual merchandising, and transaction completion rates of content e-commerce operations.

The material presented in the following pages illustrates hypothetical distribution scenarios and the potential impacts of the DOI on business results. Actual opportunities enabled by the DOI will vary depending on a provider's size, content, market position, business capabilities and distribution environment. Thus, the frameworks and analytical approach presented in these White Papers are intended to be adaptable to any number of specific content marketing situations.

Traditional content distribution channels and the Internet

The media industry has long relied on multi-tiered distribution. Book publishers are dependent upon distributors, booksellers (including Amazon & BN.com), and direct marketers. Record producers rely upon labels, global distributors, rack jobbers, and music retailers. Owners of digital, commercial content have utilized both online aggregator/distributors, and customers' own internal deployment functions, especially for business, professional and scientific content.

The Internet both complements and supplements these traditional channels, while creating new digital content distribution opportunities to leverage the Web's ubiquitous access, near-zero transmission costs, and facilities for establishing direct interconnections of related works and content objects. Google has emerged as the first stop for information seekers, whether or not they subscribe to a paid service. Search engine advertising and "viral marketing" are becoming standard components of content marketing strategies. New forms of online syndication and affiliate sales networks are evolving, and the rapidly evolving Search marketplace suggests significant further developments in the near future.

ROI analysis of DOI-enabled distribution

Our analysis draws upon independent content distribution scenarios in order to illustrate the broad scope of potential benefits, as well as the potential cumulative impact of the DOI when exploited in multi-faceted distribution strategies. Scenarios are intended illustrate the return on investment in a representative small-scale DOI implementation, and may be adaptable to many content providers' specific situations.

The scenarios are based partially on evidence presented in the first White Paper in this series (DOI: <http://dx.doi.org/10.1220/eps1>). We refer the reader to that document for a full presentation of studies that support the impact of DOI on discoverability, traffic generation, and average sales per content site visit.

The two most important attributes of the DOI, specifically for publisher e-commerce, were found to be the ability to 1) improve content *discoverability*; and 2) enhance the *user experience* in terms of navigational clarity and reliability, and through the presentation of contextually-relevant alternative paths and actions.

Discoverability - The DOI has been shown to have a highly positive impact on organic search engine rankings. Studies have found that book titles with DOIs were *5 times* more likely to deliver active links within the first two pages of search results than titles without DOIs.

User Experience – The navigational/usability benefits of the DOI may increase online conversion rates for content products *by 50%* (at substantially less cost than site redesign efforts that have been shown to increase conversion rates by 100%) and increase *by 20%* the amount of the average sale.

Two other key attributes of the DOI also have particularly important implications for content distribution strategies:

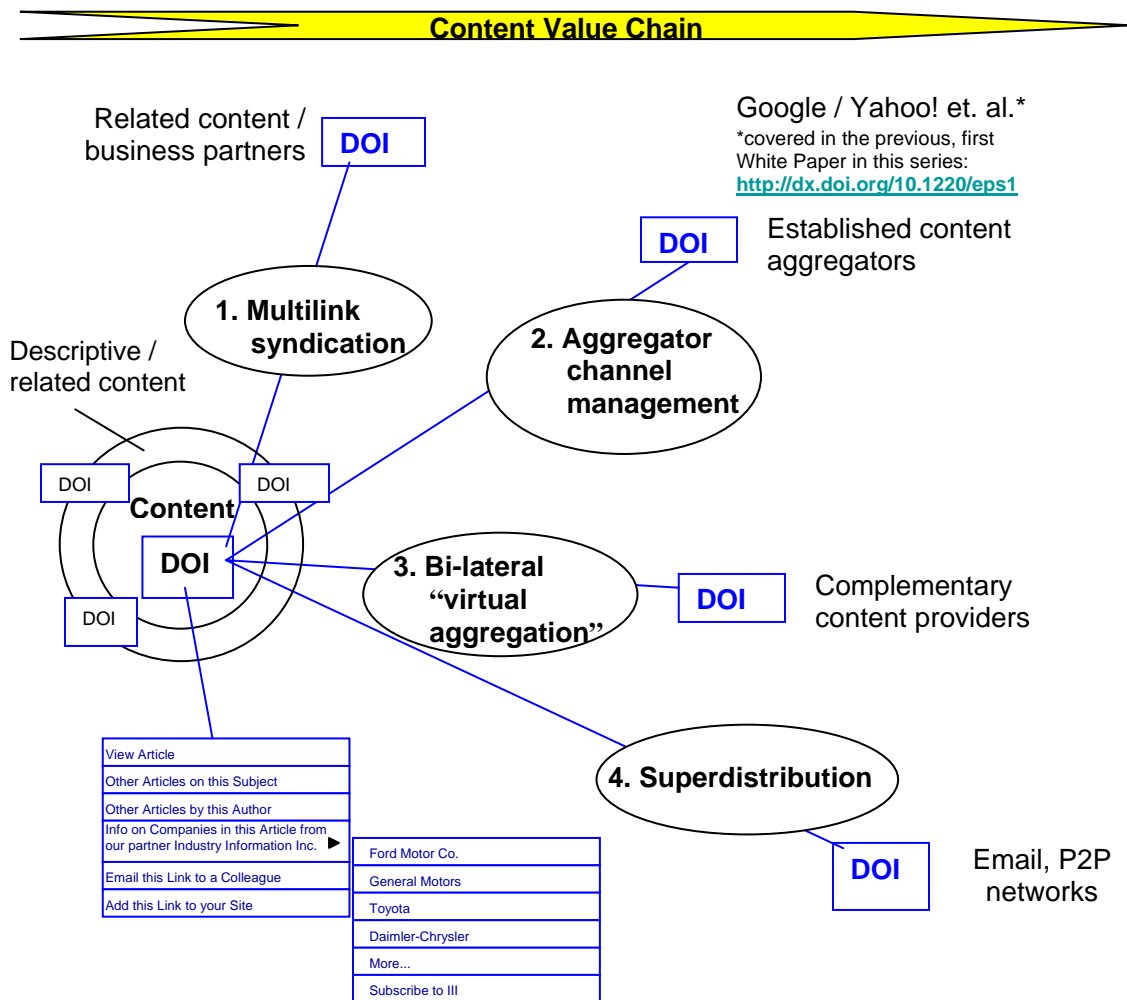
Persistence – Because DOIs are permanent links that can be managed and maintained centrally (with the help of registration agencies such as Content Directions), information content and links to related contextual and transactional options can be distributed with confidence that the links will *never be "broken."*

Control of MultiLink Creation and Management – By enabling content providers to create, change, and selectively suppress the options within MultiLink menus, the DOI facilitates distribution channel management through the capability of *controlling e-commerce navigation paths* on digital networks – including the ability to “personalize” distributor relationships with affiliate codes, ad codes, subscriber groups, etc. As a result, links on partner/distributor sites can be changed centrally, thereby simplifying the execution and lowering the cost of evolving distribution strategies.

Digital Content Distribution Strategies and ROI Scenarios

Content providers can consider various strategies (Figure 1) for maximizing their returns from third-party distribution channels. In the following pages we present four types of application scenarios facilitated by the Digital Object Identifier.

**Figure 1:
DOI-enabled Content Distribution Scenarios**



1. Content Syndication

For many digital content providers, syndication via individual content partners provides an important complement to aggregator and/or direct distribution channels. Content providers often develop distribution relationships on a partner-by partner basis. While these often are very effective in gaining exposure to new potential content purchasers, or increasing traffic that can be monetized in advertising-supported business models, they can be time-consuming to establish and may involve significant implementation cost to ensure smooth content integration.

By using the DOI, content providers can extend their reach into many more places than otherwise would be possible, including specialized niches and target communities that may be too small to justify a full content exchange and service relationship, but which may represent highly-targeted and -qualified sales prospects.

The DOI facilitates new digital content distribution opportunities such as:

- Company and industry reports linked in context with news articles that mention named companies or reference their products
- Commerce-ready content objects representing book titles or collections, accessible from author- and discipline-specific sites
- Biographical information linked to and from named people in news, press releases etc.
- Music purchases and cross-promotions accessible from fan sites
- Reviews that point to works (and works that point to their reviews)
- Bibliographies linked to referential citations of all types

The ability to extend market reach through such targeted channels stems from the DOI's elimination of "heavy" requirements for partner-specific technology development and operational setup, and because tools such as [CDI's MultiLink Syndicator](#)¹ allow partners to post DOI links on their own sites with very little or no contact from the content provider and with very little effort themselves. For example, site operators can become content distribution partners by simply clicking the "Add this Link to Your Site" option² of DOI menus they encounter. Further, content providers can facilitate such arrangements readily and with minimal contact: e.g. by sending an email blast to authors or music artists, fan sites, trade associations or other professional societies, portal sites oriented around a given subject, etc.

Because providers themselves can centrally create and control DOI links on all partner sites through the web with a single, one-time change, the expense associated with changing content and links on partner sites is effectively eliminated. In addition, the partners can be assured that all links (including "deep links" to specific, frequently changing content) are properly maintained and always active, with no ongoing effort or expense on their part. If they wish, partners and affiliates also can manage the links on their sites independently, for example by using CDI's software to make changes (e.g., suppressing links to their competitors).

¹The [MultiLink Syndicator](#)TM is software that with minimal effort, time, and cost enables third party sites to display DOI-embedded content, regardless of format (e. g. images, sound, video, etc.) with cascading MultiLink menus. The DOI enables them to function as "instant affiliates," able to offer e-commerce functions (discovery, navigation, context for decision-making, purchase options, and so on), from within an image or visible link on the third party site.

²For an example of a DOI MultiLinkTM that has this option, go to: <http://dx.doi.org/10.1336/0899304907>

ROI Implications

Assumptions

A typical scenario for content distribution directly via specific partners might involve a provider of specialized business books, magazines, reports, and information services. We'll call it Industry Information Inc. (III). III uses a variety of advertising and direct marketing approaches, including keyword advertising on Google, Yahoo!, and other portals and search engines.

III believes there is also substantial growth potential - for its books, magazines and reports - in developing a range of specialized partners whose sites are frequented professionally by III's target customers - often in a context relevant to III's content. By integrating its digital content with the services and applications of "affinity" partners (e.g., large suppliers within industry verticals; associations; complementary content providers, and so on) III can reach more customers, place its content closer to their workflows, and reinforce both its own brand and that of its partner.

Without DOI implementation, such partnerships with providers of complementary content and/or companies otherwise serving relevant customer channels are created through traditional business development activities, followed by projects, usually quite tech-heavy and time-intensive, designed to integrate the partners' offerings in user-oriented and brand-appropriate ways.

In this scenario, over the course of a year, a single business development executive identifies distribution opportunities involving 20 different content partners. About 7-10 emerge as the most promising; of these, 3 are successfully established and implemented. The annualized resulting revenue yield from these partnerships averages \$40,000 each.

Based on an annualized salary-plus-overhead cost of \$120,000 for the business development executive, and an estimated 50% of his/her time spent specifically on this activity, the cost the three completed business development initiatives totals \$60,000, an average of \$20,000 each. In addition, technical and business costs to implement each of the three resulting content distribution agreements could conservatively average another \$20,000 (\$60,000 in total) for programming, interfaces, metadata management, etc. (e.g., \$10,000 for two in-house programmers each working 10 days, at \$500 per day; and another \$10,000 representing management and staff time involving business meetings, presentations, legal review, etc.). Time-to-market ranges from 2 to 6 months.

With DOI implementation, this company is able to increase dramatically its exposure to target markets through content partners.

- An email blast to target partners results in the inclusion of DOI(s) on 10 sites
- Ten other related sites pro-actively add the company's DOIs using the MultiLink™ Syndicator

We'll assume that average revenue per site is 50% lower based on the involvement of smaller, more specialized sites, even though revenue per site is maximized by the

DOI's e-commerce navigation and cross-selling functionality. Thus, revenue per site is \$20,000 ($\$40,000 \times 50\% = \$20,000$).

ROI model

Table 1 models the assumptions set forth above. In the scenario without the DOI, three incremental affiliate relationships generating an average of \$40,000 result in a total of \$120,000. The combined average cost of business development efforts (\$20,000) and average technical and business implementation costs (\$20,000) totals \$40,000; thus the total cost of revenues for three affiliate relationships is \$120,000. The result is break-even in the first year ($\$120,000 - \$120,000 = 0$), with an outlook for high-margin revenues thereafter.

In the "with DOI" scenario, 20 new affiliates generate an average of \$20,000, for a total of \$400,000. The average cost of business development is calculated based on 10% of the time of a coordinating business development manager ($(\$100,000 \times 10\%) / 20 = \500). Thus, the total cost of developing and implementing 20 affiliate relationships is \$10,000. In addition, a reasonable estimate of the first year cost of implementing the DOI for this collection of book, periodical and report content is \$50,000. This brings the total implementation cost with DOI to \$60,000 ($\$10,000 + \$50,000$). **The first-year net return on syndication via the DOI is therefore \$340,000** (incremental revenue of \$400,000, less \$60,000 total implementation cost).

Table 1: Comparative Returns on Developing Direct Content Partners

Results	Without DOI	With DOI
Content affiliate relationships established (year one)	3	20
Average annual revenue yield per affiliate	\$40,000	\$20,000
Incremental revenues	\$120,000	\$400,000
Average cost of business development efforts	\$20,000	\$500
Total business development cost	\$60,000	\$10,000
Average technical and business implementation cost	\$20,000	
Total implementation cost	\$60,000	\$50,000
Cost of affiliate relationships (Year 1)	\$120,000	\$60,000
Net incremental revenues (Year 1)	\$ --	\$340,000

Source: EPS

Optimizing Aggregator Channels

Online aggregators continue to play an important role, sometimes even the primary role, in information provider business models. Similar models likely will develop in multimedia education and entertainment markets. [DOI multilinking suggests a

variety of interesting product development opportunities for aggregators as well as primary content providers, and these will be examined in the third paper in this series.]

From the *distribution* perspective of a content owner, aggregator channels can represent another way to leverage an already sunk investment in DOI, whether or not the aggregator actively incorporates the DOI into its own product strategy. As long as the aggregator will accept active DOI links in the content they (repackage and) distribute³, the aggregator channel can be optimized in several ways. Content owners can:

- Derive additional usage-based revenue by using MultiLinks to drive usage to their own content provided elsewhere within the same service.
- Generate incremental revenues by providing ancillary services available via MultiLink menus (e.g. article reprints, subscriptions to print editions, and advertiser services such as opportunities to request relevant product information).
- Make the aggregator channel more efficient by hastening time-to-market in comparison to an otherwise extensive and time-consuming setup process.
- Better track the actual results delivered by different aggregator channels – for example, determining the effectiveness of the channel at an early stage by only delivering DOIs (perhaps for contextual placement by the aggregator) rather than immediately establishing a loading process for its own full-text content. (The value of this benefit, which we suspect is very real in many cases, is hard to quantify, and we have not included it in the ROI model set forth below.)

ROI Implications

Assumptions

Industry Information Inc. (III) distributes its book, magazine and report content through a major news & business information aggregator. In addition, it is considering adding its content to a second online aggregator through which it hopes to reach a largely distinct audience with potential to generate an equivalent revenue run rate by the end of the first year of availability on the service.

³Content providers can encourage that acceptance by providing MultiLink options to other content on the aggregator's service. Alternatively, the *aggregator itself* can use available server software to add and control their own desired MultiLinks to the content provider's MultiLink menus, thus linking their customer to other content or services on their own service (e.g., "see similar/related content from other content providers," or "sign up for [the aggregator's] additional package of sources on this topic") and thus also avoiding costs associated with loading content directly into their systems. [This will be addressed further in a forthcoming White Paper on Content Product Development opportunities.]

III's royalties received from the first (current) aggregator, calculated based on actual usage, have leveled off at \$240,000 per year. Given the analysis provided in the first White Paper indicating that the DOI's ability to provide contextual links can raise the average content e-commerce sale by 20%, we have applied the same factor to represent the additional online usage that could be expected from MultiLinks pointing to other relevant materials also available on the same system. We also have assumed a 5% increase in aggregator-derived revenues from contextually-relevant ancillary products and services.

Discussions with the second aggregator have shown that the process of having III's content loaded and integrated with the broader service will require six months elapsed time – for converting its data to the aggregator's internal document format; designing the database (e.g., what fields are searchable, what metadata is included, where are links provided, what will be displayed at different levels of a search); loading and indexing the data; developing database documentation; and developing marketing materials and a market rollout plan. Given that usage revenues likely would increase sharply in the course of the first year, we estimate that the "opportunity cost" associated with a six month delay in market availability would represent about 1/3 of annual royalties.

In the DOI-enabled scenario, III's revenues from its existing aggregator relationship are enhanced by the incremental usage generated by MultiLink options, as well as ancillary services. The second aggregator avoids loading content, and instead includes only III's DOI links and associated keywords in searches. If returned as a search result, the link then can point (reliably) to full-text material stored on III's own system. This provides an immediate revenue stream.

ROI model

Table 2 summarizes the assumptions outlined above. DOI-enabled content loaded by the first aggregator generates an additional \$48,000 in usage-based royalties ($\$240,000 \times 20\% = \$48,000$), and \$12,000 in MultiLink-driven sales of ancillary products and services ($\$240,000 \times 5\% = \$12,000$). The relationship with the second aggregator immediately generates \$80,000 in revenue otherwise forgone during the six-month setup process (i.e., $\$240,000/3$, as described above). There is no additional implementation cost for DOI implementation, since III is able to leverage its existing investment in registering and maintaining DOIs for its book, magazine and report products. Therefore, **potential first-year net return from optimizing the aggregator channels in this scenario totals \$140,000** ($\$48,000 + \$12,000 + \$80,000$) – *an increase of more than 70%*.

Table 2: Optimizing Aggregator Channels

Results	Without DOI	With DOI
Current annual royalty revenues (first aggregator)	\$240,000	\$240,000
DOI-enabled usage increase	--	20%
Incremental royalty revenues	--	\$48,000
Ancillary sales (5% of base revenues)		\$12,000
Avoidance of six-month "opportunity cost" while content not available (second aggregator)	--	\$80,000
DOI implementation costs	-	(leverages previous implementation)
Net incremental revenues (year 1)	--	\$140,000

Source: EPS

Virtual Aggregation

By using inter-company MultiLinking, providers of related, complementary digital (or even hardcopy) content can create "virtual aggregation" offerings without the need for an intermediary third party, and with virtually no incremental technical or implementation costs.

For example, a provider of company information (company "A") could ally with a provider of product information (company "B") to create cross linkages. Such an arrangement would enable a DOI-linked company name on a record from company "A" to generate MultiLink™ pointing to information about the company's products (from company "B"). To see how bi-lateral virtual aggregation might be presented to an online user, go to http://doi.contentdirections.com/snapshots_iii/

Such arrangements can enable two or more content providers to offer their users more complete solutions than would be possible individually – without an intermediary and at far less integration time and cost with the partner. From a *distribution perspective*, they enable a content provider partner using DOIs to act as a complementary and target-customer-focused distribution channel.

Inter-company MultiLinking when both (or all, in multilateral arrangements) use DOIs can be implemented by a registration agency with processes that are almost entirely automated. Other advantages of the DOI in establishing reciprocal linking arrangements include:

- Lower cost of deployment and ongoing link management (and zero cost/effort for technology development and operational setup, or for ongoing monitoring, troubleshooting, support and operations)
- Faster implementation (i.e. shorter time-to-market)
- Greater flexibility in switching quickly to different partners, if a given partnership isn't producing the desired results
- Easier, more standardized, outsourced tracking of cross-provider traffic.

Aggregators may wish to consider whether to observe passively the adoption of such bi- and multi-lateral arrangements among content providers – or use the DOI to leverage their own businesses more strongly. There is also potential first-mover advantage here, as the first content provider(s) or aggregator(s) in any content space to get their MultiLinked content into end users’ regular workflows may be viewed by the users as the “gateway” to related information for that space.

ROI Implications

Assumptions

The same publisher as in the previous scenarios, III, identifies a particularly complementary provider – a reference directory publisher with listings for many of same companies that the vertical player covers in its various information products and services. In subsequent discussions, both players agree that reciprocal linking not only will add value to the answers each is able to provide, but also will open up new, complementary and contextually-sensitive distribution channels for each others’ content. Directory listings from the second provider can include DOIs which display numerous options for additional information from III about a given company; news articles, product reviews, and other descriptive content published by III can in turn include DOIs whose MultiLink menus include direct access to the other provider’s directory listings. For each company (but in this case we are focusing on III), the reciprocal linking partner can drive traffic from new potential subscribers, as well as immediate pay per view revenues.

ROI model

Table 3 presents the potential financial implications of a bi-lateral “virtual aggregation” arrangement between two complementary content providers. For the sake of simplicity, we have assumed that the average revenue per subscriber (\$1,500) and number of subscribers prior to virtual aggregation (5,000) are identical (i.e. perfectly symmetrical).

In this scenario, III is seeking revenue growth for its subscription information services. III is exposed to the subscriber base of the second provider through contextual inclusion in DOIs associated with key terms in that provider’s content. We have assumed that this results in a 5% conversion rate of new subscribers (probably conservative since each provider offers content that is directly related and complementary to the other’s).

Thus another 250 subscribers ($5,000 \times 5\% = 250$) are captured at \$1,500 per year, for total new subscription revenues of \$375,000. In addition, 10% of the second provider’s subscribers (500 subscribers) make “pay-per-view” article purchases enabled by III’s online system. Annual purchases by these 500 subscribers average \$150, generating PPV revenues of \$75,000 – for a total of \$450,000. The first-year cost of implementing DOI for the database records of III’s information services (in addition to the previous implementation for its books, periodicals, and reports) is estimated at \$50,000. Therefore, **net incremental revenue is \$400,000** (\$450,000-\$50,000).

Table 3: Distribution-driven Revenues from “Virtual Aggregation” (Company “A”)

Results	Without DOI	With DOI
Average annual revenue/subscriber	\$1,500	\$1,500
# Subscribers	5,000	5,000
Additional relevant content buyers exposed to “Company A” offerings		5,000
% of exposures leading to new subscribers		5%
Incremental subscriber revenue		\$375,000
% of other newly-exposed subscribers making pay per view purchases		10%
Average annual PPV revenue per purchaser		\$150
Incremental PPV revenue		\$75,000
Total incremental revenue		\$450,000
Cost of DOI implementation		\$50,000
Net incremental revenue		\$400,000

Source: EPS

Superdistribution and “Viral Marketing”

In addition to more formal or purposeful distribution arrangements, the Internet enables the widespread practice of sharing and “pass-along” of digital content in general, and links to specific web content in particular. Further, digital samples (sample book chapters, excerpts from expensive research reports, music clips, movie trailers, etc.) can be made available for free pass-along, with embedded links that drive the user to a purchase option for the full product, whether the full product itself is digital or physical.

Content providers are often reluctant to distribute communications such as marketing materials, email messages, and press releases that contain deep links to specific content, because URLs for specific content below the “home page” level often change. (A 1997 study by Brewster Kahle, founder of Alexa Internet, concluded that the “half life” of a URL was 70 days. That is, half of the links would be expected to have died in 70 days, half the remaining links would be expected to have died in another 70 days, and so on.) When “dead links” are included in branded communications, the resulting user frustration is likely to erode loyalty and brand equity.

Content (and content objects) containing DOI links, however, can be widely distributed and made available for uncontrolled redistribution with confidence that the linkages are always current (assuming that they continue to be managed by the

content owner/provider, using the ability to update all instances of a link with a single change in the DOI registry – a service which, further, is typically provided on a fully-automated basis by the provider's DOI registration agency such as Content Directions.)

Superdistribution is a conscious strategy for marketing digital content (or again, digital samples pointing to physical products) that involves imbuing a content object with its associated rights (such as payment requirements of a user), as well as the rights that a user can pass on to others, and that *they* can pass on to still others, and so on. In this manner, pass-along turns 180 degrees from being a phenomenon that undermines legitimate sales, into a phenomenon that *generates* additional sales. In effect, every user becomes a potential sales channel. Further, these pass-along referrals are unusually highly targeted because they represent referrals from personal friends or colleagues or others sharing the same specific interest.

Superdistribution strategies (such as delivering “free” content with an option to purchase additional material, and the ability to pass that option on to others) are constrained by the need to maintain links to the appropriate content and to centrally maintained rights information that may have changed since the item was first disseminated.

Returns from these methods, enabled by the persistence and flexibility of the DOI, are difficult to quantify only because assumptions could vary so widely as to the audience size and degree of pass-along represented by different audiences and/or different types of content. But given the well-documented magnitude of peer-to-peer pass-along activity on the Internet today, incremental revenue associated with such low-cost, high-potential-reach methods could be significant.

Conclusions

All the scenarios outlined above could be pursued simultaneously by a single content provider. Realistically, the results would not be entirely cumulative, since the markets and applications would probably overlap to some extent. Table 4, which brings together the total revenues from the three quantified scenarios, therefore includes a 20% reduction to reflect this potential effect.

Table 4

Summary of Net New Revenues Implied by DOI Implementation Scenarios

Scenario	Net Incremental Revenue
Syndication to Content Partners	\$340,000
Optimizing Aggregator Channels	\$140,000
Virtual Aggregation	\$400,000
Subtotal	\$880,000
Reduction for potential market overlap	- 20%
Total	\$704,000

After incurring a total initial implementation cost of \$100,000, for its book, magazine, and report content *and* for its information services businesses, III has generated a net first-year return on investment in DOI of \$704,000. **This represents a 7:1 ROI ratio**, before adding the impact of the “viral marketing/superdistribution” benefits described in the last section.

In assessing this outcome, two additional factors should be borne in mind:

- 1) III might well have already implemented the DOI for purposes of improved internal content management, and/or improved content e-commerce effectiveness ([White Paper #1](#)), and/or enhancement of the value of its products (the forthcoming [White Paper #3](#)). In that case, the effects of DOI-enabled improvement of its revenues through third-party distribution channels would have fallen straight to its bottom line.
- 2) The illustrative III company serves a single vertical industry market. If it were one of several vertical market units of a more diversified publisher, the ability to apply distribution leverage across multiple segments could magnify the rate of return on investment suggested in the preceding scenarios. For example, in the “virtual aggregation” scenario, the benefits to *both* sides of the bi-lateral content partnership (rather than just one side) would be accruing to the same publisher. Or for a publisher with both a primary publishing business and an aggregator business, again both parties’ benefits would accrue to the same parent company.

Our objective has been to suggest the scope of economic benefits that can stem from DOI implementation in the context of publishers' digital content distribution strategies, and to provide a framework for more specific analysis of individual situations. Given the hypothetical nature of some of the analyses presented in this paper, any conclusions must be preliminary. DOI adoption (outside its particular use by the scholarly publishers participating in CrossRef) is taking place across a variety of content types, though at this stage few comparable case studies exist. Successful results always will depend upon effective execution of activities that are implicit in the scenarios, and on the particular services offerings of the DOI registration agency that must provide these capabilities.

Our analysis clearly supports the theory of economic benefits associated with employing the DOI in collections of valuable content. We hope that it lays the groundwork for more detailed analyses and case studies as more publishers register and leverage DOIs in the development, marketing, and management of content-based products and services.

About the Author

As Managing Partner of the US affiliate of Electronic Publishing Services Ltd ([EPS](#)), a London-based consultancy providing strategic assistance to publishers and other content providers, **Steve Sieck** advises EPS' global publishing clients in the US and contributes regularly to its ongoing analysis of information markets and industry trends. For over twenty years, at Scient, PwC Management Consulting and IDC/LINK Resources, he has helped content and enabling-technology providers develop new products, enter new markets, make strategic investment decisions and align organizational resources with strategic and financial objectives.

About EPS

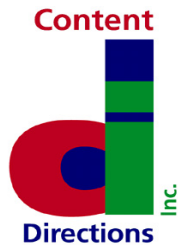
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Contact: EPS-USA LLC

Email: steve@epsLtd.com

Web: www.epsLtd.com

White Paper commissioned by Content Directions, Inc.



To see **who is using DOIs** to enhance their content's discoverability, increase their web site traffic and otherwise support their revenue goals, see:

<http://doi.contentdirections.com>

To see **why** content companies are using it and how it reflects real economic benefits, see the first paper in this series: <http://dx.doi.org/10.1220/eps1>

To read about all the international persistent identifier standards under consideration and the greater value of the DOI, see (purchase or subscription required): http://dx.doi.org/10.1343/EPS_Focus_Report_Doi_in_2004

To read why Esther Dyson, founding chairman of ICANN, which governs the DNS system, believes that the DOI is a more scalable solution than DNS for object-level identification and routing, see the free Release 1.0 excerpt available via the article's DOI: <http://dx.doi.org/10.1340/309registries>

To learn more about **The Benefits of DOI Linking vs. URL Linking**: <http://dx.doi.org/10.1220/edudoc3>

For more information, see Content Directions' Web site at:
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<http://doi.contentdirections.com>

or contact:

Hal Espo, Business Development, Content Directions, Inc.; (917) 533-7375
hespo@contentdirections.com. IID ("Internet ID" or personal DOI):
<http://dx.doi.org/10.1570/hespo>)

David Sidman, CEO, Content Directions, Inc.; (212) 792-1847
dsidman@contentdirections.com. IID ("Internet ID" or personal DOI):
<http://dx.doi.org/10.1570/dsidman>)