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Razorfish creates experiences that build businesses. As one of the largest interactive marketing and technology companies in the world, Razorfish helps its clients build better brands by delivering business results through customer experiences. Razorfish has offices in markets across the United States, Germany, Japan, Spain and the United Kingdom.

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Content needs to be free (like a bird, not like beer)

Digital content no longer needs to be packed into a container to be valuable to an audience

Editors will oversee the care of a living, growing set of nimble content and data.

Structure sets content free!

Develop a portfolio of revenue models

Use content to develop new products and services that provide unique, valuable user experiences.
nimble: 
a razorfish report on publishing in the digital age

by Rachel Lovinger
Introduction

In January of 2010, the Razorfish Media and Entertainment practice, along with research partner Semantic Universe, set out to chart how media and publishing companies are adapting to the demands of the digital content landscape. Who is pushing the envelope and how? What technologies can be applied in new and interesting ways? What lessons can be put to use in your own organization?

To explore these ideas we went straight to the experts, in over 20 interviews with people on the ground at The New York Times, the BBC, the Wall Street Journal, TalkingPointsMemo, CBS Interactive, and Next Issue Media, as well as with semantic technology experts who have been exploring ways that linked data can change content experiences. We also analyzed external studies and reports covering everything from the breakdown of traditional media models to the emerging trends in the media industry, and in consumer behavior.

We learned how digital content thrives today, and the nimble approach that content producers need in order to succeed. “Nimble,” in this case, applies both to a methodology and to the content itself. Here are some of the other key things we learned:

• Simply put, digital content needs to be free – to go where and when people want it most. In particular, content has to be mobile, and it has to be social.

• As a content producer, being nimble is about quick adaptation and preparation for future opportunities.

• “Container limitations” don’t exist with digital media in the same way that a TV program is limited by a timeslot, or a newspaper article is constrained by the available column inches.
• It’s time to question your authority; what you think you know about your brand, your business models, your audience, and how (and where) they’re engaging with your content.

• The more structure you put into content the freer it will become.

• In a “nimble” world, editors will become curators for managing all of your digital content.

• It’s time to explore new revenue models. In many cases, the value of content will lie in being able to provide a desired product or service, not just the content itself.

• New opportunities for advertising will arise, including unique approaches that use the digital content itself.

• Development of content for multiple platforms is a must, and the best performers will rise to the top.

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Gratix vs. Libre

Let’s clarify: Content isn’t free. Not in the gratis (i.e. ‘free beer!’) sense. And it will never be free, because it still costs money to create it. Whether the audience directly purchases the content or it’s supported by advertising, partnerships or funding, the resources for creating and distributing content have to come from somewhere. Even personal blogs and other ‘user-generated’ content require an investment of time, equipment, and resources on the part of the creator.

But libre, liberty, freedom. This is what content needs in order to survive. It must be free to go where and when people want it most.

It must be free to be read or viewed on a wide range of portable and networked devices. It must be free to mix and mingle with services, social networks, apps, and content from other sources. In a highly connected world, content that’s trapped in a silo is basically invisible. And invisible content might as well not exist.

Digital content has the potential to gain this freedom. It’s no longer bound to physical products or fixed timetables. But that’s not enough. Content needs to be flexible. It needs to be easy to find. It needs to be enjoyable for people to use. And yes, we still need to find ways to pay for its production.
To succeed as a digital content producer you need to be Nimble. Many companies will say that they’re nimble, but very few actually are. Being nimble is about the ability to adapt quickly to the new challenges and opportunities in today’s media ecosystem; things like the explosion of new media devices, the world-domination of social networks, and consumers’ growing expectation of first-class digital experiences. And it’s about how prepared you are to face the opportunities coming in 5 or 10 years, the ones that haven’t even been predicted yet.

And being nimble is not just about an organization. It’s about the industry’s business models. It’s about production processes. It’s about the content itself. Content needs to be nimble in order to be free.

Sound easier said than done? That’s why we put together this report on how digital content can become nimble, and what publishers need to do to get working on it right now. Read on.
Escaping the Container

Digital media doesn’t have the same physical constraints as traditional media. This creates the potential for an audience to engage with content where and when they want to, but there’s more to be done to create the experiences people seek.
Digital content is not just another new development in the landscape of media formats. It’s been a tectonic shift. The changes taking place deep beneath the surface can be easily missed without careful attention. Publishers are missing what’s really going on if they’re thinking, “Instead of just publishing a magazine, we now have to publish a magazine and deal with putting its content on the website.”

The aspect of digital content that makes it so fundamentally different, and exponentially more valuable, is deceptively simple: it no longer needs to be packaged into a specific container in order to reach an audience.

But breaking out of the old container doesn’t give content all the freedom it needs, at least not enough to make it truly nimble. Nimble content is more valuable because it provides an audience with unique digital experiences. And nimble content is more valuable to a brand because it’s cheaper and easier to produce, it has a longer shelf life, and publishers can quickly take advantage of new revenue opportunities such as paid content models with value-based pricing and development of new content products and services.

“Limitations are more directed by business models than by capabilities.”

- Jim Stanley, VP of Products, CBS Interactive, Technology and News
Constraints are dead!
Long live constraints!

Nimble content is content freed of traditional media constraints, but crafted in such a way that it still delights, informs, educates, and entertains. When it breaks out of those constraints, it allows people to consume it in new places, without losing the context that makes it meaningful. Wherever the content appears, it should be able to retain a strong association with the publisher’s brand. It should uphold the valuable data and service partnerships created to augment it. In short, it should offer—or at least hint at—as rich and engaging an experience as the creator intended.

With traditional media, containers define content borders. The length of a magazine article is defined by the amount of available space on a page and the number of pages in the magazine. The duration of a TV program is defined by its timeslot. CDs, movies, and newspapers are also limited to the boundaries of their containers. At the same time, if the containers aren’t filled, people will feel cheated.

People don’t have the same limitations or expectations when it comes to digital media. They could happily stream a 3-hour radio program or watch a 3-minute video. They could read a 140-character tweet or download a 620-page PDF. With nearly ubiquitous broadband access, the difference in transmission time (and cost) is negligible.

Constraints still need to exist in order to create the best audience experiences, but they should not be based on limitations set by the size or duration of traditional containers. Content that’s free allows content producers to easily explore new formats for telling stories and sharing information online that wouldn’t necessarily make sense in traditional media—short form video, microposts, limited series podcasts, etc. More importantly, content that’s free doesn’t live in isolation. It can participate in the vast ecosystem of media experiences, enhanced by an active community keen to keep great content moving through this system. But to run free, content has to be nimble.
Question Your Authority

Before nimble content can be created, publishers attempting to navigate the digital media ecosystem should pause to answer the following questions:

• What is the unique business value of the brand?
• What role will the editor play?
• How valuable is the content?
• Where does content reside and how does it get there?
• Where does a brand find its audience?

These questions may already be keeping some publishers up at night. Others may think they already have the answers. We challenge them to think again.
“Technologies always come along and challenge who and what we think we are, and the value of what ‘experts’ do for us.”

– Tony Ageh, Controller of Archive Development, BBC
What is the unique business value of the brand?

A publisher’s business is not a newspaper, a magazine, or a TV network. It’s not tied to a particular format or flavor of media. The business is a brand, and it has an audience. The brand has a voice, a reputation, and a set of values that its audience relates to. In order for that business to grow and evolve, it’s imperative to understand what the brand means to people and how to extend that relationship in meaningful ways without leaving the core audience behind. This is not a situation that’s unique to the onset of digital media, but it could very well be the reason why digital efforts flounder. The ability to understand the true value of a brand, as well as the desires and expectations of its audience, will dictate how effectively opportunities can be seized.

What role will the editor play?

Editors and producers have always had the responsibility of guiding a story (whether it be print, audio, or video) and making sure all the pieces are there to fully and properly communicate a message. With traditional media the content had to be perfect at deadline because once the work was sent to print or broadcast over the airwaves, it was finished. Editors couldn’t go back and revise it. For better or worse, it was out there in the world. It was the editor’s job to ensure nothing was released without being thoroughly checked and double checked for embarrassing errors or omissions.

With digital content, if an article is published with typos or errors, it can easily be fixed. If an app is released with bugs, an update can be issued. If a photo needs to be replaced, a forgotten credit added, or a new version of a video or podcast released, it’s easily corrected. No one wants to release flawed material, especially because the incomplete or erroneous version may still be out there, but the opportunity to put a better version out there is readily available.

At the same time, there are a lot more things an editor has to mind and wrangle: partnerships, user comments, dynamic content, integrated services, and even user contributions. How does a smaller editorial staff effectively monitor all these inputs while creating more content, in more versions, often with a smaller staff?
How valuable is the content? To whom? Does all content have the same value?

Clearly digital content continues to challenge the traditional media model, which has primarily been supported by direct sale of products or by advertising revenue. It gets even more complicated when people have come to expect content online to be free and balk at the idea of paying for it. Advertisers have told us that, because the audience is so fragmented, they can no longer reach their audience through traditional media, no matter how much they’re willing to spend. So, they’re increasingly allocating budgets to online paid, owned, and earned media, but not yet at the same rates that they’re cutting spend in traditional media. It’s a question of value for the advertiser and the consumer. How valuable is the content, and how does a publisher provide a content experience worth paying for? Is it all or nothing? And are there entirely new markets that need to be explored?

Where does content reside and how does it get there?

Digital content will still require some kind of container to reside in, or more likely, an untold number of containers. Editors may pay a lot of attention to how the pages on their own site are designed, but not necessarily how content will be experienced in a variety of other places online. This includes social networking services, content portals, RSS readers, syndication partners, and content aggregators of all kinds. A good portion of the audience is seeing content outside the original context it was designed in.

Managing the brand experience across these rapidly proliferating devices – tablets, personal media devices, and networked or portable game consoles – is incredibly inefficient. Each content element (content type, length, format, brand logo placement, etc.) has to be manually negotiated and agreed to, and yet there’s little guarantee that someone’s experience with the content across devices is as it was intended.

How can content be nimble if it’s embedded with design elements that make it beautiful in one location and sub-par for all other channels and platforms? How do you make sure that it retains the information that will make it meaningful and useful in each place it appears, such as branding, usage rights, shelf life, relative importance, contextual instructions, etc.?
Where does a brand find its audience?

Once content appears in all those places, and on all those devices, it’s still a challenge to get it in front of as many eyes and ears as possible and keep them coming back for more. This is getting increasingly difficult. It’s not just a question of standing out in a crowd. There’s so much noise that it’s difficult for content to be found in the first place.

As the consumer tries to navigate the vast landscape of content, she will employ a variety of means to pinpoint the content that’s most interesting to her. She relies on trusted editorial sources, editorial aggregators, community aggregators, personal filters, and social recommendations. She struggles to keep up with all of the information streams and still worries that she may be missing something.

What can content producers do to help the audience find content in all this mess? How does a brand connect with its ideal audience? And once they engage, how does the brand form an enduring relationship with the audience?
Structure Sets Content Free
Ironically, it’s more structure that makes content nimble and sets it free. Not the kind of blind structure that defines the layout of a web page, but tags that express the meaning and function of each individual element in a content item. This section describes the types of structure that can help.
“You can’t afford to [create] a piece of content for any one platform. Instead of crafting a website, you have to put more effort into crafting the description of an asset and the different bits of an asset, so they can be reused more effectively, so they can deliver more value.”

– Nic Newman, Future Media & Technology Controller, Journalism and Digital Distribution, BBC
Structure and definition allow content to be atomized. They allow the elements to be isolated and identified so that the content item can be broken down and recombined in countless variations that are free to fly to all corners of the web, across any number of devices, without losing its ability to entertain, inform, or educate. Structure allows content to be reliably interpreted by automated systems, as well as people, so that dynamic relationships can be established with little or no effort from developers and content producers. One item of content can have many lives, can remain relevant in different forms and different lengths, can be tied to other content to create richer connections, and can have the appropriate value ascribed to it – free for a tweet, one value for a chart, another for the entire piece, and yet another for the video.

**Structured Data**

When elements of content and data are well defined in a content management system, they can be marked up with tags that provide more meaning than HTML. Instead of “dumb” tags like `<h2>`, that just define the way the information should be displayed, these tags give meaning and importance to the information contained within. It may indicate an address, a time, or a person’s name. It could be more valuable content such as a film, restaurant, or book review. It might even deconstruct a long-form political scandal into segments for different services – the tweet tease, the short form for mobile phones, the slide show for a tablet device, and so on.
Structure removes the guess work for the receiving systems and helps them interpret not only what he information is and what it means but also gives clues about how it should be used in different environments. Some structured data is expressed online using ad hoc markup (e.g., microformats). In these cases, other systems can only understand the information if they’re told in advance what that markup means. But new standards are being established, such as Dublin Core and FOAF (Friend of a Friend), that have pre-defined tags that anyone can use and interpret the same way.

**Unique IDs**

In order to avoid ambiguity, each person, place, thing, or concept a publication discusses should have a unique way to be identified. Unique identifiers help systems distinguish content about Chevy Chase, the actor, from content about Chevy Chase, the town in Maryland. Unique IDs can also be helpful for determining that Bill Clinton and William Jefferson Clinton are two names for the same person. It’s the Internet’s version of an ISBN number for every single thing or concept. Publishers can create their own IDs or use third party IDs, like the data that AllMusic licenses to its partners. With unique IDs in place, search results are more accurate, and it’s easier to create related links to external content sources that can increase the value of the content.

**One Page per Concept**

A website can be made into a powerful tool and reference point if an individual page is created for every unique and important concept, using the unique URL as the ID for each concept. These pages don’t necessarily have to be part of the featured content of the site, but they could be. Many sites have already started incorporating “topic pages” for their high SEO value, and to gather all the content a person may be looking for in one place. In addition to site content, these pages should also contain related, structured data that is readable by automated systems. This helps to unambiguously identify the concept that each page is about. If possible, include IDs for that same concept from other openly available datasets. For example, the IMDb database is a good point of reference for information about movies, actors, directors, and other people involved in the creation of movies. If a system accesses a BBC artist page for Stephen Fry but doesn’t know the BBC ID for the actor/comedian, it may recognize his IMDb ID, which is also included on the page.
Linked Data

In fact, that last point represents the philosophy behind the Linked Data movement, whose goal is to create a web of connections between equivalent concepts by making useful data available on the web. As a result, it’s not necessary to know everyone’s IDs for something. If, for example, a system understands the IDs in the GeoNames data set, then that can be used to understand the location IDs contained in U.S. Census Data. The known IDs become a tool for translating any set of IDs that aren’t already known. Public data sets can be used as points of reference, or data from a variety of third-parties can be used as the starting point.

Beyond Layout

Currently, digital content is tagged with information about how it should be displayed (HTML) and what it’s about (metadata). Some well-established markup approaches allow content to be separated from display and used in different ways (XML, RSS), but these don’t go far enough. We need additional tagging systems to allow us to fully express things like usage, trust, versioning, entitlements, and value. For greatest efficiency, we should be able to take a single collected piece of content and easily mark which parts go on the website, which get fed to the mobile app, what part gets extracted as a tweet, which bits are sent to a Facebook page, and any other uses that are identified. We should also be able to designate the value of content in different scenarios: which parts are free for everyone, which parts are premium, which are available only to mobile subscribers, and definition around access for different content partners.

APIs for content, data, and function

Once the content is structured and well-tagged, it makes it easier to create and use APIs. An API (Application Programming Interface) is a data feed or other software that allows software to easily interact with partner content, data, and services. Publishers can create feeds of their own data or content, or they can use partner APIs to bring in useful services – for example, embedding a service that allows users to make a reservation directly on restaurant reviews. The content should contain meaningful metadata in order to automatically create rich, immersive experiences. Using industry standards for that metadata will help make sure that content is more easily understood by partners and therefore more useful to the audience.
Imagine a Nimble World

Tools and standards are needed to add structure, meaning, and detailed usage instructions to content; to link it to rich data; and to create APIs that enable sharing with partners and audiences. Many of these kinds of tools already exist. Unfortunately, they’re often missed because they’re grouped under the broad and seemingly intimidating heading “semantic technologies.” Let’s lift the curtain of mystery, take another look at those gnawing questions from earlier, consider what should be done to address each one, and discuss the kinds of tools that are available to help.
Sure, the web is always open, and nothing is ever “final.” The 24/7 news cycle isn’t going away, so embrace it and make it part of an iterative production process. Editors and producers will become story managers. They’ll oversee the care of a living, growing set of nimble content and data. They must watch for new developments, decide what should and shouldn’t be included as an update, and perhaps choose sources from partner content feeds and community responses.
The editors of *TalkingPointsMemo*, for example, have a very interactive publishing process. They start a story with a small seed of information. As the story develops, and as they receive insights and updates from an audience of citizen journalists, they add to it. This allows news to get out faster, since they don’t have to wait until all the details of a story have come to light before starting to report it. As soon as they recognize that a topic or event is newsworthy, they begin coverage.
“At the end of the day, I don’t think the user really cares about where this content lives. They want useful information.”

- Jim Stanley, VP of Products, CBS Interactive, Technology and News
Google Labs recently did an experiment called Living Stories where, in partnership with The New York Times and the Washington Post, it tried to show how ongoing news stories could be presented online, giving them more context and better representing the development of an issue over time. The Living Stories experiment is closed for now, but there are indications that the Labs may make these tools available for other content publishers sometime in the near future.

Curation like this also potentially extends the life and value of older content, because it brings relevant content into a new context and makes it available to a new set of people. For example, right before Apple revealed the details of the iPad, there was renewed interest in a 16-year-old article from The New York Times Archive. It turned out that a tech blog called Gizmodo had pointed to a review of the Apple Newton from 1993. Blogs have long understood the value of pulling older content (and other people’s content) into a new context to shed new light on a current situation. Content producers with a deep archive should be learning to do this with their own content as well.

**Related Content Services.** These services identify the key concepts on a page and help an editor or producer quickly find additional assets to augment the content. Videos, images, user-generated reviews, tweets, Wikipedia entries, or other related content can be added to create rich pages without manually searching for each item.

**Advanced Media Monitoring.** Track Twitter, social networks, blogs, and discussion boards, as well as other content sites, to see what people are saying about a topic of interest. Perhaps most familiar to marketing departments, these tools can be used by content producers to track ongoing stories and audience reaction to them.

At the end of this report, in the Appendix, you’ll find a summary of the capabilities described in this section, plus a list of related tools and services.
Develop a portfolio of revenue models

Companies are reevaluating existing approaches to monetization and figuring out how to diversify instead of putting all their expectations on one revenue stream. What are the unique opportunities available for digital content? Let’s start with the big ones, Paid Content and Advertising.

**Paid Content: Content as a Service**

Not surprisingly, there’s a strong revival of industry interest in exploring paid content models for digital content. In the past, this approach has met with varying levels of success. As of the end of February, Apple’s iTunes has sold 10 billion songs, but getting people to pay for text-based content on the web has been a tougher sell. The perception is that it’s because there’s so much information available online for free that people will just move on to the next source rather than pay for it.

But there are exceptions. Take a look at the companies that are doing it right and understand why it’s working for them. At a basic level, it’s because those brands provide a unique combination of valuable content and valuable experience – something that the customer wants and can’t get anywhere else.

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Martyn Williams, IDG News Service

Apple’s iTunes Store Serves up 10 Billionth Song

http://www.pcworld.com/businesscenter/article/190187/apples_itunes_store_serves_up_10_billionth_song.html
This unique value could come primarily from the specialized nature and high quality of the content, as with the *Wall Street Journal*, whose customers are willing to pay to subscribe to the *Journal*'s website content, newsletters, and other digital products, even if they already subscribe to a print edition. But let's be honest – few companies are going to be able to reproduce the value proposition of the *Wall Street Journal*. Even if some of them had the ability to do so, the market would quickly become saturated.

More likely, an organization can provide value by creating a unique service, like Netflix. The DVD rental site charges a flat rate, provides a vast selection not available to many people in local video stores, keeps track of the movies a customer would like to watch in the future, lets her share ratings and recommendations with friends, and in addition to delivering DVD rentals right to her door, allows her to stream many selections immediately to her laptop or TV.

One could argue that even with traditional sales-based media, people are not paying for the content itself, but rather for the distribution. They pay to have the newspaper or magazine delivered, they pay for a seat at the movie theater, or for the cable signal that pipes TV programming into their living rooms. Is it any wonder, then, that they're hesitant to pay for digital content that can be losslessly reproduced and instantaneously delivered on a computer?

Content producers must use content to develop new products and services that provide unique, valuable user experiences. Those who do will also find new audiences for paid content, even if they continue to provide a core product for free.
For example, Major League Baseball has a free app which provides scores, news, and schedules. But it also has an app available for annual purchase which allows access to live streaming audio, video clips, and Gameday (pitch-by-pitch coverage). When combined with a subscription to MLB.TV, the app allows fans to stream live video of games (and even Spring Training) to the phone.

Next Issue Media, a coalition of magazine publishers, is taking it a step further and developing its own platform for distributing digital magazine content. Instead of allowing platforms like iTunes and Amazon.com to control the means of distribution (and the resulting revenue), the creators of the content are gathering to set their own standards for the market. In order to foment this level of coordination, they need to push the boundaries of current content publishing systems and formats.

**Capabilities that can help**

**Semantic Publishing Tools.** Content management tools that incorporate a wide range of structure and metadata capabilities will allow producers to create content that is more flexible, and encoded with meaningful metadata and semantic markup, without needing to understand all the underlying code. Content with “baked-in” semantic markup makes it faster, easier, and cheaper to bring new content products to market.
Advertising: Rich, Relevant, Targeted

An advertiser’s willingness to pay premium rates is based on the knowledge that its ads will get in front of a certain number of eyeballs, preferably belonging to the demographic segments that would be most interested in its products. As audiences’ attention becomes more fractured, advertisers are less willing to pay the same premiums.

In the world of digital content, we can tell a lot more about how ads are performing – not just how many page views, but also how many clicks, and, increasingly, details about the people who are clicking. This is both a benefit and a drawback. Advertisers can get a lot more feedback about the effectiveness of their display ads, but they also need to justify media spend.

We need innovative approaches to advertising that are tailored specifically to the opportunities offered by digital content. The media industry needs to show advertisers how they can collaborate to create ads that are more engaging, relevant, and ultimately more effective. Partnerships between publishers and advertisers will yield greater benefits for both parties, as well as for the audience.

Take, for example, a recent Mad Men campaign that appeared on NYTimes.com. The rich media ad, paid for by AMC, contained content about the show (trailers, character profiles, etc.) and included articles from The New York Times Archive. The Times previously covered the show from a wide variety of perspectives, from the Culture desk to the Business desk to the Styles section. Utilizing its trove of original content, The Times was able to partner with AMC to create a more engaging advertisement that would appeal to precisely the target audience for the campaign.

Semantic Ad Targeting. Create highly desirable ad inventory by analyzing each page, identifying its message, context, or mood, and inserting relevant ads. Advertisements are closely aligned with users’ demographics and intentions, creating more relevant matches than previous approaches to contextual ad serving, which alleviates the privacy concerns associated with behavioral ad targeting. Semantics are also used to protect brands from unfortunate placement of ads based only on matched terms.

In addition, any of the tools that help make content more flexible and give it rich metadata will make content nimble, making it easier to collaborate on content-rich advertising opportunities.
Neither of the previous approaches is likely to completely replace the revenue losses from traditional media. But there are a variety of other opportunities that arise from the digital media landscape, and content publishers need to start taking advantage of some of these opportunities. Here are some additional sources of revenue publishers should consider.

**Partnering on Product Development.** In the Paid Content section we mentioned selling content products and services, instead of just selling the digital content itself. If products can’t be developed in house, partner with developers who need a regular stream of high quality content to make their products useful and keep them up to date. There are two potential revenue models for this kind of partnership: Licensing and Marketplace.

**Licensing Model.** Provide branded or custom content to portals, non-content companies, or other partners who use the content in their own products, in exchange for a fee.

**Marketplace Model.** Make content or data available to developers. In return, receive a portion of the revenue from products they develop.

**Affiliate Partnership.** Incorporate affiliate links to related services with the content. Partners can pay upfront for the placement of these links or share the revenue they receive from traffic sent from the site.

**Value-Add Approach.** Offer free content that drives sales of paid services, products, or devices by making them more useful and appealing to an audience.

Some of these models have been around for a while but deserve a second look. The key is being able to quickly and easily adapt content if you suddenly find a partner interested in one of these options. If your organization produces excellent travel articles, a developer may approach you with an offer to license those articles for a new tourism app. If the articles are too deeply tied to the layouts of the site, or don’t contain the proper location metadata to be accurately matched up with the app, the developer has two choices: they can wait for the content to be updated, or move on to the next provider. If you decide not to do it because the time and expense is greater than the revenue, it means you still won’t be ready when another travel service approaches you with an offer to incorporate affiliate links into your articles.

**Rich Data Services.** APIs or widgets provide access to linked data and shared vocabularies. Linking to databases that are used or understood by partners makes it faster, easier, and cheaper to integrate their services with content, or vice versa.
“What [linked data] will let you do on the back end is pretty revolutionary. It lets you answer questions, not that you couldn’t answer before, but [for which] it would have been way too hard to collect, sanitize and curate the data.”


Reduce Costs: Do More with Less
Cutting costs by eliminating staff is a short-term solution. Companies will only be able to grow if their production processes become more efficient. If the staff is gathering and prepping the same assets for online, mobile, and print, time and money is being wasted. Whenever there are resources used in multiple places, follow the principle “produce once, use multiple times.” Do as much of the research and asset-gathering as possible with a consolidated team of producers. This will not only make the work process more efficient, it will also help ensure content has a consistent voice and quality from one format to another. In addition, tools that help automate parts of the process—such as systems which automatically suggest keywords—can reduce a lot of time spent on repetitive tasks. Tools that help make production processes more efficient will become invaluable as media production companies find themselves producing more content, in more formats, with a smaller staff. And some content features that would take large numbers of people a substantial amount of time to accomplish can be accomplished in a matter of seconds by machines using rich metadata.

For example, having recently begun tagging the historic New York Times Index in semantic form, the R&D team put together a demo called “Alumni in the News.” Enter the name of a school and it pulls up the latest articles from The Times about everyone who went to that school, regardless of whether that information is mentioned in the article.
It’s possible to achieve the same effect by having a team of researchers look up all the famous people who went to Harvard, and then search *The Times* for each of their names. But that could take hours, and the demo is able to do it in moments.

**<CAPABILITIES THAT CAN HELP>**

**Machine-Assisted Tagging.** Manually tagging large amounts of existing content is arduous and time-consuming. Luckily, some semantic tools are able to streamline the process by extracting concepts on a page and assigning a set of consistent tags to each piece of content. The tags can be used to find and manipulate content based on topic and other attributes, allowing editors and producers to more easily become curators.

Plus, many of the others already mentioned will allow publishers to do more with less, more efficiently:

**Related Content Services.** Related content can be added to create rich pages without manually searching for each item.

**Rich Data Services.** Linking to sets of data that make it faster, easier, and cheaper to integrate services with content.

**Semantic Publishing Tools.** Combine many other capabilities to further streamline the publishing process.
This doesn’t necessarily mean that all publishers are going to create distribution platforms, like iTunes or perhaps Next Issue Media. But as a single brand, or even as a single title, a publisher has to be prepared for all the places where content may appear. This includes all the online channels and all the devices where people are consuming content.

Most online channels are fairly compatible, but it’s still necessary to look at them and make sure that the content is lining up correctly. Not just to make sure that the headline fits in the allotted space, but to make sure that valuable metadata has been carried through. This will be instrumental for giving content proper context when it appears offsite.

Serving content to different devices is another matter. While the technical issues of reformatting content for each platform may be relatively easy to solve, the workflow issues can quickly add a lot of overhead to content production processes and expenses. Plus, devices vary widely in amount of screen space and modes of interaction. People can’t perform the same actions with a remote control as they would with a keyboard or a game controller.

Appropriate content products must be developed for each platform. Consider the unique modes of interaction and the optimal types of experiences for each one. For the past few years companies have been scrambling to reformat websites and develop content and apps for the iPhone. Many stragglers still aren’t there yet.
Soon the vanguards will be developing content products for the iPad and networked TV. The companies that are first to release products with a fantastic user experience will seize the market and set the bar for others. And next year? Maybe we’ll all be rushing to create content for gestural/spatial operating environments like Project Natal, or g-speak, created by Oblong Industries. And maybe in 2016 we’ll be developing new content modules for personal home holodecks.

And sooner or later, these devices will be designed to communicate with each other, as well as be seamlessly integrated with social tools. Imagine this scenario: a consumer buys a movie on her laptop. She sends it over to her TV, where it triggers relevant interactions on her social network.

Then she switches to her tablet so she can continue watching the movie on the go. Not only does the content need to work on each of these systems, but some of them will require metadata indicating what the content is and what it’s about.

Ideally, when transitioning from one device to another, each device should know where she left off, who she was talking to about it, and any other ways she was interacting with the content on the previous device. Not only will the devices need to speak a common language, but the content will need to include rich metadata that they can understand.

How do publishers prepare for that? How do they reduce development time for current and next generation devices? How do they anticipate the needs of platforms that don’t even exist yet? How do they make everything seamlessly work together?
Once again, content needs to be nimble. Push as much of the production work upstream as possible. Even when creating separate content in text, audio, and video formats, the responsibility for research, tagging, and other “input” tasks should be consolidated upfront, while the specialized output for each type of content is handled by different people or tools.

Content should be created and stored independent of design elements so that the presentation can vary as needed from one platform to the next. At the same time, the content must contain markup that will guide each device or channel on how it should be used. As the variety of delivery platforms expands, the pain of not using this approach will grow dramatically. If production costs are a drain now, they’re only going to get worse when the staff is cropping and optimizing the same set of images over and over for delivery on 14 different devices.

**Semantic Publishing Tools.** Once again, the process efficiencies created by using these tools will be invaluable. And the structure and meaning they add to the content will make creating content variations, and developing new products, faster, easier, and cheaper.

**Rich Data Services.** These will also be very useful for facilitating compatibility and communication between different platforms and devices. As standard vocabularies emerge they will be captured and shared in these data services. By plugging in to these translation services, the burden of making sure that the data adheres to a common language shifts from the content creators to the developers of each new platform.
In order for people to connect with content it needs to be discoverable and compatible with as many channels as possible. More and more, people are experiencing content outside the environment it was designed for. Here are some of the ways the audience will connect with content, filtered through search, other platforms, and the community.

**SEO Goes into Overdrive**

If you get the feeling that web search doesn’t work as well as it used to, it’s because of all the noise: link farms, keyword stuffing, and other questionable practices designed to game the system. Sites that are not employing SEO best practices are already falling behind the gamers. Search engines are continuously trying to improve the accuracy of results, but like speed traps and radar detectors, search algorithms and search spammers will keep trying to outsmart each other.

Give content an edge by making better use of the existing data and structure. Yahoo, Google, and Bing have all begun using rich metadata embedded in pages to apply formatting for specific kinds of content and display useful information right in the results. For example, results for a restaurant may include user ratings, price information, address, and phone number from Yelp.com.

Too few content publishers are participating in these efforts. Major content providers should be partnering with developers at these search companies to help find ways to make sure that audiences are getting the most relevant results possible.

**Semantic SEO.** While many of the other capabilities will naturally aid with SEO, semantic SEO tools specifically let producers add markup to content, which helps search engines read and understand each page. This can boost search rankings, make pages more accessible for visually impaired users, and display additional business data, content, or product information directly in search results.
“The old portal model has given way to a social model, and you have to have your content threaded into that.”


**Structured Serendipity: Me + Friends + Community + Editors**

Most people who use the web regularly are starting to feel overwhelmed by its vast amount of information. They want control over the content that comes across their screens, but they also don’t want to miss out on interesting finds.

What consumers need is a smarter filtering system. They need to be able to indicate the sources and topics they care about, while taking in content recommended by friends, like-minded communities, and trusted editors or content curators. We have tools that account for one or two of these factors, but none that use all of them to create a robust filtering system that still allows for discovery of content.

And though people may wish the filters were more accurate, most of them will not take the time to manually change settings within a profile. Especially not if they have to do it for each content provider they frequent. And yet tools that automatically detect people’s interests from their online behavior raise some very uncomfortable privacy issues. The ones that succeed will make suggestions based on activity, but let people validate settings in the course of their regular content consumption, as a seamless part of the experience. They will also allow users to adjust the filters to be focused or fuzzy, for those times when they want to broaden their chances of discovering something new.

For publishers, this means that content has to be discoverable and understandable by these automated systems. Is it enough to clearly identify what topics a piece of content covers? What if people want to filter by positive or negative sentiment, by political leanings, by local interest, or by reputation of the author? What are all the factors that might guide filtering decisions? If content can’t be identified in this arena, it will not be found by the intended audience.
Machine-Assisted Tagging. Having a content management system that suggests appropriate topical tags is a great start. If it can also apply sentiment analysis and information about the expertise and experience of the writing staff, that creates even more of an advantage. Some things may still need to be determined by a human editor, but most systems will learn over time and become more and more accurate.

Rich Data Services. These can also be applied to integrate content better with the other services the audience is using, which may provide helpful cues about “relatedness.”

Social Influence: Audience as Ambassadors

Social networks already play a huge part in how people discover both online and offline content. Search engines are more suited for targeted search than for discovery and browsing. At the same time, people are spending increasing amounts of time on social sites – up by 82% from December 2008 to December 2009, according to Nielsen. That’s a lot of time spent looking at content recommended by friends, family, colleagues, extended community members, and industry thought leaders.

If content is not easily sharable and identifiable via social networking tools, it will likely miss a large portion of its potential audience. It’s not sufficient to just put “share” buttons on articles. Pages should be properly structured, marked up, and tagged so that when that link shows up on Facebook it includes meaningful copy and imagery instead of just a vague headline, a generic description, and a logo. The reader did her part by sharing the link; it’s up to publishers to make their content enticing enough to draw people in.

Semantic Publishing Tools. Tools that combine many of the previously listed capabilities will allow producers to easily add the necessary markup and metadata to make sharing and social integration easy and useful.
This is a moment of great challenge and great opportunity for digital content publishers. The key to successfully evolving in this new content ecosystem is to recognize that no one is tied to the containers of traditional media products. Rather, successful publishers are brands that know how to understand and harness the relationship with their audience and develop new, engaging products for them.

Increasingly, this requires giving the audience access to content in a wide range of formats, platforms, and experiences that suit them. Instead of trying to micro-control each mode of distribution, content publishers need to focus on creating nimble content.

Powerful tools to do this are starting to emerge. They’re underutilized and often not well understood, but they have the potential to solve some of these problems. The challenge for publishers is to make sure that they’re investing in the ones that best align with their business strategies. Our challenge is to weave them together in a way that can benefit the entire industry.
Appendix
These tools and services can reduce the cost of creating content while increasing its value. By adding structure and meaning to the content, it becomes nimble. This flexibility makes it easier, faster, and cheaper to develop new applications, new partnerships, new formats, and new content products as the ideas arise. The key capabilities described throughout this report are:

**Concept Extraction.** Natural language processing is applied to structured and unstructured text in order to recognize any people, places, and concepts mentioned. Once they’re isolated, these concepts can be used to drive many other semantic services, including the capabilities listed below.

**Related Content Services.** Enhance existing pages by identifying their key concepts and placing additional assets and information on the page or linking to relevant offsite content. Automatically inserting or suggesting video, images, user-generated reviews, tweets, and Wikipedia entries allows producers to create rich pages without spending a lot of time manually searching for related assets.

**Advanced Media Monitoring.** Track Twitter, social networks, blogs, and discussion boards, as well as other content sites, to discover what people are saying about a given brand, industry, domain, or topic of interest. With semantic capabilities, these tools can more accurately interpret relevance and even perform sentiment analysis on the things that people are saying. Perhaps most familiar to marketing departments, these tools can be used by content producers to track ongoing stories and audience reaction to them.

**Semantic Publishing Tools.** Content management tools that incorporate a wide range of structure and metadata capabilities will allow producers to create content that is more flexible and encoded with meaningful metadata and semantic markup, without needing to understand all the underlying code. Creating content with “baked-in” semantic markup allows for further streamlining of the publishing process and makes it faster, easier, and cheaper to bring new content products to market.

**Semantic Ad Targeting.** Semantic ad targeting involves analyzing each page, identifying its message, context, or mood, and inserting relevant ads. This creates highly desirable ad inventory, since advertisers can ensure that their offers are closely aligned with users’ demographics and intentions. Semantic ad targeting creates more relevant matches than previous approaches to contextual ad serving. It can be coupled with behavioral ad targeting or serve as a replacement for it when people opt out due to privacy concerns. Semantics are also used to protect brands from unfortunate placement of ads based only on matched terms.

**Rich Data Services.** Producers can enhance their own content by using APIs or widgets that provide access to linked data and shared vocabularies. Linking to databases allows producers to import additional information, assets, services, and user-generated content into their own pages, improve SEO, and obtain additional data and content for application development. With the growing Linked Open Data cloud, producers can use links to one data set to easily map to other data sets in the network.

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Machine-Assisted Tagging. Manually tagging large amounts of existing content is arduous and time-consuming. Luckily, some semantic tools are able to streamline the process by extracting concepts on a page and assigning a set of consistent tags to each piece of content. The tags can be used to generate and populate topic pages, provide recommendations to users, and make relevant information easier to find.

Semantic SEO. While many facets of semantic technology can aid with SEO, semantic SEO tools specifically let producers add semantic markup to their content, which helps search engines read and understand each page. Some tools can help validate this markup, while others can automatically generate marked-up versions of a page and submit it to search engines, with no need for extra coding on the publisher’s part. Semantic SEO markup can boost search rankings, make pages more accessible for visually impaired users, and display additional business data, content, or product information directly in search results.

Additional Reading

The original article about the Semantic Web:

An interesting discussion of Unique IDs by Tom Coates, who worked on the BBC Programme Information Pages project:

Linked Data
• http://linkeddata.org/

Dublin Core – an initiative to develop interoperable metadata standards:
• http://www.dublincore.org/

FOAF (Friend of a Friend) – a metadata standard for describing people and the rich relationships between them:
• http://www.foaf-project.org/
Here is a sample of currently available tools that have these capabilities. Razorfish does not have partnerships with these companies, and has not evaluated all of their tools.

**Related Content Services**

**Apture** Provides additional contextual information in multimedia pop-ups drawn from places such as Wikipedia, YouTube, and Flickr.

**Evri** Allows readers to browse articles, images, and videos related to the topic of an article or content element and provides widgets for sidebars, posts, and popovers.

**Headup** Provides contextually relevant material from social networks and web services.

**NewsCred** Augments content with related stories from 6000 top news sources, as well as topic pages and license-free photos.

**Zemanta** Suggests related content and pictures that editors can embed in articles or blog posts.

**Advanced Media Monitoring**

**Imooty** Tracks keywords and mentions of a brand using a simple dashboard or by creating alerts, widgets, or RSS feeds.

**Inbenta** Follow the topics that people in your business are following.

**Lexalytics** Scans what’s being said in blogs, tweets, and social media to provide sentiment analysis about companies, topics, and current events.

**Tattler** Mines news, websites, blogs, multimedia sites, and social media to find mentions of topics or issues of interest to you.

**Semantic Publishing Tools**

**OpenPublish** A version of Drupal with OpenCalais machine-assisted tagging and RDFa formatting built in.

**Jiglu Insight** Finds hidden relationships to other content you’ve published and automatically creates links.
Semantic Ad Targeting

**ad pepper**
Provides ad placement, lead generation, and brand protection through semantic analysis of page content and user behavior.

**Peer39**
Understands the meaning and sentiment of web pages so that ads can be targeted to appropriate audiences, and also protects advertisers from having their campaigns placed on negative or objectionable content. Identifies hot topics on the fly, and quickly adapts to create new “premium” inventory.

**Proximic**
Performs real-time content analysis to accurately target ads, builds user profiles for better audience targeting, and includes brand protection measures.

Rich Data Services

**Factual**
An open data platform providing tools to enable anyone to contribute and use sources of structured data.

**Freebase**
An open, semantically enhanced database of information, similar to Wikipedia, but with structured data on millions of topics in dozens of domains.

**iGlue**
A community editable database containing images, video, individuals, institutions, and geographic locations.

Machine-Assisted Tagging

**OpenCalais**
Automatically tags people, places, companies, facts, and events found in the content.

**TextWise**
Generates weighted, relevant metadata based on key concepts found in the text of a document or web page.

Semantic SEO

**Google Rich Snippets Testing Tool**
Tests webpage markup to ensure that Google’s Rich Snippets feature can interpret it correctly.

**Inbenta**
Assists in the creation of content using the terminology of popular search queries.

**Semantify** *(by Dapper)*
Provides automated semantic enhancement of a site without changing its pages. Search engines see the site with RDFa tagging embedded in the page.
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This report would not exist without the help of all those who took time out of their very busy work lives to speak with us, including the supportive group of Razorfish media and publishing aficionados. Many thanks to all who contributed.

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Razorfish creates experiences that build businesses. As one of the largest interactive marketing and technology companies in the world, Razorfish helps its clients build better brands by delivering business results through customer experiences. Razorfish combines the best thought leadership of the consulting world with the leading capabilities of the marketing services industry to support our clients’ business needs, such as launching new products, repositioning a brand or participating in the social world. With a demonstrated commitment to innovation, Razorfish continues to cultivate our expertise in Social Influence Marketing, emerging media, creative design, analytics, technology and user experience. Razorfish has offices in markets across the United States, and in Australia, China, France, Germany, Japan, Spain and the United Kingdom. Clients include Carnival Cruise Lines, MillerCoors, Levi Strauss & Co., McDonald’s and Starwood Hotels. Razorfish is part of the Publicis Groupe (Euronext Paris: FR0000130577) VivaKi organization. Visit razorfish.com for more information. Follow Razorfish on Twitter at @razorfish.

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New @Razorfish report on the publishing industry: Nimble

structure sets content free!

content needs to be free (like a bird, not like beer)

digital content no longer needs to be packed into a container to be valuable to an audience

editors will oversee the care of nimble content and data.

Develop a portfolio of revenue models

Use content to develop new products and services that provide unique user experiences.

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