

Content Optimization

The New Imperative for Monetizing Content on the Web

www.RAMP.com

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1 Executive Summary

Content Optimization is the unleashing of monetization potential of content through optimizing the discovery and engagement of content to the dynamic requirements of online publishing and consumption with the search and browsing behavior of users.

Content Optimization is the critical foundation for major media companies, publishers and broadcasters to tap into the web's potential as a publishing medium and important source of revenue. There are a number of key factors across consumer, technology, and business trends that have converged to make Content Optimization the cornerstone of commercial online publishing going forward. Among them are:

- Content and audience fragmentation, wherein content is moving from being part of “containers” to being treated as “objects”, which are further deconstructed by self-organizing online communities – audiences whose behavior is distinct online than has been with traditional media.
- Sources of content are vastly different than with traditional media. We are living in a syndicated economy where content fragmentation, prosumer and user-generated content appear alongside professionally produced content within a flattened publishing environment of the web.
- Content proliferation – the amount of content being produced and repurposed – both with and without content fragmentation is unlike anything before the web, or even during its relatively short existence.
- Rich media, especially video is reaching mass-market proportions in terms of audience adoption. This virtuous cycle of video publishing and consumption on the web is predicted to make the web a major platform for video publishing, distribution and consumption, and video the majority of web traffic in the not too distant future. Video is essentially opaque to the online “search economy” that drives the majority of content discovery, and as such, needs to be adapted to the web.
- Content monetization on the web is required not only as a growth strategy for publishers, but in most cases, necessary for survival of the publishers' business.

Content Optimization delivers against all these requirements. It does so while supporting advertising, syndication, subscription and transaction based revenue models for content today and in the future through very sophisticated targeting and personalized solutions. Such Content Optimization solutions enhance the effectiveness of solutions being developed across other industry verticals such as advertising, syndication and others.

Content Optimization holds the key to giving publishers, media companies and content providers the ability to adapt to the new realities of online publishing and simultaneously achieve the following three critical objectives:

- 1) Control of their brand
- 2) Control of context for their content
- 3) Control of monetization of their content

At its core, Content Optimization is a platform solution of purpose built technologies that work in concert to deliver across a wide range of requirements in a mostly automated manner for dynamic and scalable publishing requirements. Critical within this is the support for “universal” media types – i.e., any type of audio, video, text and image content in a highly integrated manner. Among the foundational blocks of Content Optimization is a sophisticated workflow that integrates with existing publishing platforms to extract relevant facets of content as contextual metadata and syntax in a predominantly automated manner. Using natural language processing applied to this metadata with empirical web search and browsing information of users, content can be dynamically published, syndicated or targeted with high degree of precision and relevance to publishers’ objectives.

There are a number of key requirements in order for Content Optimization to be realized by publishers. In aggregate, any Content Optimization solution needs to support all of the following, and then some:

- 📄 Real time content processing
- 📄 Universal media support
- 📄 High volume and scalable content amounts
- 📄 Intelligent semantic web capabilities
- 📄 Business model support for syndication, aggregation and advertising
- 📄 Integration with legacy systems and flexibility across different systems
- 📄 Intelligent metadata driven end user experiences
- 📄 Empirical-data based dynamic adaptation
- 📄 Business justification
- 📄 Future proof solutions anticipating emerging trends such as the Semantic Web

RAMP

RAMP is the only Content Optimization solution to meet all of the above requirements. Developed from technologies spanning more than 19 patents and more than \$100M in federal research by BBN, one of the world’s foremost research organization, RAMP’s core functionality has been

further refined, tested and proven across leading publishers of online audio, text and video, first as PodZinger and subsequently as EveryZing. Among them are: FOX, NBC, Meredith, CBS Radio, Comcast, Thomson Reuters, Boston.com and others. Based on proven results, both across universal content applications and specific vertical applications, RAMP has evolved as a Content Optimization SaaS platform with a high degree of integration of our core technologies with a modular and flexible set of solutions for publishers, broadcasters, and media companies. RAMP delivers functionality across the following products comprising the RAMP platform:

- a) **RAMP:workflow** – Comprehensive production and management of metadata across all online assets-audio, video, text, and images- to deliver a cost effective workflow solution for maximizing the value of content.
- b) **RAMP:discover** – Automatic and continuous publishing of SEO-friendly topic and content pages to increase your traffic from Google, Yahoo, and Bing.
- c) **RAMP:engage** – Universal site search for all of your content to deliver precise, relevant search results to drive increase site engagement and session length. “Lean-forward” video experience to deliver search within videos, jump-to navigation, and scene and tag based navigation to increase video consumption across your site.
- d) **RAMP:monetize** – Contextual targeting across all audio, video, text and images, including advanced instream adserving and ad targeting to maximize site revenue.

RAMP is further integrated with a number of leading publishing and advertising platforms and optimized for a number of market specific verticals for fast time-to-market implementations including Yume, Brightcove, thePlatform, and others.

2 Background – The Need for Content Optimization

While content is king on the web, it has not always been an easy ride for publishers and major media companies to capitalize on the web as a source of revenue growth. The web has unleashed unprecedented proliferation of content – and content itself has become a nebulous and amorphous entity on the web. As a case in point, major media companies are simultaneously trying to manage, capitalize and purge their content from YouTube. Most of this content is not intended to be presented the way it is on social media sites, blogs and others where extracts of content are posted and shared, often in ways unintended by publishers. That this content can be monetized is an unintended consequence in such cases, at least for now. That this content should be monetized is the logical conclusion for publishers given the sea change underway in the world of content publishing and consumption on the web.

To say that the content and audiences are fragmenting on the web is simply describing the symptom of trends of even broader magnitude. The underlying tectonic shifts are extremely significant, pervasive and ongoing for major media publishers.

With the changes that major content publishers are experiencing, how their content gets discovered, how audiences engage with this content, and how publishers develop revenue streams, is no longer only about building the best website and having the best content. For dynamic publishing environments and highly fragmented audiences, Content Optimization holds the key to giving publishers, media companies and content providers the ability to adapt to these new realities and simultaneously achieve these three critical objectives:

1. **Control of Brand:** Web2.0 unleashed a wave of end user clipping and sharing which has caused major media companies' brands to be subsumed by content aggregators. Content Optimization enables content producers to leverage web consumers' behavior without giving up the brand equity that's been built over decades.
2. **Control of Context:** The more robust approach of Content Optimization for properly tagging and attributing content enables content publishers to ensure their content is consumed in a relevant context, driving end user satisfaction and maximizing advertising revenue through better ad targeting.
3. **Control of Monetization:** End user behavior over the past five years has shown the importance of enabling users to make the content their own through clipping, sharing, rating, and commenting. Yet this behavior has often resulted in a loss of the advertising opportunity for the publisher. Content Optimization balances the end user need for control with the content producer need to monetize.

These trends discussed here mandate that successful web publishing does not end with making content available on the web and practicing search engine optimization. That is merely table stakes in the dynamic world of Web2.0 and beyond. Content Optimization is the new watchword to make content more relevant to discovery, engagement and monetization if publishers want to make meaningful transitions to the web for their commercially produced content.

This paper describes: What Content Optimization is; Why it is necessary; What the leading

Content Optimization platform from RAMP features; and some examples of how RAMP has delivered Content Optimization solutions to leading brands in different market verticals.

3 What is Content Optimization

Simply stated, Content Optimization is the unleashing of monetization potential of content through optimizing the discovery and engagement of content to the dynamic requirements of online publishing and consumption with the search and browsing behavior of users.

At the core of Content Optimization is a highly evolved workflow that integrates with existing publishing platforms to extract relevant facets of content – be that text, video, audio or image content – as contextual metadata and syntax in a predominantly automated manner. Using natural language processing applied to this metadata with empirical web search and browsing information of users, content can be dynamically published, syndicated, or targeted with high degree of precision and relevance to publishers' objectives.

Among the necessary elements that are automatically achieved with Content Optimization are:

- ▀ Granular Metadata creation and processing - including facet parsing, and support for syndication and advertising, to deliver targeted results, including targeted advertising.
- ▀ Topic Indices created dynamically based on users' empirical search behavior to make content presentation highly relevant and contextual to users' needs.
- ▀ Search Engine Optimization and best practices implemented automatically for dynamic publishing and automatic updates in real time or near real time.
- ▀ Faceted site search and navigation capabilities implemented to deliver highly granular search and navigation experiences to users.
- ▀ Uniform presentation and usability across content from different sources for a consistent user experience and search regardless of content source.
- ▀ Universal media capabilities across video, audio, text and images for an integrated user experience around topics of interest regardless of media types.
- ▀ Rich video/audio capabilities, including search and interactivity within video and audio files.

4 Key Trends Driving Content Optimization

Web publishing is increasingly becoming an important, if not the predominant, publishing medium for commercial content across all types of media – including video and audio. While this is dictating how content is published and consumed, and how the dynamics between content creators, publishers, aggregators, advertisers and consumers is changing the rules of publishing, a few major trends are particularly noteworthy in this sea of transformation:

4.1 Content and Audience Fragmentation

All traditional media, whether broadcast television, magazines, music entertainment, or another can be defined as packaged into “containers”. One of the biggest drivers of change in the media landscape as a result of the web is the shift from such “containers” to “objects”. The nature of the web fundamentally deconstructs media into individual content objects and enables users to consume only the precise pieces of media of direct interest to them. This has occurred across the entire media landscape: iTunes deconstructed the music “container” (the record album) into its individual “objects” (song tracks); Podcasts have enabled radio stations and radio programs (containers) to be deconstructed into digital show clips (objects); Magazines and Newspapers (containers) have been deconstructed into individual articles and photos by the ascent of Google Web, Image, and News search; Television has been deconstructed from networks and channels (containers) into individual show episodes (objects) by sites like Hulu, and further into individual user crafted clips (objects) on sites like YouTube. This is the first phase of deconstruction that is still continuing to gather strength, while a second wave of deconstruction has also started.

The second wave of this deconstruction has been the rise of social media. With social media, even the objects themselves can be easily deconstructed and passed around. News articles are excerpted and commented on across the millions of blogs on the web. Pieces of songs are played on personal homepages and on ringtones. Individual video clips and magazine articles are embedded on Facebook and passed around. The web at large is now able to easily discover and re-construct the content objects into an infinite number of personal, customized containers of their choosing via RSS readers, blogs, playlists, personal homepages, and status updates.

This new reality poses a series of threats to the Media Enterprise. The old container-driven model held great advantages for media publishers. First, containers ensured that the Media Enterprise brand could be front and center. Branding a newspaper, magazine, television network, or record company is made easy when the container is the key delivery vehicle of the content experience. In addition, editorial voice can be carefully controlled by the selection, editing, and ordering of content objects within the containers. And finally, and perhaps most importantly, the business model could be carefully controlled and leveraged. Advertisers were sold, and willingly purchased container-level advertising opportunities. In fact, typically the most valuable inventory was most closely tied to the container rather than the objects. The back cover of the magazine, the full page ad in the newspaper, and the upfront television network buy. Neither the Media Enterprise nor the advertisers were ready when the shift occurred to objects, and as a result, the infamous “trading analog dollars for digital pennies” metaphor.

Beyond the shift in consumer behavior, the Media Enterprise is constructed in a manner that makes it difficult to make the transitions. The typical Media Enterprise faces the following realities:

1. The Media Enterprise is decentralized. This typically includes multiple brands across multiple geographic markets and media formats. This could include a mix of newspapers, radio and television stations, cable networks, national news, entertainment, satellite channels, and Mobile and Internet properties. Vast amounts of content are produced on an hourly basis.

2. The Media Enterprise has a heterogeneous technology infrastructure. Rarely are platform and technology decisions centralized, as each business unit has sufficiently unique requirements that decisions are made at the business unit level to ensure requirements are precisely met. This means that the Media Enterprise typically has licensed at least one of virtually every vendor alternative for every piece of the technology stack required to produce and distribute professional media.
3. The Media Enterprise faces an increasingly heterogeneous distribution requirement. Content must be produced with all formats in mind, including broadcast, satellite, Internet, Mobile, and IPTV. Each of these is further splintered into carriers, operating systems, and format requirements.
4. The Media Enterprise needs to redefine how it measures and qualifies audience. The statistical sampling of the traditional terrestrial broadcast world that both publishers and advertisers have relied upon no longer applies, as both the content and the audience is fragmented across thousands of points of consumption.

Content Optimization is the cornerstone to bridge the world of traditional media and web publishing in this paradigm shift from containers to objects.

4.2 Sources of Content

The web publishing ecosystem is being defined as a “syndicated economy”. Syndication and aggregation is increasingly featured in content publishers’ web strategies. This is both a function of the ease of syndication on the web (e.g., with enabling technologies such as RSS, MRSS), and the growth of prosumer content and web-only publications that has flattened the landscape of web publishing.

Content Optimization creates intelligent options for content syndication and aggregation within this ecosystem, giving publishers broader publishing options and larger, more relevant content libraries for drawing larger audiences.

4.3 Content Proliferation

In aggregate, content fragmentation and syndication is leading to content proliferation unlike anything before the World Wide Web, or even previously in the web’s short existence. While the business model on the web in the past was to build audience for destination websites, today the definition of audiences has changed. It is less about unique visitors to a publisher’s site as it is about the ability of their content to get discovered, consumed, and in many cases, shared on the web.

Content Optimization creates opportunities to distinguish publishers’ content from the crowd through discovery and engagement solutions, as well as allow this content to be distributed to relevant outlets in ways to drive greater consumption.

4.4 Rich Media, especially Video

An additional forceful trend is the adoption of rich media on the web. By some accounts video will

account for 90% of consumer Internet traffic by 2012. The demand for online video has everyone scrambling – from publishers, to service providers, to network operators, and advertisers. At the same time, managing video asset discovery and user experiences for Internet audiences is even more complex than other forms of web content because of the inherent opacity of video as a content format.

Content Optimization is required both to bridge the semantic gap between ‘non text’ content such as audio and video and to make such media part of an integrated experience that the web promises and users increasingly expect.

4.5 Content Monetization

Finally, the idea that content needs to be monetized on the web has firmly taken hold. This awareness has come at the expense of various traditional content companies and even industries that either ignored the web or misunderstood the web opportunity as being core to their future revenue streams and survival. Today, the idea that content on the web needs to be monetized not at discounted rates, but as part of a stable and core revenue stream is taking hold.

Let's look at the important role of Content Optimization towards content monetization next.

5 Content Optimization and the Business of Content

Content Optimization and monetization of content on the web are directly related. The key attributes of Content Optimization – namely, contextual relevance, dynamic publishing, and high end-user metrics – are also key requirements for content monetization.

As mentioned earlier, Content Optimization is dependent on highly sophisticated metadata schemes with facet parsing of context and natural language processing. This data and its application in Content Optimization has a key role to play in the following business models for online content publishing:

5.1 Ad supported revenue models

One of the key challenges in online publishing is sustainable advertising revenues and higher CPMs. Content Optimization enables this through:

- Ad targeting – Content Optimization creates a publishing environment for highly contextual discovery and engagement. Accompanying this intelligence is the ability to create high value advertising inventory precisely targeted to known audience criteria.
- Ad rates – Given the ability to create both highly targeted ad inventory and higher audience metrics through Content Optimization, publishers can command higher rates for their inventory, separating themselves from the overall commoditization that is taking place for online ad inventory.

5.2 Content syndication revenue models

Content syndication is a growing model for content monetization. Content Optimization is

inherently driven by highly intelligent content workflows that parse content facets to derive intelligent metadata. These workflows also inherently enable content syndication using this metadata and other aspects of Content Optimization. Syndication using Content Optimization is powerful in that syndicated content is also optimized; allowing optimized content publishing to be scaled very easily.

6 Requirements for Content Optimization

Within the industry trends and business requirements discussed above, Content Optimization needs to fulfill key requirements to deliver results for publishers. In the absence of one or more of the following requirements, Content Optimization is not being achieved, and publishers should use the following as a partial checklist of things to look for in Content Optimization solutions:

6.1 Real time or faster content processing

Given the dynamic publishing requirements for online publishing, whether it is text or video, Content Optimization should not be the bottleneck for content publishing. Content Optimization should be a “background process” for most part, optimizing data in real time or faster than real time.

6.2 Universal media support

Users are driven by topics and interests when searching and engaging with content. The line between video and non video content that prevails in traditional media is exceedingly blurred in web content. Users searching for news on a topic will migrate seamlessly from written text to an audio clip to a video clip, for example. Similarly, users will use text to search within a video clip for the precise segment they are interested in. Content Optimization needs to not only support such universal media capabilities, but also take them to the next level of seamless publishing and consumption on the web.

6.3 High volume & scalable Content Optimization

In addition to being real time or faster, Content Optimization cannot be limited by the volume of content that can be optimized. Dynamic publishing requires real time processing of large volumes of content with a high degree of automation. Content Optimization should be scalable to meet any publisher’s requirements regardless of volume and sources of content.

6.4 Intelligent semantic web capabilities

Content Optimization effectively creates the most advanced semantic web capabilities possible for content. This means that Content Optimization should have strong language processing capabilities in addition to strong metadata creation capabilities. Such semantic capabilities should also have language modules to support different linguistic characteristics of users as well allow optimization for different content categories. For example, the term “squash” has a very different meaning for cooking or gardening websites than a sports site. The term “football” needs to be interpreted differently using an American vernacular than a British one, despite both being the same language.

6.5 Business model support for syndication, aggregation, and advertising

As mentioned above, Content Optimization must support key existing and emerging business models for content monetization. While Content Optimization is by definition aligned with requirement for content monetization, a Content Optimization system should specifically be able to demonstrate support of such business models.

6.6 Integration with legacy systems and flexibility across different systems

Content Optimization cannot work in a silo or be a parallel process to publishers' existing content publishing, syndication and advertising platforms. In other words, Content Optimization platforms are modular, open, and flexible to deliver all the Content Optimization requirements working with publishers' existing systems and workflows with easy to implement and fast time-to-market configuration.

6.7 Intelligent metadata driven end user experiences

One of the key objectives behind Content Optimization is to drive end user metrics. This requires having the facility to enable end user experiences that lead to more effective discovery of content and increased engagement. Content Optimization systems that do not extend all the way to end user experiences are likely to not be able to assure publishers the results of Content Optimization. Included in this criterion is the ability to create new experiences, particularly with audio and video content, that are unique to the web and where tremendous room for innovation still exists.

6.8 Empirical data based dynamic adaptation

Content Optimization needs to be empirical data based and adaptive to changing conditions on the web. The web is a dynamic environment, and the popularity of content, users' interests and such are constantly shifting on account of a myriad of forces. Search engines are also continually adapting their search algorithms to adapt to the dynamic nature of the web. Content Optimization cannot be a static function that is based on a point in time data. It needs to be an intelligent, evolving set of processes that continually get better over time.

6.9 Business Justification

In addition to ease of adoption and integration with existing publishing systems, Content Optimization systems need to have a sufficient level of automation and scale to ultimately reduce the cost of large scale publishing operations. Content Optimization systems play a critical role where the scale or speed of publishing exceeds human capabilities to curate and optimize content. The business justification of Content Optimization is easily measured over manual processes.

6.10 Future-proof Solutions

A final and key requirement for Content Optimization is that, along with being dynamic and adaptive to the changing web environment, Content Optimization needs to be able to incorporate

new technologies and new forms of content as they emerge. Just as it needs to mesh with existing publishers' platforms today, it needs to have the ability to evolve to future capabilities without requiring a fork lift or replacement in the future.

7 RAMP – the World's Leading Content Optimization Platform

RAMP is the leading platform to deliver the complete set of requirements for Content Optimization discussed above. Two key foundational elements differentiate RAMP from others that may claim to be in the Content Optimization space. First, RAMP's core technologies were developed over a period of 20 years and an investment exceeding \$100M by BBN, one of the worlds foremost research organizations, for federal funded work in the area of speech-to-text and natural language processing. Second, these core technologies were refined in the field of web publishing, first as Podzinger and then as EveryZing, during which time these technologies were field tested with some of the leading global brands in broadcasting, publishing and digital media on specialized applications and publishing models. Upon reaching a critical mass of field proven functionality and integration, we decided to launch our core solutions and technologies as a modular, scalable and highly flexible Content Optimization platform. The RAMP platform includes the following solutions:

- a) **RAMP:workflow** – Comprehensive production and management of metadata across all online assets-audio, video, text, and images- to deliver a cost effective workflow solution for maximizing the value of content.
- b) **RAMP:discover** – Automatic and continuous publishing of SEO-friendly topic and content pages to increase your traffic from Google, Yahoo, and Bing.
- c) **RAMP:engage** – Universal site search for all of your content to deliver precise, relevant search results to drive increase site engagement and session length. “Lean-forward” video experience to deliver search within videos, jump-to navigation, and scene and tag based navigation to increase video consumption across your site.
- d) **RAMP:monetize** – Contextual targeting across all audio, video, text and images, including advanced instream adserving and ad targeting to maximize site revenue.

The key technologies implemented in RAMP are the most advanced in the industry and span essential Content Optimization technologies across speech-to-text conversion, natural language processing, search, metadata creation, content tagging, dynamic topic page creation, and are continuing to evolve into object and image recognition technologies, and other technologies central to advances in semantic web.

An important distinction between RAMP as a Content Optimization platform and other “metadata” creation technologies is that RAMP is built to handle universal content formats – across video, audio, text and images – which is a core requirement for Content Optimization.

Offered as a Software as a Service (SaaS) platform, RAMP offers flexibility and fast time to market implementation. RAMP implementations are also cost effective, modular solutions with the scalability of “cloud computing” and future proofing as compared to an enterprise software model.

7.1 RAMP:workflow™ - Efficient Workflow Automation

RAMP:workflow is at the heart of its Content Optimization capabilities. Powered by RAMP's MediaCloud® technology, it integrates with any publishing system to parse facets and extract relevant metadata for any type of video, audio, text and image content. RAMP:workflow then applies such metadata towards publishers' business objectives for discovery, engagement, syndication, and advertising of their content. RAMP is today the leading choice among major broadcasters, content publishers, and digital media companies for deriving the maximum value for their content on the web, having been deployed by NBC, FOX, Thomson Reuters, and Meredith, among others.

RAMP:workflow can be deployed as a content optimization work horse within a publishing, syndication and advertising infrastructure with or without other RAMP technologies and services that are discussed later in this paper.

In keeping with the modular, open and flexible approach, RAMP:workflow is integrated with the industry's leading content management (CMS) and publishing systems, including online video publishing systems from thePlatform and Brightcove. RAMP:workflow easily integrates with any publishing system using standard APIs.

7.1.1 Key Features

- Universal content support for Audio, Video, Text and Image tagging and metadata creation
- Automated advanced facet parsing and metadata creation for driving search, advertising and content syndication models through integrated workflows
- Web services based integration with existing publishing systems, CMS, ad networks and analytics platforms
- Web interface and easy to customize custom features
- Integrated with other RAMP technologies for specialized vertical market solutions

7.2 RAMP:discover™ - Enhanced Content Discovery

Content discovery is at the heart of finding success on the web. Whether users discover content using search engines such as Google, Yahoo, Bing, and others; discover content on a publisher's site using site search; or through shared content on social networks, the ability to drive discovery of one's content is critical to increasing audience metrics that further drive monetization. Content Optimization for driving discovery is a key facet of RAMP. Rich media such as video, audio and images are also mostly opaque to web discovery without the use of advanced techniques provided by RAMP.

Discovery solutions using RAMP:discover are automated using among the most advanced semantic web technologies available for large and dynamic publishing websites, whether those be for news, sports, entertainment or any other market vertical.

RAMP:discover offers search and search-engine optimization (SEO) solutions that are based on applying users' search and browsing behavior to dynamically create Index Pages. For rich video and audio content, discovery optimization is done using the most advanced content recognition and speech-to-text conversion, among the use of other technologies.

7.2.1 Key Features:

- ▀ Advanced semantic technologies and natural language processing for content optimization with advanced search and discovery capabilities
- ▀ Dynamic SEO and Site Search capabilities implemented through automated topic indices and pages
- ▀ Dynamic publishing updates and SEO using empirical user data and search and browsing behavior
- ▀ Discovery applications for supporting different publishing, syndication and advertising business models
- ▀ Integrated search and discovery features enabled across all content types – audio, video, text and images – for SEO and Site Search
- ▀ Social media integration and integration with existing publishing systems

A Note on Video SEO

Video SEO has emerged as one of the most difficult SEO challenges in the market. With the dominance of text as the primary means of indexing across the major search engines such as Google, Yahoo and Bing, video is at a distinct disadvantage due to the paucity of text and tags associated with videos. In addition, videos are produced with flash and other binary formats which can't be deciphered by the major search engines. RAMP has developed a patent-pending approach to Video SEO, which combines our unique ability to generate rich transcripts and tags using our MediaCloud core technology, and then organizing and publishing your video catalog into SEO-friendly topic and landing pages. Specific features include:

- Dynamic content processing to surface relevant topics
- Dynamic "mining" of consumer search demand to optimize page rankings
- Dynamic indexing of videos to surface most relevant and timely content per topic
- Time-stamped and confidence-scored transcripts and tags for every video clip in your collection
- SEO best practice publishing including automatic optimization of URL, title, meta-tags, and related links. Automatic handling of 301's for dynamic categorization of topics.
- Automatic RSS feed creation for each topic

- Automated video sitemaps published to all major search engines
- Add in RAMP MetaPlayer technology for a full ‘lean-forward” video experience for your users
- Full control over hosted publishing environment via RAMP management console. Template-based publishing with both WYSIWG and programmatic interfaces
- Full control over content presentation per topic including pinning and blocking of individual content objects
- Optional map-based interface for all content
- Integration of 3rd party content including Twitter, Flickr, Amazon and others.
- Easy integration with any CMS, adserver, analytics and publishing system
- Easy integration with any CDN
- Full support for Brightcove 3.x, thePlatform 4.x, YouTube, and more
- Social media integrations across Facebook, Twitter, etc.

7.3 RAMP:engage™ - Increased Audience Engagement

Engagement is at the core of content monetization strategies and a key metric for Content Optimization. While discovery increases audience, engagement increases the total consumption of your content, which in turn directly impacts audience metrics important to advertisers.

RAMP:engage presents content in ways that drive higher engagement tailored to users search and browsing behavior for all types of content. This is done through dynamically creating correlated index pages and landing pages; navigation logic, including faceted search; and content recommendation – all with customizable features for publishers’ unique requirements for the look and feel of their search templates.

For video and audio content, the RAMP’s MetaPlayer™ technology makes possible new engagement capabilities for such content. Using advanced metadata created for audio and video content, RAMP allows users to search and consume with extreme granularity parts of audio and video files that are most relevant to their interests. “Jump-to” cue points based on text markers associated with specific points in the video or audio timeline allow users to navigate within audio and video files.

7.3.1 Key Features

- Full indexing and easy discovery of all audio, video, text and image content on websites
- Full publisher control over search template look and feel via RAMP management console
- Configurable faceted search display allowing dynamic search refinement
- Widget-based platform for contextual content integration

- Powerful recommendations' engine for dynamically generating related topics and related content recommendations
- Video search within file using RAMP patented "jump to" search integration features; User-defined clipping, sharing, and embedding
- Seamless integration of video metadata produced by RAMP MediaCloud technology to enable search within the video, tag based navigation and scene-based navigation.
- Most advanced chromeless video player compatible with third party publishing systems and advanced navigation and user experiences using metadata based tags
- Widgets for contextual targeting, presentation and content distribution
- Easy integration with any CMS, adserver, analytics and publishing system

A Note on Video Search:

Video Search is one of the more challenging problems in search today. RAMP advanced metadata creation capabilities means that every video you produce can be fully indexed using our proprietary video transcription and tagging capability. Users are able to easily see their search term in context and "jump-to" the precise moment in the video where the term appears. Using RAMP MetaPlayer technology, users are also able to search within the video using simple keyword search, and navigate the video using time-stamped tags and thumbnails. Specific features include:

- Feed-based or crawl-based content ingestion
- Configurable faceted search display, allowing dynamic search refinement
- Seamless integration with RAMP keyword merchandising
- Customizable results presentation, including blended or federated
- Presentation via RAMP patented "jump-to" search integration feature.
- Custom relevancy "recipes" to meet the needs of any type of site
- Compatible with all major CMS and video platforms.
- Easy integration with any CMS, adserver, analytics and publishing system
- Full control over search template look and feel via RAMP management console

7.4 RAMP:monetize™ - Optimized Content Monetization

The central tenet underlying Content Optimization is to maximize content monetization. Whether the content is text, audio, video or images, and the monetization model is advertising, transactions

or another, RAMP:monetize enables solutions suited to different content monetization and revenue models.

RAMP Content Optimization delivers Topic Indices, Landing Pages and rich metadata to drive higher discovery and relevance for increased engagement. This gives publishers the ability to create higher value targeted advertising inventory for greater monetization potential of content. In addition, higher levels of engagement create more advertising inventory as well as more potential for transactions.

The granular search capabilities enabled by RAMP:discover and RAMP:engage, including search within audio and video files, also provides granular usage metrics and reporting to publishers for their content, including accurate reporting on video usage.

7.4.1 Key Features

- Advanced syndication, advertising and publishing models with automated SEO and engagement solutions
- Advanced metadata based tagging for ad targeting and contextual search results
- Instream and overlay video advertising based on timed stamp intervals in video
- Integrated with ad networks and ad platforms – Yume, DART, Google AdSense
- Integrated with advanced analytics platforms

8 Content Optimization Requirements for Different Market Verticals

It merits mentioning here that Content Optimization is a highly analytical and empirically driven set of automation technologies and solutions that adapt to dynamic content and usage patterns. While there are linguistic and cultural factors that must be taken into account as mentioned earlier in the paper, it is also imperative that Content Optimization take into account specific market verticals. Content Optimization solutions for news have unique requirements than content optimization for sports or entertainment, for example. RAMP Content Optimization capabilities are currently organized for the following market verticals, with more underway:

- News
- Local
- Infotainment
- Sports
- Web
- Print Publishing

The following section provides sample case studies of some of the market verticals that RAMP Content Optimization has been implemented for.

9 Case Studies – Examples

9.1 Fox News

About – Leader in general, political, entertainment and business news.

Goals – Present an integrated discovery and engagement experience for content from different online and offline sources and across all content types – audio, video, text and images.

Challenges – Large amounts of content and dynamic updates; Rationalizing content from different sources and categories for different use cases and usage models.

Result – Tapping into RAMP:discover and RAMP:workflow, FOX News has published thousands of relevant, search engine optimized Topic Pages. Based on a comprehensive analysis of FOX News content, RAMP employs powerful natural language processing capabilities to organize content into topics. Topics are updated as new content is published and new Topic Pages are discovered dynamically based on breaking news events. RAMP:discover also dynamically publishes individual landing pages for all audio and video content leveraging the metadata produced through MediaCloud to improve discoverability of multimedia content by the web search engines. Through RAMP:workflow, the FOX News editorial team has complete control to manage existing Topics and create new ones. The result has been a low-cost method to significantly increase the amount of web content published into the FOX News domain which, in turn, improves the discovery of content through both the web search engines (Google, Yahoo!, Bing) and FOXNews.com.

9.2 Thomson Reuters Project Insider

About – Project Insider is an interactive web-based TV service providing access to breaking news, analysis, and research for financial services professionals by Thomson Reuters, a leading global financial news publishing organization.

Goals – Highly personalized news and video presented through personalized channels and dynamically formatted content, with personalized alerts and power search capabilities delivered across multiple platforms to key financial executives and business professionals.

Challenges – Rationalizing content from more than 100 key content partners with high degree of granularity and personalization across markets, topics of interest, and relevance to individual user preferences.

Result – To accomplish these goals, Thomson Reuters incorporated RAMP:workflow into the core of Project Insider. All content, whether it be Reuters created or syndicated from partners, is passed through RAMP:workflow for transcript creation, time stamp development, entity extraction, and topic classification. If the inbound content asset already has a transcript, the RAMP:workflow adds timestamps to each individual word before applying the tags and topics. Content can be routed to different RAMP:workflow processing pipelines based on business rules.

For example, US content is processed using different language models than UK content in order to improve transcript accuracy based on the semantic and phonetic nuances of each language. Since breaking news is only valuable to financial analysis if they are alerted about it in a timely manner, content is processed in real time – meaning that a five minute video is processed and posted-back to Reuters within five minutes for ingestion into Project Insider’s CMS and search and alert index. The result of the implementation with EveryZing is a highly scalable workflow solution based on automation and real time processing capabilities that can analyze and create metadata for thousands of minutes of video each day. The editorial savings is significant, and because RAMP is based on a cloud computing architecture, RAMP:workflow scales linearly to handle additional content volume without any degradation in quality or throughput.

9.3 WEEI Sports Talk Radio

About – WEEI is the country’s highest rated sports talk radio station, and home to some the radio’s most distinguished brands and recognized personalities.

Goals – Broaden audience beyond New England radio using the web as an on-demand platform

Challenges – Draw radio audiences to web podcasts through a highly personalized and relevant discovery and engagement model.

Result – The impact that RAMP has made on site usability, engagement, and audience development for WEEI has been impressive. Thousands of Topic Pages and Media Landing Pages showcasing WEEI’s podcast content have been published to the site and indexed by Google, Yahoo!, and Bing, resulting in global audience growth. Each published page is accompanied by a suite of social bookmarking and viral sharing features, further building audience and enhancing search engine optimization. Once on the WEEI site, visitors can perform a simple keyword search and instantly access on-demand audio and video, blog, and article content and narrow results by content type, relevance, and publication date or choose to download content directly to their iTunes player. RAMP powered navigation widgets allow visitors to explore content by popularity, show series, and teams making the most sought after content available from every page on the site. Lastly, through RAMP syndication features, WEEI content is easily integrated into other third party sites, such as Boston.com, the website for the Boston Globe. The revamped site powered by RAMP offers powerful discovery tools, enabling a truly personalized content consumption experience and has provided WEEI with an efficient online operation that allows it another channel to service its listener base through.

9.4 Boston.com

About – The online home of The Boston Globe, Boston.com is one of the most visited regional portals in the country, receiving more than 4million unique visitors each month.

Goals – Enrich site with original and syndicated companion multimedia content with high discovery and engagement for such content ala “Related Video” features.

Challenges – Creating contextual links to video and non video content in a dynamic high

content volume publishing environment, and driving video consumption through relevant recommendations.

Result – The RAMP deployment with Boston.com has led to a surge in stream-starts over the past 24 months. This stems from RAMP:workflow core ability to create meaningful and relevant metadata for multimedia content that is incorporated in RAMP:discover and RAMP:engage to drive organic audience development from Google, Yahoo!, and Bing, and strengthen content consumption for site visitors. Through use of RAMP automated solutions, content publishing and integration is performed without the need for additional headcount and, RAMP platform-approach to the enterprise has enabled Boston.com to gain further value from other technology partners, such as BrightCove.

9.5 Petside.com

About – A premier site for pet owners and enthusiasts, launched by NBCU in association with Proctor & Gamble, as part of NBCU's strategy to launch a series of content rich sites focused on high-advertising-value vertical market segments.

Goals – Utilize NBC's vast archive of content to be a one stop destination for all-things related to pet ownership.

Challenges – Aggregation of NBC, syndicated and third party content and dynamically organize it into vertical market specific topics through minimal editorial staffing and high level of automation. Secondly, replicate this model across multiple verticals using the same platform and within 4 weeks launch time per vertical.

Result – After performing an extensive market analysis of potential vendors, NBC Digital settled on RAMP as the technology partner for this strategic initiative. With limited editorial input, NBCU is able to use RAMP:workflow to process RSS and MRSS feeds from all desired content sources through a single analysis pipeline in order to organize the site topically and publish relevant pages. This has yielded hundreds of topic opportunities across health, wellness, and breed categories that are published to PetSide.com through RAMP:discover. Once published, RAMP topic pages are updated with relevant content as it is processed and new topic page are dynamically identified and published as new themes are discovered.

For video content, Petside uses RAMP:workflow to process NBCU, partner, and YouTube content for transcripts and tags. This content is then published into individual landing pages using RAMP MetaPlayer technology to provide a seamless playback experience regardless of content origin: NBCU content is played through the NBCU player while YouTube content is played through the YouTube player. The MetaPlayer technology wraps each underlying player with a common set of controls, or "chrome" to provide a consistent user experience.

In order to create an authoritative vertical "hub", PetSide wanted to make sure that the site search functionality included an index of authoritative third-party sites that provide complimentary content to the editorial experience. To achieve this, RAMPengage is used to crawl numerous

third party websites and power a “Best of the Web” section on all search results pages. This ensures that, regardless of query, PetSide will have the answer or know where the answer can be found on the web.

Based on the success of the PetSide launch, NBC has tapped into the RAMP platform for additional verticals including a UK pet site and a health information site. RAMP provides NBC with a cost-effective approach to launching new sites very quickly that incorporate SEO, site search, and web publishing best practices in order to achieve advertiser impression and audience exposure goals.

9.6 Howcast

About – The leading destination for free, how-to video guides aggregated from multiple sources and distributed through multiple publisher sites such as AOL, Yahoo!, Apple, YouTube, and others.

Goals – To make search and discovery highly granular and specific to users’ interests across a growing library of more than 100,000 videos, both on publishers’ sites and on search engines.

Challenges – Rationalizing search and discovery across videos ranging from professionally produced to user generated across a large library of highly specialized topics.

Result – Built on industry leading speech-to-text algorithms, RAMP has been integrated into Howcast’s web publishing workflow to auto-generate transcripts and tags for third-party content. The resulting metadata is returned to Howcast for ingestion into its CMS and published to its website in order to improve video search engine optimization and site search by providing more context for what is actually discussed in each episode. Because RAMP is based on a cloud-computing architecture, Howcast is guaranteed a low-latency, low resource intensive solution that can scale with video production needs without any increase in cost/unit of processed content. The work of several full-time editors is performed for less than the cost of one.

9.7. Meredith

About – One of the nations leading media and marketing companies with business centered on magazine and book publishing, television broadcasting, integrated marketing and interactive media, with brand names such as Better Homes and Gardens, Fitness, and Parents.

Goals – Extend its core brands and multi-format content including articles, videos and slide shows to the web while providing unique experiences associated with its different properties starting with Better Homes and Gardens (BHG).

Challenges – Rationalizing content across multiple sites and content sources while providing relevance and discovery to drive engagement.

Result – By performing a deep analysis of BHG content, RAMP:discover solutions identified and published over 500 relevant topic pages without the benefit of an existing taxonomy in just a couple of weeks. In order to promote the Topic Pages to BHG’s user base and improve the web search efficacy of the implementation, Meredith employed RAMP:workflow to analyze text content from across all BHG network sites and place inline links to RAMP powered Topic

Pages on relevant article pages. This resulted in over 7,000 links to the Topic Pages from the BHG network and over 1,000 inbound links from third-party sites. With links playing a key role in Google's ranking algorithm, RAMP:workflow and RAMP:discover enabled BHG to gain top-10 ranking in search results for targeted keywords in a short amount of time.

Since the launch of Topic Pages on BHG, Meredith has used the RAMP solutions for two other projects. Better.tv was established as a destination for all BHG video content. Along with Brightcove, RAMP:workflow creates transcripts and relevant metadata for video content that is used with RAMP:discover to publish search engine friendly video landing pages and RAMP:engage to allow visitors to keyword search for video and jump-to specific passages of interest based on the spoken word inside the video. Similarly, Meredith's FitnessMagazine.com integrates RAMP solution suite across the video publishing pipeline for transcript creation, content tagging, video SEO, and video site search. Partnering with RAMP has enabled Meredith to advance their strategic roadmap in a cost efficient manner. The automation behind RAMP makes core editorial and web production tasks more efficient and scalable, allowing Meredith to improve productivity and achieve business goals without incurring additional headcount.

10 Conclusions

With the growing importance of web as a publishing medium for all types of content and the changing requirements of content from "containers" to "objects", Content Optimization holds the key to major media companies, broadcasters and publishers harnessing the opportunities of the web. Content Optimization enables rich media, including video, to be deployed on the web with the rich interactive, targeting and discovery capability that the web enables. In addition, Content Optimization creates a semantic capability for all kinds of content, making users' web experiences more rewarding, and publishers more relevant to their audiences. Content Optimization is the critical element in web publishing that not only bridges traditional and online media publishing but also drives efficiencies and cost containment to publishing workflows.

Content Optimization is a new paradigm based on a number of purposeful technologies working in concert in a highly integrated and efficient platform based solution. RAMP is the leading Content Optimization platform that satisfies all the requirements for Content Optimization used by some of the largest media and publishing brands.

Publishers and media companies should evaluate Content Optimization solutions across more than ten unique criteria. In addition, the role and utility of Content Optimization will continue to evolve to encompass new types of content, use cases, consumer behavior, and business models. Content Optimization systems need to scale, and even lead, this evolution as the web continues to grow in importance as a publishing and monetization platform for major media publishing brands.

RAMP is an advanced Content Optimization SaaS platform providing publishers' workflow, discovery and engagement solutions to drive monetization of online content to users' search and browsing behavior. RAMP offers publishers an open, flexible and modular capability to optimize large amounts of content, including text, audio, video and images, within dynamic publishing environments. As a result, publishers' content becomes positioned for discovery and precise targeting, both on search engines and within publishers' own websites. Users rely on such precision to discover and engage with content, thereby increasing the commercial viability of content for publishers while curtailing publishing costs. Leading publishers using RAMP include – FOXNews, NBC, Thomson Reuters, Meredith, and others.

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