

white paper



The EndPlay™ Web Content Management Platform Architecture

The Intelligent Way to Turn Content into Commerce

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Executive Summary

Corporate and media websites are in need of a major transformation. What used to be a primary source of information and a user destination has now become a place where users — if they visit at all — grab the information they need and quickly return to their social, video-rich, customized, on-demand digital life.

It's time for a change.

But keeping up with the changes in Web technologies and delivery platforms, much less integrating them into current websites, is an ongoing challenge. There are now multiple screens and devices at the consumer's fingertips or in their pockets. To get their message out, corporate website owners — both marketing and IT — now need a mobile site, a mobile app and a tablet site. They need to generate content that is media-rich and compelling. And they need the ability to future-proof these sites to accommodate the devices, platforms and operating environments yet to come.

As the market matures, the Web experience is no longer just about reading static printed text. Users are spending an increasing amount of time on YouTube, Twitter and Facebook. Their expectations of corporate and media websites are broad and intimidating: they want to watch videos, interact with social media, receive news feeds, view high-res images and videos — often within a few minutes of each other. Creating websites that give users media-rich content, the ability to interact and socialize, and that result in more engaged, loyal users has long been the Holy Grail of Web development. Because satisfying those users will not only build the brand, it will also boost the bottom line.

This paper will briefly review the trends shaping the Web content management industry and examine the limitations of the status quo. It will then introduce the EndPlay Web Content Management platform, a revolutionary approach to digital content management that is changing the media world as we know it today.

The Challenges Facing Website Owners

Website development and content management used to be a much simpler task. The end goal was to create a Web presence that accurately represented a company's technology, products and underlying story. And if the Web team added a few graphics, an ease of navigation and a nice look and feel — the company's objectives were achieved.

That was then.

Today's companies are faced with complexity and abundance. Platforms have become much more sophisticated. New types of rich media are emerging. And with a growing global footprint, the company's website now has to support additional languages and multiple operating systems.

Although Web technology has advanced at warp speed, most companies' websites haven't kept pace. Previously, enterprises and media companies only competed for attention with the other players in their niche marketplace. They are now competing with a growing list of entertainment and social networking sites. When users come to a website today, they grab the information they need and then quickly go back to those other environments where they are having a richer, interactive online experience.

And what do those other environments have in common? They are visually compelling — often dominated by video and other rich media. They are social in every aspect, enabling the user community to connect and share common content and experiences. And finally, they are unique to each end user. They are personalized to deliver a much wider selection of information and activities that the individual users are directly interested in. That's the environment that every website now has to compete with.

Today's enterprises and media companies need to improve how end users engage with their sites. This means more than just increasing the quantity of page views — it means enabling more useful and meaningful interactions with each customer. If users are impressed with the experience, they will want to share private information, opt in to email campaigns, participate in ad click-throughs and even group-buying campaigns — and then encourage their friends to do the same.

The end result? Compelling content = more end-user engagement = increased opportunities for monetization.

The Need for a New Approach to Web Content Management

Current website development efforts are costly, time-consuming, inefficient and antiquated. And even if a company manages to produce a website that meets all of its current goals, extending and evolving that platform to meet shifting user demands and incorporate new technologies is virtually impossible. Any additional platforms, devices, functionality or rich features that the company wants to incorporate must be created from scratch with costly, one-off development efforts.

Website owners need a fresh approach, one that is based on their business needs, not their WCM's limitations — an approach that puts the user experience front and center. One where authors can own and distribute their own content, not work through IT at every step. One that is not only logical and intuitive, but engineered for constant change.

An effective Web content management platform must be open and extensible, providing the flexibility to seamlessly incorporate new innovations in video, real-time media, sharing, gaming and more as these exciting innovations emerge. It must facilitate the development and distribution of a company's content, providing the ability to develop once and deploy everywhere — to every connected device. And it needs to take an ecosystem approach, with modular building blocks to simplify and speed development.

The only way to effectively respond to a revolution is to take an entirely different approach to solving the problem. It is this philosophy that is at the core of the EndPlay Web Content Management platform.

Introducing the EndPlay Platform

The EndPlay Web Content Management platform is the industry's first solution to fully meet the needs of today's demanding media and enterprise clients — and the people who build and manage the websites these people visit. With its software-as-a-service (SaaS) delivery model, the EndPlay WCM platform integrates, automates and intelligently renders audio, video, text and rich media. It provides the ability to seamlessly connect clients with key partners and the flexibility to scale and adapt at every step of the way.

Originally developed for the demanding media industry, the EndPlay architecture — and resulting platform — is very different from existing solutions. The EndPlay approach is business-centric, as opposed to technology-centric. While other solutions start with the technology ingredients and their inherent restrictions and limitations, EndPlay's developers start with the business objectives of the clients and the needs of their users — and then use state-of-the-art technology to build business- and user-centric systems.

Central to the EndPlay platform and architecture is the belief that the way users consume content — from Facebook and Twitter on a PC, to the delivery of a local station website on a connected device — will become increasingly more complex and will happen faster than anticipated. And it's not only the form factor that needs to be considered (different smart phones, tablet PCs, etc.), it is also the flavor of the operating system. Today, users can choose from iOS, Android, Android-Honeycomb, Symbian and more. And that's just today.

No one can predict every technology advance that lies ahead. That's why EndPlay has taken an agnostic approach with respect to technologies, applications and end-user devices. EndPlay will continue to adapt as platforms evolve. This approach avoids vendor lock-in and prepares customers to meet the ever-changing technology landscape of the future.

The EndPlay™ Architecture

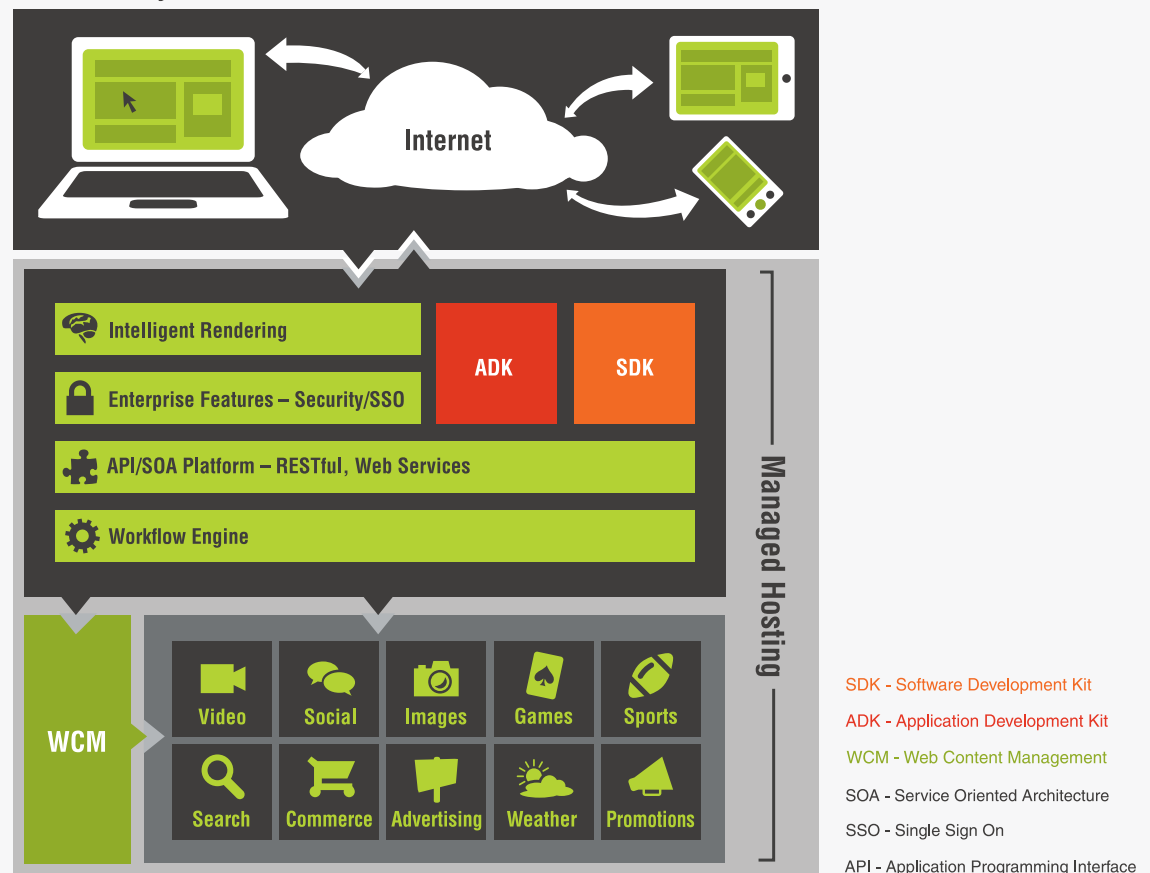


Figure 1. The EndPlay WCM architecture.

Intelligent Rendering

The EndPlay architecture is based on the concept of Intelligent Rendering, which consists of three components — Intelligent Composition, Intelligent Monetization and Intelligent Delivery. Intelligent Rendering provides the ability to serve users with the content they're requesting, with the monetization they require, intelligently generated based upon an understanding of the content's taxonomy, metadata and the form factor by which the content is being accessed.

Intelligent Composition enables clients to generate content from the device of their choice, regardless of the media type. Whether it is UGC (user-generated content), video uploads from the field or any other form of content, the EndPlay platform can generate and deploy it intelligently, usually with just the involvement of the author — no IT expertise required.

Intelligent Monetization speaks to the platform's ability to help streamline and synthesize the relationship between high-value content and the requirement for that content to maximize monetization without degrading the user experience. EndPlay accomplishes this through a combination of analytics, advertising modules and registration services, as well as by leveraging key ecosystem partnerships in areas such as e-commerce, contextual advertising, ad serving, analytics and search.

And finally, EndPlay's Intelligent Delivery component ensures that content is delivered in real-time, in a manner customized to the user's receiving device. It is the synthesis of content metadata, taxonomy and form factor context that enables EndPlay to deliver an optimized and contextualized display of client content. Content that delivers high quality experiences on a traditional website no longer translates to an optimized smart phone or tablet view. In analyzing the context by which content is being viewed, the architecture takes into account the content relationships, monetization requirements and form factors to define a truly optimized display.

The EndPlay Software Development Kit (SDK)

EndPlay has a fully articulated and well-documented software development kit that enables developers, HTML-scripters and designers to leverage the full power of the EndPlay platform to customize the look, feel and visual layout of the user consumption experience for each device. Users with limited coding experience can easily leverage the EndPlay SDK to design and build customized look-and-feel templates for their entire site or just a single page. Iterative changes to the look of a website as well as making API calls are made possible through the use of the EndPlay extensibility layer.

Modular, Pre-Integrated Building Blocks

The EndPlay platform includes a rich set of modular building blocks to speed and simplify website development. EndPlay clients retain granular control of the content of their modules, as well as how they visually render the content. EndPlay modules range from client-controlled headers, footers and navigation, to various configurations of media players, photo galleries and interactive polls.

EndPlay's unique content configuration modules provide the ability to construct pages that best utilize and render the client's text, video, audio and image assets into an optimized display; in addition to providing the ability to control the flow of content into specific pages and modules. EndPlay customers can establish business logic around keywords, categories, author bylines and

content types that define which content dynamically displays within specific modules and page-types. Furthermore, clients can apply unique custom style sheets and JavaScript to further enhance the visual power and impact of modules and pages.

Out-of-the box integration capabilities simplify development, eliminating the need for costly coding projects. EndPlay's use of a service-oriented architecture (SOA) inherently packages functionality as a suite of interoperable services that can be used to seamlessly tie multiple disparate services and systems together. It is the SOA model that enables EndPlay to build out a diverse partner ecosystem, allowing developers to build applications that will leverage the entire platform including third-party applications.

A Rich Ecosystem of Partners

In addition to providing a broad selection of pre-integrated modules with the core EndPlay WCM solution, the EndPlay platform leverages third-party development and partner innovation. But the EndPlay ecosystem is not merely a robust pool of partners with point solutions; the EndPlay architecture provides the ability to tightly integrate these modules seamlessly into the client's solution.

The EndPlay ecosystem consists of a large number of certified partners in the key areas of video, social, gaming, weather information, sports data, search and advertising, to name but a few. With its broad ecosystem approach, the EndPlay platform provides clients with unlimited flexibility. Customers can use the pre-built EndPlay modules, leverage others built by EndPlay's best-of-breed partners or they can build their own applications through the use of the EndPlay Application Development Kit.

The EndPlay Application Development Kit (ADK)

The EndPlay Application Development Kit enables clients to extend their website footprint within the EndPlay WCM by building deeply related modules. These customer-built modules sit natively in the central instance of the application, providing additional functionality to the website, while still leveraging EndPlay's out-of-the-box toolset.

The richness and power of the EndPlay API layer provides the ability to synthesize disparate services and technologies across a myriad of user and business needs. The EndPlay ADK allows clients to leverage the existing EndPlay APIs to create native modules that can persist within a client's instance of the WCM system. The EndPlay ADK approach is unlike most content management platforms, where APIs are built for and from individual pieces of functionality. The EndPlay ADK leverages the platform's entire product stack, including its integrated partner ecosystem.

For example, if a customer wants to leverage the EndPlay ADK to build out a unique mobile application for iOS that includes content management features, third-party video functionality and third-party weather data — the client can leverage the EndPlay extensibility layer to touch all of those facets of the system through a minimal number of API calls. Competitive systems have largely decoupled extensibility architectures that permit developers to touch only a few of the architectural components, as opposed to all of them.

User and Workflow Management

The EndPlay WCM architecture provides granular control of all user roles and permissions. By layering the user control functionality on top of the entire WCM ecosystem, developers obtain complete control over which internal users are able to access each separate piece of the entire stack.

Users across all Web properties are centralized for easier, single-tab management, with just one place to add/edit/disable users for one or many Web properties. This enables granular permissioning. Moreover, the EndPlay platform allows users to belong to multiple groups within the organization. This built-in flexibility allows users to have both functional and hierarchical roles and the appropriate permissions that map to the responsibilities and expectations of each role. For example, an art director that also participates in the executive team can have permissions similar to other designers within the organization, while also having secondary permissions that map to other executives on the team.

The EndPlay workflow engine enables clients to manage their content publication process and align it with their business processes. Clients can define, execute and enforce the necessary steps to distribute and publish content. The EndPlay workflow framework helps organizations control their publication process through:

- Mandatory approvals
- Content reviews
- Process escalations
- Notification to appropriate stakeholders; and
- Process auditing

A Highly Available SaaS Delivery Platform

The inherent dynamism, flexibility and extensible framing of the EndPlay architecture is powered by and delivered through a highly scalable, reliable and redundant SaaS model. Client sites are hosted at the SuperNAP world-class, purpose-built hosting facility. The SuperNAP center provides state-of-the-art infrastructure technology and a triple redundant monitoring service, ensuring the highest level of availability for all EndPlay-hosted solutions.

The EndPlay Architecture at Work

The following section will look at a hypothetical example of a large digital media property that is creating different channels that leverage the company's well known brand.

This large media company wants to build a new module, a page and a website that encompasses not only new content for the subsite, but also incorporates existing content from the parent site and other sources — including a blog, a book an author has written and a video interview he has done.

So what would it take for this large media client to develop the new application without EndPlay? The company would have to allocate an entire IT team to complete the project. The team would need to build the application from scratch, develop some very low-level Really Simple Syndication (RSS) feeds from the content management system (CMS) system and build a backend plug-in that queries

the database on its own. The development team would basically be creating a separate mobile application that runs next to the company's main CMS application. To accomplish this with existing tools, this media company's developers would need to i-frame in additional pieces of functionality.

By using the EndPlay approach, the company's developers now have the ability to tightly couple that experience so that all modules are part of the same system, interacting together as part of the "instance" of the system. With the EndPlay platform, the media company can now syndicate its content and make it extensible — versus using an API or an SDK. They can extend the content through the API and build their own personalized application that still consumes content with all of the great back-end features of the EndPlay platform. The new content is immediately available on the company's website, but also on mobile devices and other platforms without coding for multiple screens. All of this is done without the need for costly and time-consuming development efforts to format for each delivery channel.

Now that the content is developed, the company's end users have immediate access to real-time data. As soon as an editor puts in a story, that story is available to the user's smart phone and every other device in the user's briefcase just as fast as it is to the website. And from the perspective of the company's IT team, the EndPlay platform eliminates the one-off development effort required for taking an existing site and content and then modifying it for the mobile platform and other delivery options.

Summary

The digital content management industry is in the very center of a revolution — one driven by the changing demands of online consumers. These users, accustomed to a media-rich, social online experience as well as their choice of devices and platforms — now expect the same from the websites they visit.

The EndPlay WCM platform addresses the current digital content needs of enterprises and media clients today and prepares them for the new technology advances of tomorrow. It automatically syndicates content internally or externally to any device, from one hub that houses all digital content. With its customizable, automated workflows, clients can optimize content creation, management, storage, distribution and monetization. The EndPlay WCM provides the ability to easily connect with key partners through plug-play modules, APIs, configurable features and page types — and much, much more.

It's time to take stock of your existing Web content management environment. Does your current system provide an ecosystem for content management? Does it contain an intelligent analytics model for maximum engagement? And does it provide a vehicle to monetize your content to the fullest extent?

If not, it's time to move to EndPlay. Let us show you how to turn content into commerce, while future-proofing your website at the same time.

There's a revolution going on in Web content management — and EndPlay is leading the way.

About EndPlay

EndPlay is a leading software-as-a-service (SaaS) provider of Web content management (WCM) solutions to enterprise customers in media, entertainment and education. The company's Intelligent Rendering technology is at the core of its evolving architecture and platform. Its Intelligent Composition technology provides the ability to generate and distribute compelling content from and to virtually any user device. Its Intelligent Monetization platform enables customers to generate a variety of revenue opportunities through an enhanced user experience.

EndPlay serves over one billion page views per month, making it one of the top 50 Web properties in the U.S. based on traffic volume. In the media marketplace, EndPlay customers access local markets with 53% of U.S. households, reaching an unduplicated 15% of the U.S. Internet population and operating in 15 of the top 20 designated market areas (DMA) in the United States.

EndPlay delivers 24x7 customer service and is rapidly expanding its geographic reach into Europe and Asia, while extending its technical capabilities and product portfolio across a diverse range of industry segments.

EndPlay is headquartered in Los Angeles, California, with offices in Florida and New Jersey.