



Business Mobility: Now in Full Colour

To offer a truly differentiated and engaging mobile experience for employees or customers, you need to consider the full spectrum of what mobility has to offer. **AMPchroma™ provides the overarching paradigm for achieving mobility excellence** and is the only mobile cloud platform that enables you to deliver on this promise.

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A Revolutionary Beginning

The story of AMPchroma™ begins with two seminal moments in the history of modern technology.

January, 1993. The launch of the Mosaic web browser. An event which ushered in the era of the popular (and populous) internet.

January 2007. The launch of the Apple iPhone. An event which began the terraforming of the mobile landscape and heralded the mobile age as we know it.

But what was it that made these events revolutionary? After all, the Internet had been around since the 1960s—long before Mosaic—and the first ‘smartphones’ had emerged in the 1990s. The answer is the same in both cases: they became phenomena because they radically improved the user experience — leading us away from monochromatic, text-driven screen-scapes to a promised land of multi-chromatic, highly graphical click/touch interfaces. More importantly, both phenomena demonstrated that it is possible to influence the behavior of millions of people by improving, rather than reinventing, ‘the wheel’.

THE MOBILE WHEEL

Today, at the start of 2012, the mobile wheel is well and truly spinning—driven in large part by smartphone and tablet users’ seemingly ever-increasing app-etite. The availability, simplicity, and power of apps have allowed them to infiltrate an international consciousness and become part of the zeitgeist. Of course, apps are still only a single spoke of that mobile wheel, one source of the channel’s over-arching strength; the other spokes—mobile websites, web-apps, and private app stores—are also gaining in importance. And yet — enterprise mobility’s own seminal moment has not seemed imminent.

CONSUMERIZATION OF THE ENTERPRISE

If anything, it seems farther away than ever, as the diversity of hardware and software platforms available to consumers proliferate month on month. Increasingly consumers as employees are demanding access to corporate content and systems on their personal devices to improve their productivity and effectiveness – a trend known as ‘the consumerization of the enterprise’. Across companies large and small, IT, marketing and business unit heads are struggling to maintain visibility and control over an increasingly fragmented portfolio of customer focused and employee related mobile projects. At the same time, employees, starved of rich business content on their mobile devices, remain frustrated by the strategic and technological shortcomings that prevent enterprises from distributing that content effectively.

When businesses are able to reach any device with every mobile app and website they create, when IT departments are able to handle all seven stages of the mobile development lifecycle (design, build, integrate, publish, run, manage and analyze) all from one management console, when they are able to realize their mobile projects in a matter of minutes, and when they are able to see their commitment to mobile summarized on a single corporate dash board as well as being able to review usage and results – in short, when they too reach the promised land of multi-chromatic user experiences – enterprise mobility will have reached its pivotal moment.

Enter AMPchroma.

There will be 1 billion smartphone customers by 2016, with 257 million smartphones and 126 million tablets in the US alone. Of those worldwide billion mobile devices, Apple, Google and Microsoft will control some 90% of the market with their respective platforms. Business users will factor heavily into these numbers, with some 350M employees using smartphones.

– Forrester Research, 2012 (Mobile Is The New Face Of Engagement)



Driving the need for AMPchroma™

In a moment we'll look at exactly what AMPchroma is, but before we do that, it will be instructive to review the confluence of trends and technologies that have driven the need for a radically improved mobile 'wheel'.

THE RISE OF THE MOBILE WEB

Native app development (using Objective-C for iOS, or Java for Android, for example) is being de-emphasized. It is losing 'mind share' as the standards of web-based languages like HTML5, CSS, and JavaScript evolve to better accommodate mobile development. This shift has also been driven by programmers' widespread familiarity with these languages. Although there will always be a place for native development, it is already possible to see that web-based technologies will come to dominate; the preoccupation with the idea of apps as native-only has long since gone.

THE NEED FOR FLEXIBILITY

The pace of change in the business world, especially where digital assets are concerned, means that the majority of companies are now looking for mobility solutions with flexibility built-in. Native, hybrid, and web apps each involve different levels of complexity and carry different cost of ownership consequences. For example, native apps can do anything you want, but they are expensive to build and maintain. At the other end of the spectrum, pure web apps are suitable for lighter transaction applications, but they also typically have lower cost and resource requirements. What matters to business leaders and IT decision makers is having the flexibility to employ the appropriate app technology for their requirements.

EVERY CONTENT TYPE, EVERYWHERE

More and more of us are consuming content primarily through our mobile devices — using them as our 'window' onto the world. Crucially, apps are only one aspect of this tablet-supercharged trend, with office files, videos, images and other digital content required by mobile users on a minute-by-minute basis. And the complexity of meeting this need is further enhanced by the difficulty of delivering content to an ever-increasing array of device types in a multitude of shapes and sizes — especially as that content must be delivered in the most effective way possible.

CONTENT BOOM

The single biggest frustration for users and developers alike is in app discovery — how to get the right apps to the right user. Today, app stores from Apple and Google control the lion's share of app distribution. However, in the future, businesses are certain to want to stamp their own authority on the channel, meaning that users will be able to get their apps, as well as content, across a wide range of specialty mobile stores.

BRING-YOUR-OWN-DEVICE MOMENTUM

The consumerization of IT, or the bring-your-own-device (BYOD) phenomenon, has certainly changed the expectations of mobile users. At one time employees were happy being able to get

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The total global mobile applications market is expected to be worth US\$25 billion by 2015 out of which the Apple App Store will account for nearly 20.5% of the total revenues.

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– **MarketsandMarkets**, 2010 (World Mobile Applications Market 2010 – 2015)
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By 2013, more people in the world will access the Internet on a mobile device than on a PC.

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– **Gartner**, 2010 (Gartner's Top predictions 2010)
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15% of new mobile apps will be based on HTML5 by year's end (2012)

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– **IDC**, 2011 (Predictions 2012: Competing for 2020)
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email on their phones. Today, workers want and expect much more – in particular mobile apps and content to help them to be more productive and efficient. As a result, enterprises need to address the needs of various work groups—from information to task oriented workers – as well as everyone in between. IT can use mobile device management (MDM), which is an active management model, to control devices and policies, or mobile application management (MAM), a sub-category of MDM which provides a passive management model that allows users to download pre-approved apps. Regardless of the method, the demand from users is clear—they want to use their own mobile devices and they want all the help they can get.

UNIFYING ARCHITECTURES

With the economic uncertainty of the past few years, CIOs and department heads are struggling with tighter budgets and leaner resources. Accordingly, it is no longer feasible or desirable to meet the costs and demands of several one-off mobile projects on separate platforms, with different development teams and suppliers. Business leaders everywhere are looking to unify their mobile strategies. Whether aimed at employees or consumers or both and whether they utilize native, hybrid or web technologies, mobile deployments should be addressed by a single platform in order to reduce costs and complexity. Consolidation of technology not only includes mobile app development, but also other important mobile products that must be intertwined — such as device management, app store solutions, and analytics.

MOVING TO THE CLOUD

Spurred on by consumer applications of its power, businesses are finally showing signs that they are ready to adopt mobile cloud services and make the cloud their primary hosting local. For enterprises, relying on mobile backend services in the cloud enables faster time-to-market and greater scalability. They can take advantage of a specialized mobility infrastructure, which is constantly being enhanced rather than wait or pay to build their own. By doing so, they can reduce the TCO of core mobility requirements and pay only for what they use while taking advantage of a future-proof architecture that evolves with their business and the marketplace.

UNPRECEDENTED ANALYTICS

Mobility is providing a whole new level of insight into user behavior – one that will ultimately transform businesses. The convergence of real-time mobility and geo-location, coupled with context awareness and social sharing, is now enabling a deeper level of understanding regarding mobile device usage to drive more revenue and greater efficiencies. Never before has so much actionable and detailed data been available for businesses to analyze and harness.

MULTICHANNEL WORLD

At present, the number of contacts businesses make with consumers is at an all-time high and likely to keep climbing. In this environment, the most impactful campaigns are those which employ multiple, combined approaches. Businesses can use mobile apps, websites, SMS/MMS, videos, podcasts, and more to make contact. But the task is complicated once again by the vast array of devices that we use day in and day out to receive these contacts. Mobility is not just about reaching the user on the go; it's also about reaching the user wherever they happen to be. Unless a mobile platform can do this, it will be unable bring about a true revolution in the space.

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New technologies such as media tablets and advances in mobile will have a disruptive impact on many industries, requiring changes to existing processes and propelling business transformation.

– **Gartner**, 2012 (Top Industry Predicts 2012: Industries Face intensified Consumerization and Technology Disruption)

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Mobile computing, cloud services, social networking, and big data analytics technologies is growing at about 18% per year and is expected to account for at least 80% of IT spending growth by 2020. 80% of new commercial enterprise apps will be deployed on cloud platforms.

– **IDC**, 2011 (IDC Predictions 2012: Competing for 2020)



Introducing AMPchroma™

One unified mobile cloud platform that lets you manage the entire mobile lifecycle, from design and build through to analysis. It radically simplifies how businesses engage users with apps and content on any device to drive greater profits.

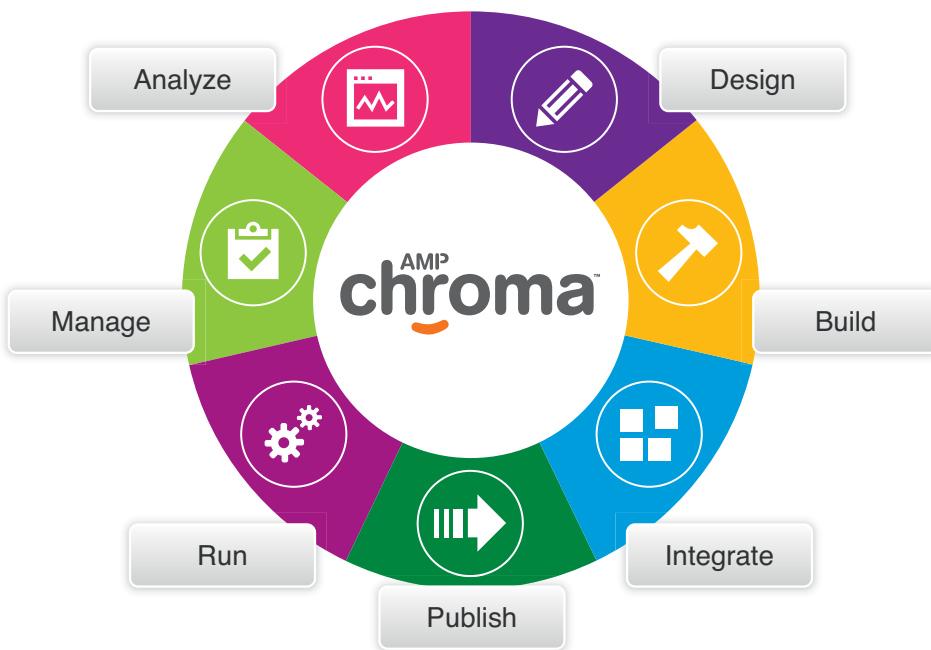
AMPchroma is Antenna's new mobile cloud platform that radically simplifies how businesses engage users with apps and content on any device to drive greater profits through the mobile channel. AMPchroma is modular and scalable; it can be used holistically for a cross-enterprise mobile strategy, or tactically by a business unit for targeted mobile apps and websites. All design, development, management, and analytics functionalities are presented as a suite of software modules accessible via a user-friendly web interface.

With AMPchroma powering your mobile connected world, you can easily create, publish and manage mobile apps and websites and connect them to a suite of powerful cloud-based services. These services include content management, integration with web feeds and enterprise systems, distribution through branded storefronts, management and control of devices, apps and content, and sophisticated real-time analytics. AMPchroma gives you the ability to control, measure, adapt and future-proof all of your mobile strategies for employees, partners, and customers in one place.

However, AMPchroma is more than just technology. AMPchroma—as the name implies—embodies the full spectrum of a virtuous mobility lifecycle: Design, Build, Integrate, Publish, Run, Manage and Analyze.

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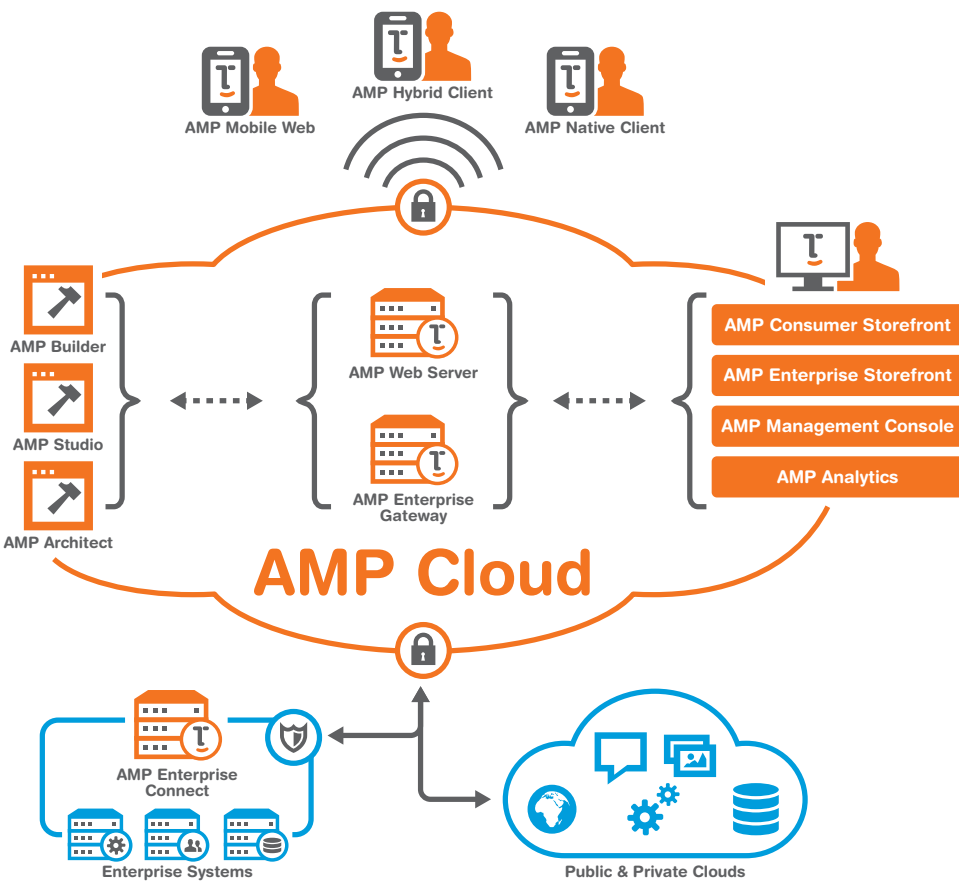
The Mobile Lifecycle



Mobility is about more than just one-off projects. To offer a truly differentiated and engaging mobile experience for internal or external audiences, you need to consider the full spectrum of what mobility has to offer, which is captured in the seven major phases of the mobility lifecycle. By adhering to the best practices of each phase, you ensure that your mobile strategy will offer users a highly optimized and branded experience, all controllable and measurable by the enterprise.

AMPchroma™ provides the overarching paradigm for achieving mobility excellence, and it is the only mobile cloud platform that enables you to deliver on this promise.

AMPchroma™ Mobile Cloud Suite



The Mobility Lifecycle and AMPchroma™

1. DESIGN

Designing for the mobile experience is quite different to designing for any other form of UI. There is the matter of smaller screen real estate, thousands of different device OS and browser combinations, capabilities unique to mobile (e.g., camera, GPS), and the issue of different UI controls and behaviors across devices.

In addition, mobile design expertise is not commonplace. Designers are still developing and refining their mobile development skills. The device landscape is still fragmented and the pace of innovation and change rapid, which further exacerbates the design challenge. Given that the attention span of mobile users is so short, driving adoption and achieving competitive differentiation relies on getting the design phase right, first time round.



AMPchroma™ Design

To jumpstart the design process, AMPchroma provides a wide range of pre-built, device-agnostic application templates. These templates are easily branded and configured by non-technical editors in AMP Builder and are fully customizable by developers using AMP development tools. In addition, Antenna offers expert services with specialization in the mobile user experience and user interface design.



2. BUILD

Because of device fragmentation, developing mobile apps and sites is the most resource intensive and costly part of the mobile lifecycle. Device fragmentation will continue, but the good news is that Web technologies are already playing a major role in decreasing development costs.

Apps that look and feel like native apps can be built using web technology, while mobile browsers are becoming powerful enough to handle more complex apps in terms of UI and transactions. Although web technologies can be used to build apps that meet the majority of use cases, natively coded apps will still be important because they offer the tightest level of integration with the target device hardware and the ability to leverage the latest device-specific capabilities and APIs.

Building is just the beginning of the lifecycle. Ongoing testing, plus site and app maintenance, needs to be effortless. New devices need to be easily and seamlessly supported and basic UI and content changes should require zero coding.

Moreover, apps and sites need to stand out from the competition. Whichever development approach you take, your apps need to leverage the best of each device platform. In a rapidly evolving space like this, relying on a trusted partner in the Build phase is becoming business critical.



AMPchroma™ Build

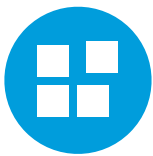
Some development tools claim a write-once-run-anywhere approach. However, these tools are often “Jack-of-all trades, and master of none”—leaving you with apps and sites that run across multiple devices, but that don’t look compelling on any single one of them. With AMPchroma, you have purpose-built tools to easily create rich content apps, complex business process automation apps, and every kind of app in between.

AMPchroma lets you choose your weapon: native, web or HTML5. Development can be done using a no-code WYSIWYG editor in AMP Builder or with the Eclipse-based tool, AMP Studio, using HTML with extensions. All apps are built to run across multiple device platforms and can leverage an extensive library of AMP UI controls, including some controls not native to a device (such as a unique 3D carousel control across iOS, Android and BlackBerry). Building on AMP provides you with the most powerful and flexible tools to do the job right.

3. INTEGRATION

Integration is often the phase that is given the least thought, and as a result requires more effort than expected. It could be that people expect mobile transactions to work just like the wired world. The truth is, wireless transactions are inherently not reliable. There are many potential points of failure from the backend through to the mobile device. Wireless connections are spotty and variable so data needs to be tracked for delivery. Additionally, compression and security are required for optimal performance.

Robust integration to enterprise backend systems and public or third party systems is critical. In particular, heterogeneous backends that require different (sometimes arcane) methods of interfacing pose complex integration challenges. Data synchronization and integrity must be built into the mobile architecture.



AMPchroma™ Integrate

AMPchroma allows you to plug into AMP cloud-based services for integration with any back-office systems, social media applications, location-based services, web services, RSS and Atom feeds, for dynamically updated and content-rich mobile apps and sites.

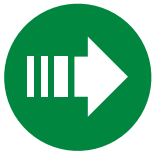
At the core of the AMPchroma cloud is our high-performance AMP Enterprise Gateway for carrier-grade security, transaction processing, and guaranteed message delivery. It enables data compression, store and forward data delivery, and message encryption in order to ensure guaranteed delivery of transactions and minimal latency over unpredictable wireless networks.

AMP Enterprise Connect is the component that directly interfaces with your systems to allow secure and reliable transactions to and from the gateway. This approach minimizes the impact on the host systems and enables optimized data flow from the backends.

4. PUBLISH

A new generation of workers is entering the workforce. They have grown up with SMS, MMS, mobile email and apps and they expect to easily get apps and content on their mobile device for work. You need to empower these workers, while at the same time mitigate the impact that rogue apps may have once downloaded. By offering an enterprise controlled mobile storefront, you can achieve both objectives.

Crucially, because app discovery is a huge challenge, private mobile storefronts can deliver your brand and content directly to your customers, giving you control of the consumer mobile experience beyond simply the apps themselves. Curate your own branded app store and provide access to apps and digital content. You can also enable targeted delivery and set-up subscription services to achieve greater intimacy with your consumers.

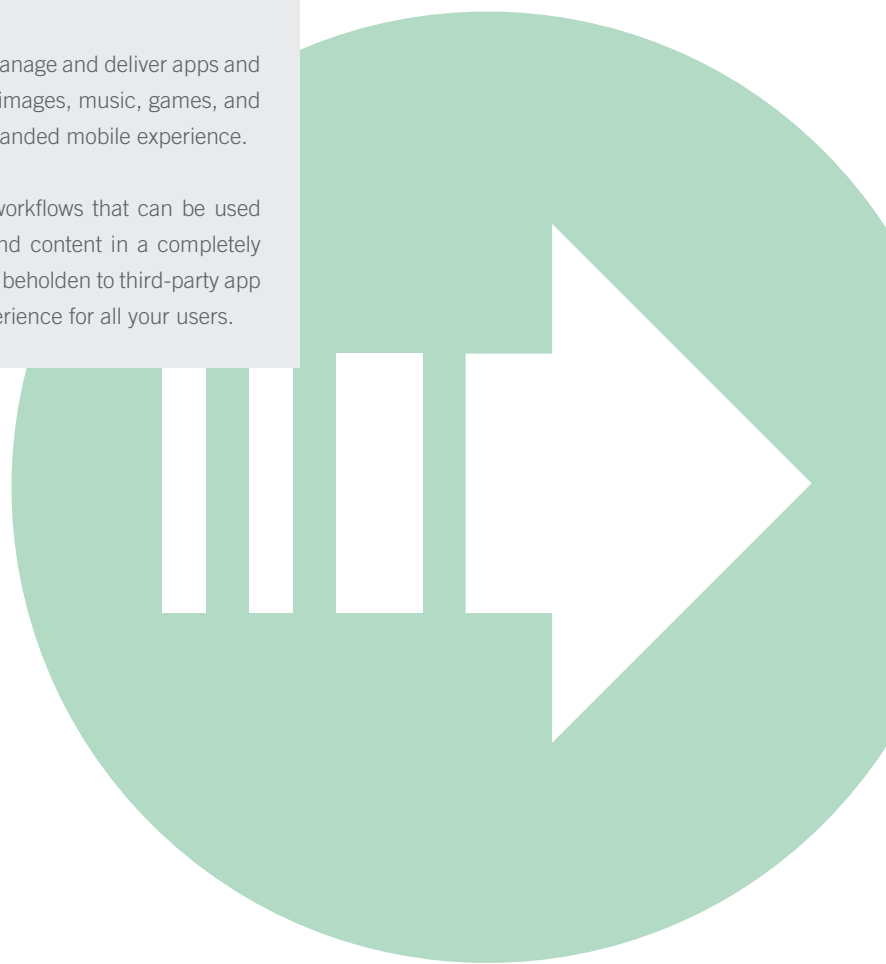


AMPchroma™ Publish

AMP Enterprise Storefront lets you create and manage branded enterprise app stores for employees to access certified native and web apps – whether your own or from a third party — and digital content such as training videos, sales collateral, podcasts, expense apps, company directories, and more.

AMP Consumer Storefront lets you upload, manage and deliver apps and other digital content — such as ads, videos, images, music, games, and more — to consumers through an entirely branded mobile experience.

AMP Storefronts have robust BPEL-based workflows that can be used to submit, approve and publish the apps and content in a completely enterprise controlled environment. No longer beholden to third-party app stores, you are the master of the mobile experience for all your users.



5. RUN

Running a truly compelling mobile experience means that it must be optimized for every single device. Users expect the best experience for their given device, rather than a 'least common denominator' approach. Device proliferation and fragmentation are the greatest challenges to optimized user experiences, but different mobile client approaches for different purposes can help maximize each experience. Whether web, hybrid or native, a well-considered approach that serves specific user requirements will deliver the best user experience, while minimizing costs and risks.

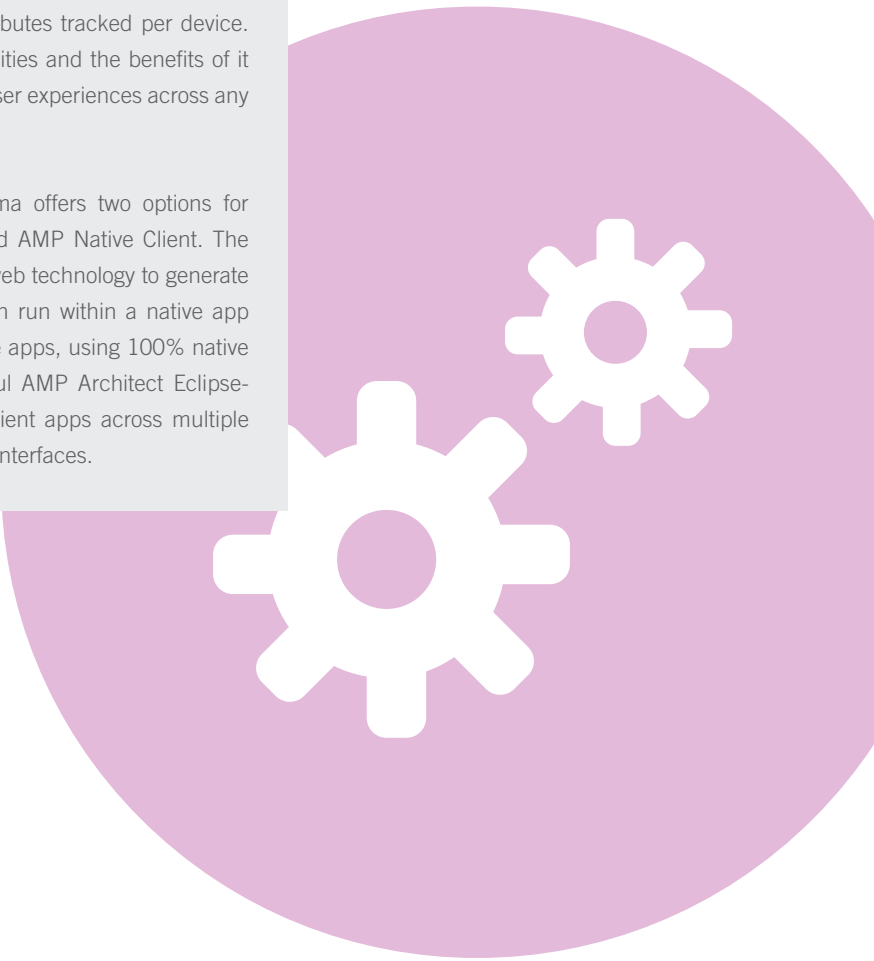


AMPchroma™ Run

AMPchroma lets you design, test, deploy, and maintain mobile apps and websites that look great on any device on the market today – whether that device is the oldest feature phone or the newest tablet or smartphone.

AMP Web Server is a highly scalable device-aware mobile web server, supporting devices from feature phones through to smart phones and tablets, even non-phone devices like IP-TV's and kiosks. Using patented technology, it supports thousands of transactions per second and has been implemented for deployments that count millions of users. Moreover, AMP Web Server houses a regularly updated device database of over 10,000 devices, with over 1,000 attributes tracked per device. AMP Web Server is unmatched in its capabilities and the benefits of it are superior performance and an optimized user experiences across any device.

In addition to mobile web apps, AMPchroma offers two options for device-resident apps: AMP Hybrid Client and AMP Native Client. The AMP Hybrid Client approach uses common web technology to generate a native app package or a web app that can run within a native app container. AMP Native Client apps are native apps, using 100% native code. These apps are built with the powerful AMP Architect Eclipse-based plug-in that generates AMP Native Client apps across multiple platforms and supports high-end native user interfaces.



6. MANAGE

Once a mobile app is deployed, the hard work begins. For internal apps designed for employees, you need to maintain control and visibility with a unified view across the entire mobile deployment. The ability to monitor and troubleshoot system issues is also imperative to help ensure maximum uptime. Administration tools should be easy to use and allow for role-based management by user groups.

Securing both corporate-issued and personal devices in the work environment is becoming a necessity. Employees are increasingly using their personal devices in the work place; as a result there is an increased risk of losing devices along with highly sensitive enterprise data. A comprehensive management policy should include remote management for over-the-air updates and administration.

Mobile apps and content are also proliferating. The solutions for keeping everything up-to-date is to centrally administer apps and content from a single source using workflow driven processes for review, approval and versioning.



AMPchroma™ Manage

The AMP Management Console is the central access point to administer the entire AMPchroma deployment. With the ability to set various levels of role-based administration, you can provide complete or targeted visibility of the processes relating to the enrollment and provisioning of apps, users and devices.

AMP Device Manager is the part of the AMP Management Console that provides mobile device management (MDM) capabilities to secure and control corporate-issued or personal devices in the work environment. And to manage content, there is the AMP Content Manager, a mobile content management system (CMS) built from the ground up and available if you choose not to integrate with your existing CMS.

On top of the technology, Antenna offers monitoring services that deliver proactive 24x7 monitoring of your mobile deployment along with expert troubleshooting of any app, device and network issues.



7. ANALYZE

Mobility offers unprecedented access to understanding user behavior. Not only can you get information in near real time, but you can also dissect the information based on the user's location, device profile and other opt-in information. This treasure trove of data can be used to increase business agility in sales and marketing programs, and to help drive overall business process improvements.



AMPchroma™ Analyze

AMP Analytics is a window into your mobile users' behavior: what's working and what's not, and provides overall monitoring of the mobile environment – all in real time. Working in combination with the other components of AMPchroma, it monitors and tracks transactions with a meta-data trail. By analyzing opt-in user geo-location and profile information and in-app usage—screen-by-screen and click-by-click—you can drive real-time business intelligence to enhance your context-aware marketing and business processes and workflows.



AMPchroma™ for Mobility Excellence

Apple's iPhone poured gas on a mobile bonfire and forever changed the business and technology landscape. It opened our eyes to a new way of conducting business and created new channels of growth. But it's not just about mobile devices; it's multi-channel (laptops, tablets, IPTV, M2M). It's not just about apps; it's videos, images, and other digital content. It's not just about native; it's web, hybrid, and all shades in between. Mobile is a colorful place, and smart businesses need an integrated suite of software that recognizes how they operate.

Antenna has been a leader in mobility since 1998, and AMPchroma is the culmination of all our expertise and technology innovation applied to this new world order. Unlike other mobile enterprise application platforms (MEAP) that are focused on one or two aspects of the full mobility spectrum, AMPchroma is the first and only MEAP to address the complete lifecycle of mobility and enable a foundation for strategic mobility across an entire organization—from C-level to business units to IT and developers.

No other vendor offers cloud-based app design, content delivery, publishing and management from a single, unified platform for greater visibility, measurement, and control throughout the lifecycle of all mobile initiatives. Only Antenna gives companies the ability to control, measure, adapt and future-proof all of their mobile strategies for employees, partners, and customers in one place. Whether for one or one hundred apps, AMPchroma delivers greater productivity, connectivity and engagement for happier customers, partners and employees.



Antenna provides the **most complete cloud-based enterprise mobility suite** in the market, enabling both IT pros and business executives alike to create and manage mobile apps, websites and content across the entire business.

AMPchroma™ gives Global 1000 companies the ability to create, control, measure, adapt and future-proof their mobile business strategies for employees, partners and customers in one place, increasing productivity, connectivity and engagement. Antenna's integrated suite of mobile services provides unparalleled creativity, control and visibility throughout the entire mobile value chain. Founded in 1998, Antenna is headquartered in Jersey City, N.J., with offices around the world.

**GET READY
TO DEPLOY
HAPPINESS**

Are you ready to take your mobility strategy to the next level?

To learn more about Antenna and our AMPchroma mobility suite, or other products and services: Visit www.antennasoftware.com | Call **+1 201 239 7980** (US) or **+44 1483 739 707** (EMEA APAC).