



Accelerated Mobile Pages (AMP)

Darvesh Raviraj Narsing¹, Date Ganesh Revji¹, Mayuri Dendge²
¹Student, ²Professor

Department of MCA, Bharati Vidyapeeth's Institute of Management & Information Technology
C. B. D. Belapur, Navi Mumbai, Maharashtra, India

ABSTRACT

Scope of this paper is to focus on Accelerated Mobile Pages a project brought by Google and its infinite possible use cases in this mobile-first era. In my paper, I have given emphasis on areas such as publishing articles, implementing news broadcast in storytelling format and Direct Email engagement via Accelerated Mobile Pages. As Accelerated Mobile Pages is an open source technology and it works on the browser it can be used by anyone on any device regardless of hardware and OS compatibilities.

Keywords: Accelerated Mobile Pages, AMP email, AMP for Word Press, Advertise, Publisher, AMP Stories.

I. INTRODUCTION

Web pages should be optimized for mobile users, but if the mobile browser pages aren't loading quickly, that will discourage users from fully appreciating our content.

To improve mobile web page performance, Google came up with Accelerated Mobile Pages, a new open source initiative. The Accelerated Mobile Pages (AMP) enables page rendering at an amazing pace and ensures improved content delivery. Thus, this open-source website publishing technology improves the performance of web content and advertisements.

II. What is amp

Announced on October 7, 2015, the AMP pages can be published on most of the existing browsers. A standard web page having an AMP counterpart has a link to the AMP page which is placed in an HTML tag in the source code of the standard page.

Most search engines and other referring websites choose to link to the AMP version of a webpage instead of the standard version, as AMP versions are easier to discover for web crawlers.

Three major components of AMP are:

1. AMP HTML which is a standard HTML with web components.
2. AMP JavaScript which maintains resource loading.
3. AMP caches which can deliver and validate AMP pages

Companies can support AMP caches. For now, most AMP pages are delivered by Google's AMP cache.

III. Amp working

1. AMP HTML :

AMP HTML is basically core HTML extended with custom AMP properties.

Though most tags in an AMP HTML page are regular HTML tags, some HTML tags are replaced with AMP-specific tags. These custom elements, called AMP HTML components, make common patterns easy to implement in a performant way.

2. AMP JS:

The AMP JS library ensures the fast rendering of AMP HTML pages.

The AMP JS library implements all of AMP's best performance practices manages resource loading and gives you the custom tags mentioned above, all to ensure a fast rendering of your page.

Among the biggest optimizations is the fact that it makes everything that comes from external resources asynchronous, so nothing in the page can block anything from rendering.

3. AMP Cache:

The Google AMP Cache can be used to serve cached AMP HTML pages.

The Google AMP Cache is a proxy-based content delivery network for delivering all valid AMP documents. It fetches AMP HTML pages, caches them, and improves page performance automatically. When using the Google AMP Cache, the document, all JS files, and all images load from the same origin that is using HTTP 2.0 for maximum efficiency.

The cache also comes with a built-in validation system which confirms that the page is guaranteed to work and that it doesn't depend on external resources. The validation system runs a series of assertions confirming the page's markup meets the AMP HTML specification.

Another version of the validator comes bundled with every AMP page. This version can log validation errors directly to the browser's console when the page is rendered, allowing you to see how complex changes in your code might impact performance and user experience.

IV. Accelerated mobile pages are beneficial for

1. Advertisers

Growth drop by 12% for each extra second that is appended to a webpage takes to load. If we want people to engage with our brand and improve the performance of our campaigns, we have to speed things up. AMP provides a way for us to give users a rapid experience everywhere -- on landing pages, ads or our entire website.

1.1 Keeping our audience bound with AMP pages:

Whenever our targeted users land on a page developed using AMP, they instantly get what they're looking for because AMP pages normally load in under one second. The ultimate result, they're more likely to be engaged with and responsive to our brand's directive, and more likely to take the actions we're guiding them towards like accomplishing a purchase.

1.2 Rise our campaign performance with AMP HTML ads:

Even the most catchy creative won't serve its purpose if the ad is slow and unruly for a user. AMPHTML ads are a new way of building ads, making them as fast as AMP pages to ensure our ads do what they're meant to do and deliver the value we're looking for.

1.3 Maximize ROI all over:

Building the landing pages, right ad or web content with all the available tools and techniques in the market, takes time. With AMP HTML ads, our ads can serve on both AMP and non-AMP pages, meaning we can build our AMPHTML ads once and deliver a memorable brand experience everywhere. Pages need to be built once with AMP and now they can be distributed across a wide variety of delivery platforms simultaneously.

2. E-commerce

2.1 Creating rapid, user-friendly e-commerce experiences:

Enabling our pages to load quickly with keeping our consumer engaged as they move through browse and purchase flows. Users may start their journey on our site or on platforms that link to pages built with AMP, they will find a consistently fast experience. A site mechanized by AMP is a truly mobile-friendly involvement that enables our consumers to stay hooked with our site.

2.2 Preserve control and flexibility:

With preservation of their own brand identity and assembly, E-commerce sites can still adopt AMP efficiently. AMP has more than 30 embedding and analytics integrations to take advantage of and more can be built with all this arsenal of AMP. we can use Cascading Style Sheets to customize our styling. For performing A/B testing to experiment or build the best possible user experience and fetching dynamic data or the latest data, respective AMP components can be used.

2.3 Sales Escalation:

By constructing AMP pages, we are able to take bring the speed of AMP to our intended users. With faster loading times than available techniques, many vendors see higher conversions and higher engagement. And it is a known fact that users are more happy to return to an e-commerce site that performs well.

AMP can help us make the business, whether we're a smaller store or a larger marketplace.

3. Advertise Tech Platforms with AMP

A regular mobile site takes 19 seconds to load over a 3G connection. Coupled with the fact that gain fall by almost 12% for every extra second appended to a webpage for loading, we can safely assume two things: pace equals performance, and most advertiser campaigns have room to enhance. That's where AMP comes in. As a Supply Side Platform, Demand Side Platform, Analytics Provider, or anything in between, embracing pace means improving campaign performance, delivering quality, user experiences and establishing yourself as the adtech platform for the fast web.

3.1 Maximizing Our Earnings:

Speeding up ads is the fastest way to boost performance. AMPHTML ads load as fast as content, so they are richer in users view and more likely to be engaged with.

4. Publishers:

Pages developed using AMP load near instantly enabling us to offer a consistently fast experience across all devices and platforms that link to AMP Pages including Bing, Google, LinkedIn and more. Web page speed improves the user experience and core business metrics. These performance gains often translate into improvements in the numbers that matter to publishers; such as time spent on page, return visits and CTRs.

V. Use cases of the amp

AMP is not some future technology which is still in the process of making but it's the present which people around the globe are using for their daily needs.

1. AMP Email:

Use of java script is strictly restricted in Email for security purposes, hence email users are not able to perform all their required actions in the email itself. Restrictions like this to protect the ecosystem of the web from various issues but also add limits to the infinite capabilities of email.

The feature, called AMP for Email, allows us to make emails more interactive and engaging in nature. Its beneficial to the users because developers can embed widgets in emails that are up-to-date and reflects real-

time information to the user and include actionable functions that work without leaving our inbox.

This feature will allow us to do things like browse and interact with email content natively, or fill out forms, respond interactively through a form without leaving the email client.

It would allow us to browse through images and click on them for the more detailed view of how we browse on the site but through the email itself.

As we are not leaving the email client to perform advanced actions, the round trip time that requires to jump on other intended web pages becomes zero.

During the research, I briefed the AMP email feature to Shubhangi Gupta, Account Strategist at 1702 DIGITAL which is a digital marketing agency in Mumbai and she was excited about the fact that, their targeted audience now don't have to go through the redirection process while interacting with email, which will boost their online campaigns.

There are infinite use cases which will ease the way in which we communicate through email.

2. AMP Stories :

A visual story telling format for the open web. AMP stories immerse readers in tappable, full-screen content. Building on the infinite possibilities of the AMP project, this format enables the creation of visual content that is fast, open, and user-first.

By expanding to visually fill readers' screens, AMP stories offer creative opportunities for storytelling, with flexibility in design. The tappable experience can be used to create engaging stories for users.

AMP stories will load as quickly as amp pages because they are built with the same technology used in AMP pages. Providing users with a smooth experience. AMP stories are part of the open web and can be shared and embedded across sites and apps without being confined to a single ecosystem.

As AMP Story is created in HTML format, hence a person with knowledge of HTML can easily create their own story and publish it on the web.

At morning's, going through important news is getting difficult as our routines are getting tighter day by day,

but AMP stories provide news in a more abstract and visually rich format with related background images and videos, which makes the process less time-consuming.

3. Offline Reading :

Viewing news articles can be a slow process full of constant interruptions for people from emerging markets like India, Nigeria, Indonesia, and Brazil, thanks to the limited data plans these markets offer.

But recently Google announced a new feature that will automatically download relevant news articles when connected to Wi-Fi, which should help cache articles for offline reading. It will be available for chrome on android.

This feature can be further boosted with pages built with AMP, because of the lightweight nature of AMP. This feature uses Google servers to route data for optimization purposes, coupled with the fact that AMP cache is core component of AMP, Offline consumption of resources is going to be practical for above-mentioned markets.

4. AMP for Wordpress :

Wordpress is designed for building websites, online stores, community sites. It is fully-integrated content management system, Online Marketing and E-commerce platform that gives their users space to fully concentrate on creating the websites, without having to manage multiple systems.

WP AMP is a WordPress plugin which adds support for Accelerated Mobile Pages (AMP). With this plugin, it takes just a couple of clicks to make our website go mobile friendly.

5. Progressive Web AMPS :

Progressive Web Apps deliver reliable performance for re-visits to sites with the use of Service Workers and the App Shell architecture. This technique allows sites to deliver rich experiences without worrying about networks.

For instant-loading, auto-upgrading experiences, all we need to do is combine the laser-sharp leanness of AMPs with the richness of progressive web apps.

Many Progressive Web App features can be used with AMP Pages, as long as they're served from our origin (our site's domain) as opposed to an AMP Cache such as google cache. This means that PWA features won't kick in when consuming an AMP Page within a platform like Google or Bing, but they will on the onward journey, or if users navigate to our AMP pages directly.

VI. CONCLUSION

In my master's thesis, I summarized some of the basic elements of Accelerated Mobile Pages technology with its real-life use cases for various areas. In assistance with 1702 Digital Company, I analyzed the needs of a Digital Advertising & Marketing Company and how AMP can uplift the business of such organizations drastically.

VII. References

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