



# Solution White Paper: Alef In-App Video Notifications

## Create Interactive, Intelligent and Immersive Notifications with the Software-Defined Mobile Edge

The communications and digital markets are under massive, synchronized transformations. Edge Internet is a distributed Internet architecture combined with a programmable paradigm where computing and connectivity are provided in close proximity to the point of consumption to meet the demands of current and future applications and services.

The synchronized transformations of the communications and digital markets are impacting every trillion-dollar industry in our economy. The next wave of mobile connectivity (5G and next gen wireless networks) and Edge computing is here bringing new applications and services the current infrastructure cannot handle.

“We are at the cusp of a seismic paradigm shift wherein computing and communications will move from a core network with a centralized cloud architecture to the Edge. The reasons are manifold but the basic premise is that in order to serve the data computing and communications demand of objects, sensors, people, resources, compute, and intelligence have to move to the Edge to not only operate in the most cost-effective way but to enable new use cases that can’t be supported by traditional cloud architectures.” – Chetan Sharma, Industry Analyst.

**The Edge Internet is a distributed overlay Internet architecture – public and private – with programmable Edge API’s, creating new computing and communications paradigms.**

With the rise of 5G and computing environments, AlefEdge is key to unleashing the convergence of networking and computing. AlefEdge’s Software-Defined Mobile Edge platform enables a new set of mobility, cloud and applications APIs that unleash Enterprises and application developers to leverage the full power of the Edge. By utilizing our unique APIs, Enterprises can deploy, orchestrate and manage Edge applications and services.

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## Alef In-App Video Notifications

Notifications and their content have become difficult to manage and consume, creating an overall poor user experience for consumers and employees.

Alef's In-App Video Notifications solution provides an easy-to-use video notification system allowing Enterprises to send rich content rapidly, without compromising performance. With Alef In-App Video Notifications, Enterprises can enhance their click through rate (CTR) with dynamic and rich content that plays seamlessly allowing Enterprises to focus on their campaigns and not the technology behind it.

## Industry Problems

With the rise of smartphone applications, wearable devices and IoT devices, notifications have become an important part of communications. We rely on notifications for alerts regarding information, updates and any issues or errors. With the rise of notifications, the content we consume must become as rich, interactive and intelligent as the rest of the ecosystem.

With performance and bandwidth constraints on the network, it is challenging to send rich media through notifications rapidly and efficiently. The start time for embedded video or graphic links is often too long. This leads to a decrease in KPIs, specifically video completion and click through rates. With enhanced rich media, Enterprises and advertisers want to take advantage of interactive campaigns to increase KPIs. Due to network constraints and lack of tools, interactive campaigns have become difficult to manage and send out. Interactive campaigns that include 360-degree images, GIFs, HD Images, Augmented and Virtual Reality create a more compelling campaign, but these interactive campaigns are difficult to manage and deliver. Furthermore, ending, pausing or restarting content in these notifications can create performance and quality issues for users.

Significant user experience issues exist for end users trying to consume content when there is buffering or delays in loading. With these interactive campaigns, Enterprises and advertisers are integrating intelligent features to further increase the click through rate and completion rate. These features include chat bots, affinity groups, locator systems, etc. and are difficult to manage per campaign. When these features work properly, the end user experience is much improved. When they break, they lead to a frustrated end user and a poor performing campaign. These tools require an open and rich delivery mechanism to make sure they are intelligent.

Rich Media Delivery  
Lags Behind

Interactive  
Campaigns are  
Difficult

Intelligent Features  
are not Intelligent

These issues have can all be addressed with Alef's In-App Video Notification services.

## Enterprise Problems

With Enterprises and advertisers creating ever richer content they are looking for solutions that can ease the delivery of such content to their employees, customers and partners. The implemented solutions must be open to create frictionless content delivery and easy campaign environment. Additionally, the management of the system must be intuitive and easy. Further they must integrate with existing Enterprise management and reporting systems. The management system needs to be frictionless for creating, deleting, pausing, editing and building campaigns. Without access to these tools, the management of the system is burdensome, and the campaign performs poorly. A good Dashboard and Analytics of the campaign's performance are important requirements for Enterprises. The industry is unfortunately filled with fraud and bots, and Enterprises and advertisers require reporting tools to make sure their campaign statistics are true and transparent.



By implementing the Alef In-App Video Notification solution, Enterprises can focus on their campaigns and content – instead of the technology behind the rich media notification service.

## Solution Deep Dive

Alef In-App Video Notifications enables Enterprises and advertisers to upload and run targeted campaigns based on preferences, behaviors, and attributes of the users. It ensures a seamless experience to the end users by analyzing their network and Internet speeds and adjusting content to match such analysis.

The solution requires Enterprise users to integrate Alef's SDK available for both iOS and Android with the Enterprise's mobile application. Once this is done, Video notifications run by the Enterprise can be easily delivered to and received by Employees, Customers and/or Partners. Some of the features delivered as APIs and available to Enterprises are:

- Secure login and Enterprise Onboarding
- Campaign Onboarding
- Fast Delivery from the Edge directly to the Enterprise Application
- Admin Dashboard with Reports
- Notification Service

- Transcoding
- API Management
- Service Monitoring

Alef's In-App Video Notifications solution creates an open and easily manageable environment for campaigns. With campaign dashboards that can be broken down by campaign, location, device type, etc., Enterprises and advertisers have a new level of granularity they can leverage to understand the performance and impact of their campaigns. With these dashboards, Enterprises and advertisers can manage the entire service easily through the portal. The solution comes with many features and capabilities which can be accessed through the Alef EdgeNet Portal. To make integration and use easier, the solution has been built with Open APIs making it easily interoperable with existing systems as well as making it easy for Enterprise developers to add new features/solutions to create further value and impact from Enterprise video campaigns. By enabling interactive and intelligent campaigns, Enterprises and advertisers can increase click through rates (CTR), drive calls to action and create heightened awareness on various matters of importance for their Employees.

We have seen Alef In-App Video Notifications being used in several different segments in a variety of ways:

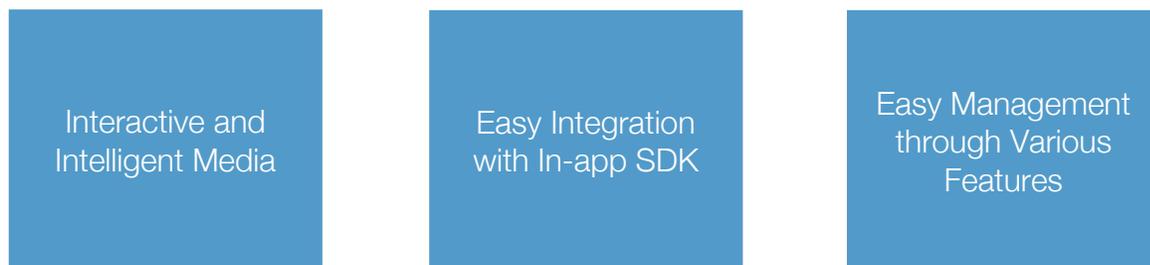
- Video Notifications
  - Building customer experience through an In-app notification with video snippets
  - Target segment – Media & Entertainment, Education, Financial
  - E.g.: A trailer of an upcoming movie or entertainment series can be sent out as a video directly In-App
- Virtual Reality and Augmented Reality Notifications
  - In-app notification for an immersive experience that has content from the physical world overlaid into a virtual environment
  - Target segment – Online Apparel, Online Furniture, Healthcare
  - E.g.: A fully furnished kitchen with the possibility of changing colors/patterns to give the look and feel of an actual kitchen, when fully setup
- 360 Degree/HD/GIF Images Notification
  - Images of real-world scenes where the view in every direction is captured at the same time. During viewing, the viewer has the control of the viewing direction
  - Target segment - Real Estate, Automotive
  - E.g.: Housing & commercial In-App notifications can include 360 degree images of exterior and interior/ sample furnished retail or commercial unit.

Once connected to the platform, end users have access to a host of capabilities:

- Immersive and Interactive Story telling – Eliminate boring text and image notifications and indulge in the world of UHD and AR/VR interactive advertising. Immersive notifications can generate much higher CTRs and improve brand perception.
- Big Data – The convergence of networking and computing enables the most comprehensive and real time data in the world. Alef securely layers this data with real time intelligence to provide highly accurate and relevant targeting for Enterprises to reach their Employees.
- Leaner Value Chain – Alef’s platform directly connects all involved parties programmatically, thereby increasing revenue share for Enterprises who decide to let Advertisers reach their Employees in locations such as Cafeterias and auditoriums.
- Ad-Fraud and Privacy Amplification - Edge processing provides a unique capability to mitigate Ad-Fraud and save millions of wasted dollars should the Enterprise allow advertisers into their system. It also ensures end users’ privacy is not compromised by using techniques like Tokenization, Data masking, obfuscation etc.

In summary, Alef’s In-App Video Notification service allows Enterprises to leverage the following capabilities to send powerful interactive video content directly to their employees: In-App Video Notifications has distinct set of product features which can be leveraged:

- Sponsored advertising and notifications
- Immersive story telling through 4K, AR, VR
- Enhanced real-time bidding for advertisers should Enterprises choose to admit any
- Affinity groups for long term communications
- Big Data creating Hyper Local Targeting with Privacy Amplification
- Leaner value chain for notifications and advertisements



### How it can help Enterprises

Alef’s In-App Video Notifications is an easy to deploy solution that will dramatically impact an Enterprise’s ability to create and deliver impactful messages for its employees and customers. By using Alef’s open and modular APIs bundled together, Enterprises can easily onboard content and create notifications.

We have seen in several deployments how Alef's In-App Video Notifications create benefits for Enterprises and content providers and advertisers. The Software-Defined Mobile Edge enabled In-App Video Notifications deliver content in an intelligent, immersive and interactive manner which leads to targeted campaigns with increased CTR. Some of the benefits of Alef's In-App Video Notifications are:

- Increased Click through Rate
- Increased Conversions
- Raised public and social awareness
- Rise in 25%, 50%, 75% and 100% Notification Completion Rate

Alef's actual network measurements show:

- 2.1x better HD resolution at 1080p and 1.7x better startup time (80 percentile) for Media & Entertainment applications;
- 12.6x better HD resolution at 1080p and 1.8x better startup time (80 percentile) for advertising applications;
- 2x better in PDF and 360 Degree HD Images throughput and 1.7 better download response times (80 percentile) for learning applications; and
- 1.4x better HD resolution at 1080p

### [How Enterprises can deploy](#)

Alef's In-App Video Notifications solutions can be easily deployed for Enterprises. Signing up, deploying and managing can be done through Alef's EdgeNet Portal. You can learn more the product and how to deploy the solution today by learning more in our Resources section.

For more information on any of the documentation, please contact us, use the search bar or contact your sales representative.