



Network
2020

Advanced Communications
The next generation of keeping in touch

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Advanced Communications

The next generation of keeping in touch

Today, we communicate more than ever before.

Trillions of SMS and instant messages, tens of trillions of minutes of voice calls, more sharing and connected interaction than we could ever have imagined. But we are faced with a growing and confusing number of communications tools and ways to stay in contact.

TRILLIONS OF MESSAGES
& TENS OF TRILLIONS
OF MINUTES



We use different applications, messaging clients and networks. Wouldn't it be great if we

could have all of our family, friends and work contacts all together in one place, already connected to us via our existing number, without the need to find out what app they use or what social network they are on?

How we can keep in touch – with Advanced Communications

Advanced Communications represents the next level of mobile messaging and calling, an upgrade on a global scale. It is a solution which takes traditional voice and SMS and enhances them with instant messaging, chat functionality, photo sharing, live video, video calling and file sharing across devices on any network and enables new, richer interaction experiences. And the best bit for consumers is all this new functionality will be embedded in new phones. And if for users who already have a phone, the next OS update takes care of it.



Approximately 47 global mobile operators are launching these services to a combined subscriber base representing 4.7 billion mobile users. Based on the GSMA's Rich Communication Service (RCS) specification, these services are already supported by more than 150 commercial devices. Advanced Communications services are set to be the dominant messaging platform around the world.

VOICE AND SMS HAS CHANGED

CALL MULTIPLE FRIENDS WITH GROUP CHAT

SAY WHY YOU ARE CALLING BEFORE THE CALL STARTS

SHARE PICTURES, LOCATION OR SWITCH TO VIDEO

ADVANCED COMMUNICATIONS WHAT IS IT?

It is the next evolution of how we talk, text, and see each other. Rich Communications Services, or RCS, has been around in the industry for some time, and Advanced Communications is the next iteration of RCS. This e-book focuses on the role Advanced Messaging can play in an operator's strategy for developing and implementing innovative services and most importantly, for generating new revenues.



What is the Universal Profile?

The Universal Profile (UP) specification has been **developed by the GSMA** to help simplify both product development and operator deployment of Advanced Communications and provide the scale needed to develop Messaging as a Platform (MaaP).

SEND VOICE
RECORDINGS

SHARE
LOCATION

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The **UP specification** deals with the network and embedded handset functionality. To achieve this, the GSMA has worked with operators globally and leading vendors developing a single UP specification Release 1, published November 2016, to build messaging services. It will include core features including capability discovery, chat, group chat, file transfer, audio messaging, video share, multi-device, enriched calling, location share and live sketching. Release 2 in Q2 2017 will build on this.

What does UP do for the end-user?



UP ensures a richer experience in a much more convenient way. From early in 2017, UP Advanced Messaging will be embedded in the Android OS from day one, just like voice and SMS are – along with all your contacts who already have your phone number – and just like voice and SMS, UP works no matter what network you are subscribed to. Customers with existing devices will get the UP client with their regular software upgrades or can download a client.

UP revolutionises what you can do with messaging and calling – on-demand. You can start a voice call with a pre-call priority setting, image or text message contextualising the call. You can introduce chat in the call. Or send a photo. Or upgrade the call to a video call. Or share maps or pictures and collaborate in real-time. You can even have rich interactions with shops, businesses and service providers that merge Advanced Messaging and artificial intelligence to allow you to interact with them through natural language. You have the control to ratchet all this up and down within a call or text. And the great thing is, every friend, family member, work contact and shop you can think of has a phone number. So you can interact with all of them right out of the gate without ever considering what OTT app they might use.



Advanced Communications: gathering momentum

Advanced Communications is happening now.

Today's generation of mobile users simply love their messaging and real-time communications services and have been empowered by the always-on, high-speed mobile broadband available to them.



So end-users have continued to lap up messaging applications and tools at unprecedented rates,

but they become ever-more siloed and fragmented as user bases. Over-the-top (OTT) messaging apps have each developed their own dedicated communities, but they are still islands in a large connected sea. Consumers may like their rich functionality but they remain limited and reliant on friend, family and work contacts all utilizing the same downloaded app.

This means that only mobile operators with IP network coverage are able to give end-users full continuity of coverage and a seamless user experience across multiple networks.

ORDER A TAXI

SHARE LOCATION

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The numbers stack up and demonstrate why evolving SMS to the next level makes sense for mobile network operators (MNOs). In 2015, the world's 6.7 billion SMS users were responsible for revenues of approximately \$15 million per hour, while 2.5 billion OTT messaging users were responsible for around \$3 million per hour. The following 12 months, however, present a potentially different picture; usage patterns change and SMS is forecast to be worth \$13.4 million per hour while OTT grows to \$5.2 million per hour. The global mobile operator industry can take advantage of this change in end-user habits.

Why is Advanced Messaging gathering momentum?

Advanced Messaging features are already popular with end-users. In research conducted by the GSMA, 89 percent of users say they believe it is unique and 79 percent say that it is relevant to them in today's world. In the US, the average user spends 23 minutes and 23 seconds per day¹ on Android messaging apps, and end-users now want services like pre-calling, instant messaging and real-time video all in one place. They want Advanced Messaging.

Currently, 47 of the world's largest mobile network operators have committed to supporting the GSMA UP spec, covering a subscriber base of 4.7 billion active users. Ten of the world's largest handset manufacturers have also committed to UP.

THE AVERAGE USER SPENDS
23 MINUTES & 23 SECONDS
A DAY ON  MESSAGING APPS



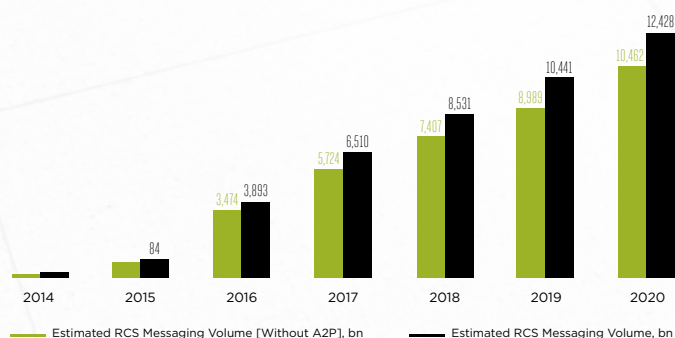
ADVANCED COMMUNICATIONS:
THE NEXT GENERATION OF KEEPING IN TOUCH



The opportunity

MNOs have a big opportunity. Traditional SMS volumes are in decline and new revenues can be made by leveraging the reach of SMS and giving users richer communications services. These services include verification of sending the message, read receipts including time, date and location of when message were read, embedded apps and video, direct call-back and more. MNOs can market all these as advantages and position themselves as of greater value to brands and advertisers for promotional messages.

Estimated RCS Messaging Volume, 2014 - 2020



80% OF **GENERATION Y** USE **TWO** OR MORE DEVICES WHILE **WATCHING TV**



One of the main reasons Advanced Messaging represents such an opportunity for MNOs is the way

in which end-users are connected. Messaging has changed and grown in so many ways, but the biggest 'app' in the world is still SMS. Every OTT chat app offers a rich experience to users via their mobiles or computers, but not everyone uses every OTT app so there will always be a disconnect. People still have to download the same OTT apps that their various groups of friends use and remember which friends are on which app.

With Advanced Messaging, this disconnect does not exist because everyone has a mobile number. It is already in place, you just 'call' or 'message' the person to whom you are already connected. Advanced Messaging seamlessly integrates with existing voice and SMS so messages are always delivered. With Advance Messaging, MNOs retain their SMS subscriber base. They can be easily migrated to the MNO's Advanced Messaging app.

This fragmentation of apps by type and by market is where the big opportunity exists for MNOs. At the moment the migration from SMS to OTT apps is steady, but at some point the shift risks becoming too large and it will be too late. So while MNOs retain the vast majority of that global user base via SMS, the key is to move now or risk missing out.

Engaging with Generation Y

Y **Generation Y** refers to those born after 1990 and they represent the most technologically demanding generation so far. Their expectations are that they can and will interact digitally at all times with all their friends and they are also of a mobile-first mindset. It is also important for MNOs to remember that while Generation Y are the consumers of today, they are also the business leaders of tomorrow.

80 per cent of Generation Y consumers use two or more devices while simultaneously watching TV². One-third exchange videos on their phones. Half of teenagers send 50 or more text messages per day. Mobile operators must plan strategically for how they intend to engage with this user base.



The possibilities

One of the key drivers behind the rise in richer messaging apps is the greater functionality they give to users, currently far above the limitations of SMS. Rich messaging apps continue to evolve to give users more enhanced services, so MNOs should embrace Advanced Messaging now.



MNOs with their vast SMS user base have a head start. They also have a key role in handset sales and distribution. They have the 'clean slate' possibility to introduce a messaging app that delivers all the similar features as OTT apps but that

has the benefit of being ubiquitous, eliminating the question of what app to use to contact someone. Operator apps are also secure and remove the twin irritations of unsolicited ads and data analysis and sharing without knowledge that end-users regularly cite as frustrations.

HOW MNOS CAN DRIVE NEW SERVICES AND BUSINESS

Advanced Messaging can help businesses engage differently with customers.



Premium messaging services – such as those used by TV shows for voting



Enable users to communicate easily with businesses in natural language and without apps



Receive highly targeted and relevant advertising and promotions



Pay for goods and services



Branded and sponsored stickers can be given away to customers around events and campaigns to engage users and create new business



How the end-user benefits

End-users benefit in numerous ways from Advanced Messaging. Operators need to focus on these to upsell customers.

MAKING COMMERCE
A CONVERSATION

FIND A RESTAURANT

BOOK A TABLE

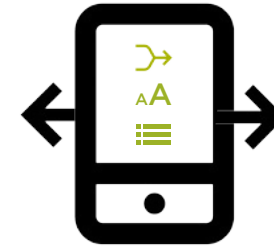
ORDER A TAXI

BOOK A HOTEL

CHECK THE WEATHER

PAY FOR IT

- 01 SWITCH FROM VOICE TO VIDEO CALLS
- 02 SKETCH COLLABORATIVELY
- 03 INSTANT MESSAGE / CHAT TO A GROUP / INDIVIDUAL
- 04 FOLLOW UP MESSAGE AFTER CALL
- 05 SEND MESSAGES BEFORE CALLS
- 06 SHARE PHOTOS AND FILES DURING A CALL
- 07 SHARE LOCATION
- 08 MAKE HD VOICE CALLS



SHARE CONTACTS AND YOUR LOCATION
Stay connected to friends by sharing where you are and by passing on your numbers

CHANGE THE WAY IT LOOKS
Personalise the app by changing the background colour and size

ORGANISE YOUR SOCIAL LIFE
Make plans with a single group chat

- **Ubiquity:** one, universal messaging app embedded in their phone OS that lets them contact anybody anywhere
- **Simplicity:** no app download, no checking which apps friends and family use
- **Everyone is invited:** Advanced Messaging is immediately available on Android and Microsoft devices and will extend to others in time – making it available to billions of users
- **All the features:** richer communications experience including pre-calling, instant messaging, live video and real-time photo or file sharing services, all within existing phone subscription package
- **Enhanced messaging experience** with plug-ins for memes, emojis, stickers, animated clips and more

WHAT IS 'MESSAGING AS A PLATFORM (MAAP)?

To most users messaging is just an 'app' – a program on their phones they use to keep in touch. Advanced Messaging will change that though – messaging is now becoming a 'platform' on which applications will be built to deliver whole new levels of interaction and experience. It is where SMS is headed.

End-users simply want all the services they need as quickly and conveniently as possible, and MaaP lets operators deliver that. If you want to book a taxi, a flight or look up train times for example, you will not need to download a specific new app – just hit your messenger. MaaP removes that barrier of another app to download and connects suppliers directly to consumers.

Messaging as a Platform will give operators all new possibilities for developing and implementing innovative services, and most importantly, for generating new revenues.



Making the most of your audience

MNOs start from the perfect position when planning and implementing an Advanced Messaging strategy: they already have the customers and end-users in place. The current base of active SMS users around the world are potentially ripe for migrating over to Advanced Messaging, but what should operators look to include in their strategy? How do you make it as simple and painless as possible to get all those end-users using Advanced Messaging?

01

Think in a straight line. Operators do not need to over-complicate the issue and should target end-users in the most straightforward way possible. Advanced Messaging is an evolution of a service that users already know and love. It is simply the next generation of it, albeit with great new features and functionality. Emphasise that existing users do not need to do anything to enjoy a whole new world of enhanced messaging.

02

Leverage your smarts. MNOs start with an inherent advantage as they can install their own Advanced Messaging app on devices as the default messaging client and have a level of control that OTT providers do not. And always remind end-users that Advanced Messaging with their MNO means no third-party downloads.

03

Delight your customers. Utilise the ability to upgrade Advanced Messaging clients frequently via app stores to introduce new features like memes, expression, stickers, in-app games and more on a regular basis.

04

Make it a platform. Use natural language programming and partner with AI and chatbot providers to make messaging not just the main application that customers use, but eventually, the only thing they use for mobile commerce, internet search and many other experiences.



CALL A LOVED ONE

SWITCH TO LIVE VIDEO AND SHARE AN EXPERIENCE



The potential for Messaging as a Platform

One of the more striking developments of messaging in recent times has been the evolution of messaging apps and clients into the 'new home page'. End-users pick up their mobile devices in the morning and the first place many head to is their chat or messaging app. It has now become both their inbox and their home page. This is an evolution that operators can use to develop Messaging as a Platform propositions.



This new user model means that messaging will become the 'platform' on which future applications will be built and over which operators can deliver all-new services, home to commercial interactions, searches and more, under the new umbrella term of 'conversational commerce'.

Messaging as a Platform empowers mobile operators as never before. It enables Application-to-Person (A2P) services, the next generation messaging tools which let organisations engage directly with end-users via alerts and notifications, marketing and more – all within the messaging app. This enables all sorts of companies to interact with customers in unprecedented ways – travellers, for example, could receive

their actual electronic boarding pass securely from airlines rather than receiving an SMS with a link. When on holiday users can order a taxi or Uber, check the weather at their destination and the exchange rate, find a recommended restaurant and book a table and pay for it and learn some handy phrases in another language – all just by sending messages.

Further to this progression in customer service and fulfilment, marketers too benefit from Advanced Messaging. They can use read receipts to tell if end-users have read promotional messages and where and when they read them. They can embed call-to-action codes in them, giving access to previously unavailable data to analyse. It all adds up to richer, more engaging advertising content.



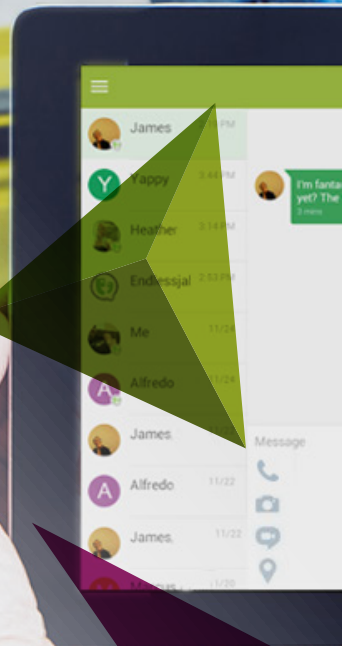
New services, new uses

Furthermore, Advanced Messaging also enables Bot-to-Person interactions, where end-user engagements are simply richer and more detailed. The Messaging as a Platform approach and its exponentially increased degree of interaction makes huge new monetization opportunities available to MNOs.



The workplace can benefit too, with Messaging as a Platform presenting companies with the possibility of a ubiquitous, secure, rich communications platform that integrates seamlessly with their existing office messaging systems.

Operators can extend their blue sky thinking with Messaging as a Platform; why not a smart, Wi-Fi-enabled video doorbell which uses messaging to record a video message from a visitor when you are not home and 'chat' it direct to your mobile device? Built-in AI-based intelligent assistants are great in their place but some people do not like talking out loud to their phone in public places – chatbots can enable that same function via a messaging platform.





Advanced Messaging: accelerating in the market

The **new features** and **greater interactivity** as to how we talk, text, and see each other are seeing a **surge forward** in the marketplace. The enriched features that consumers can enjoy mean a more immersive experience and a chance to tie them to operators as more loyal users than ever.

In-call features like live video sharing, image sharing, sharing any size or format of file, location-based information and group chat capability, all on top of basic chat functionality. Interactive in-call features like the ability to share sketched images in real-time or share sketched maps add value. Previously unavailable post-call functions like adding text notes or voice messages to missed call notifications give users a 'one-stop shop' method of engaging with their friends and family.

The Universal Profile makes this acceleration and take-up by end-users a much simpler exercise for operators, simplifying the evolution of SMS and voice. It opens up that whole new realm of revenue possibilities but operators must think forward, accelerate their messaging strategies now or risk missing out on those new revenues.

 **OPERATORS MUST THINK
AHEAD →**



Maximising a fragmented market



This too is key – MNOs have a subscriber base which uses multiple messaging services and apps but who typically have only one phone number. The majority of the world has signed up to the mobile network operator community whereas they have not signed up to any one particular OTT app.



Advanced Messaging deployment models: getting it right

Another key benefit of Advanced Messaging is that deployment models can be mixtures of various approaches; operators do not need to commit entirely to a single method and limit their options. For example, Deutsche Telekom is one operator that has already introduced a successful mixed deployment comprising in-house instant messaging services and hosted tools for other geographical locations.



OWN IMS



HOSTED SERVICE

PROS

- 01 Retain control of core service
- 02 Flexibility and ability to integrate with other services

CONS

- 01 Complex project, requires expertise
- 02 Costly in the short term, CAPEX

- 01 Pay-as-you-grow model
- 02 Fast deployment and time to market
- 03 Benefit from third-party data centre infrastructure and expertise
- 04 Scope for complementing other services e.g. VoLTE

- 01 Limited service flexibility
- 02 No in-premises deployment option

SHARE FILES
ON THE MOVE

Why should your end-users adopt operator Advanced Messaging instead of OTT apps?



An operator messenger service has the key advantage of already having all users registered on its network. OTT apps can only work if a user downloads an app, and they cannot interoperate with other apps. An operator messenger arrives embedded directly into the OS from the mobile provider.



End-users like and value simplicity. They will migrate to operator Advanced Messaging services because everybody they know is already there – their friends, their family, and even people they have yet to meet.



The GSMA support

As data network speeds increase, smartphone prices tumble, penetration soars and OTT messaging apps proliferate, the mobile industry cannot afford to wait with Advanced Messaging. To exploit the existing user base and reap the benefits, the industry must move more quickly than it has historically with SMS, which took a number of years to bring to a consistent global standard. It is vital that operators introduce Advanced Messaging offerings which are entirely reliable across networks and devices to differentiate themselves against the many OTT apps available.



The GSMA has worked with mobile operators from around the world to establish a consistent set of principles on how best to implement Advanced Messaging, principles that have been broken down into the technical specifications that form the Universal Profile. UP Release 1 will be available to operators in November 2016 with the second release, incorporating many new features, to be launched in Q2 2017.



The GSMA has a mission to help Advanced Messaging progress as quickly as possible, rather than be restrained by a rigid and time-consuming release schedule. Each release will be backwards-compatible, ensuring the advanced messaging apps can interact with earlier back-end and handset software. The Universal Profile is a key building block in the construction of an Advanced Messaging proposition that delivers reliability and reach without being rigid.



By delivering economies of scale and interoperability, the Universal Profile will ensure mobile operators remain at the heart of the communications experience. It is the next generation of messaging and it is the right time to do it. Over 500 networks, billions of users from the existing SMS community, Android and other OS users to engage with. Everything is in place.

ADD A VOICE MESSAGE TO
A MISSED CALL NOTIFICATION



To find out more about the GSMA and UP:

<http://www.gsma.com/network2020/universal-profile/>



To find out more:

<http://www.gsma.com/network2020/ip-services/>

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