RCS Business Messaging in Japan

December 2019

About the GSMA

The GSMA represents the interests of mobile operators worldwide, uniting more than 750 operators with almost 400 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces the industry-leading MWC events held annually in Barcelona, Los Angeles and Shanghai, as well as the Mobile 360 Series of regional conferences.

For more information, please visit the GSMA corporate website at www.gsma.com. Follow the GSMA on Twitter: @GSMA.

Contributors

KDDI

KDDI, a Fortune Global 500 company and one of Asia's largest telecommunications providers, has a proven global track record of high quality service delivery. We provide a multitude of services, including mobile phone services, fixed-line communication, and data centers, thus making us the optimum one-stop solution provider for everything telecommunications and IT environment related.

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NTT DOCOMO

NTT DOCOMO, Japan's leading mobile operator with over 78 million subscriptions, is one of the world's foremost contributors to 3G, 4G and 5G mobile network technologies. Beyond core communications services, DOCOMO is challenging new frontiers in collaboration with a growing number of entities ("+d" partners), creating exciting and convenient value-added services that change the way people live and work. Under a medium-term plan toward 2020 and beyond, DOCOMO is pioneering a leading-edge 5G network to facilitate innovative services that will amaze and inspire customers beyond their expectations. DOCOMO is listed on the Tokyo Stock Exchange (9437).

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Synchronoss

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Executive Summary

Known in Japan as +Message, RCS enables people to send a wide variety of messages, including group chat, photos, videos, stickers and read-receipts, using just the recipients' phone number. Secure, private and easy-to-use, RCS can be used by customers of all of Japan's major mobile operators – KDDI Corp., NTT DOCOMO Inc. and SoftBank Corp.

The rich interactivity made possible by +Message means that consumers in Japan will no longer need to download a specific app to interact with a specific brand. Instead, they will be able to communicate directly with a range of brands and services from within the messaging app itself, allowing them to engage with virtual assistants to book flights, buy clothes, make restaurant reservations and more. Consumers can also use +Message to share their location with a merchant or brand. For businesses, RCS also supports chatbots and artificial intelligence to answer queries and exchange messages, as well as customer analytics.

Differentiating between registered and non-registered senders, the +Message service is designed to be consumer-centric and spam-free. Japan's operators intend +Message to be person-to-application led, placing the onus on the consumer to search and discover brands and businesses, rather than be subjected to unsolicited messages. This approach will keep consumers fully in control and engaged.

As it is delivered by telecoms operators, which are widely-trusted in Japan, +Message meets the latent demand for a secure and private way for consumers and businesses to communicate with each other. The Japanese operators offer an "official account" service for brands and chat bots: A green tick indicates these official accounts have been verified, thereby providing consumers with a secure and trusted proposition.

KDDI, NTT DOCOMO and SoftBank are pre-loading the +Message application, which has a standardised user interface, on to new Android devices. They also offer a downloadable client for smartphones running both Android and Apple's iOS. By November 2019, 19 months after launch, +Message had 13 million users in Japan and that figure is likely to rise to 17.5 million by the end of 2020, according to specialist research firm Mobilesquared. All three operators have since launched full RCS Business Messaging (RBM). KDDI is finding that consumers open more than 85% of RCS business messages they receive, while the click through rate from a RCS message is more than 40% higher than with SMS/e-mail.

The success of +Message is being closely followed in the global telecoms industry. "A great example of the new wave of trusted messaging services being rolled out collaboratively by operators around the world, +Message points to how digital commerce is evolving to become even more convenient and compelling for individuals and merchants alike," says Henry Calvert, Head of Future Networks at the GSMA.

Japan's mobile operators, which are increasingly using +Message to interact with their own customers, say that financial services, transport and media companies are particularly interested in the new service, as it provides a secure and trusted communications channel. "Financial firms have a strong interest in sending important notifications and procedures via RCS," explains Hideyuki Koto, Senior Manager at KDDI. "The regulations in Japan require, thus guarantee, that SIM subscribers are authorised through Government-issued IDs, such as a driver's license, which is advantageous for those use cases that require security." Indeed, KDDI itself is now using +Message to send important notifications to customers of its own financial services, which include its au Wallet credit card offerings.

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Introduction

A primer on the rollout of RCS Business Messaging in Japan, this paper complements the GSMA RCS Business Messaging Awareness Lab hosted by the GSMA's Future Networking programme in Tokyo on 5th December, 2019.

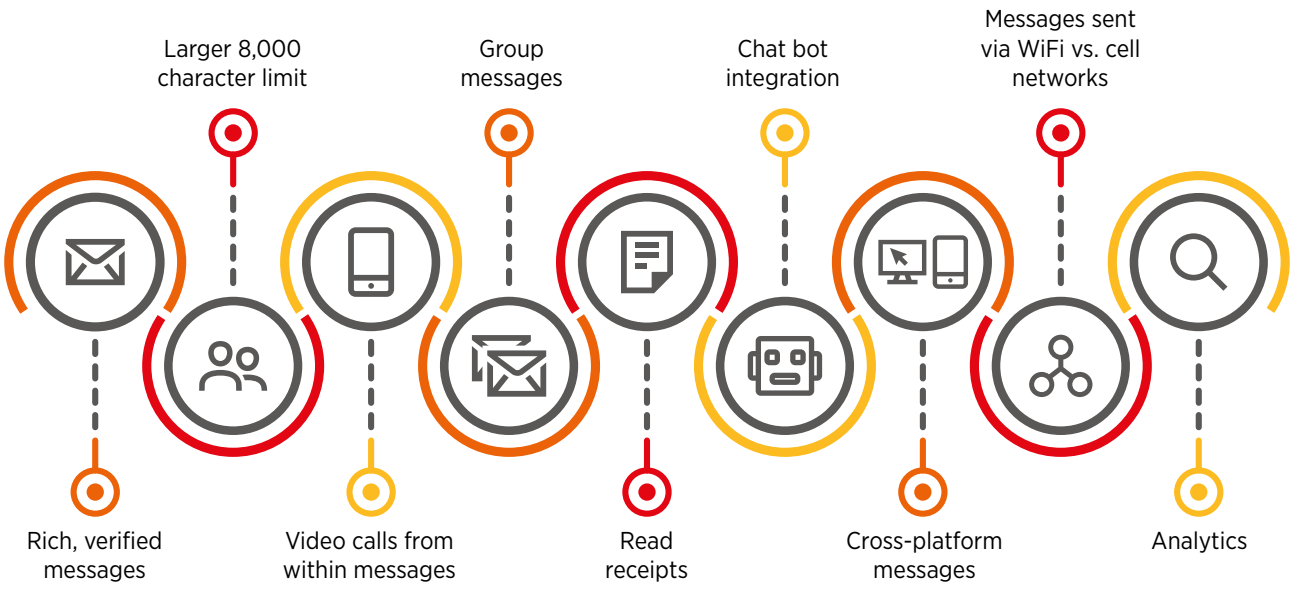
In Japan, RCS (Rich Communication Services) is known as +Message and is available to customers of all three of the major mobile operators. As with SMS, sending a +Message only requires the recipient's phone number, known in the cellular industry as the MSISDN or mobile station international subscriber directory number. The evolution of mobile messaging, RCS Business Messaging expands and improves the ways in which people and businesses communicate. For businesses, RCS upgrades SMS to support branding, rich media, interactivity and analytics. It also enables brands to increase their engagement with customers by employing chat bots (specialised software for automating customer care), underpinned by artificial intelligence, to answer queries and exchange messages. Simple and straightforward for users to adopt, RCS also supports enhanced peer-to-peer (P2P) messaging services, such as chat, group chat and file share, amongst many other features.

The rich interactivity made possible by RCS means consumers no longer need to download a specific app to interact with a specific brand. Instead, the user can gain direct access to a range of brands and services from within the messaging app itself, allowing them to engage with virtual assistants to book flights, buy clothes, make restaurant reservations and more.

For mobile operators, RCS Business Messaging is an opportunity to reshape and revitalise their messaging services and play a central role in the future of IP-based messaging. With RCS, operators can offer their customers new capabilities and share in the revenue generated by new business paradigms, such as artificial intelligence, chat bots and in-chat search.

Although WhatsApp, LINE and some other social/chat applications are widely used for P2P messaging, SMS is still by far the strongest channel for business-to-consumer communications in the world. As RCS greatly enhances the functionality provided by SMS (see graphic), it enables brands to run highly-engaging and interactive marketing campaigns. It also makes it straightforward for businesses to enter into one-to-one conversations with customers, encompassing everything from advice to sales after-care.

RCS Versus SMS: Features that come with RCS that aren't offered by SMS



Source: Comviva

Moreover, RCS enables marketers to see how messages are performing with real-time data on user actions and behaviour along the customer journey. As businesses around the world adopt this new marketing medium, RCS services are set to generate US$74 billion in revenue by 2021, according to GSMA Intelligence.

In summary, RCS is a new secure and trusted delivery channel that enables enterprises to:

- Send branded messages and conversations
- Share rich media content: such as images, videos or PDF documents
- Drive engagement with suggested replies and actions
- Track message delivery
- Use powerful reporting and analytics to optimize future messages

RCS Business Messaging Labs

The GSMA RCS Business Messaging Labs bring together stakeholders in the messaging industry to discuss the operational and commercial requirements to enable RCS to become an industry-leading business messaging platform, underpinned by an open global ecosystem.

Participants in the GSMA RCS Business Messaging Labs can contribute to the future of business messaging in many ways, from designing the customer experience to informing the GSMA standards. Networking is a major part of the Lab series, and individuals have gone on to work with important connections made at the Labs.

Aimed at companies that are new to RCS, the Awareness Lab in Tokyo was designed to provide individuals with an understanding of the service, the GSMA's Universal Profile, the RCS ecosystem (operators, brands, technology companies and marketing companies), RCS global deployment, handset adoption, customer experience, brand trials, commercial models, privacy, security and trust.

The global traction of RCS

Worldwide, there are almost 353 million monthly active users of RCS, according to the GSMA. Specialist analyst firm Mobilesquared predicts the global user base will rise by an average of 64 million per month in the 18 months to the end of 2020. That would mean 1.5 billion people are using RCS by the end of next year.

More than 84 mobile operators globally and 20 international phone manufacturers support RCS. Furthermore, 80 per cent of Android smartphones already support or can support RCS based on the GSMA's Universal Profile (UP), which ensures an open, consistent and global messaging service across networks and devices. The UP simplifies interoperability and enables device makers and operating system providers to achieve scale and give consumers a richer and more consistent messaging experience regardless of the device or network they are using. UP 2.0 upgrades the service further by enabling application-to-person RCS Business Messaging. Many device manufacturers are making the Android Messages application, which fully supports the UP, their default messaging app.

In the enterprise market, early adopters include telecom, banking/financial, travel and logistics, social and entertainment, consumer brands, among many more. In Japan, for example, telecoms operator KDDI is using RCS to distribute coupons for its Wowma! e-commerce store. It has found that 75% of RCS subscribers use the coupons to buy products from the store.

In Mexico, home improvement retailer Club Comex has run more than 10 RCS Business Messaging campaigns, promoting offers for products and discounts via a carousel. The campaigns have boosted engagement and driven sales: Club Comex says the RCS campaigns generated a 115% increase in revenue and a ten-fold increase in click-through rates, compared to previous campaigns. Similarly, Mexican furniture retailer Gaia celebrated its fifth anniversary with a big RCS campaign involving product discounts and a video overview of the company history. The click-through rate for the campaign was three times higher than that achieved via email communications.

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RCS in Japan

Japan's three major mobile network operators - KDDI Corp., NTT DOCOMO Inc. and SoftBank Corp. – made their SMS services interoperable in 2011. Although their customers could then send text messages to any phone number, the cross-network delivery of photos and video (MMS) wasn't supported by all the operators, due to difficulties in aligning MMS into a single service.

To increase their user base and customer satisfaction, KDDI, NTT DOCOMO and SoftBank took the decision to upgrade to RCS in 2017. Aiming to enhance the convenience and relevance of their services, the three operators wanted RCS to at least match the functionality and user experience offered by Internet-based services, such as LINE and Facebook Messenger, while maintaining the safety, security and universality of SMS. They decided to work together to source a RCS system based on unified specifications, which they then implemented in parallel and launched simultaneously in May 2018. As a result, Japan became the first country in the world in which all the major mobile network operators offered RCS. Moreover, all three operators connected directly with each other's networks to enable full interoperability from the moment of launch.

A consistent cross-network approach

The operators in Japan are each hosting their own back-end platform. But the core RCS software for all three of these platforms is supplied by Synchronoss Technologies and WIT Software, thereby ensuring a consistent implementation and interoperability from launch – a model that is now being emulated by the leading telcos in the U.S.[1]. A consistent cross-network approach enables brands to use RCS to reach all of their customers, rather than just a subset that use a particular mobile network.

As well as using the GSMA's RCS standards to unify the specifications, the operators in Japan have adopted a common service name (+Message). As Synchronoss and WIT Software provide the core RCS software for the +Message app for all three operators in Japan, users experience precisely the same interface and features, regardless of which network they are connected to. The rationale was that the use of a consistent service name would be simple and easy to understand for consumers, while the adoption of consistent service features ensures RCS is predictable and reliable for both consumer and business users.

The Japanese operators pre-load the +Message application, which has a standardised user interface, on to the new Android devices they distribute. They also offer a downloadable client, which is available through app stores serving smartphones running both Android and Apple's iOS. Apple iPhones account for 64% of the mobile devices in use in Japan, according to Statcounter, which tracks the devices that visit web pages.

The +Message service differentiates between registered and non-registered senders, and it allows users to see whether their contacts are RCS-capable. Moreover, +Message supports rich messages, the sharing of photos, videos and stickers, read receipts and location sharing.

[1] Sprint, AT&T, Verizon, and T-Mobile have announced a joint venture called CCMI, or the Cross-Carrier Messaging Initiative. Following their work in Japan, Synchronoss and WIT were chosen by the U.S. carriers to build the network of servers for RCS in the U.S..

Rapid consumer uptake

By the end of June 2018, two months after launch, +Message had two million active P2P users. That number exceeded three million by the end of August 2018, approximately four months after launch. By June 2019, more than nine million people in Japan were actively using the service and that figure rose to 13 million in November 2019. Specialist research firm Mobilesquared forecasts that the number of RCS users in Japan will rise to 17.5 million by the end of 2020 and climb to more than 42 million by 2023.

"Although Japanese consumers have already known a rich communication user experience from over-the-top or iMessage services, they acknowledge the additional value of RCS, since it provides the same type of experience only with a mobile number, as the successor of SMS," says Shin Mitsuhashi, manager at NTT DOCOMO. "SMS hacking or spam/fraud SMS are still critical issues in Japan, so mechanisms to protect privacy and security will make RCS a popular tool in Japan."

KDDI says it has made the +Message app available for all the mobile devices being used on its networks. It has pre-loaded the app on new Android smartphones, while rolling out a downloadable app for iOS and Android handsets that are already in use. It has also launched an RCS app for feature phones running Android with a customised user-interface for ten-key/non-touch-screen devices. KDDI also zero-rates RCS data traffic, meaning that the consumer does not incur any charges for using the service.

[2] Defined as sending and/or receiving at least one message each month.

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RCS Business Messaging in Japan

In a presentation at the GSMA's MWC Shanghai event in June 2019, Shin Mitsuhashi of NTT DOCOMO said there is growing demand for application-to-person messaging in Japan. In particular, businesses are looking to authenticate individuals (via their mobile phone number), for billing notifications and for reminder notifications. People are more likely to open a SMS than a direct message or email, Shin Mitsuhashi noted, while messaging is more cost-effective than a call or direct mail.

The new +Message platform in Japan is designed to build on the utility of SMS by making it easy for consumers to engage directly with multiple brands via two-way communications, which can be used for customer care, reservations, order applications and reminder notifications.

From the moment it was launched in Japan, +Message has been able to support application-to-person (A2P) and P2A messages. KDDI launched full RCS Business Messaging (RBM) in May 2019, while NTT DOCOMO followed suit in October and SoftBank in November. RBM is designed to support chat bots that can provide consumers with automated responses, as well as additional 'conversational commerce' features. The +Message app for Android and iPhones now supports the GSMA's UP 2.0, making it compatible with chat bots and other RBM functionality.

Consumers are in control of their communications

To further differentiate +Message from other services, Japan's operators are aiming to keep RBM free from spam by putting consumers in control. They are focusing on a P2A-centric approach, which puts the onus on the consumer to search and discover brands and businesses, rather than be subjected to unsolicited messages. In other words, they are encouraging consumers to reach out to brands, rather than the other way round. "In Japan, spam is very common with SMS and e-mail," notes Eiko Tanaka, Manager – Service Planning/A2P Business Strategy at Softbank. "We hope that RCS can solve this spam."

"Push advertisements from companies are not allowed." adds Shin Mitsuhashi of NTT DOCOMO. "Junk advertisement or spam/fraud SMS and e-mail are still critical issues in Japan, so we want to keep RCS clean for DOCOMO users."

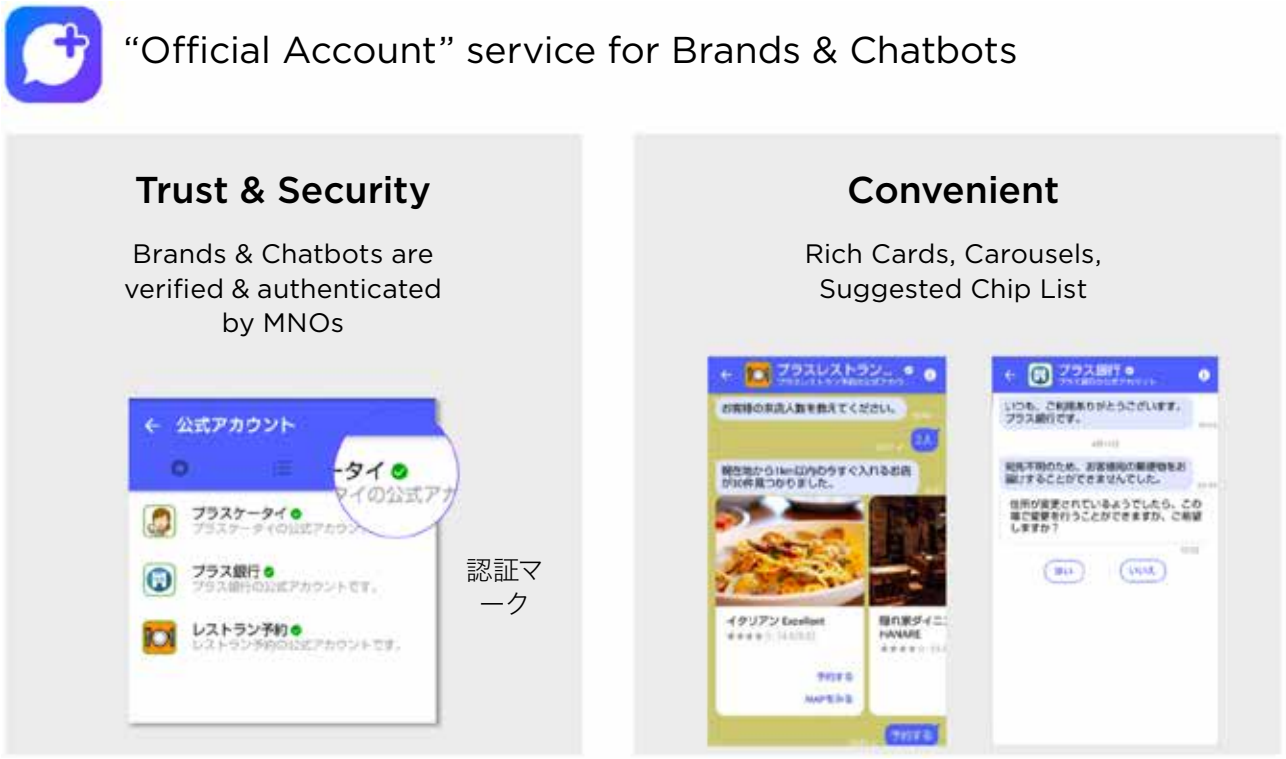
As well as differentiating +Message from alternative services, this consumer-centric approach will help to ensure that individuals pay attention to incoming messages and aren't swamped with communications, as can happen with email and some other messaging services. That means +Message is well placed to become the communications channel of choice for important notifications and customer care messages from banks and other businesses.

Japan's mobile operators have created a chat bot directory that is accessible from the user's contact list, making it straightforward for the consumer to see which businesses they can initiate a conversation with. Brands can also put +Message links into web banners or enable consumers to open a messaging session by scanning a QR code (see graphic).

One of the most appealing aspects of RBM is that it is a secure and private service delivered by telecoms operators, which are widely trusted in Japan – a relatively conservative market. Japanese consumers tend to value security and privacy highly. The Japanese operators offer an "official account" service for brands and chat bots. A green tick indicates these official accounts have been authenticated by their mobile operator (see graphic), thereby providing consumers with a secure and trusted proposition.

A secure and trusted channel

Japan's mobile operators say that financial services, transport and media companies are most interested in using RCS to engage with their customers. "Enterprises and institutions that have important contractual transactions with customers are interested in using RCS to enhance operational efficiency." explains Shin Mitsuhashi of NTT DOCOMO. "We are receiving inquiries from enterprises in various industries."



As +Message provides a secure and trusted channel it is well-suited to sensitive financial communications. “Financial firms have a strong interest in sending important notifications and procedures via RCS, based on the security and trust of SIM/MSISDN and MNO-based messaging,” says Hideyuki Koto, Senior Manager at KDDI. “The regulations in Japan require, thus guarantee, that SIM subscribers are authorised through Government-issued IDs, such as a driver’s license. Consequently, SIM/MSISDN is virtually regarded as an identified person, which is advantageous for those use cases that require security.”

The Japanese operators are increasingly using +Message to support their own interactions with customers, both within their core telecoms operations and in their adjacent businesses. For example, KDDI is using RBM to deliver customer care, device promotions and sales (see graphic), and to support online commerce. For customer care, RCS brings an immediate advantage in that it automatically identifies the customer, enabling the agent to provide a personalised service. To support device promotions, KDDI uses chat bots, assisted by artificial intelligence, and natural language processing search tools to provide the customer with personalised device recommendations via RCS.

1) Customer Care

Automatic KYC using MSISDN

Personal assistance & support

Real person/operator to help you

2) Device Promotions

AI assisted bots

w/ NLP search

Personalised recommendation for YOU

KDDI is also using RCS to alert a consumer to a promotion or offer from merchants in KDDI's Internet shopping mall, which is called Wowma! If the consumer wants to take advantage of a promotion, they can authenticate themselves using KDDI's au ID service via their web browser, before making a payment using KDDI's direct carrier billing capabilities (see graphic). The merchant can use the +Message app for any post sale interactions.

High levels of engagement

KDDI is finding that consumers open more than 85% of RCS business messages they receive, while the click through rate from a RCS message is more than 40% higher than with SMS/e-mail. Those figures reflect the high-level of trust consumers have in RCS, as it is SIM/MSISDN-based and secure. For some RCS campaigns, KDDI has experienced a conversion rate of more than 95%, as customers can respond simply by clicking a button – there is no need to ask them for any identifying information.

These figures are consistent with RCS campaigns run in other countries. Mobilesquared estimates that recipients open more than 75% of RBM messages, compared with 3% of direct mail. The click-through rate for RBM is also much higher than for banner ads (see graphic).

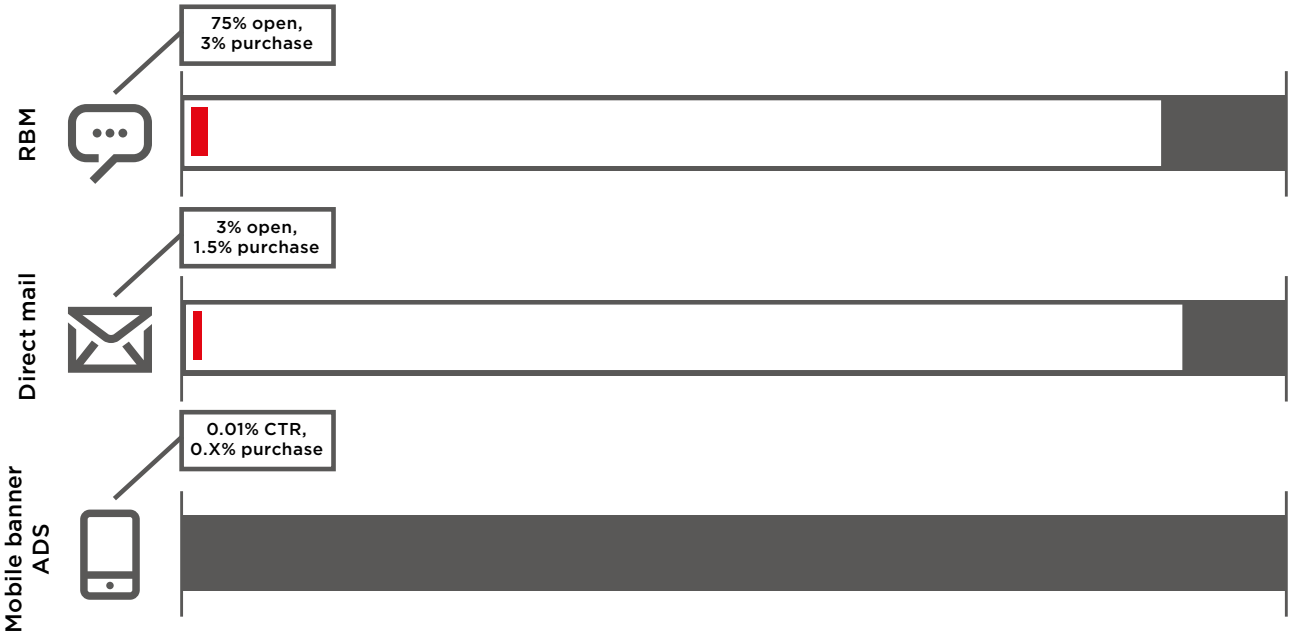
As the initial results have been good, KDDI is now planning to expand its usage of RBM to further promote and drive its own services. It plans to employ +Message to send important notifications to its financial services customers, as well as to relay information from devices connected to the Internet of Things, such as smart meters. In the event of a disaster, KDDI also intends to use RCS to send evacuation notices and other urgent information to people who could be impacted. Japan's mobile operators are also considering adding other features to +Message, such as the ability to complete transactions within the app.

As Japan's big three mobile operators increasingly use +Message to interact with their customers, the service is set to gain further traction and see wide adoption, particularly among iPhone users.

Platform performance comparison

How far does US$1 million go?

Mobilesquared
Communicating data



Simple and straightforward for brands

For businesses and brands, RBM in Japan is a one-stop shop – the operators' adoption of unified specifications means aggregators and marketers can use a unified application programming interface (API) to reach Japan's mobile phone users. Businesses looking to use RCS to interact with customers in Japan can use one commercial agreement and one technical architecture to deal with all three operators. An enterprise can sign a contract with one aggregator or solution provider, which will then work with the three operators on a wholesale basis.

In time, Japan's mobile operators also plan to make +Message interoperable with the RCS services of telcos in other countries, enabling brands and businesses to use the channel to interact with foreign visitors, as well as Japanese nationals. "Given the growth in the number of foreigners visiting Japan, and planned various international sporting events, including the upcoming Olympics in Tokyo, consumers are demanding international interoperability." says Shin Mitsuhashi of NTT DOCOMO. He adds that the operators are also looking at integrating payment and authentication capabilities into RCS, as well as bringing the service to more devices and mobile virtual network operators (MVNOs). Eiko Tanaka of Softbank agrees that international interoperability is a high priority, along with increasing the number of RCS users, especially on the iOS platform, and generating RBM revenue.

Mobilesquared anticipates that the number of RCS messages exchanged between businesses and customers in Japan will grow rapidly, reaching 750 million in 2021 and 8.7 billion in 2023 – the vast majority of these are set to be P2A messages. "Japan was the first GSMA Gold market, and all eyes continue to be on the country to see what it can achieve with RCS and set the benchmark for the rest of the world." notes Nick Lane, Chief Insight Analyst at Mobilesquared. "This is a very exciting time for, not just Japan, but the entire RCS ecosystem. We expect a very strong user adoption throughout Japan over our forecast period, and with scale comes increased brand spend. We forecast RCS revenues from brand spend of US$260.1 million by 2023, making Japan a top ten RCS market."

Conclusions

By working together, Japan's mobile operators have created a compelling communications platform for both consumers and businesses. As well as offering the rich features and functionality of Internet-based messaging services, +Message delivers security, privacy and ultimately ubiquity – customers of all three of Japan's major mobile operators can access the same service through a consistent and intuitive user interface. Thanks to the collaboration between the mobile operators, brands can now use +Message to communicate directly with all of their customers and potential customers in Japan, regardless of which mobile network they are on. As the three operators offer businesses unified capabilities, "the brands in the market don't have to think about the differences amongst the carriers within Japan." says Hideyuki Koto of KDDI.

Furthermore, +Message has been designed to ensure consumers maintain control over their inboxes and won't be inundated with unsolicited communications. That means they will continue to pay attention to incoming messages, making +Message the ideal channel for important notifications and customer care.

The progress of +Message is being closely followed in the global telecoms industry. "A great example of the new wave of trusted messaging services being rolled out by operators around the world, +Message provides a consistent, rich and intuitive way for businesses to interact with 100% of their consumers," says Henry Calvert, Head of Future Networks at the GSMA. "This exciting new B2C communications proposition points to how digital commerce is evolving to become even more convenient and compelling for individuals and merchants alike."

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