



Operator Collaboration Brings Major RCS Coverage to Japanese Market

RCS Case Study

September 2018





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Introduction

Over the next year, usage of Rich Communications Services (RCS) is expected to double. The GSMA expects RCS to continue its recent rapid growth throughout 2018, which has seen monthly active users exceed 165 million so far. This uptake has been driven by the launch of RCS across 60 networks worldwide, with more than 40 operators planning launch in the coming months.

When launching RCS, operators need to weigh the different architectural options in terms of cost, complexity of interconnection, and level of control they will have over the system roadmap. Interoperability can be achieved by adopting a common hosted platform, but the operator thereby sacrifices full control; on the other hand, operators can deploy best-of-breed in-house solutions, but risk major interoperability issues amongst clients and networks.

Japanese operators have taken an original approach to this question. KDDI Corp., NTT DOCOMO, INC. and SoftBank Corp. collectively launched RCS in May 2018, having collaborated to source a system based on unified specifications, which were then implemented in parallel. As a result,

through senior executive-level agreement early in the process, Japan became the first country in the world to enjoy RCS coverage with all major MNOs. Better still, this choice allowed them to achieve complete client and network interoperability without sacrificing control. The messaging service upgrade is named +Message, which by the end of August 2018, approximately four months after launch, had exceeded 3 million P2P customers.

“The initial market reaction is positive, where our users are enjoying the richness of RCS and unified experiences of +Message regardless of the carrier.”

- Akiko Tobe, NTT DOCOMO, Inc.

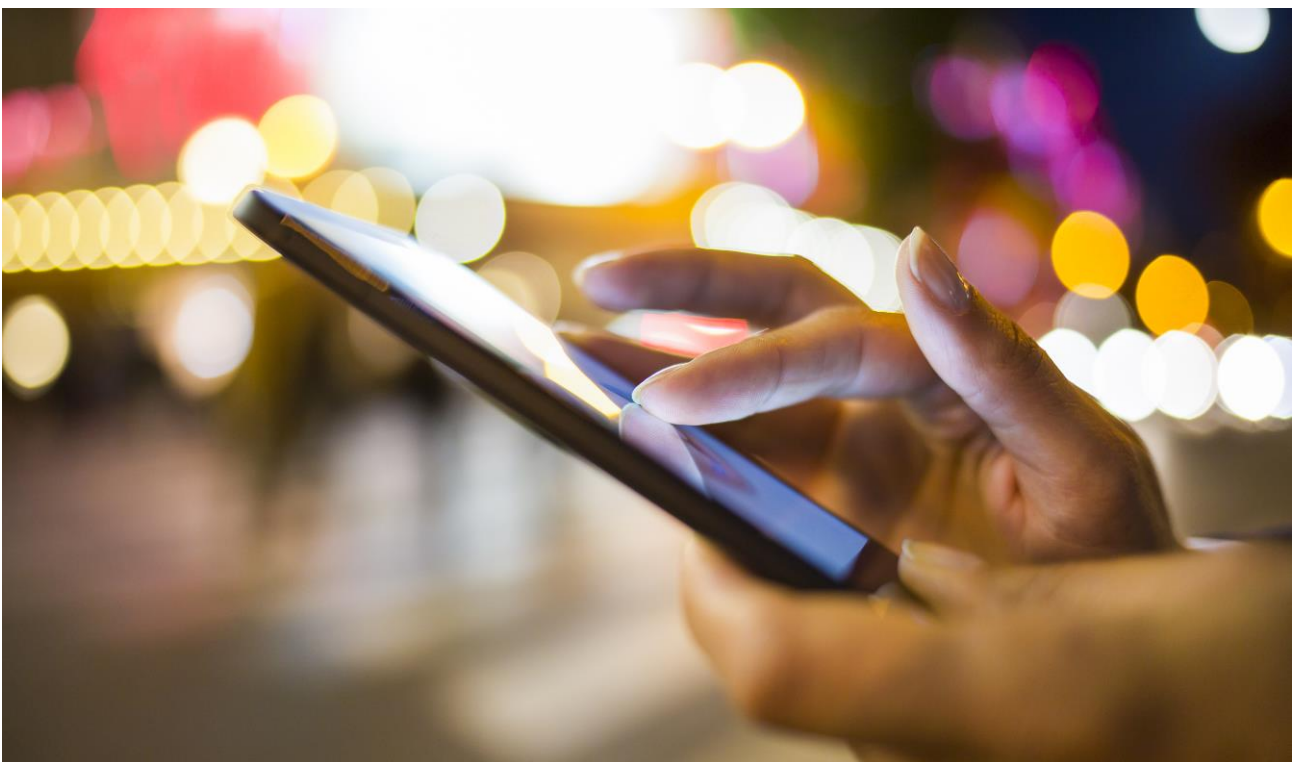


Background

Users in Japan could previously only send and receive emails between the three operators, until SMS interoperability was achieved in 2011. SMS has since been a ubiquitous and interoperable communications platform; however, exchange of photographs and video (MMS) was never supported by all the operators, due to difficulties in aligning MMS into a single service. Operators in Japan therefore saw an opportunity to increase their user base and customer satisfaction, by improving the convenience and relevance of their services, and resolving customer pain points. This was achieved by upgrading to RCS.

Before RCS was launched, rich messaging services had already been widely adopted by the market. Messaging services like LINE and Facebook Messenger had won customers over by offering new functions and enhanced user experience (UX). Capabilities like group chat, stickers and voice messaging were becoming prerequisites for a successful messaging service. Operators in Japan therefore recognised the need for their messaging services, namely SMS, to evolve and achieve, at a minimum, parity of features with other market players to retain relevance.

Accordingly, they resolved to increase and evolve MSISDN-based communication services that would be tailored to the Japanese market. Through close collaboration, they were able to create an interoperable platform, which enhanced convenience and enjoyment for the user, while also maintaining the safety and security of SMS, which only requires the user's phone number.



Solution Architecture and Design

Operators have several different architectural options and handset coverage options to consider each of which impacts the commercial offering, complexity of interconnect, and level of control the operator has over the customer experience. Options include MNO-hosted solutions; private Cloud; Cloud-hosted/operator solutions; and Cloud-hosted/outsourced solutions. MNO-hosted solutions grant maximum control to the operator over the service, but also generally bring the most complication in terms of interconnectivity; this is because even standards-compliant systems from different vendors can require testing and configuration to deliver interoperability.

In selecting the ideal architectural solution for the launch of RCS, operators in Japan considered various options based on several criteria: local regulatory issues, operator-specific concerns, and the balance between quality, cost and delivery. They eventually opted for MNO-hosting of the same platform, and selected one product (WIT Software) to provide three installations of the same platform. Their architectural solution is built on individual back-end platforms; however, at the same time, all three operators connected directly with each other's networks to enable full interoperability from the moment of launch.



Client Roll-out

In Japan, the majority of devices sold are operator-branded. For +Message, a smooth customer experience is ensured through easy pre-loading of the client on new Android devices; this is enabled by one service name, unified specifications (based on the GSMA's RCS standards), and standardised UI/UX (application based on unified service specifications on all networks). Although the pre-loaded client will be the main driver of adoption, the three Japanese operators also offer a downloadable client; this is available on Android application markets such as Google Play, the operators' proprietary Android markets, such as KDDI's "au Market", and through Apple's App Store for iOS devices.

This will aid a quicker adoption by addressing the majority of in-market devices, as Apple enjoys a 68% market share in the Japanese device market.¹

To increase the number of users, notifications via SMS, MMS or emails, were sent to customers asking them to update their application or download the new client. In addition to promotion and announcements on their traditional and social media channels, the operators also conducted a joint press release and conference. The success of this approach is proven by swift adoption by more than 3 million users.

"To enhance the customer awareness, initially we promoted/notified our Android users via SMS/emails to upgrade their SMS client app / or download, our new RCS app. In addition, we used our own-media channels and also our social media accounts to promote the service/app."

- Hideyuki Koto, KDDI Corp.

When designing +Message, the operators decided to avoid the corporate or brand colours of their individual companies; instead, they used a colour graduation of blue and purple to market it as an evolution of messaging service.

+Message was designed to be easy to use, convenient, and fun, while focusing on the key functionalities which the Japanese market demands. It only requires the user's phone number, it differentiates between registered and non-registered senders, and it allows users to see whether their contacts are RCS-capable. At the same time, it allows rich messages, the sharing of photos, videos and stickers, and enables functions like read receipts and location sharing.

¹ StatCounter, Mobile Operating System Market Share Japan, <http://gs.statcounter.com/os-market-share/mobile/japan>



Collaboration on RCS Deployment

Messaging is a fundamental service; the Japanese operators did not, therefore, want the fact that they are distinct organisations to result in fragmentation of that service. Their success here has been impressive: +Message users who subscribe to one operator experience precisely the same interface and service as those of another, so effective has collaboration been in ensuring seamless UX.

The Japanese operators decided that, while launching RCS independently and providing interconnection afterwards might be feasible, it would require more time. Working together from early on enabled them to devise a robust and interoperable system, which could be deployed swiftly, allowing them to scale more quickly while also offering better UX from the outset. Agreement on the necessity in the Japanese market of some capabilities, which are not default features of RCS, such as stickers, allowed operators to align sufficiently to make this possible.

Some Lessons and Recommendations

The unification of specifications presented some difficulties, as each operator had different views concerning the approach. On the other hand, all three companies shared a common goal: to improve the communication services that they offered to their customers and to enhance UX across Japan in the process. Through focused rounds of discussions toward a common direction, they were able to overcome the challenges they jointly faced, and with clear success.

To prevent large-scale project management issues, the Japanese operators suggest breaking down main tasks into working groups (WG) and task forces (TF). This breakdown enabled the Japanese operators to address problems far more efficiently.

Amongst all, senior executive-level agreement, commitment, and support, by all three operators in the early stages of collaboration was key to the success of this project.

Future Plans

Looking ahead, possibilities for +Message include ideas around expanding the service to MVNOs, to expand the user base; ensuring global interconnection by full adoption of the GSMA's Universal Profile, enhancing the advantages of RCS in trust and security. Once full adoption of Universal Profile 1.0 has been achieved, they plan to upgrade to Universal Profile 2.0. Enhancing interconnectivity at the regional and global levels and expanding into RCS business messaging will be key strategic goals in the years ahead.

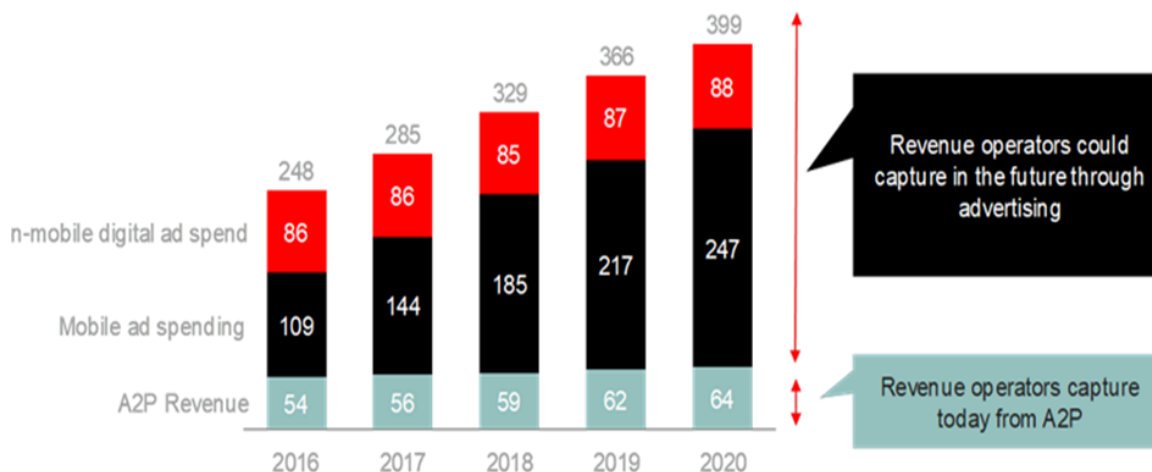
"It's natural to plan Business Messaging in addition to P2P messaging and we see strong/positive reactions from the market."

- Eiko Tanaka, SoftBank Corp.

Statista forecasts that the global digital advertising market will reach \$399 billion by 2020, and operators can leverage RCS to command a considerable slice of this². RCS Business Messaging allows consumers to engage directly with multiple brands. The Japanese operators are currently promoting P2P to expand the reach and use of their rich messaging platform, which will make serious contributions to operators' revenues in the near future.

The Japanese operators' early achievement of interoperability, along with 100% RCS coverage amongst 3 MNOs in Japan, puts them in a very strong position to offer A2P Business Messaging.

Proxy size of the addressable digital advertising market for operators (\$b)



² http://www.strathcom.com/wp-content/uploads/2016/11/eMarketer_Worldwide_Ad_Spending-eMarketers_Updated_Estimates_and_Forecast_for_20152020.pdf

Conclusion

Achieving country-level RCS interoperability is a significant achievement: it requires strong management and intense coordinated efforts among all the participants involved, and at all stages. As illustrated in several previous GSMA case studies, each RCS interconnect is a unique and highly complicated technical project.

The success of the Japanese model can be attributed to fulfilment of several key factors:

- (1) They collaborated effectively in launching RCS; so that 100% customer reach was achieved across 3 MNOs' networks;
- (2) They acted quickly;
- (3) They selected a solution which follows GSMA standards, and are working on fully implementing Universal Profile specifications and;
- (4) They solved the handset challenge, by managing to ensure client pre-loading on all new devices, and finding a solution that works on Apple devices.

The three operators see RCS as a fundamental MNO service, so providing the service with an MNO-hosted platform was important. However, the situation differs for each carrier depending on the country/region and are market specific. The ROI from both a quantitative and a qualitative perspective was still the main factor.

The Japanese model is applicable to some markets aiming to launch RCS and quickly achieve full coverage on major networks, where certain key contextual factors are comparable. It may also present a compelling example for markets where some operators have already launched, as it offers a different solution to similar problems. However, such a solution is certainly not a panacea. There are several RCS interconnects live already, and operators planning to start similar projects are invited to review industry tools and knowledge provided by the GSMA to learn from previous experience. The results achieved through an early cooperative approach in Japan speak for themselves, and offer both encouragement and clear practical lessons to those in comparable circumstances looking ahead.

It is important to understand, however, what those circumstances were. The ability of the Japanese operators jointly to ensure their platform's inclusion on the bulk of new handsets in Japan was key to the success of their own-client approach; operators in more open device markets may struggle to replicate this success. In addition to this, the effectiveness with which the Japanese operators managed inclusion of additional features like stickers while retaining interoperability cannot be taken for granted, and runs the risk of delays in development. Here, focusing on implementation of Universal Profile 1.0 from the outset would typically be advisable to maximise efficiency of deployment. Nonetheless, where conditions are similar to those in Japan, there are important lessons to be learned here, and this successful collaboration deserves recognition for the ingenuity and skill with which it was executed.



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