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Can RCS Overcome the OTT Threat?

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Much has been written about whether "over-the-top" services, such as Skype, WhatsApp, and iMessage, represent a threat to mobile network operators, potentially relegating their role to that of dumb pipe. Though the industry is debating the extent to which these services will affect traditional messaging revenues, it cannot be disputed that OTT options are growing in quantity and popularity, and operators lag far behind third-party providers in offering comparable features.

A growing number of operators are looking to Rich Communication Suite (RCS) to expand their service offerings in an effort to compete with OTT services. A review of the current state of third-party communication options, as well as a better understanding of RCS, can help operators determine how this industry-backed, next-generation communication solution can enhance the capabilities of their existing SMS and MMS offerings.

Smartphones: A Double-Edged Sword

While growing smartphone adoption has benefited operators in terms of increased handset sales and data use, it has also paved the way for competition from third-party applications that offer subscribers new, sophisticated communication options. At present, more than half of mobile subscribers in the United States use a smartphone, according to a Q2 2012 Chetan Sharma report. Though smartphone penetration is much lower worldwide—about 10 percent, according to a February 2012 Ericsson report—use of these devices is growing in all regions. In 2011 about 30 percent of all handsets sold were smartphones versus 20 percent in 2010, Ericsson says.

The uptake of OTT options has been dramatic in recent years. In 2011, 3.5 trillion messages were sent using these services, according to Portio Research. It forecasts that traffic from OTTs will reach 20.3 trillion messages by the end of 2016, an estimate it calls "extremely conservative." Use of OTT services cost operators $13.9 billion—or 9 percent of total messaging revenues—in 2011, according to research firm Ovum.

As of June 2012, only one year after its launch, Apple's iMessage has 140 million users and sends more than 1 billion messages a day, according to Apple. Although WhatsApp does not publish user data, it has stated that usage increased from 1 billion messages in October 2011 to 2 billion in February 2012. In a recent tweet, the company boasted that it processed more than 10 billion messages in a single day.

Meanwhile, peer-to-peer (P2P) SMS revenue is declining in mature markets. For example, in Taiwan, WhatsApp has been identified by analytics firm Coleago Consulting as a major driver of a 12 percent drop in SMS messaging volume in 2011. Messaging in the Philippines, which has the world's largest SMS volume at approximately 1.8 billion messages daily, began to see declining SMS volumes in 2010 due to OTT competition, according to research firm BuddeComm. Volume declines have also occurred in France, Ireland, Spain, and Portugal.

RCS to the Rescue

Backed by the GSM Association (GSMA), RCS gives operators the opportunity to respond as a united force in the fight to retain subscriber loyalty. The initial version, RCS-enhanced (RCS-e), provides in-demand features that extend traditional SMS and MMS capabilities. Users launch all communications, including voice calls and messaging sessions, from an enhanced address book. In addition to traditional contact information, including name, number, and email address, the address book identifies each contact's capabilities, such as chat, video share, and file transfer. RCS Version 5 adds each contact's presence information, including current status, location, and available services. It addition, it provides backward compatibility with SMS and MMS, enabling RCS users to communicate with any mobile phone, regardless of whether the device has an RCS client. With Version 5, RCS capabilities are also extended to tablets and PCs in addition to mobile phones, enabling subscribers to move from one device to another during a conversation.

Operators worldwide are committing to RCS. Five of the world's leading mobile operators—Deutsche Telekom, Orange, Telecom Italia, Telefónica, and Vodafone—were the first to announce plans for 2012 RCS-e launches in Spain, France, Germany, and Italy. In addition, 2012 launches are planned in the Netherlands and South Korea. Numerous operators in North America and China are also trialing RCS, while operators throughout the world are evaluating the service.

Handset manufacturers are likely to help boost RCS adoption. Nine of the top 10 OEMs have committed to embedding RCS clients on mobile devices starting in 2012, according to the GSMA/Gartner Research. This eliminates the need for subscribers to download, register, and sign in to the service. Instead, as the GSMA says, "It's just there, it just works." In the meantime, downloadable clients are available that make it possible to use RCS on existing handsets, including both feature phones and smartphones.

Technology Considerations

Operators evaluating RCS should understand the following:

- *RCS compliance:* While some vendors offer a fully compliant RCS solution, others have developed "RCS-like" solutions using proprietary protocols. Because these solutions do not comply with RCS-e and RCS Version 4/5 specifications, they lack the ubiquity of true RCS—limiting exchanges only to those users who have downloaded the service to their device. By choosing an RCS-compliant server, operators ensure compatibility with any RCS client, enabling operators to choose a client that best fits their subscribers' needs. In addition, selecting a fully compliant solution is the only way to ensure interoperability across platform and device type, a major limitation of OTT options.

- *Infrastructure requirements:* RCS specifications call for operators to deploy an IP Multimedia Subsystem (IMS) core, which can be both costly and complex, taking up to 18 months to deploy. Some vendors offer solutions that circumvent this requirement, but operators should understand how they do so. For example, some solutions host the IMS core, while others build "RCS-like" services, as noted above, that offer similar features but do not comply with RCS standards. The ideal solution minimizes complexity and gives operators the option of deploying IMS in the future if they choose to do so. This can be accomplished, for example, by a server that incorporates the required

IMS functions—including signaling, authorization, and session routing and setup—into the RCS server itself.

- *Interoperability with legacy messaging:* This functionality bridges the gap between legacy and next-generation services and represents a significant advantage over OTT services, which typically enable only users of the same service to communicate. By offering compatibility with SMS and MMS, RCS enables subscribers to launch all messaging sessions from the RCS client on their devices, regardless of whether the recipient's devices have RCS clients, ensuring ubiquity that OTT services lack. This RCS 5.0 feature is available with some vendors' RCS-e solutions today.

- *Deployment options:* Time to market is an important consideration for operators who need to secure subscriber loyalty in the face of OTT competition. A hosted deployment option provides the fastest time to market and also minimizes up-front capital expenditures. Operators should choose an option that lets them change to a turnkey RCS solution should they wish to do so in the future.

Conclusion

As the communication ecosystem evolves, operators risk losing revenues to OTT options that provide new, in-demand features not offered by operators themselves. RCS provides an industry-supported way to combat this growing source of competition. Offering interoperability across platforms and device types, as well as compatibility with legacy technologies, RCS can enable operators to provide high quality, next-generation features while strengthening subscriber loyalty.