RCS for Business:
Leveraging Enhanced Reliability, Security, and Monetization Opportunities

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Executive Summary

Mobile communications have become increasingly fragmented as the number of available options continues to grow. In addition to traditional voice calls, email, and instant messaging (IM), mobile users can now take advantage of numerous over-the-top (OTT) services, such as Skype, WhatsApp, Blackberry Messenger, and other downloadable applications. In the workplace, employees' use of disparate communications services can lead both to productivity declines and security issues. In addition, with the rapidly growing Bring Your Own Device (BYOD) movement, IT departments are more challenged than ever to effectively manage employee device pools while ensuring efficient yet secure communications.

Rich Communication Suite (RCS) has emerged as a means of enhancing and streamlining available communication options for today's mobile subscriber. Managed by an industry organization, the GSM Association, RCS provides compelling, next-generation communication features that let mobile users connect in new ways. Much of the RCS focus to date has been on consumer use. However, for businesses of all sizes, this solution can provide the increased security, reliability, and quality of service (QoS) that commercial and industrial environments require, while effectively supporting BYOD initiatives. Further, exposing RCS features and services through open and secure interfaces such as Application Programming Interfaces (APIs) can enhance a wide range of business processes.

What is RCS?

The value businesses place on streamlined communications is well established. Unified Communications (UC) and Unified Messaging (UM) efforts began in the 1990s to integrate multiple services to enhance productivity and optimize various business processes. Today many companies have adopted solutions that merge services, such as voicemail, SMS, and email, from a single interface. However, given that communication tools have increased in number and the use of smartphones and tablets has become nearly ubiquitous in business, companies must continue to evolve their communication strategies.

With RCS, businesses can enhance their communications infrastructure by providing a single interface from which users can initiate voice, video, and messaging sessions. RCS provides access to these features directly from a device's address book, whether the device is a feature phone, smartphone, tablet, or PC. In addition to traditional contact information—name, number, and email address—the enhanced RCS address book identifies whether each contact's device can join a chat, initiate a video call, or send a file.

RCS Version 5 adds presence information for each contact, including current status, location, and available services. In addition, this iteration provides backward compatibility with SMS and MMS, enabling RCS users to communicate with any mobile phone, regardless of whether the device has RCS capabilities.

Version 5 also extends RCS functions to tablets and PCs to enable subscribers to move from one device to another during a conversation. Combined, these features can dramatically enhance the communication efforts of the always-on, increasingly mobile workforce.
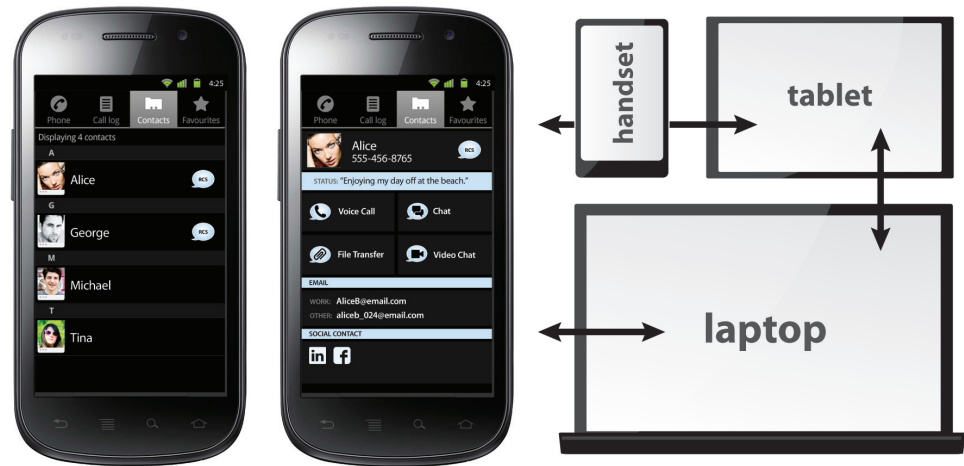
BYOD: New Challenges for the Enterprise

Employees' use of smartphones and tablets may mean productivity gains for businesses. However, these devices can also create new challenges in terms of both security and management as the BYOD trend has grown. According to Harris Interactive, 74 percent of companies responding to a February 2012 survey permit some type of BYOD usage. The number of employee-owned smartphones and tablets used in the workplace will reach 350 million by 2014, up from nearly 150 million in 2012, according to a Juniper Research report.

Without explicitly defined business communication and supported technology policies, companies' intellectual property may be at risk. Employees may, for example, leverage apps on their personal devices for business use—apps that may meet the needs of the casual user but lack the security demanded by a company.

OTT applications like Skype and WhatsApp, for example, have strong and growing subscriber bases. Overall, 3.5 trillion messages were sent using OTT services in 2011, according to Portio Research. It forecasts that OTT traffic will reach 20.3 trillion messages by the end of 2016, an estimate it calls "extremely conservative." The Skype website states that the service has more than 40 million concurrent users during peak usage periods, and the app reportedly has in excess of 700 million registered users. WhatsApp does not publish user data; however, it has stated that usage of the service grew from 1 billion messages in October 2011 to 2 billion in February 2012. A recent company tweet claimed that WhatsApp processed more than 10 billion messages in a single day.

RCS at Work

- **Presence** capabilities show when co-workers, customers, and prospects are available.

- RCS can be enabled on mobile phones, tablets, and PCs—and **conversations can be preserved between devices**—so employees can select the most convenient option.

- **Video chat**, individual and group messaging, and real-time file exchange enhance communication efficiency.

- RCS APIs let businesses offer new, **value-added services**.

Users have clearly embraced OTT apps, which offer more sophisticated features than legacy messaging services and are typically free. However, these services may subject companies to security breaches. In a recent article, ABI Research consumer mobility analyst Aapo Markkanen stated that a lack of security on OTT mobile messaging apps is a major drawback to their use in the business environment. Given that they were built principally for the consumer market, these apps focus on cost and convenience rather than security, he said, making them susceptible to breaches. The potential for WhatsApp conversations taking place on Wi-Fi networks to be easily viewed by hackers has been widely publicized in recent months, and an app called WhatsAppSniffer simplifies this process. Indeed, WhatsApp appears to recognize this limitation in its Terms of Service, cautioning against anything but personal use of its service, guarding against the disclosure of personal and financial information, and suggesting, "Use this just for fun."

Likewise, OTT services may face reliability and quality issues in a way that network operator-provided services do not. Because OTT service providers do not control the networks over which their services operate, OTT players are unable to control QoS and may not guarantee emergency support.

RCS, in contrast, promises the same high quality and security subscribers have come to expect from other operator-provided, standards-based services. Through built-in authentication and authorization activities that validate sender and receiver and control access to the closed operator network, RCS can overcome the security issues that OTT options lack.

RCS APIs: Enhancing Business Processes

RCS also offers the potential to leverage APIs that can help businesses improve existing processes and create new, value-added services. An API is simply an interface that enables RCS to communicate with another application or service; though invisible to the end user, the API enables other applications
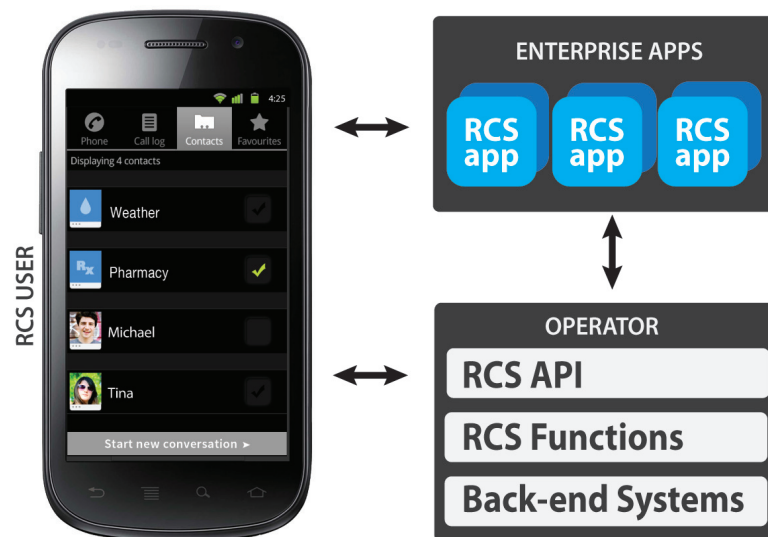
to take advantage of RCS features, such as group chat and file share. Highly customizable, these applications can be incorporated into company web portals or web browsers—and because RCS APIs are standards-based, applications can be developed quickly. As a result, the opportunities to improve both internal and external processes in virtually any industry are abundant.

Automotive: Apps can enable support personnel to perform remote fleet vehicle diagnostics, conduct live chat with drivers, and send instructions (such as how to reroute a truckload of goods) via file or video exchange.

Healthcare: An app can tap into a library of content that enables a pharmaceutical company representative to send relevant information to a physician, such as drug interaction and side effect data.

Financial: An app that provides access to a customer's existing financial portfolio can be used to discuss potential strategies in a session between a broker and investor, who can evaluate the market in real time and exchange confirmations of trades once complete. This can enable more frequent client contact and supplement face-to-face meetings.

Emergency Services: On-scene law enforcement personnel can tap into law enforcement records to obtain detailed information about a suspect, such as photo and criminal history. Officers can conduct a group chat for tactical coordination and information sharing, such as sharing video from different vantage points to determine how best to apprehend a suspect.

Sales Force Automation: Applications can integrate with a company's customer relationship management system to assign salespeople, communicate with clients, track prospects, and define strategies.

Conclusion

The number of available real-time communication services has grown dramatically in recent years, giving businesses new options for enhancing productivity and improving both internal and external communications. Meanwhile, the use of mobile devices in the workplace has become nearly ubiquitous, leading to new challenges for IT departments to create and effectively manage BYOD policies.

RCS provides business of all sizes with innovative, next-generation features, such as video chat, instant and group messaging, and real-time exchange of image or video files during communication sessions. At the same time, RCS offers commercial and industrial markets the same security, quality of service, and support as other trusted operator-provided services. In addition, unlike many OTT options that are limited in terms of their reach, RCS is available to mobile subscribers on any data network and operating system—and provides backward compatibility with SMS and MMS to ensure that users can communicate with any mobile phone, regardless of whether the device has RCS capabilities. Companies can also leverage RCS APIs to enhanced communication efforts, both internally and externally, through new, value-added services.

About Interop Technologies

Interop Technologies (www.interoptechnologies.com) is a leading developer of innovative software solutions to support today's converging communication ecosystem in the areas of advanced messaging, over-the-air handset management, and connectivity gateways. Offering exceptional deployment flexibility, Interop enables operators of all sizes worldwide to launch new mobile services quickly. The company's future-proof solutions deliver superior reliability and high performance in today's evolving mixed-generation technology environments. Interop designs, develops, and supports all solutions in-house, providing modular and extremely scalable architecture that makes migration to next-generation technology simple. Interop Technologies maintains its corporate headquarters and a network operations center (NOC) in Fort Myers, FL, with a fully redundant NOC and offices in Dallas, TX.