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Executive Summary

Mobile operators have spent the last ten years building reliable, high-bandwidth networks. They will spend the next ten years defining their new role in the world of IP-based communications, and devising business models that will allow them to generate revenues from new services that will compensate for the decline in revenues from traditional services. Converged communications that draw on the capabilities of mobile operators’ networks will play a key role in achieving and sustaining subscriptions, traffic and revenues in the evolving, IP-centric, mobile communications world.

Mobile operators are concerned that their voice and messaging revenues are coming under pressure from Internet companies, including voice-over-IP (VoIP) providers such as Skype, and social networks such as Facebook and Twitter.

Primarily, mobile operators are concerned about how they can attract and retain subscribers who will remain loyal customers. To date, mobile operators have encouraged first penetration, and then churn, by offering basic voice, messaging and data services at extremely competitive prices. However this is not a viable long-term strategy, as will become evident when mobile operators launch their HSDPA, LTE and other high-speed mobile data networks.

The time has come for telecom operators to think about their retention and customer relation strategies.

Mobile operators are looking for new services, a new approach to the market and new business models which will help differentiate them from their competitors, and which will increase customer value and subscription lifetime.

Operators also accept that they need to partner with the Internet companies and social networks that their customers use. However, operators will need to construct business models that enable them to work with Internet companies and generate income from sources other than access to their networks.

Services based on the GSM Association’s Rich Communication Suite (RCS) initiative are viewed by some mobile operators as a way in which they can maintain a competitive market position against Internet companies and voice-over-IP providers, because RCS maintains the mobile phone address book as the central point from which their subscribers will communicate, and over which additional, converged services such as enriched calls and enhanced messaging, can be laid. Interoperability across networks would be supported by GPRX today and IPX in the future, giving subscribers even more freedom to use RCS across operators.
However, it is taking some time for mobile operators to commercially launch RCS services. This delay has created an opportunity for infrastructure vendors such as Huawei to develop RCS services for non-IMS networks.

Huawei offers a comprehensive Rich Communication Suite (RCS) Solution, a service platform that not only provides a convergent and open platform but also provides innovative value added services that help mobile operators to identify and fulfil customer needs. Huawei’s RCS Solution provides convergent communications, a user friendly experience, convergent personal information storage, and convergent social network services based on mobile subscribers’ real social relationships. The RCS Solution is fully compliant with GSMA’s RCS 2.0 and 3.0 specifications, and it will also be compliant with future GSMA RCS specifications, but without mobile operators needing to deploy an IMS network.

This white paper provides an overview of the GSM Association’s RCS initiative and an overview of Huawei Software’s RCS Solution. It also includes a case study from a mobile operator which has deployed Huawei’s RCS platform.

Section A: Rich Communication Suite – an Overview

GSMA RCS Specifications

The Rich Communication Suite project was announced in February 2008 by a consortium of mobile operators and vendors, consisting of Orange, Telecom Italia, Telefónica, Nokia Siemens Networks, Nokia, Ericsson, Sony Ericsson and Samsung. By September 2008, the GSM Association had assumed responsibility for the initiative and in December 2008 the GSMA announced the release of the first set of RCS specifications, RCS Release 1.

By December 2009, membership of the RCS initiative had grown to just under 90 mobile operators and vendors, including Huawei, and two more sets of specifications had been released, RCS Releases 2 and 3 (see table1).

Table 1: GSMA RCS specifications, April 2010

<table>
<thead>
<tr>
<th>RCS Release</th>
<th>Features</th>
<th>Release date</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS 1.0</td>
<td>Enhanced address book, content sharing, file transfer, enhanced messaging</td>
<td>December 2008</td>
</tr>
<tr>
<td>RCS 2.0</td>
<td>Broadband access, multi-device environment, network address book, enriched communications services</td>
<td>June 2009</td>
</tr>
<tr>
<td>RCS 3.0</td>
<td>Enhancements to broadband access, content sharing, social presence information, messaging; network value-added-service</td>
<td>December 2009</td>
</tr>
</tbody>
</table>

Source: GSM Association
RCS 4.0, which is due for release in December 2010, will likely include APIs for the integration of social networks, among others. In taking an API-led route, the GSMA is acknowledging that if the focus of RCS remains solely on providing a set of shrink-wrapped services, it will not meet market expectations quickly enough.

The GSMA also now views RCS as being potentially as important and ubiquitous as SMS and MMS as a bearer for services, particularly in the context of mobile operator concerns about whether they can rise to the challenge of being viewed as more than just a transport network for commoditized communications.

RCS mobile operator trials

Mobile operator trials of RCS have been ongoing since 2008. By April 2010, consumer services based on RCS 1.0 were being trialled in France and Italy (see Fig. 1, Table 2), while T-Mobile Germany has been conducting a market trial of an enterprise service also based on RCS 1.0. In February 2010, mobile operators in Spain and Japan announced that they had begun a pre-commercial pilot and technical trials, respectively, of RCS 2.0 services. Mobile operators in Sweden and Finland are also believed to be evaluating RCS with a view to conducting pilots in 2H10 or 1H11, though it is not known on which version of RCS these pilots will be based.

Table 2: Global RCS trials during April 2010

<table>
<thead>
<tr>
<th>Mobile operator</th>
<th>Date</th>
<th>Trial description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFR, Orange, Bouygues Telecom (France)</td>
<td>Q4 2009</td>
<td>Enhanced phonebook, enhanced messaging, and enriched call</td>
<td>Improvements required in user experience</td>
</tr>
<tr>
<td>SFR, Orange, Bouygues Telecom (France)</td>
<td>Q2 2010</td>
<td>Consumer trial involving 100 customers from each of the three mobile operators.</td>
<td>Not yet available</td>
</tr>
<tr>
<td>TIM, WIND (Italy)</td>
<td>H2 2010</td>
<td>Enhanced address book, social presence, content sharing, enhanced messaging</td>
<td>Chat and enhanced address book tests positive, file transfer tests negative</td>
</tr>
<tr>
<td>NTT DoCoMo, KDDI, Softbank, E-Mobile (Japan)</td>
<td>Q2 2010</td>
<td>Interoperability trials</td>
<td>Not yet available</td>
</tr>
<tr>
<td>Orange, Telefonica (Spain)</td>
<td>Q1 2010</td>
<td>Pilot of RCS2.0 services</td>
<td>Not yet available</td>
</tr>
</tbody>
</table>

Source: GSMA, Informa Telecoms & Media

RCS-like services

In addition to the RCS trials, mobile operators in South Korea and China have already introduced services which are classified as RCS-like, in that the services include features like those outlined in the GSMA’s RCS specifications (see Table 3). However these services are not fully RCS compliant because they are not using handsets with native RCS clients.
Table 3: Global RCS-like services available by April 2010

<table>
<thead>
<tr>
<th>Mobile operators</th>
<th>Description</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK Telecom, LG Telecom, KT Freetel (South Korea)</td>
<td>Interoperable mobile instant messaging service</td>
<td>SKT: Mobile Messenger users grew to 720,000 in Sep. 2009; IMs grew to 110 million messages a month.</td>
</tr>
<tr>
<td>China Mobile (China)</td>
<td>139.com service</td>
<td>139.com attained 19 million registered users in six months after launch in May 2009 who generated 30 million SMS, 100,000 MMS and 420 minutes of voice a month.</td>
</tr>
</tbody>
</table>

Source: GSMA, Informa Telecoms & Media

RCS market challenges

Handsets

A lack of RCS-compliant handsets has delayed the launch of commercial RCS services. Handset manufacturers have been reluctant to move more quickly to include RCS as a native capability in their devices because they have not known whether enough mobile operators would order the devices, and in sufficient quantities, to make it viable to develop the capability and manufacture the handsets. However, several Tier 1 operators are conducting RCS pilots and trials so the terminal vendors’ expectations that they can sell RCS-capable handsets in quantity are increasing to the point that Nokia, Samsung and LG have committed to including RCS as a standard feature in some of their devices.

Meanwhile, the first RCS-compliant prototype devices were believed to have an extremely poor battery life, lasting about an hour, and even the more recent prototypes don’t last much beyond 24 hours. This doesn’t bode well for subscribers’ acceptance and use of RCS devices, especially if there is also a question about how desirable they will find RCS services.

However, even though RCS-compliant handsets may take some time to come to market, some mobile operators are already offering RCS-like services to their subscribers on their existing non-RCS-compliant handsets and PC terminals. Subscribers can access the RCS-like services that are enabled on their mobile operator’s network using downloadable client software for converged communications, which is customized to the device and to the PC. That means that subscribers will be able to access their voice, enhanced messaging and other converged communications services using their mobile, and on their PC via an Internet portal provided by their mobile operator, such as the 139.com service provided by China Mobile. The Webphone and TAG services operated by Portuguese mobile operator Optimus, and KT Freetel’s Show Moov, are also examples of RCS-like services which use non-RCS compliant handsets and PC terminals.
Marketing

Marketing RCS services when they become commercially available will most likely present a challenge, as mobile operators try to explain that what they are offering is not just another social network or voice-over-IP service. The challenge will arise even as the members of the RCS initiative move toward defining future RCS specifications that include the integration of social networks and other types of communities, including Internet communities, enterprise users and family groups.

Mobile operator Orange suggests that one way that operators could collaborate on the marketing of RCS would be to introduce an RCS service mark as a form of branding. This would also have the effect of building a feeling of community among RCS users while at the same time allowing operators to pursue their own strategies in terms of pricing and the timing of their commercial launches.

Legacy network integration

Traditional messaging revenues and infrastructure have been and are currently dominated by SMS and MMS, while mobile operators are assuring that these revenues remain protected despite the emergence of data communications. As such, building an autonomous network for new RCS services may not make commercial sense, as revenue potential and user adoption is not certain. Apart from the advanced data markets (including South Korea and Japan), mobile operators in developed markets have little insight into market potential for advanced messaging services. Therefore, a smooth and cost-effective evolution from legacy messaging infrastructure to advanced RCS-like networks is necessary in most cases.

GSMA’s RCS services by default require an IMS core network to operate, an element that may be missing from existing networks. Moreover, RCS services may not provide the Return on Investment (ROI) to implement an IMS core - leaving RCS out of reach for most mobile operators. In order to minimize implementation costs and increase efficiency, advanced messaging platforms need to interface directly with existing BSS/OSS systems, interwork with a variety of third-party vendor equipment while being expandable to cater for future services. Moreover, advanced messaging architectures will need to be compliant with relevant standards, including GSMA’s RCS.

Section B: Huawei’s RCS strategy and platform

Introduction to Huawei Software

Huawei Software is one of four divisions within Huawei Technologies; the other three are Telecom Network Infrastructure, Professional Services and Devices. It was previously known as Huawei’s Application and Software line of business.
Within Huawei Software, there are three lines of business: consumer, enterprise and business support systems. The division has 436 mobile operator customers in 138 countries, including seven of the top ten mobile operators globally, and 28 of the top 50 Mobile operator customers. These include China Mobile, Vodafone, China Unicom, Telefonica, America Movil, France Telecom, and Telenor, among other operators of similar size and geographic reach.

According to Huawei Software, the size of the mobile operators on its customer list, in terms of their subscriber bases, means that 20% of all mobile voice users, 33% of all SMS users and 50% of all MMS users globally are already using elements of its RCS platform.

Huawei Software generated US$2.23 billion in contract sales in 2009, an increase of 54% year-on-year.

Huawei RCS strategy

Huawei Software’s Rich Communication Suite (Huawei RCS Solution) strategy is based on addressing the following market challenges for mobile operators:

- Weakening growth in voice and messaging ARPU while at the same time the consumption of these network assets, and their data networks, is increasing.
- The ease and frequency with which mobile subscribers churn to other mobile operators or service providers, and the lack of new and innovative services that would prevent churn.
- Mobile virtual network operators, Internet companies and voice-over-IP providers are contributing to cannibalization of mobile operators’ voice and messaging revenues by offering alternative or cheaper messaging services and/or cheaper or free voice calls.
- Mobile subscribers require a sophisticated, multimedia-centric communications experience across fixed and mobile.

Figure 1: Huawei Software RCS solution

Mobile operators are increasingly concerned about the threat presented by Internet companies, such as Google, with its free Google Voice service. Google Voice is an invitation-only service which is also only available in the US. Fixed-line users can register their existing telephone
number in order to access visual voice-mail, voice-mail transcriptions, custom greetings, free national or local calls in the US, low-cost international calls, and e-mail or SMS voice-mail notifications. In addition, fixed-line users can also register for a Google number, which would provide a single number which would ring on all of their registered devices, in addition to free SMS, the ability to screen, block and record calls, and the ability to arrange conference calls.

While some telecommunications infrastructure vendors, such as Huawei, do not believe that mobile operators should regard Google Voice as a direct threat, services like Google Voice should act as a powerful motivator for them to re-assess their core businesses of voice and messaging, in order to determine how they can develop value-added services that will help them to retain their subscribers and also make them higher-value customers.

For its part, Huawei undertakes a consultative approach with those of its mobile operator customers that are seeking to deploy RCS services. The vendor will work with the operator in order to understand its existing network capabilities, the demographics of its subscriber base as well as requirements its subscribers may have for mobile communications services and devices, and its current line-up of services and business models. Gathering this information enables Huawei to recommend the introduction of new RCS-based services and business models or the modification of existing services and business models, which would help the operator to more effectively compete against Internet services providers and other companies.

Huawei aims to help mobile operators examine their long term customer relationship strategies, with a view to increasing the tenure of their subscribers. The RCS Solution has been developed to help mobile operators focus on what their customers need, and to enrich their customers’ existing user experience.

Huawei places the mobile user at the centre of its RCS strategy (see fig. 2). It believes that an increasing proportion of mobile users will be able to access basic communications services such as voice, SMS and MMS, and also more advanced messaging such as e-mail, instant messaging and presence. In addition, Huawei believes that mobile users will be able to access and use a convergent storage database such as Huawei’s One Box, in which they can keep a history of their messages and conversations. Further, mobile users will likely also be keen to access and use online personal information storage, such as Huawei’s NetDisk, to store documents, images and videos, among others, and to share these contents with their family and friends.

Mobile users would also like to exert more control over their communications including being able to share and update their status and their social relationship information with their contacts on social networking services, which they access via the mobile or the Internet. To meet this need, Huawei is providing Mini-Blog and Relationship Radar services, through which mobile users can share their sentiments with their friends as well as their contacts on Internet SNSs such as Facebook and Twitter.

Providing security on the mobile device, including anti-spam capabilities, is another way in which mobile operators can provide their customers with an enhanced user experience that would help to discourage churn to another network. Huawei’s Communication Firewall is provided as part of...
its RCS Solution, enabling mobile users to establish white-lists and black-lists for voice calls and SMS, and to keep a history of barred calls.

Therefore, in order for mobile operators to successfully compete with Internet companies, they will need to deploy services which go beyond simply a network-based aggregated address book and the other types of services that are included in the GSMA’s RCS specifications. The network-based address book will not be a differentiator for mobile operators, but it will provide a foundation on which mobile operators can build differentiated services.

**Figure 2: Huawei Software Service Network Engine**

In order to be able to provide these differentiated services to their subscribers and generate return on investment, mobile operators must:

- Open up their networks to third party application- and service-developers, enabling them to more easily develop new products that are closely integrated with existing services such as voice, messaging, presence, location and billing;
- Deploy a platform that is cost-effective, in that it complements rather than replaces existing elements of the core network; and
- Above all, focus on convergence as the primary objective, including the convergence of communications, services and terminals.

In order to be able to provide services that increase customer loyalty and subscription lifetime, mobile operators must provide:
• A convergent and user friendly experience, which will improve customer satisfaction and increase subscriber loyalty.

• A convergent personal information storage platform that keeps an extensive history of the mobile subscriber’s data, including their SMS, MMS, VMS, voice calls, e-mails, images, videos and documents, among others. Providing this kind of storage platform would reduce churn for the mobile operator, since subscribers would associate their mobile experience with the mobile operator and its network.

• A social relationships update capability, such as Huawei’s M-blog and Relationship Radar, and access to Internet social networking services. This approach would also increase customer loyalty, encouraging subscribers to stay with the operator’s network because their online home and community is built within that network.

The core component of Huawei’s RCS Solution is its Service Network Engine (SNE), which addresses the above requirements. The SNE provides a service layer that can be integrated into the mobile operator’s existing infrastructure, including its voice and messaging platforms, and that exposes core network capabilities and even third party capabilities as application enablers. Mobile operators and third party application- and service-developers can use enabler application programming interfaces (APIs) into the SNE in order to create new applications and services much faster and at a reduced total cost of ownership.

Huawei’s RCS not only provides GSMA RCS services but also provides enhanced value-added-services such as voice-over-IP (VoIP), HomeZone and missed call notification (MCN). It also provides a convergent messaging experience which is based on the mobile operator’s existing messaging infrastructure, including its SMSC, MMSC, voice-mail and e-mail, among others. In addition, Huawei RCS provides enhanced messaging services, such as sponsored messages, blacklist and copy-and-forward, and value-added messaging services such as mobile newspapers and micro blogging.

In providing value-added-services (VAS) to their mobile subscribers, operators can generate additional ARPU by charging a small premium for each service individually or by offering a package of the services for which the operator would charge a subscription. They could also more closely tie in mobile subscribers to their networks, and reduce churn. Perhaps most importantly, mobile operators will be able to better compete with Internet companies that are seeking to erode both their market share and their revenues from voice and messaging.

Differences between Huawei RCS Solution and GSMA RCS

Huawei RCS solution complies with GSMA RCS, but builds upon the GSMA standard to achieve higher levels of functionality. The existing GSMA RCS is only based on IMS networks and only focuses on basic features, including enhancing user experience, promoting industry alliances and identifying business models related to advanced messaging. This restricts operator choices. Huawei believes that a successful RCS solution must consider both IMS and non-IMS networks. Huawei’s RCS solution focuses on:
- Enhancing user experience: Bridging IMS and non-IMS networks to provide a seamless user experience.
- Unified communication VAS platform: unified platform to enrich communication services, increase ARPU, and provide cost savings on their infrastructure investment.
- Greater variety of services: In addition to services defined in GSMA RCS standard, Huawei RCS provides functionality for new services, including convergent messaging box, micro blogging services and others.
- Network Evolution: Huawei RCS solution can help operators to migrate from legacy network based services to RCS services without the need for large expenditures or subscriber migration to new systems.

Huawei RCS platform

**Overview**

As the telecoms value chain is entering the mobile 2.0 era, mobile operators are struggling to predict and follow end user behaviour while rapidly launching services that address and monetize these requirements. RCS is among the latest attempts to capture end user requirements for advanced communications, including a presence enabled phonebook, rich voice and video while introducing extensions for future services that are not yet in the market. GSMA’s RCS has been spearheading the evolution of such services and Huawei is now evolving this platform to allow operators to take advantage of more advanced functionality while not necessarily waiting for the RCS standard to be completed. Moreover, Huawei’s RCS platform will be compatible with the GSMA RCS standard, making the technology future proof while also ready to address the needs of operators today. Huawei’s RCS platform is illustrated in the following chart.

**Figure 3: Huawei RCS platform**
Although GSMA’s RCS defines the basic multimedia communication service based on IMS architecture – applicable only to the telecoms value chain – Huawei’s RCS platform extends the reach of RCS to both Internet and telecoms markets reaching a far larger audience compared to the GSMA platform.

Compared with the GSMA solution, Huawei RCS offers several advantages:

- Apart from supporting enhanced messaging defined by GSMA, Huawei’s RCS supports traditional messaging, including SMS, MMS and USSD. This allows for convergent messaging services in order to meet end user and operator needs for evolution. Huawei’s RCS also allows for development of traditional messaging services while supporting existing, revenue generating services.

- Huawei provides an IMS-ready architecture which not only supports GSMA RCS but is also compatible with existing deployed networks. This ensures that Huawei RCS can be effectively deployed in complex, multi-vendor network environments.

- Support for service capability exposure with open APIs, allowing developers and third parties to access network functionality to create a new breed of services.

- Huawei RCS supports enriched call functionality defined by GSMA RCS while including traditional voice service capability. Operators can integrate current voice capabilities with new, richer services and educate subscribers in an incremental fashion.

The introduction of GSMA RCS services requires an IMS core, making the transition a complicated and – in several cases – costly upgrade for current networks. Operators that do not expect to generate a significant amount of new revenues from RCS or any new messaging platform may not be willing to evolve current legacy infrastructure to IMS without a guaranteed plan for Return on Investment (ROI). Huawei RCS, on the other hand, does not require the use of IMS in the core network; it can be deployed in a standalone fashion while operators can upgrade functionality as dictated by end user requirements. Therefore, Huawei RCS has a strong economic benefit compared with GSMA and is suited for both developing and developed markets, as operators are not currently willing to invest in technologies that have long ROI cycles.

**Services available on Huawei’s RCS platform**

Huawei RCS is fully compliant with GSMA RCS R 2.0/3.0 and Huawei also has more rich services focusing on consumer needs. The list of applications that are being developed using RCS platform enablers is as follows:

**GSMA RCS service feature compliance**

1. **Enhanced Phone Book**
   - Free text, portrait icon exchange, capability exchange, share Presence (social presence, SNS presence, synch, location)

2. **Enriched call**
Call enriched with multimedia sharing (share video, share image) with or outside voice call

3. Enhanced Messaging
   Conversational messaging experience, IM (1-1, 1-m, legacy messaging, file transfer)

4. Video call

5. SNS Services
   Integration with SNS services (facebook, twitter)

Huawei proprietary RCS services other than GSMA RCS:

1. One Number
   Uni-Number for several terminals and several numbers. It supports Simultaneous Ringing and Sequence Ringing which can be set by the subscriber.

2. One Box
   SMS/MMS/VMS/Email, Unified Storage

3. VoIP
   PC2PC/PC2Web/PC2Phone/Web2PC/Web2Phone/Web2Web.

4. Calling Name Card
   It includes Home Location Display, CNAP (calling name presentation), and Caller reminder set by called party.

5. M-Blog
   M-Blog is similar with that of internet SNS (twitter etc) but the concept is richer and it is the combination of Internet and telecom. Users can publish, receive, reply, and follow the information through SMS, MMS or Internet. And it also can interconnect with the other internet Micro-Blog, Thus the subscriber can also view the Micro-Blog via the unified RCS portal.

6. NetDisk
   It is an online personal information storage place where user can upload and store their data including messages, pictures, videos, documents among others and also they can share it with friends by allowing full or limited access.

7. Relationship Radar Status
   See who is closer to you. It shows the relationship level between your contacts by analyzing statistics on how many times they have contacted you or you have contacted with them.

8. Rich terminals & clients
   Huawei RCS solution provides Mobile Client, PC Client and WEB portal.

9. Open API for 3rd parties
Section C: China Mobile’s 139.com service

Overview

China Mobile’s 139.com service is a converged telecommunications and Internet service offering, which enables those of China Mobile’s post-paid subscribers who sign up for it to access a range of voice, messaging and Internet services, using multiple devices attached to a single SIM. The 139.com service includes voice services such as OneNumber, messaging services such as OneBox, and Internet-based services such as micro-blogging and access to external social networks. China Mobile charges its subscribers a monthly tariff to access 139.com; it also works with third-party Web companies with which it shares revenues and to which it charges access fees for using its network.

Strategic goals

China Mobile faces a number of challenges in China. These include ensuring that it can maintain and grow its customer base, and generate additional revenues from its subscribers. China Mobile is the largest mobile operator in China with 71.2% market share and 538.9 million subscribers at end-1Q10, 88% of which are pre-paid, according to Informa Telecoms & Media. Mobile phone penetration in China currently stands at 56.1%, so there is still plenty of room for organic growth. However China Mobile’s ARPU remains relatively low, totalling US$10.27 billion at end-1Q10, though this is above the country average of US$9.29 billion.

Having invested CNY62.8 billion (US$9.2 billion) in its networks in 1H09 alone, China Mobile is also concerned about the potential outbreak of price wars, wherein competing mobile operators drive down the retail price of their services in order to win new customers and encourage churn.

Also, China Mobile is concerned about its networks becoming used primarily as a transport layer for Internet companies; under this scenario, China Mobile would derive relatively little value and therefore minimal additional revenues.

139.com Technology Strategy

China Mobile developed 139.com in three stages:
1. Integration of network assets.
2. Combining its telecommunication and Internet assets.
3. Establishing itself as an Internet company.

In phase one, China Mobile focused on integrating its voice and messaging services, resulting in the launch of its OneNumber and OneBox products, which it made available to a wide range of mass-market handsets. During phase one, China Mobile used Huawei’s RCS Solution to carry out the network integration required for OneNumber and OneBox, and it also used
Huawei’s platforms to integrate its business support systems (BSS) and operations support systems (OSS).

In phase two, China Mobile focused on developing Internet-based services that could be accessed via multiple devices but using the mobile subscriber’s SIM, and that are integrated with its existing voice and messaging services. China Mobile worked with Internet companies in order to integrate their services into the 139.com service, including blogs, instant messaging and social networking, and it also developed its own social networking service called Sharing. In this stage of the project, China Mobile used Huawei’s Internet Connector platform in order to open up its networks to third parties.

In phase three, China Mobile began to focus much more on its goal of becoming a Internet company in its own right. To this end, it launched a range of its own-brand Internet services and opened up its communication service enablers to third parties.

New services included micro-blogging, gaming, music and advertising, which were made available on the 139.com service and through its store. Huawei again provided integration services for this phase of the project, as well as enabling the online store.

**139.com Business Model**

China Mobile charges its mobile subscribers a monthly tariff on a post-paid basis to access and use the 139.com services, and shares the resulting revenues with its partners — which include MSN — where applicable. In addition, China Mobile negotiates resale agreements for its network with these partners, which provides an additional source of revenues. China Mobile refers to this business model as the ‘two-way business model’.

**Results**

By end-2009, 20 million China Mobile subscribers had registered to use 139.com, and subscriptions continue to increase at the rate of 1.5 million new users a month. The users of the 139.com service generate 400 minutes of voice use, which is 51.8% more than non-139.com users, and they also generate an additional CNY 37 (US$5.41) in ARPU. In addition, 139.com users send many more messages than non-139.com users, consisting of 960 SMS and 100 MMS a month, compared to 100 SMS and less than 10 MMS, respectively. Also, the churn rate for 139.com users stood at 1.82% at end-2009; by comparison, China Mobile’s overall churn rate is 4.44%. The 139.com service also has good brand recognition; China Mobile says that 70% of its subscribers are aware of the service.

The 139.com service can therefore be said to be helping China Mobile to achieve its goal of increasing voice and messaging traffic and revenues. It can also be concluded that the 139.com service is also helping China Mobile to reduce churn.
Conclusions

Mobile operators are developing and pursuing strategies that are aimed at helping them to arrest what has been a decline in voice and messaging revenue growth, in developed markets especially. They are also developing and pursuing strategies aimed at helping them to reduce churn. But, as the penetration of cheap voice calls and Internet services such as social networking increases, mobile operators are also developing and pursuing strategies for converged communications services that are aimed at helping them to better compete with the Internet companies, or at least to work with the providers of Internet-based services in a way that ensures that the mobile operator retains the mobile subscriber as a customer, and also increases the value of that subscriber on their network.

The GSM Association’s Rich Communications Suite is an important and necessary step in the right direction in terms of providing an agreed, standards-based framework for converged communications services on mobile operator networks. But the GSMA’s efforts are taking some time to come to fruition in terms of mobile operator deployments of RCS-compliant services. A select number of Tier 1 operators have already launched a first tranche of converged services that are based on the network-address-book and that are within the spirit of what the GSMA is trying to achieve with RCS.

Meanwhile infrastructure vendors such as Huawei, while supportive of the GSMA’s RCS initiative, are also cognisant of mobile operators’ desire to move quickly in order to deploy converged services as a way of arresting declining growth in their voice and messaging revenues. In addition, mobile operators are driven by the desire to reduce customer churn and to increase the value of both their existing customers and any new customers they might win as a result of pursuing a converged communications strategy. Ensuring that they do not lose customers or revenue to Internet companies is also a high priority for mobile operators.

At the same time, mobile operators are more than ever mindful of the cost of deploying new technology, so any approach that combines getting the most out of their existing network investment with the ability to deploy new services for minimal additional investment will prove attractive.

The GSMA has delayed the release of the RCS 4.0 specifications while it examines an API-led approach towards the development of rich communications services. The GSMA’s move towards APIs is an approach that Huawei supports; the vendor recommends creating RCS enablers using APIs, as opposed to developing RCS services that are tightly bound to the mobile operator network. But there is scope for the GSMA to go further, Huawei believes, in that the APIs that would be used to create the RCS enablers could also then be incorporated into the GSMA’s OneAPI initiative.