IDC EMEA, 389 Chiswick High Road, London, W4 4AE, U.K. Tel.+44.20.8987.7100 www.idc.com

INSIGHT

RCS and Joyn: Keeping Operators at the Center of Communications

John Delaney

IDC OPINION

Rich Communications Suite (RCS) emerged as a technical specification in February 2008. It went through four releases without producing any commercial subscriber services. In early 2011, Europe's five biggest mobile operators galvanized RCS by promoting a simplified version, RCS-enhanced (RCS-e). A year later, they announced a service brand for RCS-e — Joyn — and a plan to roll out Joyn subscriber services across European markets from 2H12. The aim is to produce nationwide centers of gravity for Joyn in Europe, whose experience can be replicated in additional countries. Joyn's advocates are presenting a united front and have made rapid progress in pushing RCS-e into live subscriber services. Their principal motivation is to keep operator services central to their customers' experience as customers' communications behavior expands out from voice and text messaging to encompass richer services, such as chat, video calling, and social media.

- In its app-based incarnation, Joyn is a new entrant in an increasingly crowded OTT communications space. It has some advantages over third-party services and could be helped by the operators' well-established marketing organizations. But in the OTT space, Joyn will be jostling for attention in the midst of many other new entrants and some very well-established services, such as WhatsApp, Viber, and Skype.
- The real differentiation of Joyn against other rich communications services emerges when it is deeply integrated into the handset software — then users get the "it's just there, it just works" experience that helped to drive text messaging uptake. But for this implementation of Joyn, support from the handset industry is crucial to success, and there is little solid evidence as yet that wholehearted support will be forthcoming. Handset vendors are being told by operators that Joyn's support will be one of the main criteria in handset procurement. However, they see noncompatible models with strong user pull featuring as strongly as ever in operators' ranges. They also see what could be construed as bet-hedging behavior by some of the operators promoting Joyn: Telefónica's Tu Me, Deutsche Telekom's Bobsled, and Orange's LibOn are all proprietary, OTT-like IP communications apps. Moreover, even if the handset vendors did commit to building Joyn into all of their products, it would take several years before a critical mass of users had acquired a Joyn-capable handset.
- The bigger significance of Joyn, and RCS more generally, is in the long term as a platform for communications services in LTE networks. With VoLTE already adopted for voice services, RCS has clear potential to play the same role for messaging services. Operators must ensure that this long-term significance for RCS is clearly understood in the industry. But they must also accept that, whether correctly or not, RCS and Joyn are widely seen as a riposte to OTT services. They must take steps to counter unrealistic expectations for the growth in rollout, uptake, and usage of Joyn.

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Europe, Middle East and Africa Mobile Consumer Services: Insight

IN THIS INSIGHT

This IDC Insight sets out the history and context of RCS development. We examine the significance of RCS in two separate contexts: as a response to the growth of OTT communications and as a platform for communications services in LTE networks. We analyze the reasons behind the renewed impetus behind RCS through the Joyn initiative, and we assess the prospects for its uptake and usage by end users. Finally, we present case studies, giving the views of four of the five operators behind the Joyn initiative and of the GSM Association, which is coordinating and promoting the development of RCS.

SITUATION OVERVIEW

Understanding RCS: Some Historical Context

RCS specification has quite a bit of history to it. Moreover, RCS emerged in the context of an evolving mobile messaging services landscape, which itself has a long and varied history. As industry analysts, our main purpose is to assess how things might unfold, not to recount history. However, there are some cases in which an understanding of the historical background is essential to that assessment. RCS and the development of mobile messaging is such a case, so we begin with a brief account of how we got where we are today to set us up to consider where we might go next.

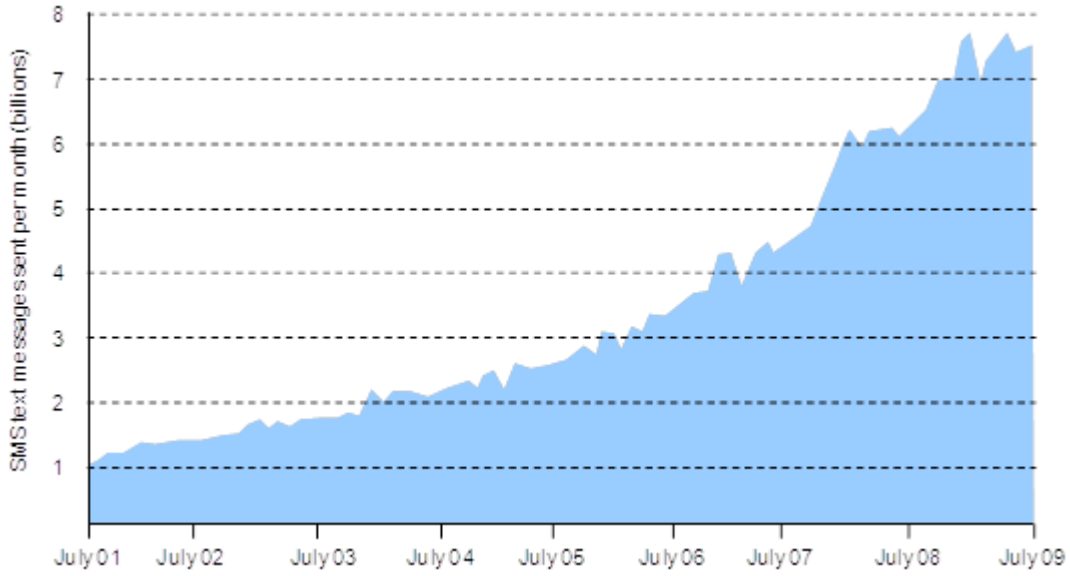
Mobile Messaging Emerged as a Key Operator Revenue Source, But It Is Increasingly Under Threat

Mobile Messaging: One Big Hit, One Disappointing Follow-Up

In the first decade of the 2000s, European mobile operators enjoyed a stream of revenue from text messaging based on SMS that was large, fast growing, and very profitable. The number of text messages sent by mobile users grew hugely in volume during the period, as seen, for example, in the U.K. traffic figures shown in Figure 1. Rapid growth in both uptake and usage of SMS by subscribers — in combination with a well-established pay-per-message pricing model — pushed SMS revenues up to the point where, by the middle part of the decade, they typically accounted for between 15% and 20% of a mobile operator's annual service revenues.

FIGURE 1

SMS Traffic Growth in the U.K., 2001–2009



Source: U.K. Mobile Data Association

Once it had become clear that SMS was set for massive popularity, the mobile industry introduced a new mobile messaging standard, MMS. MMS supported a number of functional enhancements to SMS, including the ability to send longer text messages to include photos and video clips and to send to email addresses as well as phone numbers. MMS first became available as a subscriber service in 2002, but it has never achieved anything like the same levels of usage enjoyed by SMS. For example, about 640 million MMS messages were sent compared with over 150 billion SMS messages in the U.K. in 2011. The reasons for the relative failure of MMS are instructive for the RCS case, and we will look at them in more detail later in this document.

Mobile IM: A Latent Threat to SMS

On PCs in the early 2000s, a new form of messaging gained rapidly in popularity, instant messaging (IM). Like SMS, IM was a text messaging service. Unlike SMS, IM was session based, enabling real-time text conversations. Later on, IM services added further functional enhancements, such as support for emoticon graphics and multiparty chat. Around 2004–2005, while SMS growth was still in full swing, clients and service platforms supporting IM on mobile phones and networks started to appear, from vendors such as Comverse, Colibria, Followap, and Oz. In some cases, these were aimed at building new, operator-branded mobile IM communities. In other cases, they were aimed at enabling mobile access to the existing PC-based IM communities, such as Yahoo Messenger.

Since both services supported the exchange of text messages between mobile phones, the prima facie potential for usage substitution from SMS to mobile IM was clear. However, such substitution was not experienced in practice because uptake of mobile IM remained low for several years. The reasons for this included:

- **Mobile phones' limited text input capabilities.** Almost all devices in use in the mid-2000s relied on ITU-T keypad entry.

- **A poor user experience compared with desktop IM.** In addition to the comparative slowness of text entry, mobile IM was also beset by factors such as awkward user interfaces, difficulties in making text legible on small screens, and message latency in mobile networks.

- **Users' reluctance to pay extra.** The typical business model was to charge a monthly subscription for mobile IM, plus data and/or messaging charges incurred by using the service. However, most users balked at paying even a modest additional monthly fee. For example, at the end of 2005, the French operator Bouygues launched a service offering mobile access to Microsoft's Windows Live Messenger, charging a monthly fee of €2.50. 18 months later, Bouygues reported that it had about 77,000 mobile IM subscribers, out of a total customer base of 8.5 million, and this was considered to be a comparatively successful performance.

However, it was clear that although these issues were formidable obstacles, it was possible to overcome all of them over time, in which case, the potential for mobile IM to cannibalize SMS could be realized. To try and pre-empt cannibalization, operators started to develop a mobile-specific IM service through the GSM Association, which came to be known as Personal IM. However, few subscriber services based on Personal IM went live, and those that did were not widely used.

Erosion of the Link Between SMS Usage and Revenues

Until the mid-to-late 2000s, end users predominantly paid for each SMS message they sent, and at quite high levels — typically around the 10 cents per message mark. However, from around 2007, several factors combined both to erode the per-messaging pricing model and to reduce the price of SMS messages.

- The structure of postpaid mobile pricing in Europe moved from a per-minute/ per-message paradigm toward bucket pricing whereby customers pay a fixed amount of money each month for an allowance of voice minutes, text messages, and data usage. This has had the effect of reducing the price paid per SMS message, for customers using all or most of the messages in their bundle. The downward pressure exerted by bucket tariffs on SMS pricing intensified, following the introduction of SIM-only/no-contract tariffs, which made it easier for customers that were not using all of their allowances to drop down to a smaller, cheaper bundle. These tariffs also proved attractive to heavier prepaid users, who could now send large numbers of SMS without having to pay per message.

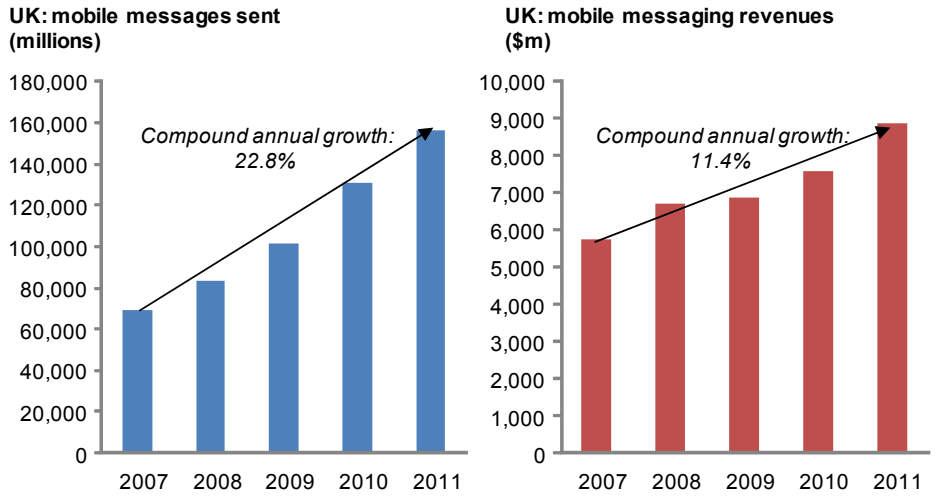
- From 2008, when some prepaid users started to reduce their usage as economic conditions worsened, operators started using cheaper and free SMS as an incentive for prepaid users to top up their credit regularly. For example, in 2009, T-Mobile U.K. was offering unlimited free texts and Internet to prepaid users who top up their credit by £10 or more each month. For regular users, such offers became, in effect, monthly rolling bucket tariffs and had the same depressing effect on average SMS pricing as true bucket tariffs.

- The large difference between the cost of carrying SMS and the price charged for doing so attracted the attention of European regulators both at the national level and at the EU level. There were several cases in which regulators set limits on SMS pricing, where operators' prices were deemed to be excessively higher than their costs. In addition to the effect of actual mandates from regulators, it is likely that the close attention paid by regulators to SMS pricing inhibited some operators from charging as much for SMS than they would otherwise have been inclined to do.

Looking again at the example of the U.K., we can see in Figure 2 the effect of these developments. SMS traffic continued to grow strongly in the later part of the decade, showing an average growth rate of 22.8% in 2007–2011. However, SMS revenues grew more slowly and erratically. The average growth in revenue during the same period was 11.4%.

FIGURE 2

U.K. SMS Traffic Growth Far Out, Stripped Revenue Growth, 2007–2011



Source: IDC's Telecommunications Services Database, 3Q12

SMS-to-IM Substitution: Delayed, but Not Denied

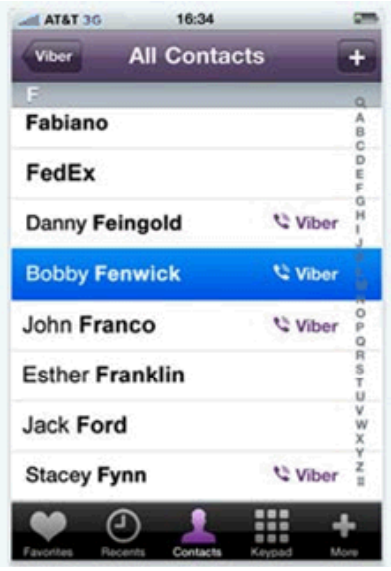
As explained previously, user uptake of mobile IM services remained low for several years after their introduction. However, in the late 2000s, some industry developments combined to make mobile IM a much more appealing proposition:

- Smartphones with large screens and better text input
- Easy and reliable provisioning of client application software
- Mobile broadband networks
- Flat-rate data pricing

From 2009–2010, mobile IM services have started to grow rapidly in popularity as some of the most popular ones in Europe, including BlackBerry Messenger (BBM), Skype Chat, WhatsApp, and Viber. Many mobile IM services, though not all of them, also include VoIP calling. These services are all closed user groups (e.g., a BBM user can exchange messages only with other BBM users) so they are not viable as a total substitute for SMS. However, although mobile IM users have to continue using SMS to communicate with those of their contacts who are not mobile IM users, it is possible for them to use IM instead of SMS for exchanging messages with those of their contacts who are on the same mobile IM service. Users can also easily belong to multiple mobile IM services, since there is no incremental cost involved in joining them. Some mobile IM apps indicate, in the user's phone book, which of the user's contacts are on the same mobile IM service, which both encourages use of mobile IM in preference to SMS where possible, and also encourages users to invite other contacts to join the mobile IM service. An example in Figure 3 shows the case of Viber.

FIGURE 3

Mobile IM Apps Show Users Which of Their Contacts Are Using the Same App



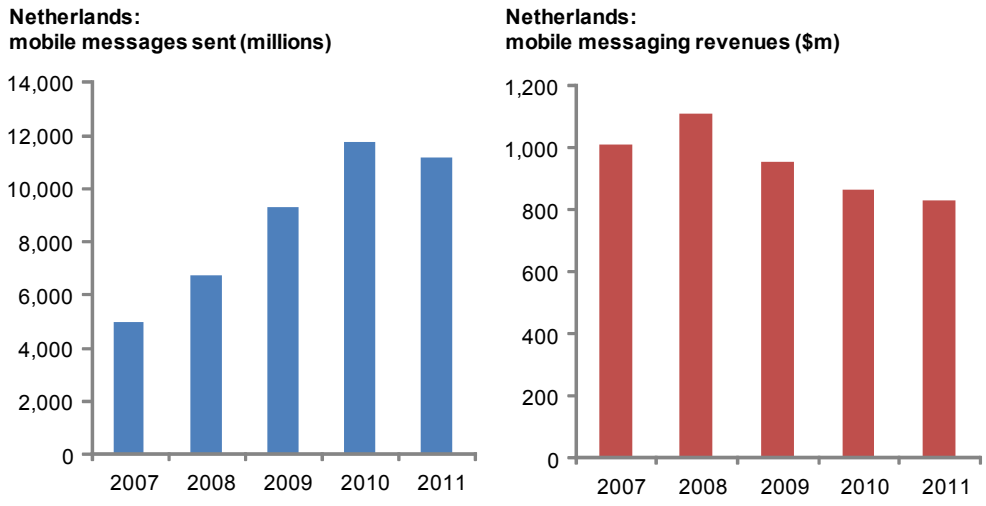
Source: iPhone Apps News

As a result of such contact-by-contact substitution behavior, operators in some European countries have started to see a notable slowdown or even a reversal in the growth of their SMS traffic in the past couple of years. For example, in May 2011, the Dutch operator KPN reported a dramatic fall in its SMS revenues for 1Q11 and a 10% YoY decline in SMS traffic. KPN attributed the reduction in SMS traffic to the increasing use by its customers of WhatsApp and BBM. As shown in Figure 4, in the Netherlands as a whole, fewer SMS were sent in 2011 than in 2010. However, the decline in messaging revenues had begun two years earlier, while SMS traffic was still growing.

IDC's *SMS and the Internet: Market Trends in Mobile Messaging* (IDC #HW04R9, December 2009) described in more detail the downward pressure on SMS revenues. In that document, we also anticipated the slowdown and decline in SMS traffic that has become apparent over the last couple of years. The report is no longer available on www.idc.com, but a copy can be supplied to service subscribers on request.

FIGURE 4

First SMS Revenues, then SMS Traffic, Commence a Decline in the Netherlands



Source: IDC's Telecommunications Services Database, 3Q12

The Need for a Blended Mobile Communications Experience

Although the Personal IM initiative did not eventually result in widespread service rollouts, it did succeed in crystallizing the notion that mobile operators need to try and outflank — or at least keep pace with — mobile Internet messaging services by developing not only a mobile messaging experience that is richer than SMS but that also builds on the strengths that have made SMS so popular. The two most important strengths and, hence, the most important differentiators against services such as mobile IM are:

- **Universal reach.** SMS is based on formally standardized technology. All mobile operators in Europe and most of those outside Europe have full SMS interconnect in place. For the end user, this means it is possible to exchange SMS with anyone, as long as you have their mobile phone number. The question of whether people can receive your message does not arise; if they have a mobile phone number, they can receive it.

- **Ease of access and use.** The client application for composing, sending, and storing SMS messages is built into the phone's software and fully integrated with the phone's address book. There is no need to find, download, install, and launch apps in order to use SMS — it comes with the phone.

The first of these advantages, universal reach, needs to be extended for any new operator messaging service. As well as interoperating with other operators that also offer the new service, it is also necessary to interoperate with:

- Users who do not have the new service

- Users who are using the new service on a PC or other nonphone device

Typical mobile users have an increasing number of separate messaging environments on their phones, from the telecom world (e.g., SMS, MMS, and voice mail) and the Internet world (e.g., email, IM, and social networking). In some cases, they access these services from multiple devices. Therefore, there is a clear potential to improve users' messaging experience by bringing together the separate messaging environments on their phones, so that rather than having to choose what kind of client and bearer to use, users only have to choose what to send and who to send it to. The concept, which we originally referred to as "blended messaging," is shown in Figure 5 and encompasses interworking between some or all of:

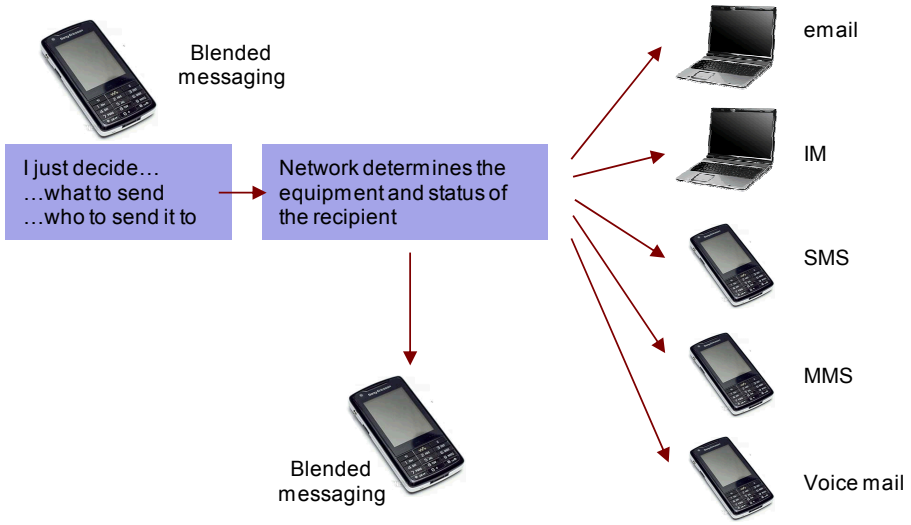
- **Different types of mobile messaging.** For example, SMS to/from mobile IM

- **Mobile and PC messaging.** For example, voice mail to email, SMS to/from email

- **Messaging and other services.** For example, SMS to/from social networking, MMS to/from content sharing

FIGURE 5

Blended Messaging: Bringing Separate Messaging Experiences Together



Source: IDC's *SMS and the Internet: Market Trends in Mobile Messaging, 2009*

Several vendors of messaging platforms developed products to satisfy the operators' interest in a richer, more blended messaging environment. Examples included Comverse's converged messaging, Openwave's adaptive messaging, (later called Converged Communications Suite), and Ericsson's enriched messaging. However, despite vendors' efforts to build in a degree of interoperability, especially regarding SMS, the lack of any cross-industry momentum behind the concept of message integration inhibited progress.

Rich Communications Suite: The Long and Winding Road

RCS Versions 1 through 4: An Evolving Spec, No Subscriber Services

In 2006–2007, the various versions of the blended messaging concept gravitated toward an embryonic cross-industry specification. In February 2008, in advance of Mobile World Congress, a group of mobile industry players announced "a joint effort to facilitate the evolution of mobile communication toward rich communication." Dubbed RCS, the specification comprised a set of features originating from a profile of the IP multimedia subsystem (IMS) and rules for implementation. The group of companies involved in launching RCS comprised:

- **Operators.** Orange, Telecom Italia, Telefónica, and TeliaSonera
- **Network vendors.** Ericsson and Nokia Siemens Networks
- **Device vendors.** Nokia, Sony Ericsson, and Samsung

Later in 2008, the GSM Association adopted RCS as a formal cross-industry initiative. Many of the messaging platform vendors were involved in the working group committees developing RCS. Examples included Acision (which rolled its earlier COMET consortium initiative into RCS), Airwide, Colibria, Comverse, Ericsson, and Tekelec. At this stage, the core feature set of RCS comprised:

- **Enhanced address book.** Provides presence and capability indications; enables users to initiate communications including voice calls, video calls, file transfers, or messaging; and allows users to integrate multimedia elements, such as photos of contacts
- **Rich call.** Enables users to exchange different types of content, such as video or photos, during a call
- **Rich messaging.** Expands on traditional instant messaging to simplify and unify multiple messaging environments and provide a richer user experience
- **Multidevice support.** User access to services and applications will be possible from both mobile and fixed terminals (PCs)

Examples of the kinds of RCS-enabled messaging interactions that were envisaged are shown in Figure 6.

FIGURE 6

Examples of RCS Messaging Sessions

Source: GSM Association, *Rich Communication Suite White Paper*

The GSM Association particularly promoted trials of RCS involving all of the mobile operators in a country market so that RCS usage could benefit from the same countrywide reach that SMS enjoyed. In May 2009, the three Korean operators (SK Telecom, KTF. and LG Telecom) commenced a joint trial, and a European joint trial commenced at the end of 2009 among the three operators in France (Orange, SFR, and Bouygues).

However, the number of players involved, the complexity of the specification, and the need for multilateral interoperability testing made slow progress in taking RCS to end users. RCS progressed from release 1 at the start of 2008 to release 4 at the end of 2010 without resulting in any commercial subscriber services. The Internet world moves much faster during the same period, and Facebook grew from 60 million users to 250 million users and migrated from PCs to mobile phones. Some operators, believing that RCS was simply too slow, undertook their own unilateral activities to develop rich communications services. The most notable of these was Vodafone, whose Vodafone 360 service launched in late 2009, delivered many of the features set out in the RCS spec but only for Vodafone customers.

RCS-e: Strip RCS Down and Push It Forward

One year after its launch, it was clear that Vodafone 360 was failing to take off in any substantial volumes with subscribers. The service's prime mover, former Microsoft executive Pieter Knook, left Vodafone in September 2010. This perhaps made Vodafone more amenable to participating in an initiative by the big European operators to accelerate the progress of RCS by replacing presence with device-discovery capability (DCD), implemented through the SIP Options framework, stripping RCS down to a less ambitious set of functionality, and focusing on commercial cross-operator deployments in targeted countries.

The result RCS-enhanced (RCS-e), was launched at Mobile World Congress in February 2011. RCS-e was jointly announced by the GSM Association and five large European operators: Deutsche Telekom, Orange, Telecom Italia, Telefónica, and Vodafone. The launch participants made it clear that the purpose of RCS-e was to enable a more rapid commercial rollout of RCS-powered services to subscribers. RCS-e focuses on the messaging aspects of RCS, with text chat as the core service capability. The other two functions offered by RCS-e are:

- **File sharing.** Pictures, video, music, and documents can be circulated among participants during a chat session.
- **Video sharing.** Each participant in a chat session can show the other participants what is around them using their phone's video camera.

At the following year's Mobile World Congress, the GSM Association announced a new brand for RCS-e powered services, Joyn. We describe the progress made so far with Joyn, its market position, and its future prospects in the second half of this report.

RCS 5: The Full Spec Reasserted

Outside Europe, there are some operators that are keen to continue progressing the all-encompassing RCS specification rather than the stripped-down RCS-e version. For example, Verizon sees RCS as a potentially important component of communications services in LTE networks, and it sees presence capability as an integral part of the future communications landscape. In this context, the future is more imminent for Verizon than for European operators because it is much further ahead than European operators in rolling out LTE infrastructure and acquiring LTE customers.

To accommodate both types of operator, the GSM Association will ensure that RCS-e is a pure subset of RCS in future releases. Thus, for instance, the latest full release RCS 5 contains session initialization protocol (SIP) presence and SIP options as alternative components.

IP Multimedia Subsystem: A Solution Looking for a Problem and Then Finding One

IMS: Designed for Service Control, but Marketed as a VAS Platform

As mentioned earlier, RCS originated from a profile of the IP multimedia subsystem (IMS). IMS is a standardized architecture for the service-control platform in networks comprising IP transport and mixed access types (e.g., a mixture of circuit-switched and packet-switched access and/or a mixture of fixed and mobile access). Support for packet-switched calling in IMS is based on SIP. It is necessary for an operator to have access to an IMS platform in order to deploy either RCS or RCS-e.

The history of IMS goes back even further than that of RCS. Its specification was first standardized in 1999, and it was adopted as part of the 3GPP specifications in 2002, with release 5. Around 2004, networking vendors started offering IMS as a standalone platform, but the marketing focused heavily on IMS as a platform for value-added services (VAS), especially fixed-mobile convergent telephony and push-to-talk. However, even using generous assumptions regarding users' interest in such services and willingness to pay extra for them, it was difficult to make a business case for investing in IMS solely on the basis of revenue from a new VAS. IMS is costly to implement, because it requires new implementations of some of the basic components of a mobile network. For example, the home location network (HLR) is replaced by a new component called home subscriber server (HSS).

It was unfortunate that IMS was first marketed as a VAS platform, and doubly unfortunate that the VASs with which IMS was most closely associated, fixed-mobile convergence and push-to-talk turned out to have limited popularity. The weakness of the VAS-based case for IMS investment gained IMS something of a reputation as "a solution in search of a problem."

In fact, there was a clear problem for which IMS was the pre-eminent solution. For a converged IP core network connected to a heterogeneous circuit/packet-switched access network, IMS is the only 3GPP standardized technology available for the service-control layer. In the mid-2000s, few mobile operators needed to solve that problem. However, most operators in developed economies need to solve it now as they undertake the process of migrating their access networks to LTE and their core networks to the enhanced packet core (EPC) specification. In the context of network development strategy, IMS looks like a much more compelling proposition than it did as a push-to-talk platform.

IMS and SIP: The Foundation of Voice in LTE Networks

The case for investment in IMS was boosted in late 2009 when a group of the world's largest mobile operators, network vendors, and device vendors announced the adoption of SIP and IMS as the technical foundation of voice services in LTE networks. A few months later, at the 2010 Mobile World Congress, the GSM Association announced its adoption of SIP/IMS-based voice over LTE (VoLTE) as a technical project, setting the seal on its status as the standard for mobile voice services in LTE networks.

Therefore, for mobile operators that are deploying LTE networks, IMS is now a requirement. The question of whether or not to invest in IMS no longer arises. The only germane questions are when and how. This removes a major obstacle that has formerly stood in the way of RCS. It used to be necessary to consider the cost of deploying IMS as part of the business case for RCS. Now, the availability of IMS can be taken as a given for an increasing number of operators. In late 2012, the GSM Association estimates that between 20% and 30% of the world's mobile operators have access to an IMS platform, a figure that will increase as deployments of LTE and VoLTE proceed.

Note, however, one large operator's remark, "There's a lot of enthusiasm for IMS in the technical departments. There's not quite so much in the marketing departments, where they're not feeling the pain yet."

FUTURE OUTLOOK

RCS-e and Joyn: The New Drive Behind RCS

Operators See RCS as a Means to Stay Central to Their Customers' Communications Behavior

Some major shifts in the mobile industry are combining to regalvanize operators' interest in pushing RCS forward. OTT communications service providers are now in a position to provide services of sufficient quality and reliability that they can viably replace mobile voice and SMS for a significant portion (albeit not all) of an end-user's interactions. The long foretold impact of mobile Internet communications on mobile messaging traffic and revenues is thus starting to materialize in some countries and looks very likely to spread to other countries. Mobile VoIP is not quite in a position yet to have the same impact on mobile voice traffic revenues, but there is clear potential for that to happen too before very much longer.

RCS offers operators a means of responding to the impact of OTT services, and their desire to do so is more intense now that the impact of OTTs is actual rather than potential. The Big 5 European operators that are pushing RCS-e forward say that their purpose is not directly to compete with OTT players. Rather, their purpose is to remain relevant and central to their customers' communications experience in the new world of smartphones and the mobile Internet. And although the operators have not explicitly stated as much, we believe that they are also motivated by the need to ensure that as multidevice behavior drives users in the direction of cloud services and content, it is the operators rather than third parties that fulfill the role of primary custodian for their customers' messages, content, and contact information. Fulfilling that role will be increasingly important as a means of improving customer retention, and also as a means of adding value to Big Data analytics (an early example of an operator moving to exploit the latter potential was seen in October 2012, when Telefónica launched its Dynamic Insights service, offering the retail industry demographically analyzed data on crowd movements.)

The importance of RCS to operators' objectives is receiving endorsement from senior management in the operators that are driving it forward in Europe. For example, when the CEO of Orange France Telecom, Stéphane Richard, presented the company's 10 commitments to fulfilling the European Commission's Digital Agenda in March 2012, RCS featured as one of the ten. Richard pledged Orange to "enrich interpersonal communication by launching Rich Communication Suite (RCS) services in European countries in 2013 and by providing 20 million RCS phones in 15 countries by 2015, enabling seamless and pan-European services."

Joyn Launched Commercially in Europe in 2012

As noted earlier, the GSM Association and the Big 5 European operators jointly announced the new consumer brand for RCS-e, Joyn, at the February 2012 Mobile World Congress. At that event, it was also announced that Joyn services would be launched commercially in two European markets in 2012 — first Spain then Germany. The intention is for the operators to coordinate services so that when Joyn becomes available in a country, it is available from all (or at least most) of the operators in that country. In this way, Joyn's most important advantage over OTT communications services — universal reach through interoperability — will be maximized. The Joyn brand is shown in Figure 7.

FIGURE 7

The Consumer Brand for RCS-e: Joyn

Source: GSM Association

Telefónica and Vodafone Spain both "soft launched" Joyn services at the time of the Mobile World Congress announcement, placing the app in the Android app storefront (Google Play). They held off from promotion of the service until Orange Spain could also bring it to market. In June 2012, Telefónica, Vodafone, and Orange formally announced the availability of Joyn to their Spanish customers, describing Joyn as "a new advanced multioperator communications service."

In August 2012, Vodafone announced that Joyn was available to its German customers. At the same time, Deutsche Telekom said it intended to launch Joyn in December. Telefónica's German operator O2 is reportedly intending to launch Joyn in 2013.

At the end of October 2012, the U.S. operator Metro PCS announced that it had launched RCS services under the Joyn brand. At the time of writing, none of the other U.S. operators have made any announcements regarding the launch of RCS or Joyn, and Metro PCS's launch statement suggested that it sees Joyn as a means of competitive differentiation in the U.S. market.

Implementation Options: Deep Integration or Downloaded App

The user experience envisaged in the RCS specification is expressed neatly in the phrase coined by the GSM Association as part of its Joyn campaign: "it's just there; it just works." Like mobile voice and SMS, the RCS client software is built into the phone during manufacturing process. The RCS client is activated, and the user's credentials are authenticated automatically and invisibly when the user's phone is switched on and the SIM registers on the network. The client is deeply integrated with the phone software so that, for example, an RCS session appears alongside calling and texting as a standard option for contacts in the phone's address book. In 2012, the GSM Association and the Big 5 operator group have been negotiating with the major device OEMs to build a Joyn client into new products and, in some cases, to place the Joyn logo on the device packaging.

However, even if the device OEMs are persuaded to build Joyn clients into all or most of their devices soon, it will still take a long time before large numbers of users have acquired a Joyn-enabled device. In order to enable a user base to be built up more quickly in the early phase of availability, downloadable Joyn apps are also being offered at present for iOS and Android phones. In terms of user experience, the app-based implementation is comparable with that of the native client. The main disadvantage of the app-based implementation is that it requires more prior action on the part of the user. Users must discover, install, and update the app in order to be provisioned for Joyn, and users must launch the app after switching on the phone before they can contact or be contacted by others using Joyn. In other words, "it's not just there and it doesn't just work."

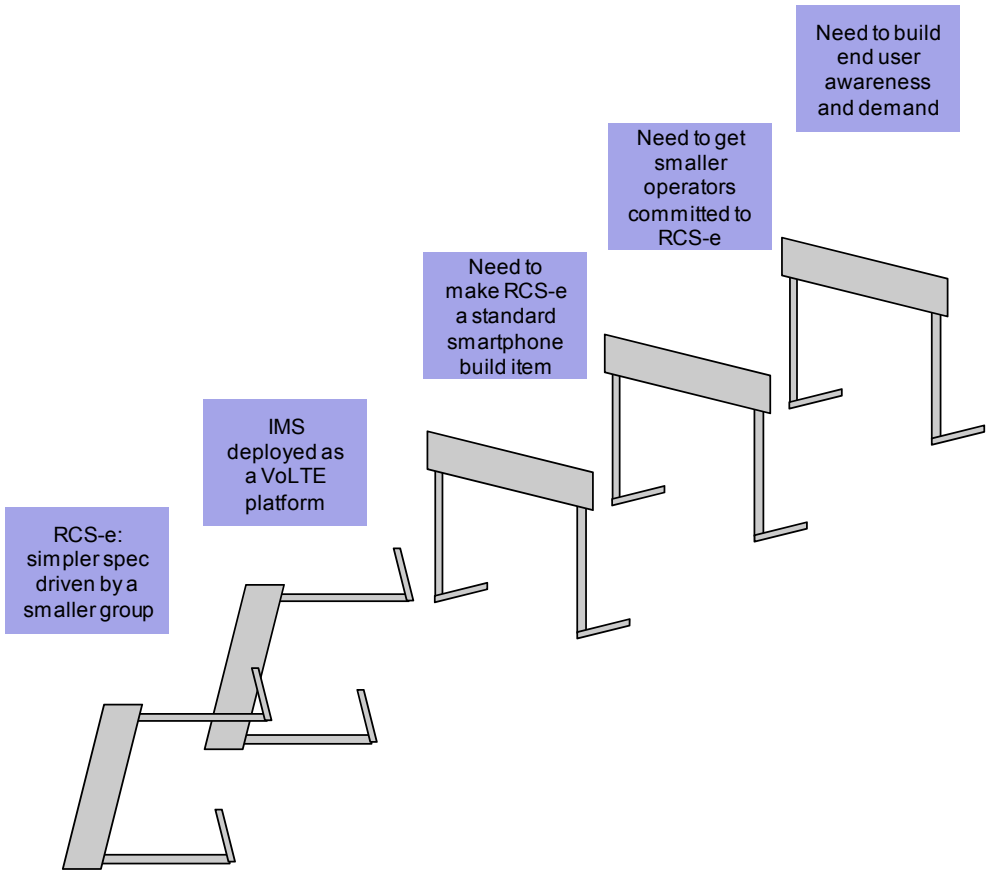
Several companies have produced RCS-e/Joyn clients and apps which have been accredited as compliant by the GSM Association, including Neusoft, Summit Tech, and WIT Software.

Some Formidable Obstacles Remain in the Path of RCS

In addition to the factors driving operators to embrace Joyn, we also have to consider the obstacles in the path of Joyn and of RCS more generally. As explained previously, two of the biggest obstacles that formerly impeded the progress of RCS in Europe are now being overcome. The complex and cumbersome nature of RCS development has been mitigated by the formation RCS-e/Joyn, a simpler specification driven by a smaller group of powerful players. Moreover, the need to factor IMS deployment costs into the business case for RCS-e/Joyn is diminishing, now that IMS deployments are being driven by the development of voice over LTE. However, as shown in Figure 8, some substantial obstacles remain to be cleared before progress of RCS-e/Joyn in the mass market can be assured.

FIGURE 8

Some Obstacles to RCS Have Been Cleared, but Some Formidable Ones Remain



Source: IDC, 2012

Make RCS-e/Joyn a Standard Build Item in New Smartphones

Smartphone vendors must be persuaded to build RCS-e clients into their products deeply integrated with the contact list, phone dialer, and messaging manager as a standard part of the software build. The operators can exert some leverage here because they purchase smartphones in large volumes. Operators in the Big 5 group have been advising smartphone vendors that RCS-e support will feature strongly in their criteria for selecting the handsets that they will purchase and offer to their customers. The operators are claiming some success for this tactic, stating that 9 of the top 10 smartphone vendors agreed to build RCS-e into at least one new model in 2012. The GSM Association expects the first devices with native RCS-e support to go on sale in Europe at the end of 2012.

However, it is far from clear at present that RCE-e support will be a ubiquitous feature of new smartphone models in the near future. None of the vendors has yet committed to including RCS-e as a standard feature of its whole range. And Apple has so far refused to include native RCS-e support at all, not surprisingly, in view of Apple's recent moves into communications services, such as iMessage and FaceTime. Given the continued popularity of the iPhone among end users, it seems most unlikely that any operator would decline the iPhone because of its failure to support RCS-e.

Promote General Adoption of RCS-e/Joyn among Operators

Although the big European operators are pushing hard behind RCS-e and the Joyn brand, more work is needed to promote widespread uptake among European operators more generally. Operators find it difficult to see RCS as an opportunity for incremental revenue because mobile service pricing is migrating toward the bundled model, and at present, smaller operators' difficulty in establishing a business case is exacerbated by the fact that they are less likely than bigger operators to have access to an IMS platform.

The Big 5 and the GSM Association need to work on persuading Europe's other operators about the strategic case for adopting and promoting RCS-e/Joyn, especially the operators that are small in pan-European terms, but are significant players in individual country markets. Examples of such operators include Wind in Italy, E-Plus in Germany, and 3 in the U.K.

Even at this early stage of commercial availability, the need to deal with the issue is gaining some urgency. The first two countries targeted for commercial launch of Joyn are Spain and Germany. In both of those countries, the three largest operators are part of the Joyn Big 5 group: Telefónica, Vodafone, and Orange in Spain and Deutsche Telekom, Vodafone, and Telefónica in Germany. However, in both of those countries, there is also a significant operator that is not part of the Big 5: E-Plus in Germany and Yoigo in Spain. Unless these operators are persuaded to adopt, invest in, and promote Joyn, it will not be possible to realize the universal reach through interoperability, which is at the core of the Joyn value proposition.

Drive End-User Awareness and Demand

Among end users, awareness of and demand for Joyn is currently nonexistent. It will be necessary for the operators to run a sustained marketing campaign to change that. Of course, this is an issue that is also faced by developers of new OTT services, and the operators' advantage over most OTTs is that they have large budgets for marketing campaigns, albeit budgets for which internal competition is fierce. However, the marketing of Joyn must be carefully phased — there is a danger of going too fast, too soon. However intensely it is marketed, Joyn will not be adopted in the mass market until penetration is sufficient to make it likely that most people have at least one or two Joyn users among their regular contacts. Therefore, for a while, operators will have to take a fairly low-key approach, focusing on promoting Joyn among early adopters who are more amenable to communicating via apps that they have to download and install. We discuss approaches to marketing Joyn in more detail in the following section of this document.

The OTT Context Raises Dangerous Expectations for Joyn Growth

The operators' view that RCS is about remaining relevant to their customers rather than about competing with OTT players, makes sense in its own terms. Nevertheless, the coincidence of operators' renewed interest in RCS with the beginnings of SMS-to-OTT substitution means that industry observers inevitably see Joyn, to some extent at least, as a response to the rise of OTT communications apps on mobile phones. This will particularly be so because Joyn has itself been implemented as an app, and it is likely that most early adopters of Joyn will be using it via an app rather than via a native handset client.

In this context, operators must be wary of, and be prepared to counter, unrealistic expectations for the speed at which rollout, uptake, and usage of Joyn will grow. As described previously, the obstacles that remain in its path are unlikely to be cleared rapidly. And even if they are, the primary use case of Joyn — "it's just there, it just works" — depends on the native-client implementation. Penetration of native clients is inevitably tied to the length of the general handset replacement cycle, which is measured in years. For example, UBS Equity Research recently published a survey of almost 2,000 users in Europe and the U.S., of whom over 50% had had the phone they are currently using for at least a year (moreover, this survey was biased toward more affluent users, since it included 600 of UBS's own staff).

Status and Progress of Joyn: The GSM Association's View

We interviewed the GSM Association about RCS and Joyn in June and in September of 2012. The following paragraphs summarize the organization's views.

The GSM Association says it is surprised by the strength of momentum that has picked up behind RCS since Mobile World Congress 2012, following the launch of the Joyn brand. It detects a renewed sense among mobile operators that "it's really happening" and has received a lot of enquiries as a result. The realization has sunk in that operators' key value offering, and their strongest differentiator against OTT service providers is ubiquitous reach through interoperability. There is less emphasis than in the past among operators on competing with each other. One of The GSMA's main tasks now is to convince the remaining operators in countries where Joyn has launched or is about to launch to get on board so that the service will be 100% interoperable.

The key technology enabler for RCS is IMS, and in promoting RCS in the past, "it has sometimes felt like we've had to sell IMS first." However, deployments of IMS are now becoming more widespread, owing to the need to have IMS in order to implement voice services on LTE networks. Approximately 20%–30% of operators globally now have access to an IMS platform, either one of their own or in-group. Some groups are looking at a hub-and-spoke approach to running the IMS platform. There are other operators for whom hosted services are an attractive option for accelerating deployment. However, others are unhappy about this approach, seeing IMS as part of the strategic issue of moving toward communications services on all-IP networks. For example, one European operator remarked to the GSMA that "IMS is at the core of our future business. I don't want to outsource it; I want my engineers to be IMS gurus." In fact, implementing RCS is a good case study for learning how to use IMS for a low-latency service such as voice.

Having said that, in most European countries, there is at least one mobile operator that does not have access to IMS yet. This is another reason why RCS is likely to be a fairly long journey. However, it is possible to base RCS on a proprietary equivalent of IMS; it will still interoperate with other operators' RCS services as long as it adheres to the standard. For instance, some session border controllers have what is required out of the box.

Approaches to Marketing RCS

A Platform or a Service?

Originally, RCS stood for "rich communications suite." More recently, the expansion of the acronym has been changed to "rich communications services." In at least one respect, though, the original was more appropriate. RCS is not a service, rather it is a technology platform upon which multiple services can be built. In fact, it could be argued that Joyn is a service application of the RCS platform and could potentially end up being one among several different RCS service applications. A useful analogy can be seen in the way Telefónica is using the Jajah VoIP platform that it acquired at the end of 2009. Rather than market "Jajah" as a VoIP service, Telefónica has used Jajah as a platform upon which to develop multiple distinct and separately branded services: first Global Friends, then Calling Card, and most recently TuMe. For more details about Telefónica's use of Jajah, see IDC's *VoIP on Mobile Phones: Service Strategies* (IDC #HW01S, August 2010) and *Telefónica Digital: Beyond Connectivity, a Vision of the Telco of the Future* (IDC #HW56U, July 2012).

However, although Joyn is an application of the RCS platform, the GSM Association has also started encouraging developers to use Joyn itself as a platform through the Joyn Innovation Challenge. This is an initiative for encouraging Web and app developers to develop innovative services based on the core capabilities of Joyn, using APIs to a live RCS network. The best entries for the Joyn Innovation Challenge will be showcased at the GSM Association's exhibition stand at Mobile World Congress 2013. An example of a small developer that is interested in the idea of using Joyn as a platform is Six3, a startup that has developed an app enabling users to create and send video messages for free. Six3 sees clear potential for complementing the real-time video sharing capability of Joyn with the asynchronous video capability of its app.

The Joyn innovation challenge could be beneficial by increasing the richness and diversity of features available to Joyn users. Care mustbe taken, though, not to make the Joyn marketing waters muddier. Simplification of the RCS proposition was one of the reasons behind the creation of Joyn, and simple service propositions are generally the easiest ones to market successfully. As one operator acknowledges, "the positioning of Joyn will take some careful planning." Should it be described as "a kind of instant messaging, perhaps as "better text messaging?"

For example, Vodafone says it will keep the Joyn proposition simple by focusing on chat as the main driver for penetration, with file sharing as an enhancing feature. Video communication will be less prominent, because it is a trickier marketing proposition on mobiles than on PCs. Placing an unscheduled video call raises etiquette issues both for the caller ("Will I be catching them at an awkward time?") and the receiver ("What will they think of me if I refuse a video call?"). These issues are being addressed by Joyn — users can indicate their status as "available for video," and video transfer can be introduced into a Joyn session, which did not initially involve video. However, such features are beyond the scope of a marketing campaign whose main purposes are to promote awareness and uptake.

Promotion and Advertising

The operators that are promoting Joyn need to consider at least three separate constituencies:

- End users
- The mobile industry
- Their own internal marketers

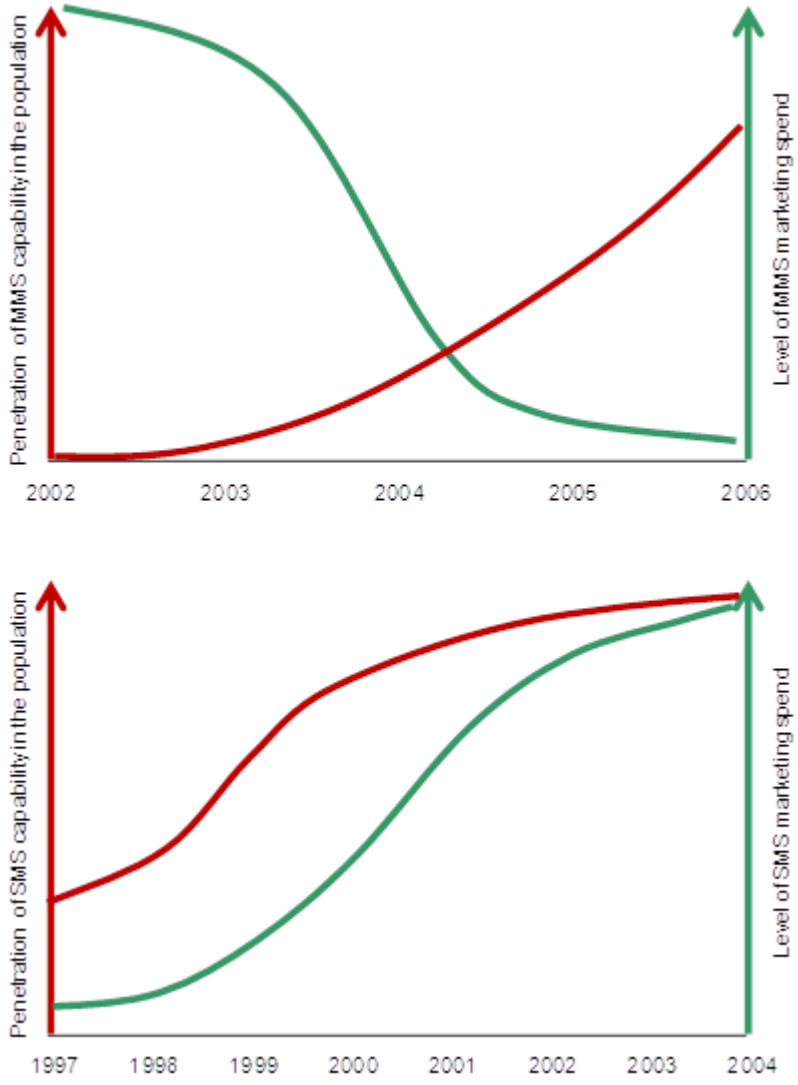
Promoting Joyn to End Users

It is vital that Joyn should not be marketed to end users too strongly, too soon. There are two reasons for this:

- As a communications application, Joyn's main value to a user lies in the community of people who are using the service. In the early days that community will be very small, touting Joyn too heavily at this early stage could prove counterproductive by disillusioning early adopters.
- Penetration of capability in the user base is currently very low, and it may take a long time to build up, especially in the case of native-client implementation. One of the mistakes that operators made when they marketed MMS 10 years ago was spending a lot of money on marketing MMS very soon after MMS-capable handsets became available. At that stage, there were few people who had an MMS-capable handset, so however persuasive the MMS marketing campaigns were, they could not have resulted in very much uptake of MMS. A couple of years later, when MMS capability in the installed base had increased, there were reasonable numbers of potential users to persuade as the marketing budgets had shifted away from MMS (and in most cases, toward mobile TV). As shown in Figure 9, this situation was the converse of what had been done successfully (albeit not deliberately) in the case of SMS.

FIGURE 9

MMS Shows the Danger of Heavily Marketing a Communications Service Too Soon



Source: IDC, 2012

The penetration of Joyn capability can proceed somewhat more quickly than in the case of MMS because an app-based implementation of Joyn is available in addition to native handset integration. Nevertheless, MMS provides an object lesson in the dangers of ramping up service marketing too quickly.

Promoting Joyn to the Mobile Industry

On the other hand, there are dangers involved in being excessively gradual too, and when marketing Joyn to end users, its proponents also have to market it to the general mobile industry in order to encourage the industrywide uptake and commitment that will maximize the service's value. In that regard, it will be necessary to present some encouraging statistics on Joyn uptake and usage fairly soon, now that commercial service launches have begun. The Spanish and German service launches have been positioned as test cases for the Joyn proposition, and whether fairly or not, uncommitted industry players are unlikely to be very patient in their wait for positive results.

According to the GSM Association, the main focus is on launching Joyn interoperably, country by country, to make sure that it works for any subscriber in the country. The mobile operators are holding back somewhat until all the operators in a country offer the service — for example, Vodafone and Telefónica in Spain waited until Orange launched. Discoverability of Joyn is built into the service experience. Users see the Joyn logo next to contact names that are Joyn users, and the service client has a suggest invite feature. Such features will be leveraged to take a mainly viral approach to marketing Joyn, at first, through media such as the social networks.

This seems like a sound approach to begin with, and at least one of the prime movers behind Joyn has past experience of promoting an app this way; Deutsche Telekom's head of Voice and Messaging Products was formerly the CMO of Nimbuzz, an OTT VoIP app that gained some traction through a comarketing deal with A1 in Austria (see IDC's *VoIP on Mobile Phones: Service Strategies* — IDC #HW01S, August 2010). However, it will be risky to rely too much for too long on viral marketing. That has succeeded spectacularly for a few OTT services, but the majority of OTTs fail to achieve mass-market uptake. After a while, operators will need to ramp up their promotion of Joyn, a full above-the-line campaign would be premature, but activities such as displays and promotion by staff in the operator's stores could help to give Joyn an early boost.

Promoting Joyn to the Marketers

Another constituency to which Joyn needs to be marketed is the marketers themselves. As noted previously, operators' marketing departments need a clear and simple service proposition to take to market. Joyn is certainly an improvement over RCS in that respect, especially if the primary focus is placed on its chat functionality.

But unless a new service proposition is entirely unique, marketers also need a clear idea of what other players and services they are competing with. In this respect, the GSM Association's messages could make things trickier. On one hand, Joyn's proponents insist that it is not designed to be an "OTT killer." Its purpose is to complement, rather than replace, the likes of WhatsApp. On the other hand, they also stress the cross-operator nature of the Joyn initiative, saying that Joyn's success can be best assured if operators cooperate with each other to make it work and promote it to end users. Therefore, the people charged with marketing Joyn are not competing against OTT services, and they are not competing with other operators. However, they are not marketing something entirely unique either.

This seems to be making it difficult for marketers to figure out a coherent positioning for Joyn. Joyn is an app, but so far, its promotion has looked and felt mostly like traditional operator advertising rather than using the quirkier and more imaginative approaches that characterize the best OTT marketing.

Pricing and Packaging

Regardless of questions about positioning, the history of communications services development over the past few years shows very clearly that in order to stand any chance of widespread uptake and usage, Joyn service pricing must adhere to the following principles:

- No additional subscription fee
- No incremental per-usage charges

Another factor that held back usage of MMS in its early days, for example, was that operators decided to charge users every time they sent a message, at rates of up to five to six times the price of sending an SMS. The need to pay 50 cents or so to send each MMS would have inhibited usage even in the best of circumstances, and it inhibited usage even more so in practice because senders could not be sure their messages would be successfully received and were being charged even if they were not successfully received.

Does this mean that Joyn cannot generate any revenue? No, but it does mean that it would be inadvisable to try and generate additional revenue directly from Joyn, at least until it has a strongly established user base. Rather, Joyn should be seen as a means of stimulating additional revenue from operators' core services: voice, text, and data. European mobile customers have shown a strong preference for bundled pricing in recent years, with an increasing number of users paying a fixed monthly fee for an allowance of voice minutes, text messages, and data volume, which they exceed only in exceptional circumstances if ever. A more recent tendency at the high-priced end of bundling is for operators to offer unlimited voice and text, with a data allowance capped at various levels and various price tiers.

Joyn can readily be built into the structure of existing service bundles. For example, chat messages could count against the text message allowance, video sharing could count against the voice minute allowance, and file sharing could count against the data allowance. A simpler approach and one that would be more intuitive to users of OTT services would be for all usage of Joyn to count against the data allowance. In either case, Joyn generates revenue indirectly by stimulating additional usage of the customer's monthly allowances and, as usage grows, by making it more likely that customers will need larger monthly allowances, for which they will pay more.

An early example of this bundled approach to Joyn pricing, from T-Mobile in Germany, is shown in Figure 10.

FIGURE 10

T-Mobile Germany Relates Joyn Pricing to Core Service Bundles

joyn – Preisübersicht

Tarifgruppe	Kamera zuschalten	Chat	Dateien senden
Complete Mobil	wie Voice-Tarif	kostenfrei	kostenfrei
Call & Surf Mobile	wie Voice-Tarif	kostenfrei	kostenfrei
Call	wie Voice-Tarif	wie SMS-Preis	wie MMS-Preis
Call mit SMS Flat allnet	wie Voice-Tarif	kostenfrei	kostenfrei
Call mit Data HandyFlat	wie Voice-Tarif	kostenfrei	kostenfrei

Source: Deutsche Telekom, Q3 2012

Operators could also consider offering Joyn on a completely free-of-charge basis in the early stages (i.e., to zero-rate data traffic that is associated with Joyn sessions). Early adopters of Joyn will not get the full value of the service while the user base remains small, so it makes sense to charge them less. The "free really means free" approach would also be a clear differentiator against OTT services, especially those that use generate audio and video traffic.

An example of an operator having adopted this marketing tactic in the past is 3 in the U.K., which launched a cobranded mobile Skype service in 2007. In 2009, 3 removed all charges for data traffic generated by Skype so that 3 customers could use Skype on their mobiles completely free of charge. The purpose of this move was to attract customers to the 3 network, which has a much smaller customer base than the other U.K. operators. At that time, Skype data charges were removed, and the operator had about 3 million customers. In November 2011, 3 announced that it had almost 9 million customers although, of course, several factors have driven that growth in customer numbers, and it is not possible to isolate the effect of free Skype from the other factors.

However, it can be very difficult for a service provider to move away from free once the expectation and habit are established among users. If an operator does adopt this tactic for pricing Joyn, it must take care to ensure that its customers are clear that service usage is free of charge only for a finite, promotional period.

The Short-to-Midterm Significance of RCS: Keeping the Operator at the Center of Communications Behavior

The Position of RCS Against OTT Communications Services

Superficially, the app version of Joyn resembles an OTT service in its mode of operation and in its branding. It is not immediately obvious that this is an operator service (although in some cases at least, the operators are associating their brand with Joyn in the app storefronts.) To some extent, Joyn's functionality also resembles that of an OTT service (e.g., WhatsApp, the core function of Joyn is chat, and Viber, Joyn uses the address book to indicate available members of its community).

However, Joyn's functionality is distinctive in other aspects. The ability to switch media during the course of a session, a characteristic feature of SIP, is not commonly encountered in OTT services. And although OTT services on PCs typically support video communications, this capability is less ubiquitous on smartphone OTT services; where it supported the user experience that can be expensive and erratic, owing to the limited ability of 3G packet services to support consistent, reliable streaming rates, and low latencies. Therefore, Joyn's ability to offer reliable video sharing and the operators' ability to tariff video predictably and affordably could also be important differentiators of Joyn against OTT services. On the other hand, the one-way nature of Joyn's video sharing could seem odd and perhaps frustrating to users who are accustomed to two-way videoconferencing on PCs and increasingly on smartphones too.

Note that one important use case of OTT services, both VoIP-centered and IM centered, is to bypass mobile operators' roaming charges, using them over WiFi in preference to mobile voice and SMS when outside their home country. Joyn works on WiFi and cellular so it can also support this use case. This suggests that the operators have decided that if their revenue is going to be cannibalized anyway, it is better for the operators to do it to themselves than to have someone else do it to them. A similar philosophy seems to underlie the proprietary, OTT-like services that some of the operators are developing, for example:

- In May 2011, T-Mobile U.S. launched Bobsled, an application for making calls in Facebook, which was later developed into a full standalone IP voice and messaging application. In September 2012, T-Mobile U.K. started trialing an IP voice and messaging app called Clever Connect.

- In May 2012, Telefónica announced Tu Me, a rich communications application built on Telefónica's Jajah VoIP platform. The service supports voice calls, text messages, video and audio messaging, photo sharing, and location sharing. Tu Me is a product of the Telefónica Digital division, whose explicit remit is to produce services that are outside the scope of traditional telecoms.

- In November 2012, Orange announced the launch of an IP voice and messaging app called LibOn. The app is a product of Orange Vallée, an organization set up by Orange for developing innovative services.

The Long-Term Significance of RCS: Communications Services in LTE Networks

Rather than OTT services, the chair of the GSM Association's Joyn initiative considers the most important context of Joyn to be mobile operators' core communications services. "What we're trying to do is raise the bar for core communications. OTT providers create vertical silos, but we're trying to horizontalize rich communications. We're not necessarily about everything, but we are about everyone. Above that bar there's room for many players to do something distinctive, and what we'd really like is for them to do their stuff on top of RCS.

In this light, we can see clearly how Joyn, and RCS more generally, could directly complement VoLTE as operators migrate to the next generation of mobile network technology. Both use SIP and IMS as their technology foundation, and VoLTE is already positioned as the platform for voice services in LTE networks, not only to replicate GSM/3G telephony in the all-IP network, but also to act as a platform for developing richer voice services such as high definition voice and multiparty conferencing. Given the text-centric nature of RCS, it is easy to see it as the messaging counterpart to VoLTE in 4G networks. Like VoLTE, RCS can also replicate a GSM/3G service — SMS in this case — and like VoLTE, RCS can also support extension of that service with richer functionality, such as picture exchange and presence awareness.

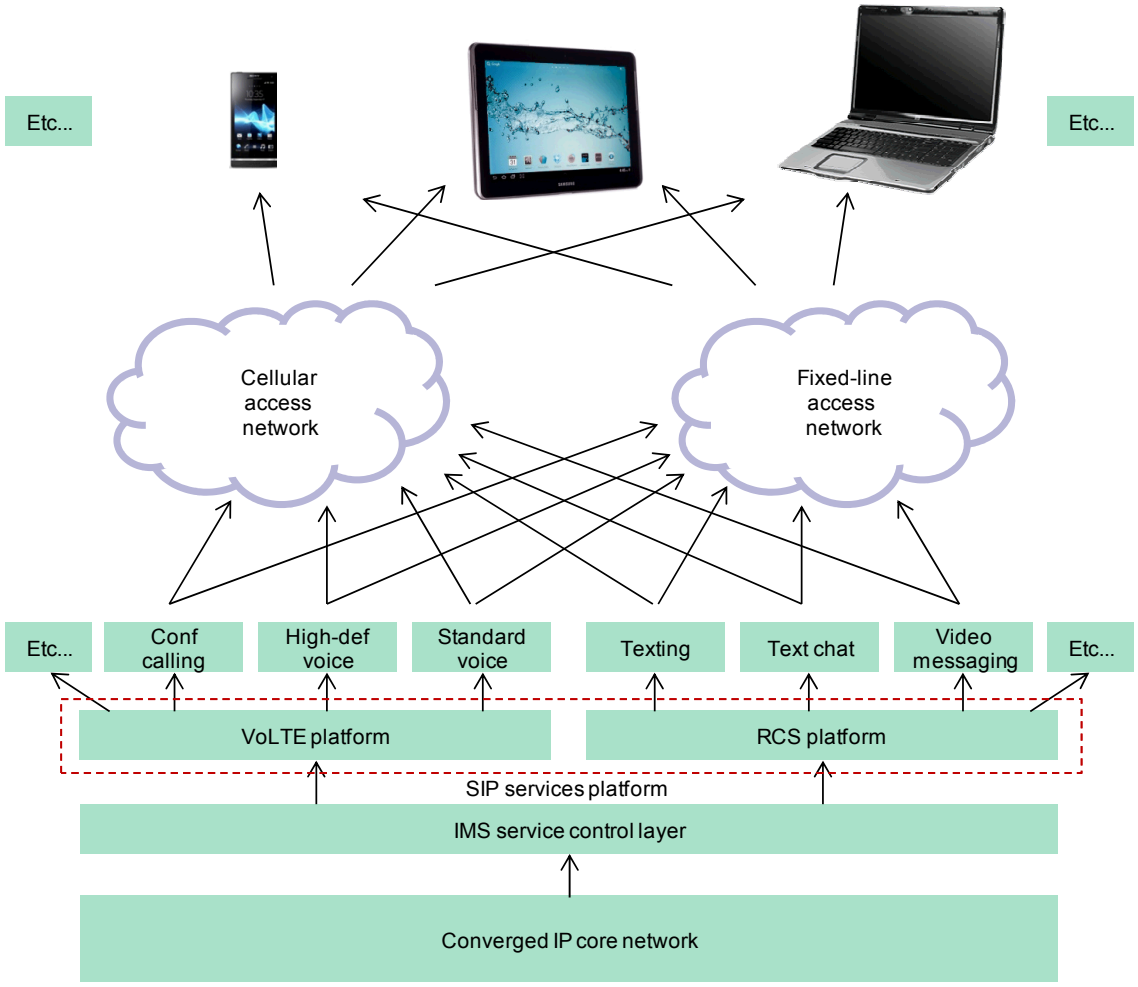
Thus, as shown in Figure 11, in the context of network development, RCS assumes a deeper significance for operators than competition with OTT VoIP and IM applications. The next-generation network architecture comprises a mixed-technology access network addressing a common IP core through an IMS service-control layer. On top of the IMS layer is:

- **A VoLTE platform.** Applications of which comprise the operator's voice-centric service portfolio
- **An RCS platform.** Applications of which comprise the operator's messaging-centric service portfolio

In principle, service applications of the VoLTE and RCS platforms could be produced by third parties and by the operator itself.

FIGURE 12

RCS and VoLTE Complement Each Other As Core Communications Service Platforms in Next-Generation Networks



Source: IDC, 2012

The question of how RCS and VoLTE fit together is addressed in RCS-5, in which it is clear that they are complementary parts of the LTE communications suite. U.S. operators, being more advanced with LTE networks, are not very interested in RCS-e, so one of the important aspects of RCS-5 is to provide a longer-term framework both for operators that are forging ahead with RCS-e and for those whose interest stems from the position of RCS in the evolution of communications services on LTE. The capability discovery feature allows for a mixture of RCS versions so, for example, someone with an RCS-e handset will be able to communicate with someone with an RCS-5 handset, although not all features will be available.

However, although the LTE communications role will be a pivotal one for RCS, it will be a long time in coming to fruition. On the network side, the combination of IP core and IMS service control is at an early stage of implementation, with only a few of the larger and more advanced operators currently in the process of rolling it out. On the handset side, the scenario requires near-ubiquitous support for VoLTE and RCS to be present in devices in the user base. No currently available handsets support either VoLTE or RCS natively, although it is likely that some will come onto the market in 2013.

The linkage with VoLTE has the potential to make RCS a more compelling proposition for operators than a mere OTT killer. Nevertheless, one of the leading RCS platform vendors Metaswitch finds that linkage frustrating. Metaswitch fears that its effect could be to slow down the introduction of RCS. It believes that, in turn, could erode the significance of RCS by increasing the time available for OTT services to gain traction and expand their user bases.

In other words, RCS must make sense as an OTT killer in the short term in order to make sense as a next-generation messaging platform in the long term.

The European Big 5 Operators, RCS and Joyn

In 2Q12–3Q12, we spoke to four of the five European operators that are promoting the roll out of Joyn. (We were unable to arrange to speak with Telecom Italia). We discussed with these operators the drivers behind the current resurgence of interest in RCS and Joyn and their views about implementing and marketing Joyn. We summarize the operators' views in this section.

Deutsche Telekom

The New Impetus Behind RCS

RCS had reached version 4.0 without bringing anything to market, mainly because it was an all-or-nothing proposition that had become too complex. Around November 2010, Deutsche Telekom was approached by Vodafone and Telefónica about taking RCS forward in a smaller and simpler form. The three operators agreed to push RCS forward via a simpler version and a clear public commitment. The new specification aimed to facilitate quick progress through a "back to basics" approach, including just three use cases and replacing presence with DCD. Presence functionality has become a staple feature of chat services on PCs because PCs are not typically powered on and connected to communications services at all times, and users do not typically have their PCs with them at all times. But when chat is used on mobile phones, rather than PCs, the requirement for presence functionality largely goes away.

However, Joyn is a long-term proposition. The user base will migrate toward it gradually as happened, for example, with the migration from ISDN to IP data services in Germany. We should not expect large-scale adoption of Joyn in the near future. That said, it is important to keep the momentum going, following the first planned service launches in Spain, Germany, and France.

Built-In versus App-Based Service Adoption

The strong expression of commitment to Joyn by the five largest European operators is playing a crucial role in the effort to drive mass uptake because the size of operators' collective customer base gives device vendors an incentive to build Joyn capability into their phones. To enable the "it's just there, it just works" experience that the operators are aiming for, Joyn needs to be built into the phone's operating software and address book in the same way that telephony, SMS, and MMS are built in. The operators have been making it clear to device vendors that technical and promotional support for Joyn will be among the key criteria used to select new phones for inclusion in operators' device ranges.

The need to have Joyn built in for the full service experience means that the pace of service adoption will, to some extent, be governed by the handset replacement cycle. The same issue has been encountered in the past, for example, with MMS. However, unlike the MMS case, adoption of Joyn can be accelerated in the early phase by the availability of apps. It is also possible to equip devices with Joyn by building Joyn into firmware updates; unlike apps, this approach can bring the "it's just there, it just works" experience to a phone that is already in use.

Approaches to Marketing RCS/Joyn

The industry has learned other lessons too, from the MMS experience of a decade ago. Besides early lack of capability in the handset base, other problems that held back MMS uptake were that:

- It was priced at a premium.
- It was unreliable, which would have been bad in any case, but which was even worse in view of the premium pricing.

One reason why MMS was unreliable was that, in practice, devices and network equipment from different vendors could comply fully with the MMS specification but still not work properly with each other. Joyn's interoperability is more robust as accreditation requires proven interoperability with two separate mobile operators.

So far as pricing goes, this will vary between operators, but all operators are keenly aware of the need to price in a way that encourages uptake. In T-Mobile's case, rich call sessions are priced the same as conventional calls, according to whatever voice tariff the customer is already on; text chat and file sharing are free of charge, except for customers in the "Call" tariff group, who pay SMS rates for chat messages sent and MMS rates for files sent.

The question of when and how to market Joyn is a complex one, and it will vary by channel. Some below-the-line marketing has already commenced, mainly targeting early tech adopters and using social/viral techniques. Operators will also be running some targeted campaigns among their own staff to give an early boost to the size of the Joyn user base. Awareness of Joyn will be built gradually by means, such as having the logo appear on device packaging and beside contact names in people's phone books. Large-scale, above-the-line marketing campaigns for Joyn will wait until there are lot more people who have devices that are capable of using the service.

Positioning Joyn Against OTT Services

Joyn needs to compete with OTT communications services. To some extent, Joyn can be positioned as a complement to OTT services. But realistically, it will also need to start displacing them to be successful. For example, this is one reason why the operators are building Joyn into customers' existing price bundles at no additional charge. Rather than trying to use the service to generate incremental revenue, operators will use to Joyn to retain their relevance to their customers and to add value to what their customers get in return for the monthly fee that they pay.

Some operators are also acting as OTT players. This can make sense as a short-term expedient but is an awkward fit in the long term because OTT services do not take advantage of the operators' core strengths in the same way that high-quality, well-integrated services do. The OTT model is conducive to breadth, but not depth, of service creation. If operators all start to focus on being OTT service providers, then they will all end up trying to compete independently in a space that is already overcrowded. And because there is no interoperability between OTT services, an OTT service can only win by displacing all or most of the other ones.

Orange

The Impetus Behind RCS

RCS and IMS have wide support within Orange, starting at the very top, "It really helps to get organizational alignment behind an initiative when it gets a name check from the CEO." RCS is part of the bigger migration to IP-based communications services, focusing initially on messaging but will evolve to include voice and video IP service in the near future.

The pieces are falling into place now at Orange for RCS, and there's a new sense of urgency. The breakthrough came in early 2011 when RCS-e was launched and achieved the backing of all the G5. It's clear that RCS-e has unlocked things in a number of ways, particularly by:

- Making the proposition simpler to understand from an end-user perspective
- Bringing a sharper focus to implementation

Orange is relatively decentralized country by country, but RCS-e has been designated a mandatory project at group level. The proposition makes compelling sense in all of Orange's developed economy-operating markets. Initially, Orange is committed to rolling RCS-e out both in Spain, where a strong-cross-operator approach is possible, and also in France, where none of the other G5 Joyn operators are present — Slovakia, Poland, Belgium, and Romania. Orange feels strongly that operators outside the G5 will come on board soon, and that RCS will become the industry standard for the messaging aspects of rich communications over the next few years.

Orange has built an open-source RCS Android stack for handset vendors and has advised the vendors that it considers built-in RCS to be a key selection criterion when procuring smartphones. Nine out of the top 10 OEMs have committed to launching native RCS devices in 2013, some of whom will be using the Orange stack. The operators are also talking to vendors and chip manufacturers about putting RCS into feature phones.

Telefónica

The Impetus Behind RCS

Telefónica's commitment to offering subscriber services based on RCS-e stems principally from its need to evolve and enrich the core service that it provides to customers. It's clear that the communications services that telcos are currently offering their customers are old format although still extremely useful. The richer and more functional things like blogging and tweets are coming from elsewhere. Telcos are communications companies, and they need to respond by innovating and enriching their own communications service offerings.

RCS also fits well with the migration of telcos networks to all-IP infrastructure that is under way now and that will continue in the next few years. There is a substantial cost associated with upgrading the network to IMS to enable IP-based call control, but telcos have to make that investment anyway in order to do VoLTE. With IMS in place, RCS becomes a no brainer. RCS will help telcos still to be telcos as their networks evolve from circuit switching to IP because of its quality of universality (i.e., the ability for one telcos' RCS users to communicate with any other telcos' RCS users).

Telco collaboration is an inherently slow process, and this is one factor that has made the progress of RCS to commercial services so lengthy. However, progress has also been impeded by the lack of impetus behind deployment of IMS in telco networks. For some years, telcos considered IMS not to be fully mature, and they did not see a clear rationale for investing in the deployment of IMS. However, that has all changed now that IMS has been adopted as one of the technology pillars for voice services over LTE networks. Before that, there was suspicion among some telcos that RCS was primarily an attempt by the network platform industry to build a business case for investment in IMS. Now, the role of RCS in enabling operators to build rich telecom services has become clear. Moreover, the issue of building rich telecom services has become much more urgent. Five years ago, we didn't have the OTT players breathing down our necks. Now the operators have a common enemy to battle together. And the VoLTE/RCS/IMS approach is the only viable one that is available to operators. This is the only bridge across the chasm — you walk across it or you fall down.

This is not to say that getting several big companies to work together is easy. Inevitably, there are still internal politics and conflicting interests to contend with. But having adopted a common purpose with RCS-e/Joyn, the European Big 5 have now achieved good momentum, with about 10 countries in the pipeline for service launches. The more progress that is made in bringing Joyn to market, the more interested the other operators will be in getting on board. The Spanish initiative will be a very important proof point. Bringing the service to market in Spain has been a learning process; rolling it out on a large scale has been really hard to do, "and thank God, we were also working on VoLTE at the same time."

Built-In versus App-Based Service Adoption

It's also important that RCS, like SMS and mobile voice, can just come with the phone and just work — no need to download, register, enter passwords, and so on. This full vision can only be fulfilled through integration of the RCS client with the native phone software. Telefónica expects all of the top 10 phone vendors (except Apple) to build RCS in to their devices, with the first commercial devices entering the market in late 2012 and the majority of new devices being RCS-capable by the middle of 2013. Some vendors are planning to promote awareness through activities such as featuring the Joyn logo on the device boxes. Now that the largest operators are committing themselves to RCS-e/Joyn, the likes of LG, HTC, and Samsung will also need to commit to RCS-e/Joyn or risk becoming low-margin hardware OEMs like the PC manufacturers.

RCS can also be used via a downloaded app. The service experience is not so seamless, but in the early days following the service launch, downloaded apps will play an important role in enabling service uptake. Although the app can speed things up a bit in the near term, Telefónica is not expecting high levels of RCS uptake to happen quickly. "This is not a six-month test, it's a long journey."

Part of the importance of RCS stems from the wider issue of developing communications services on LTE networks. Device vendors are starting to think about merging the development of VoLTE and However, a potential RCS/VoIP/VoLTE merger is a long-term issue and still somewhat speculative. Telcos also need to stay relevant to their customers in the meantime.

Approaches to Marketing RCS/Joyn

In marketing Joyn, telcos need to learn the lessons from their experiences with MMS. A user's phone will only offer a Joyn session for contacts who are also provisioned for Joyn, avoiding the problem of failed sessions. And operators will not be marketing Joyn too vigorously in the early days when there are few compatible devices on the market or in the installed base. Rather than big above-the-line campaigns, early marketing will rely on viral activities on social networks and awareness promotion in Movistar stores and on the Web site. "If we hype it now, early adopters will quickly become disillusioned."

The buildup of a Joyn-capable user base will be slow and gradual for quite some time. How long will it take? It's difficult to say for sure, but Telefónica will be able to drawn some learnings on this question from its experience in the Spanish market, which is pioneering Joyn as a commercial offering. It hopes to start seeing significant adoption of the service after a year or so, among customers who have compatible devices.

Positioning Joyn Against OTT Services

OTT players are fast and agile. Telcos are universal and reliable. These are different and not necessarily competing strengths. In some circumstances, the OTTs' strengths are more effective; in other circumstances, the telcos' strengths are more effective.

The telcos' challenge is to respond to customers' changing demands and to remain relevant to them as their communications behavior evolves. To do this, they need to find ways of providing value that only telcos can provide. The potential of RCS in this regard stems from its ability to take communications services that are mainstream, generic, and universal to a higher level of richness and functionality. People take for granted that they can make a phone call or send an SMS to anyone if they know their phone number, but that doesn't mean they don't value it. Telcos should focus on building value around the core of their existing proposition, for example, by taking instant messaging and putting it in the realm of universal service so that all IM users can communicate with all other IM users. No one else can do that. Telco services are collective services, and providing collective services will continue to be their role, although it doesn't have to be their only role.

Telcos should not be trying to compete feature for feature with the likes of Skype and Twitter. It's a losing battle, and in any case, it's not the right one to fight. Mostly, people take up OTT applications not because of the features they offer, but because their friends are on them. That's not to say that telcos shouldn't compete directly with OTT players in addition to initiatives like RCS. Telefónica is doing exactly that with the work being carried out by Digital under the Tu brand. But that's playing on the turf of the OTTs' business model, and telcos must not lose sight of the need to play on the turf of their own business model too.

In the future, especially as video features are more prominently in communications, the mobile operators' control over network performance will be an increasingly important source of competitive advantage over the OTT players

Vodafone

The Impetus Behind RCS

For Vodafone, the motivation to speed things up with RCS is its view of the future landscape. Operators are moving to an all-IP world with LTE, and in that context, they need to look at a new communications service suite. Although that is quite a long-term issue, the process is already under way. Vodafone has launched LTE services and handsets in Europe, the first ones having appeared in Germany.

The most important KPI target for RCS-e/Joyn at present is the number of countries in which it is launched commercially. Even though RCS is a long-term play, operators need to put some pressure on themselves regarding the pace at which it is brought to market to ensure that momentum does not slacken and also to benefit from learning from real-world usage of the service.

Built-In versus App-Based Service Adoption

Ultimately, there's no doubt that handsets with native implementation of RCS-e/Joyn are needed to drive uptake in the mass market. "To get to 5 billion rather than 50 million, Joyn needs to be built in to the handsets." This is clear from the history of telephony, SMS, and MMS. Downloading and installing an app will not enable mass penetration. For a while, the smartphone user base comprised mostly technically advanced users who downloaded lots of apps, but now the more typical smartphone users are those who perhaps download a few apps when they first get their devices but hardly ever do it again.

However, apps do provide a distribution model that can give a start to the creation of a user network, and so they can be a valuable means of achieving some early momentum for Joyn uptake. Apps are also valuable as a means of fine-tuning services to see how well things work in practice and then iterate the learnings back into the service. Vodafone and the other operators bringing Joyn to market have decided on a mixed approach, implementing Joyn as an app so that there's already something of a user network as devices with native Joyn implementations entering the market. This will take some time — handset developers' product development cycles are not measured in weeks. However, Vodafone has made it mandatory for all of its device suppliers — apart from Apple — to put Joyn on their devices, and all have committed to doing so even though it's fair to say that some are more heartily committed than others. Vodafone is also talking to Apple about RCS and believes it will come around when it starts to see RCS in the bigger context of LTE. It's not unusual for Apple not to be at the forefront of adopting handset technologies (the first iPhone didn't have 3G or MMS), but when Apple does come out with technologies, everyone thinks it invented them — Siri is hardly the first voice-recognition system, for example, but it's by far the best known.

Approaches to Marketing RCS/Joyn

When it comes to marketing Joyn, there are two particularly important lessons to be drawn from operators' experience with MMS:

- Interconnect did not work properly for a long time, and when it worked, it often did so in a cumbersome way, with SMS and Web links.
- Pricing was not very clear.

Both of these issues are being firmly addressed when it comes to the marketing of Joyn. For example, one condition of approval for launch in a given country market is that tested interconnect must be in place and operating as soon as the service becomes available.

Also in contrast to MMS, there will not be a big above-the-line marketing campaign for Joyn in the early phases. Instead, there will be a lower-key approach, using tactics such as nudging people in the direction of Joyn when they are in one of the retail stores.

The correct approach to pricing is indicated by the prices in Spain and those published by T-Mobile for Germany. There are no standalone subscription charges. Usage charges, where applicable, are bundled into standard tariff plans. It's very important that customers should be able to understand clearly and easily what they are paying to use a service, which isn't often the case with OTT services.

Chat and file sharing will be the main functions that feature in the marketing of Joyn, and it's likely that chat will be the main driver for penetration. Will video communication be featured in the service marketing? It's rather tricky. Video calling on 3G never really took off, partly because the quality of experience was not particularly good, also because placing an unscheduled video call raises etiquette issues both for the caller (will I be catching them at an awkward time?) and the receiver (what will they think of me if I refuse a video call?). Skype video calls don't involve these issues because they are generally prearranged; this behavior won't necessarily transfer directly to mobiles. However, these issues are being addressed by Joyn:

- Users can indicate their status as available for video
- It is possible to introduce video transfer during an existing session that did not initially involve video

Positioning Joyn Against OTT Services

There are lots of arguments about the OTT threat to operators' communications services. However, RCS/Joyn is not really about competing with OTT communications services like WhatsApp. This is a very fast-moving trend, and such services come and go. What is really important is that operators should stay relevant to their customers in the communications space as those customers adopt new ways of communicating. Operators are the only ones that can provide new communications services reliably and ubiquitously. That's the operators' role, and they will play it alongside the role that the others play, not in contention with them. Mobile telecom is not a very fast-moving industry, but its strength is to create technologies and services that survive for a long time. Vodafone believes it is more important to focus on the longer-term view, rather than trying to compete with small companies in Silicon Valley on a daily basis.

The fact is that heavy usage of the likes of WhatsApp and Facebook help to drive smartphone usage and data attachment rates. It would be silly for operators to say that customers shouldn't use them.