

The next moves

Convergence in the communications and content industries



**An Economist Intelligence Unit white paper
sponsored by Agilent Technologies**



Preface

The next moves: Convergence in the communications and content industries is an Economist Intelligence Unit white paper, sponsored by Agilent Technologies.

The Economist Intelligence Unit bears sole responsibility for the content of this report. The Economist Intelligence Unit's editorial team executed the online survey, conducted the interviews and wrote the report. The findings and views expressed in this report do not necessarily reflect the views of the sponsor. John du Pre Gauntt was the author of the report.

Our research drew on two main initiatives:

We conducted a global online survey in July 2004 of 100 senior executives on the topic of convergence.

To supplement the survey results, we also conducted in-depth interviews with senior executives at a number of companies in the communications and content industries.

Our thanks are due to all survey respondents and interviewees for their time and insights.

August 2004



The next moves

Convergence in the communications and content industries

Executive Summary

As communication networks and devices *converge* around broadband access and the Internet Protocol (IP), business opportunities *diverge*, according to a new survey conducted by the Economist Intelligence Unit in co-operation with Agilent Technologies. The survey and indepth interviews show that convergence is forcing network operators and their partners to rethink how they add value, as traditional customer relationships are redefined and new ones are formed.

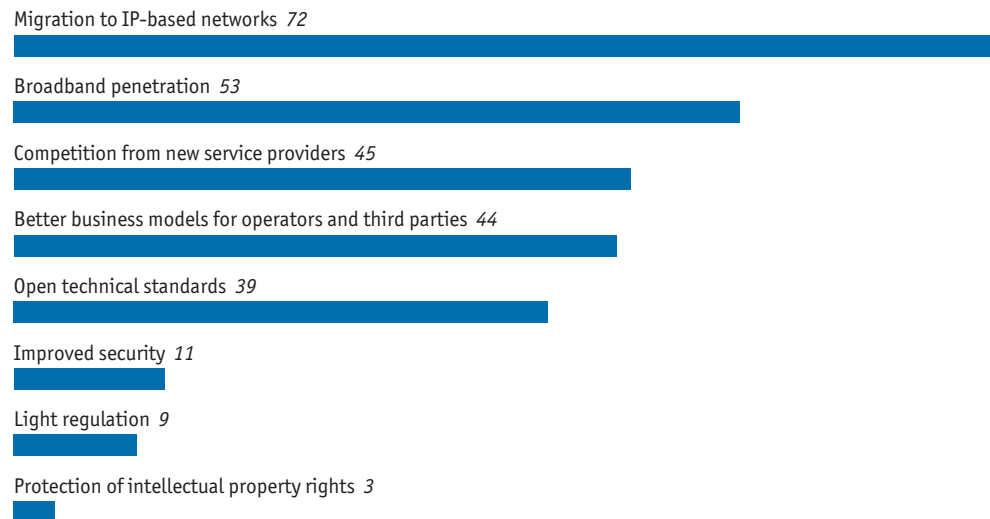
The telecommunications industry wants to capture the growth potential promised by convergence, but, in doing so, it must abandon many time-honoured practices even as it embraces partnerships scarcely imagined just five years ago. The industry will set up

networks and devices to handle not only voice telephony and real-time data transmission, but also things like photography and electronic-wallet functions. It should be obvious, therefore, that Quality of Service (QoS) for convergence will evolve far beyond the traditional demands of the network.

In their response to the survey, 100 executives indicated that three factors are driving the adoption of converged network services: migration to IP-based networks, broadband penetration, and competition from new service providers.

These forces create a chessboard where different industry players move, based upon their unique advantages and limitations. Whether they are network providers that own the infrastructure, copyright

**In your view, what are the primary factors that are driving the adoption of converged network services?
Please choose up to three factors**
(% respondents)



Source: Economist Intelligence Unit survey, July 2004



How long do you believe it will take for your company to achieve widespread migration (ie replacing infrastructure and launching commercial offers) to converged network services?
(% respondents)



Source: Economist Intelligence Unit survey, July 2004

holders that own the content or solution providers that put it all together, the survey showed that nearly one-third of all participants intend to achieve widespread migration to converged services in a year or less.

Convergence represents a huge opportunity for the industry and an equally large challenge to create and maintain the service quality that customers are prepared to pay for. Two application categories in the consumer market are strengthening the demand for higher QoS—Voice over Internet Protocol (VoIP) and entertainment services such as music or video.

VoIP and entertainment are two service categories that require a high QoS before end-users will adopt them. “You have to remember that your ear is a lot less forgiving of network delays than another computer,” says Janet Davidson, the president of Lucent Technologies’ Integrated Network Solutions Unit. As network operators build up the infrastructure to handle this delay-sensitive traffic, they pave the way for all real-time services to run over IP.

Experience from Japan and South Korea, two of the world’s most sophisticated markets for converged services, suggest that the QoS mandate has expanded to include the following:

- **Enabling widespread packet-based services centred around IP:** IP will drive the evolution of networks and access devices for the foreseeable future, with the critical application areas being VoIP and entertainment. As these services become more popular among consumers, they pave the way for nearly all real-time applications to run over IP.
- **Managing partners, content and end-users:** A real-time IP network allows network operators and their business partners to rapidly create and provision new services based upon the lifestyle preferences of their customers. But this makes things more complicated because operators not only have to manage the network but also the personalisation of the content that runs on the network. In addition, operators have to protect intellectual property rights.
- **Billing:** Converged services count for little if their value cannot be captured and billed. New business models require significant changes in billing and revenue sharing between network operators and their partners, a QoS imperative that is becoming a major differentiator.



The next moves
Convergence in the communications and content industries

Introduction

A new survey conducted by the Economist Intelligence Unit in co-operation with Agilent Technologies provides solid evidence that convergence has moved beyond the prototype stage and is now affecting business strategies for the telecommunications, computing and content industries.

Convergence describes a communications and information services environment where real-time (voice, video, music, instant messaging, etc) and non real-time (e-mail, data files, still pictures) transmissions have merged into a single broadband infrastructure based on IP, the packet-based architecture that underpins the World Wide Web. Converged networks offer lower operational costs and the fast, flexible introduction of new services—creating unique business opportunities for a host of industries.

Broadband penetration is one of the biggest drivers of convergence, given that it enables faster and more robust IP-based services. In the United States, the Federal Communications Commission (FCC) reported that high-speed access lines to the Internet had reached over 47% of all households and small businesses by mid-2004, whereas western Europe

recorded 20% broadband penetration. But it is in Asia where broadband access is most advanced. Japan and South Korea have reached nearly full penetration, with over 70% of all households and businesses having a broadband connection to the Internet.

But a physical infrastructure counts for little unless there is a software-based method for dividing network traffic into packets that can traverse different networks, keeping track of all the addresses of those network nodes as well as knowing how to route outgoing messages and recognise incoming messages. IP supplies those functions and has emerged as the standard protocol for making convergence a reality.

The impact of high-speed infrastructure and standard protocols on the communications, computing and content industries in leading convergence markets has been dramatic. In South Korea, mobile music is now twice as big as the market for recorded CDs. NTT DoCoMo of Japan earns over US\$700m in non-voice revenue every 30 days. Mobile advertising has gone mainstream while access devices offer MP3-quality sound and visual resolution that rivals the quality of today's digital cameras.

For the telecommunications industry, convergence

Which business factors are driving the convergence strategy for your company? Please rank the following issues from 1 to 5, where 1=Most important and 5=Least important

	Rank	Points
Growing new revenue streams	1	389
Customer retention	2	334
Competition from new service providers	3	291
Reducing CapEx and OpEx	4	279
Technical obsolescence	5	194

Source: Economist Intelligence survey, July 2004



offers a new path toward growth after several years of stagnation. Copyright holders see convergence expanding their audiences while enabling them to add extra value to content offers. Working with both industries are device manufacturers, solution and service providers, financial institutions and retailers, all of whom contribute to create a seamless purchase and consumption experience by customers—at least in theory.

The reality is that convergence has opened a wide array of opportunities to form new business relationships and to compete. Whether it involves cable-television operators selling voice services or telecommunications providers broadcasting television signals to wireless devices, convergence is eroding long-standing barriers to market entry even as it

constructs new ones.

One indication that convergence has moved beyond the prototype stage is that technology is often less of a hurdle than commercial considerations to the development of the right business strategy. The survey showed that business factors such as customer retention are driving convergence initiatives.

There are significant issues to overcome, however, before network operators and their partners can take full advantage of convergence. One of the most important tasks involves maintaining strong QoS for networks and devices that must seamlessly handle such things as voice telephony, data transmission, real-time streaming, photography and electronic-wallet functions.

Experience from Japan and South Korea, two of the

A convergence primer

Convergence can be best understood as the linking of four different levels of technology and business practice, according to Hawk Sohn of SK Group, a large South Korean conglomerate. These levels are digitalisation, digital integration, digital bundling and ultimately digital convergence.

Digitalisation refers to riding the price and performance curve of Moore's Law, the technology maxim stating that computation power doubles every 18 months. Digitalisation first affected networks where digital switches replaced electro-mechanical infrastructure for the routing of traffic. Equally important has been the impact of digitalisation on access devices. "It's all about what devices can do in terms of semiconductor power, battery life and

memory storage," according to Ms Davidson.

As device performance improves, it becomes easier to add functions at little cost. Known as digital integration, this is the second level of convergence, according to Mr Sohn. Examples are mobile-phone handsets that contain electronic organisers and calculators. The user pays only for the phone service but is able to do more with the device.

A higher level of convergence involves digital bundling, where networks and devices create new services. Adding the ability to e-mail, to send text or browse the Web is an example of digital bundling. Note that the value chain remains within the network or device industry.

The next level of convergence enables

new value chains to form across industries. Convergence requires a high level of digitalisation and integration in access devices. At the same time, unique bundled services are added through new partnerships. These business relationships move beyond intra-industry deals (eg, the merging of fixed and mobile services) to become inter-industry arrangements (eg, between finance and the telecommunications industry).

Now, business considerations are more important than technology in determining the convergence agenda. "It will be the competitive dynamics between different industries such as communications, finance, entertainment and broadcasting that will determine the final form of digital convergence," says Mr Sohn.



The next moves

Convergence in the communications and content industries

world's most advanced converged environments, indicate that the QoS mandate has expanded to include the following:

- **Enabling widespread packet-based services centred around IP:** IP will drive the evolution of networks and access devices for the foreseeable future, with the critical application areas being VoIP and entertainment. As these services become more popular among consumers, they pave the way for nearly all real-time applications to run over IP.
- **Managing partners, content and end-users:** A real-time IP network allows network operators and their business partners to rapidly create and

provision new services based upon the lifestyle preferences of their customers. But this makes things more complicated because operators not only have to manage the network but also the personalisation of the content that runs on the network. In addition, operators have to protect intellectual property rights.

- **Billing:** Converged services count for little if their value cannot be captured and billed. New business models require significant changes in billing and revenue sharing between network operators and their partners, a QoS imperative that is becoming a major differentiator.



Everything over IP

IP will drive the evolution of networks, devices and business models for the foreseeable future. In consumer markets, end-user demand for two application areas—VoIP and entertainment services—is accelerating the development of QoS for real-time IP traffic. As demand grows for VoIP and entertainment services, they pave the way for all real-time services to run over IP.

In the case of VoIP, the survey revealed that network providers are expecting it to generate significant revenue in a short period. Today, 10% of the survey population earns over 10% of their annual revenue from VoIP. Within three years, nearly half of the respondents expect revenue of 10% or more to be derived from VoIP.

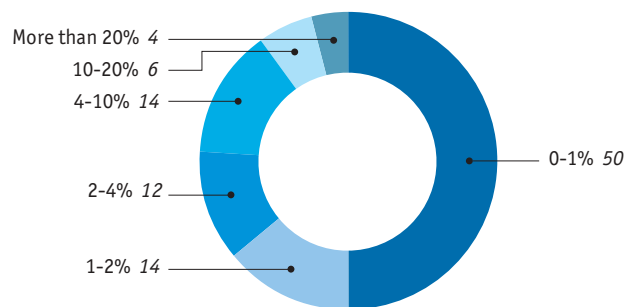
Numerous studies and trials suggest that the cost of running voice services over IP networks will fall rapidly. But cost savings are not high enough to justify the move away from the legacy circuit-switched network. They also have to promise increased revenue, according to Ms Davidson. “The reason that voice over IP is talked about so much is that it is the hardest to get right,” she says. “But from a revenue perspective, once you get voice into an IP environment, it becomes much easier to mix and match voice with video and data to create new services.”

Network providers face major operational issues to launch VoIP services. Managing vastly more complex IP environments is more of an art than a science, according to Tom White, the senior vice-president of the Communication Solutions Group at Agilent Technologies. Mr White notes that the amount of signalling messages that devices and networks must exchange in order to connect one caller with another

has increased dramatically. “If you consider the classic telecommunications network, it takes about five signalling messages in the network to set up and connect a call,” he says. “On an IP network, you’re talking more like 25 signalling messages.”

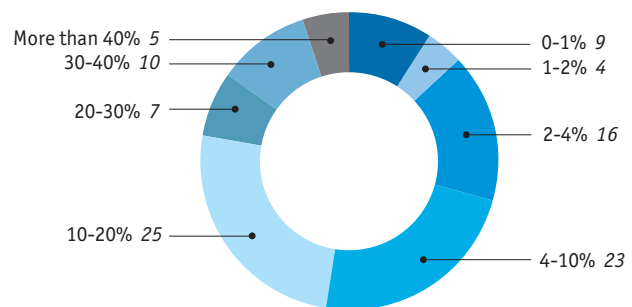
Things become even more complicated when value-

Approximately how much of your company’s annual revenue is currently represented by Voice over Internet Protocol (VoIP) services?
(% respondents)



Source: Economist Intelligence Unit survey, July 2004

How much of your company’s annual revenue do you expect will be represented by VoIP services in three years’ time?
(% respondents)



Source: Economist Intelligence Unit survey, July 2004



The next moves

Convergence in the communications and content industries

The business case behind VoIP

Trends in South Korea suggest that broadband penetration tends to level out at about 70% of households and small businesses, a figure reached in that country in 2003. This is a source of both pride and concern for South Korean broadband-access providers such as Hanaro Telecom. As the growth in the broadband access market has slowed, Hanaro is turning its attention to providing VoIP services in South Korea. In addition, Hanaro will offer video telephony, a service it will pilot during the second half of this year.

"VoIP offers more than incremental revenue for Hanaro," says Young Cheol-Hwang, the team leader at Hanaro's VoIP Division. VoIP service is crucial for holding

onto customers in a highly competitive environment. "We believe that if the customer is using multiple services instead of one, the retention effect will be stronger and there will be higher satisfaction and less churning," he says.

A second reason for pushing into VoIP is Hanaro's desire to increase its share of the local telephony market. Currently, Hanaro has a 24% share of South Korea's broadband access market but only 5% of the local telephony market, which is dominated by the incumbent provider, Korea Telecom (KT). "In the local market, we feel that we can get a lot of churn off of KT by using VoIP," says Young Cheol-Hwang.

Hanaro also views VoIP as the signature

service for enabling its network to offer other real-time services. Because most broadband access is provided on a flat-fee basis, there is little incentive for the network provider to assure higher QoS, as it does not earn additional revenue. But Hanaro and other network providers intend to use VoIP to promote the use of other services such as Video on Demand (VOD) and multi-player online games. "Convergence means integrating real-time and non real-time services through one pipe," says Young Cheol-Hwang. "We need to have the ability to differentiate traffic and separate services. By going into VoIP, we can integrate other advanced real-time services like VOD and games."

added voice services such as Push-to-Talk (PTT) are considered. PTT services are widely popular in the US market, where the cellular handset can act as a "walkie-talkie" and generate over 1,000 signaling messages during a typical session with multiple receiving parties. "If you've got a PTT phone and it takes that much to make a voice call, just imagine what will happen once you start to mingle photographs, pieces of video or other sound," says Mr White. "Combine that with the fact that network

providers have sharply reduced their workforces and it's clear that you can no longer manage such a network manually."

Be that as it may, there is little chance that the industry will scale back on IP as the protocol of choice for offering converged services. Too much has already been invested in the latest generations of telecommunications networks to undermine the assumption that IP will drive capital expenditure for years to come.



Managing partners, content and end-users

Broadband networks running real-time IP services create opportunities for collaboration, competition and multiple choices in between. Consequently, the number of new business partners working with network operators has boomed. NTT DoCoMo manages direct relationships with more than 2,000 content and service providers; in South Korea, SK Telecom works with over 20 major providers of music content alone.

Convergence allows operators and their business partners to rapidly create and distribute new services to customers. But this does not mean that these relationships revolve around a single service or last a

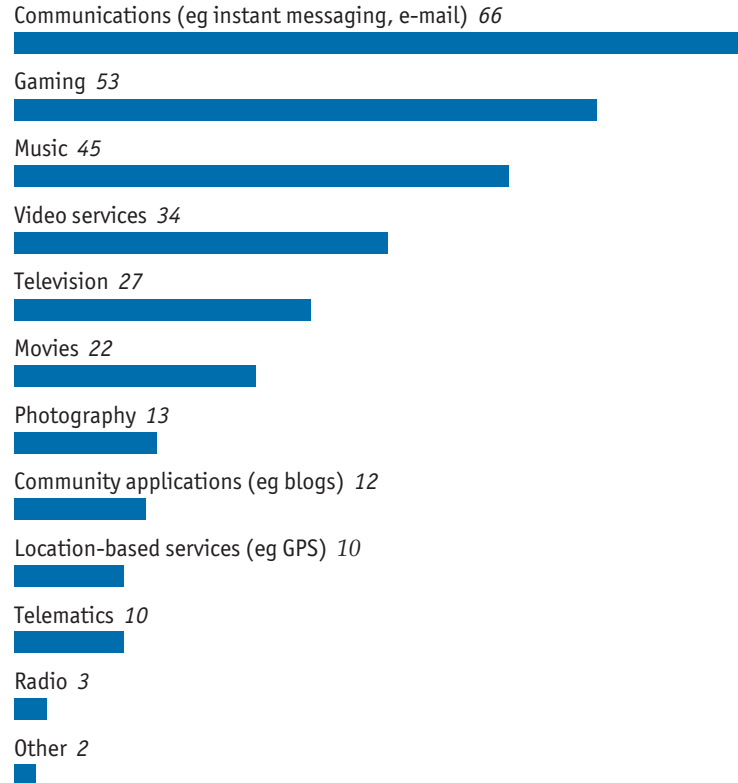
long time. “One aspect to remember is that many of these new services are transitory,” notes Mr White. “There might be a particular football match where a wireless operator or another service provider tells the end-user, ‘Pay us \$5 and you can see this’. Strictly speaking, that is a converged service but the reaction time to make a rich experience easily accessible forces

What non-VoIP application areas are driving convergence in business markets, in your view? Please choose up to three areas (% respondents)



Source: Economist Intelligence Unit survey, July 2004

Which non-VoIP application areas are driving convergence in consumer markets, in your view? Please choose up to three areas (% respondents)



Source: Economist Intelligence Unit survey, July 2004



The next moves

Convergence in the communications and content industries

The pull tab and the phone

It is often believed that everything must occur on a networked device in order for something to be a converged network service. However, some current marketing campaigns for consumer-packaged goods in Japan belie this notion. For example, by peeling off the plastic label stuck to a bottle of shampoo, Japanese customers receive a telephone number that will supply a game, coupon or some other digital reward to their mobile phones should they opt to make the call.

Combining physical and digital media for

marketing purposes is the specialty of Mobile Marketing Inc., a company spun off in 2003 from Hakuhodo, Japan's second-largest advertising agency. Using the wireless networks of Japan's three main operators, Mobile Marketing conducts marketing campaigns and advertising for a host of Japan's blue-chip corporations. According to Tatsuto Ono, the president of Mobile Marketing, its brand is invisible to the customer. "Our revenues come from advertising clients which are B2B relationships, but our service to the

customer is more properly a B2B2C application."

The use of physical media to generate network traffic will become more sophisticated as access devices improve in functionality. Now, instead of a telephone number, certain packaged goods display two-dimensional bar codes that can be read directly by the phone's digital camera in order to receive information or digital coupons, a technical advance that gives Mobile Marketing added scope for conducting ever-more-targeted campaigns.

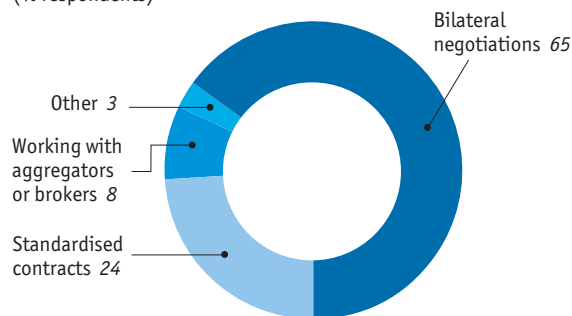
you to become a lot quicker."

Survey participants agreed that entertainment services such as gaming and music would drive convergence in consumer markets. In enterprise markets, providing remote access and integrating communications services with business applications are seen as the primary benefits of convergence.

The vast majority of these applications are provided by third-party service providers, not network operators. While larger operators and content providers have tried to introduce standard procedures for dealing with each other, the survey showed that most partnerships require long bilateral negotiations.

By contrast, content and service providers look to network operators to supply them with a set of applications that allow third parties to create the most value with their offers. Survey participants nominated communication bundling, managing end-user devices along with billing and customer care as the network applications they most demand.

What is the primary method by which your company strikes partnerships with third-party content and service providers? (% respondents)



Source: Economist Intelligence Unit survey, July 2004



Collaboration across industries is causing deals to occur that would have been unthinkable just a few years ago. Aside from content providers working directly with network operators, telecom infrastructure providers are working with software companies as never before. Lucent has partnered with Microsoft to find out what is important for content providers in the context of convergence. "The network is more than just a pipe," says Ms Davidson. "Properly configured, a network can provide a smart distribution infrastructure that gets content out to a broader base of customers but ensures that providers get paid while their rights are protected."

For which network applications does your company most commonly work with third-party content and service providers? Please choose up to three applications

(% respondents)



Source: Economist Intelligence Unit survey, July 2004

The sound of money

Demand for mobile music has rocked the telecommunications and music industries. Across Asia, North America and Europe, network operators and record labels are scrambling to understand each other's drivers. "Mobile music is causing a fundamental transformation in the industry," says Michael Nash, the senior vice-president for Internet Strategy and Business Development at Warner Music Group (WMG). "Currently, new media accounts for about 2-3% of our revenues, but within 3-5 years that figure will look more like 20-30%."

Warner Music Group launched its first mobile music service in the US with AT&T Wireless during 2002. It followed quickly with another deal in early 2003 with Sprint PCS to deliver streaming music direct to the user. Working first with carriers was a major plank of the overall WMG strategy. "We saw that the wireless space would be critical for us so we mapped out what kind of relationships we wanted, with whom and at what entry point," says Mr Nash. "We decided to engage carriers first because they own the customer relationships, are natural allies for rights management, and they need traffic generated on their networks."

Tying together the commercial interests of copyright holders and network operators are solution companies like Widerthan.com, the leading provider of "ringback" services in South Korea. Ringback services enable the user to substitute music or other audio content for a caller to hear as they wait for the user to answer.

According to Jin Soo-Yoon, the director of Research, carriers and content providers are looking to Widerthan.com to provide the platform, operate the service, and even secure content rights. "Along with providing this value, we supply traffic analysis and billing information that help both parties extract more value out of their music offers," says Jin Soo-Yoon.

Operating its "Coloring" service on behalf of SK Telecom, Widerthan.com serves 6.8m users who pay monthly subscription fees as well as fees for downloading individual songs. Such demand helped the South Korean market for mobile music to reach US\$334m in 2003, twice as large as the market for recorded CDs.

Both Mr Nash and Mr Yoon agree that personalisation is a key element in expanding the convergence opportunity in mobile music. "We are looking at convergence to help drive word-of-mouth, which is the most important marketing mechanism for music," says Mr Nash. Jin Soo-Yoon points out that Widerthan.com is positioning its offer to go beyond just posting a selection of standard ringback hits for a user to download. "In the future, we will offer an experience more like Amazon.com where the user is presented with suggestions based upon their preferences or transaction history."



The next moves

Convergence in the communications and content industries

Follow the money

Converged network services mean little if their value cannot be captured and billed. New business models require innovation in billing and revenue sharing between network operators and their partners. Ranking alongside network uptime and performance, flexible billing has become a significant QoS differentiator for network operators.

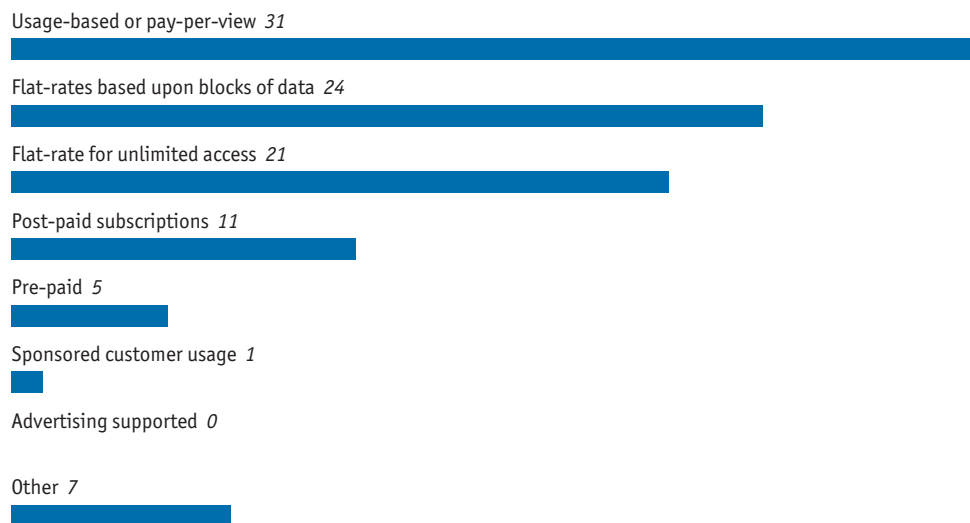
Billing for voice services is complicated. Billing for IP voice is more complicated still. Throw in video, music and other content or information services, and billing becomes one of the most important convergence issues. “No matter how the service is presented to the end-user, billing is fundamentally

about capturing voice usage, packet charges and third-party transactions,” says Mary Clark, the vice-president of Operations for CIBERNET, a leading provider of financial settlement for voice, data and m-commerce.

Regardless of how an operator captures and decides to bill for these three billing streams, it must present end-users with a bill that’s easy to understand. To date, various models have been tried without a clear winner emerging. Survey participants are aiming to introduce usage-based billing as the dominant charging model for converged network services.

Following close behind usage-based billing are flat rates for blocks of data or flat rates for unlimited access.

What is—or will be—your company’s dominant end-user charging model for converged services?
(% respondents)



Source: Economist Intelligence Unit survey, July 2004



The second part of the financial equation involves how an operator settles with their business partners for converged services. The survey showed a strong preference by participants for Billing On Behalf Of (BOBO) for third-party content and service providers. BOBO involves a third-party supplying a user with a service that is billed by the user's network provider. After the operator's share is deducted, the remainder

is passed back to the third-party provider, either by the operator itself or by an aggregator.

While billing and settlement models are slowly coming to a point of consensus, the same cannot be said about the pricing of converged services. Pricing converged services from a customer care point of view is still in its infancy. But the stakes are high. "Because the billing is being done by the phone company, there

Excuse me, I seem to have misplaced my electronic wallet...

In July 2004, NTT DoCoMo launched a mobile-wallet application using its i-mode service combined with contactless integrated circuit (IC) smartcard technology developed by Sony. The new service, dubbed "FeliCa", allows mobile handsets to be used for a variety of functions: a train pass, a debit or credit card, personal identification and even keys to the apartment. Over 39 third-party service providers such as Japan Railways (JR), All Nippon Airlines (ANA), Coca-Cola and Tower Records have signed up to use the system for reaching their customers with new service offers.

ANA is using FeliCa to allow its travel members to engage in ticketless boarding at the gate while they accumulate mileage points if they use their handset to transact with selected merchants in the ANA network. JR is using FeliCa to allow its riders to use their phones in place of a transit pass to ride trains. The

debit and credit functions in the IC chip inside the phone allow passengers to make payments at various cafes and restaurants inside JR stations.

According to Masanori Goto of NTT DoCoMo, FeliCa's functionality is not restricted to just being able to navigate train stations, airports or vending machines. The corporate use of the technology is equally significant. "An important aspect of FeliCa is that it can be used as a form of employee identification," Mr Goto says. "If, for example, I want to give certain employees access to certain floors of the building but not to others, I can have their FeliCa-enabled phone programmed to where electronic gates and elevators will recognise the user and grant or deny access appropriately." In a similar vein, FeliCa-based entry systems are being tested in certain apartment complexes where phones can serve as keys to the main

entrance as well as individual apartments.

While some might argue that this smacks of Big Brother in your pocket, the main driver behind FeliCa's strategy is to provide convenience for the repetitive small transactions and points of identification that make up the typical business day. "Look, you're not going to turn your life over to a phone," notes Mr Goto. "You take no more risk with this system than you would with your regular wallet."

Given that over 8m commuters in Tokyo already use a smart-card system based on the same FeliCa technology, Japanese travellers appear primed to move over to the phone to serve as their wallet. And it must be said that DoCoMo and its partners chose a more soothing name—FeliCa is derived from the word felicity—than their counterparts in Hong Kong. There the system is called "Octopus".



The next moves

Convergence in the communications and content industries

What is—or will be—your company's dominant financial settlement model for converged services?
(% respondents)

Billing On Behalf Of (BOBO) by my company for the third-party content or service provider 60

Offline billing by content or service provider 17

Payment services provider (eg VISA) mediating between my company and third-party content or service provider 16

Other 6

Source: Economist Intelligence Unit survey, July 2004

is a high expectation that the customer service representative (CSR) will be able to explain everything to the subscriber," says Ms Clark. "I want to know how frequently and for how much the CSRs credit customers who call up and say, 'Hey, I know I didn't use 50 megabytes of data, I only used 30 megabytes'."

Granted that operators must invest in infrastructure and training to handle new customer care and pricing challenges for converged services, but they already possess a crucial weapon at their disposal, a long-established collection mechanism. Being able to send a bill to a customer is trivial. Being able to collect

money profitably from that customer is not. More than anything else, it is the collection infrastructure laid down over 150 years of sending out telephone bills that will enable the telecommunications industry to play a major role in the convergence story.

This capability, however, will only deliver its full value when operators are able to package and share usage data and other statistics with their business partners. Many operators are reluctant to do so, but as convergence gathers steam, those that withhold information will find it harder to form profitable partnerships.



Conclusion: solvent or glue?

Keeping converged networks, services and devices up and running flawlessly—while being able to capture and bill for them—will be a major differentiator among operators.

Convergence demands them to rethink QoS to include business outcomes as well as network performance. According to Mr White, this is a fundamental shift in how telecommunications companies are run. “The way that telcos used to run their businesses was to be obsessed by the network,” he says. “As we go into this brave new world, the telcos must become obsessed by the customer because they’ve got to hold onto every one they’ve got while winning new customers. And the only way they can differentiate is through QoS because

there are so many ways that a customer can access a converged service.”

In that sense, broadband and IP adoption dissolves traditional barriers by enabling new value chains to take shape. At the same time, for those industry players who get it right the same physical and software infrastructure will bind them together in ways never before seen.

Convergence does not diminish the inherent advantages of scale and market reach. Instead, it redistributes such advantages. Those who can understand this distinction, and position their organisations appropriately, will be well placed to both find new opportunities and capitalise on them.



Appendix: Survey results

The next moves

Convergence in the communications and content industries

Appendix: Survey results

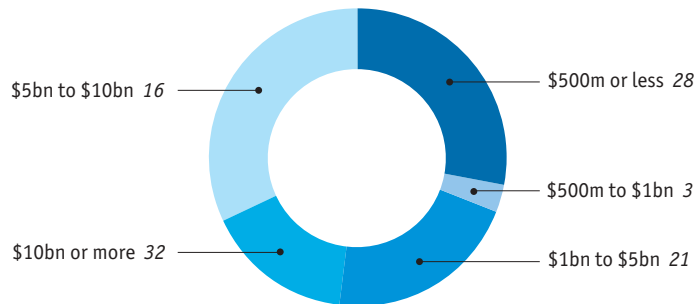
Responses received: 100

Please note that not all answers add up to 100, because of rounding or because respondents could give multiple answers to some questions.

Demographics

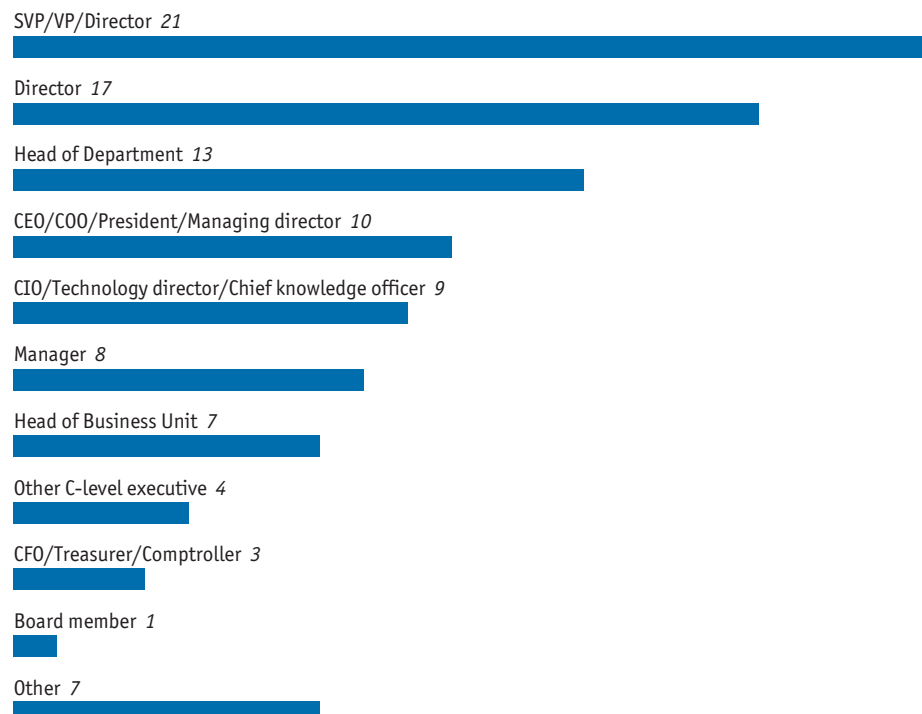
What are your organisation's annual global revenues in US dollars?

(% respondents)



What is your title? Please select best answer

(% respondents)



In which country are you personally based?

(% respondents)

UK	8	Finland	2
Sweden	8	Canada	2
Germany	8	Taiwan	1
USA	7	Switzerland	1
Poland	7	South Korea	1
Denmark	7	Russia	1
Portugal	5	Japan	1
Italy	5	Indonesia	1
Hungary	5	India	1
Austria	5	Iceland	1
Spain	4	Greece	1
Czech Republic	4	France	1
Netherlands	3	Cyprus	1
Ireland	3	China	1
Singapore	2	Belgium	1
Philippines	2		

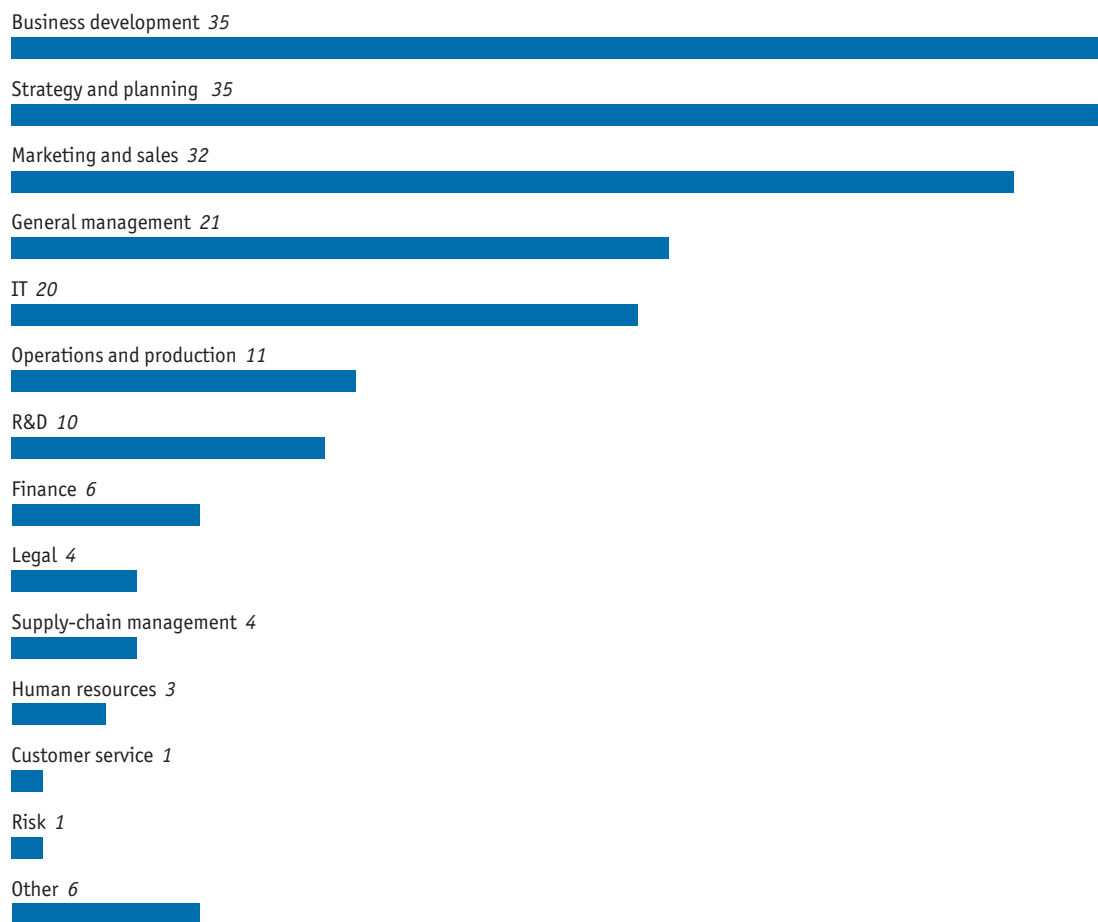
Appendix: Survey results

The next moves

Convergence in the communications and content industries

What are your main functional roles?

(% respondents)

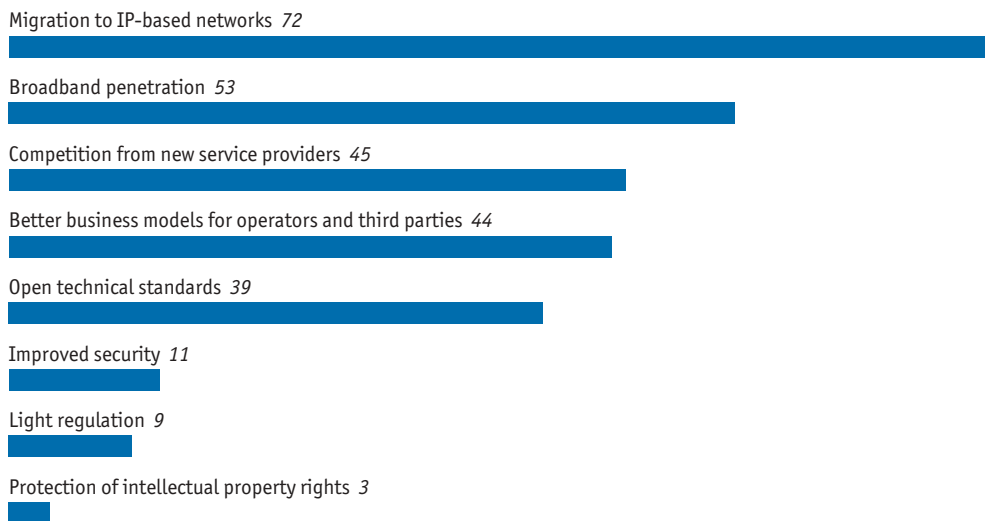


Convergence questions and answers

In your view, what are the primary factors that are driving the adoption of converged network services?

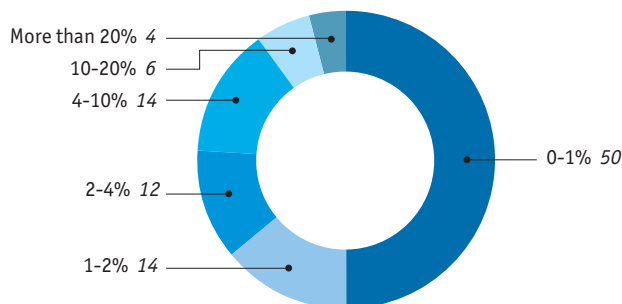
Please choose up to three factors

(% respondents)



Approximately how much of your company's annual revenue is currently represented by Voice over Internet Protocol (VoIP) services?

(% respondents)

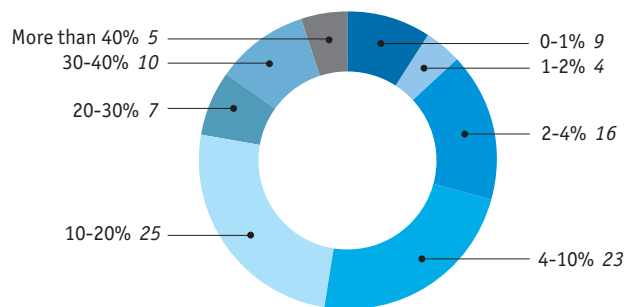


Appendix: Survey results

The next moves

Convergence in the communications and content industries

How much of your company's annual revenue do you expect will be represented by VoIP services in three years' time?
(% respondents)



Which business factors are driving the convergence strategy for your company? Please rank the following issues from 1 to 5, where 1=Most important and 5=Least important

	Rank	Points
Growing new revenue streams	1	389
Customer retention	2	334
Competition from new service providers	3	291
Reducing CapEx and OpEx	4	279
Technical obsolescence	5	194

Which customer segments do you believe will be quickest to take up converged services? Please rank the following segments from 1 to 5, where 1=Quickest to take up and 5=Slowest to take up

	Rank	Points
Multinational companies	1	404
Large businesses with little international exposure	2	307
Medium and small businesses	3	298
Other carriers (eg wholesale market)	4	232
Consumers	5	228

How long do you believe it will take for your company to achieve widespread migration (ie replacing infrastructure and launching commercial offers) to converged network services?

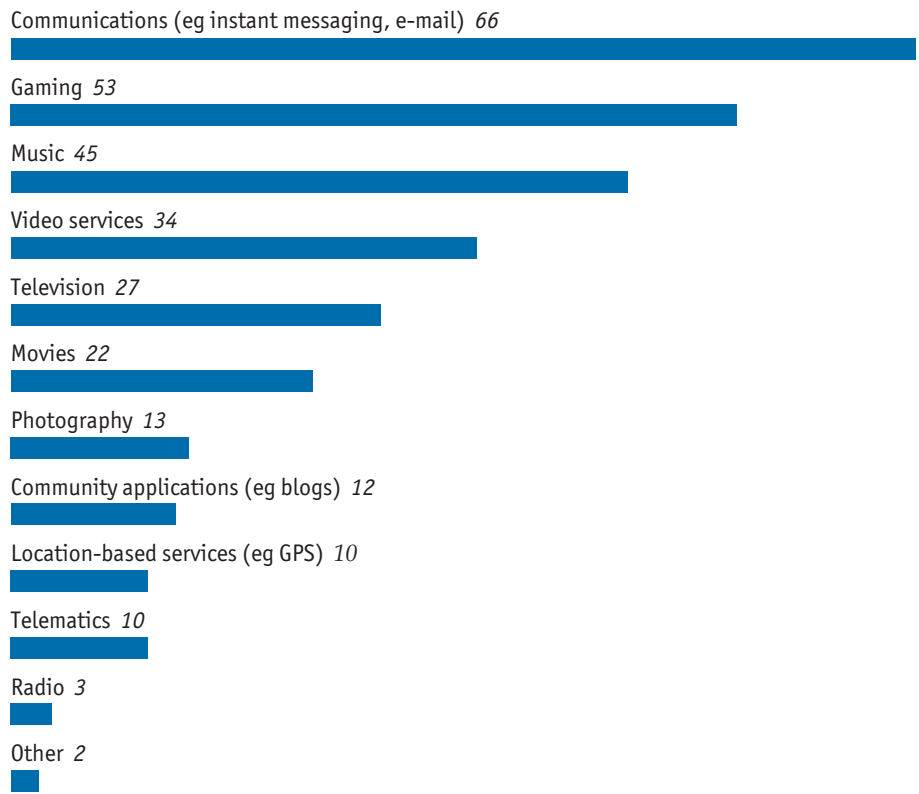
(% respondents)

Less than 1 year	16
1 year	14
2 years	21
3 years	21
More than 3 years	25

Which non-VoIP application areas are driving convergence in consumer markets, in your view?

Please choose up to three areas

(% respondents)



Appendix: Survey results

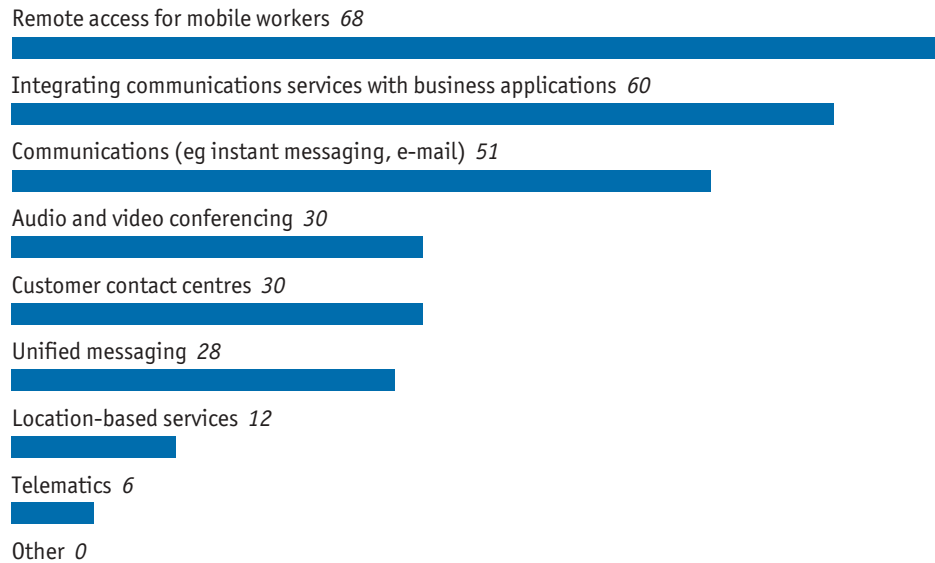
The next moves

Convergence in the communications and content industries

What non-VoIP application areas are driving convergence in business markets, in your view?

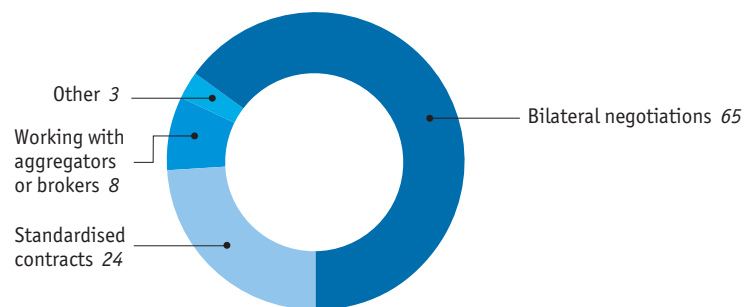
Please choose up to three areas

(% respondents)



What is the primary method by which your company strikes partnerships with third-party content and service providers?

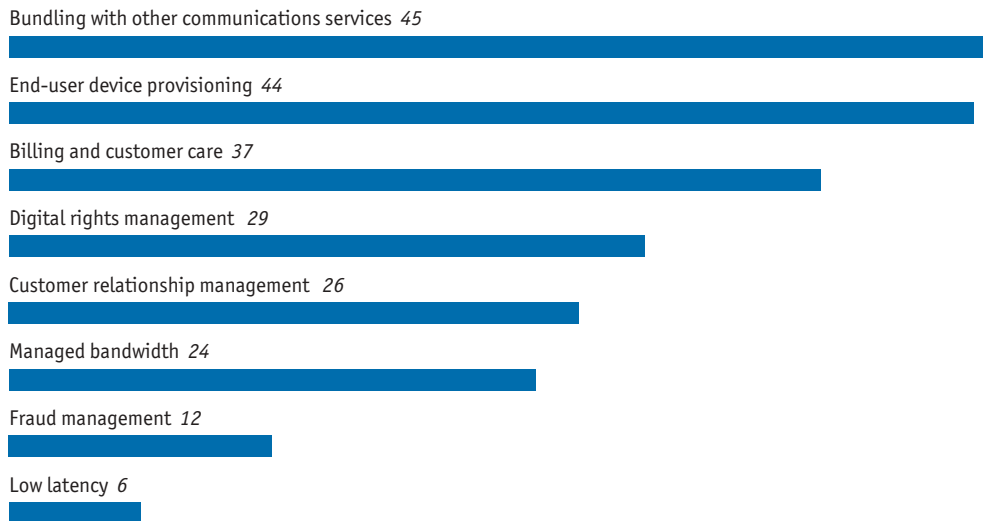
(% respondents)



For which network applications does your company most commonly work with third-party content and service providers?

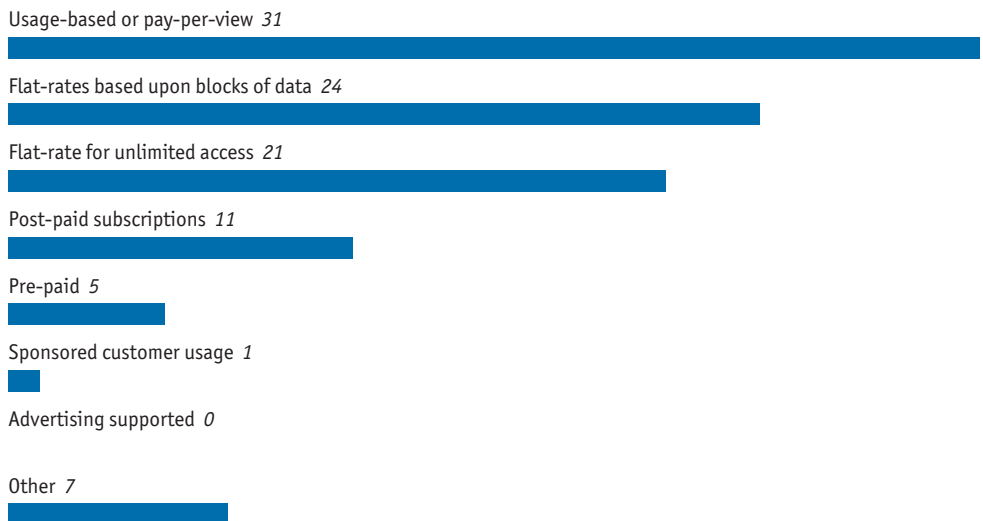
Please choose up to three applications

(% respondents)



What is—or will be—your company’s dominant end-user charging model for converged services?

(% respondents)



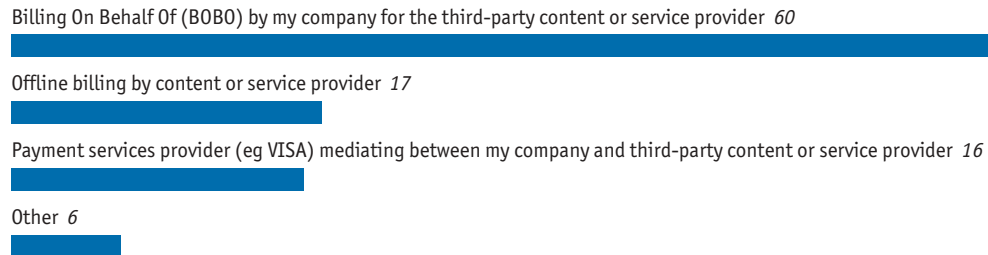
Appendix: Survey results

The next moves

Convergence in the communications and content industries

What is—or will be—your company’s dominant financial settlement model for converged services?

(% respondents)



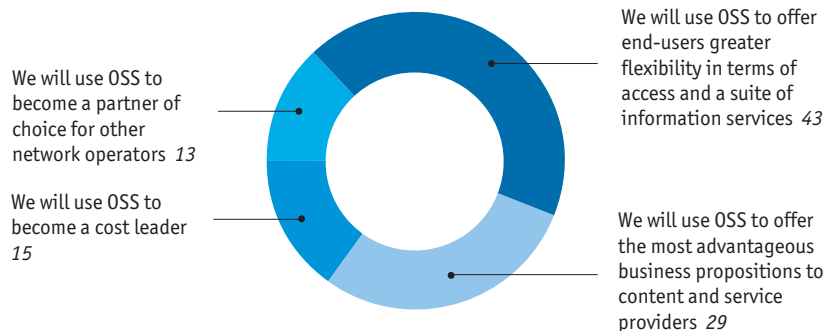
How big a concern are the following issues regarding your company’s Operation Support Systems (OSS) in the context of convergence? Please rank these issues from 1 to 5, where 1=Biggest concern and 5=Smallest concern

Issue	Rank	Points
Rapid service rollout	1	347
Lower operating cost	2	335
Legacy integration	3	298
Integrated billing	4	273
Interoperability with external business partners	5	237

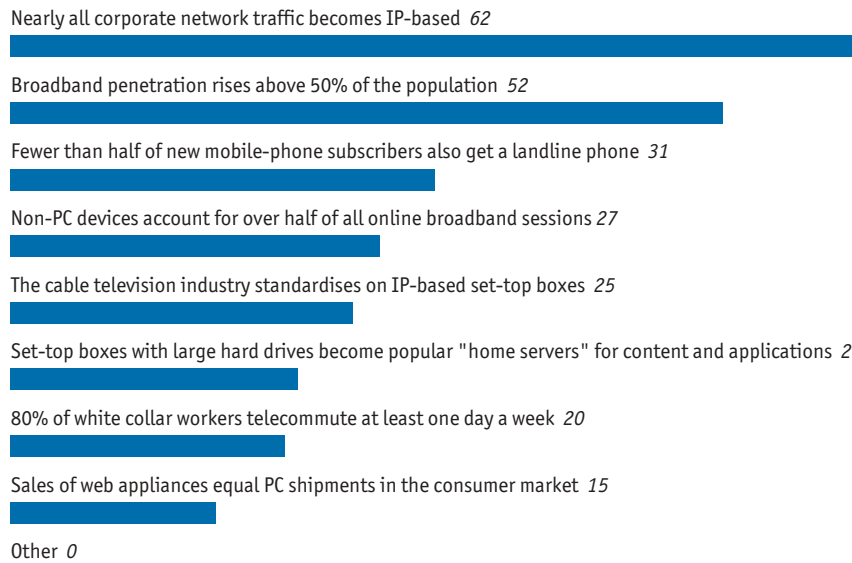
How will your company use next generation OSS platforms to differentiate itself in a converged service environment?

Choose the answer that best applies

(% respondents)



What indicators would best suggest that converged network services have become dominant? Please choose up to three indicators
(% respondents)



Whilst every effort has been taken to verify the accuracy of this information, neither the Economist Intelligence Unit Ltd. nor the sponsor of this report can accept any responsibility or liability for reliance by any person on this white paper or any of the information, opinions or conclusions set out in the white paper.

LONDON
15 Regent Street
London
SW1Y 4LR
United Kingdom
Tel: (44.20) 7830 1000
Fax: (44.20) 7499 9767
E-mail: london@eiu.com

NEW YORK
111 West 57th Street
New York
NY 10019
United States
Tel: (1.212) 554 0600
Fax: (1.212) 586 1181/2
E-mail: newyork@eiu.com

HONG KONG
60/F, Central Plaza
18 Harbour Road
Wanchai
Hong Kong
Tel: (852) 2585 3888
Fax: (852) 2802 7638
E-mail: hongkong@eiu.com