# **White Paper**

# Working With Third Party Services: An Action Plan For Network Providers

Prepared by

Graham Finnie Chief Analyst, *Heavy Reading* 



www.heavyreading.com

On behalf of

Alcatel-Lucent

May 2009

## TABLE OF CONTENTS

<b>EXEC</b>	CUTIVE SUMMARY	3			
I.	IT'S MY 3 <sup>RD</sup> PARTY?	5			
II.	NETWORK PROVIDERS GET IT—BUT HOW SHOULD THEY DO IT?7				
III.	WHO'S DOING WHAT: LESSONS FROM THE PIONEERS	.10			
IV.	NEXT STEPS	.12			
٧.	10 CORE PRINCIPLES FOR WORKING WITH THIRD PARTIES	. 17			
LIST	OF FIGURES*				
SECT	ION I				
Figure	e 1: Widely Used Network Services, 2000 and 2010, by Type of Provider	7			
Figure	e 3: Top Barriers To Opening Networks To Third Parties e 4: Selected Network Operator Third Party Programs e 5: Potential Partners, Ranked by Network Providers Themselves	. 10			

<sup>\*</sup> All charts and figures in this report are original to *Heavy Reading*, unless otherwise noted.

# **Executive Summary**

Network operators, including telcos, cable MSOs and others that own and run major networks, are at a crossroads. In the 15 years since the Internet became a commercial phenomenon and the World Wide Web was invented, there has been an explosive growth in the number of services that customers are able to access via their telecommunications connection—and most of them were created and supplied by third parties.

This is not to say that there has been no growth in telco-created applications, but growth has been largely restricted to a tiny handful of new services such as IPTV.

These unavoidable facts have led to a sea-change in the attitude of network providers to third party application and content providers. They are beginning to recognize that there are two possible ways they can work with them.

In one, network providers are effectively access network wholesalers, connecting customers to third party services but offering little new additional value.

In the other scenario, network providers play a more central role in the value chain by working closely with third party service and content creators, helping them to create higher value propositions that yield better direct and indirect revenues from end users and from advertisers. To do this, network providers unlock a range of valuable assets and enablers, from subscriber demographics to billing systems, and from QoS support to location information.

Is this second scenario credible? That depends heavily on networks providers themselves. It will require them to successfully invest in, define and refine new ways to partner with content, application providers and other 3<sup>rd</sup> parties. It also requires them to develop or encourage new ideas that add real value to applications that run on top of their networks, beyond connectivity itself.

Many have successfully established third party programs in areas such as premium SMS and IPTV, showing that it's possible for network providers to establish the basis for strong relationships with a very large number of third parties. But network providers can do much more—and arguably **must** do much more, because the open nature of Internet connections allows end users to bypass network providers altogether. Specifically, operators must:

- Identify which types of **resources** are most valuable;
- Identify which types of **partners** are most valuable
- Identify which types of business models will be most appropriate

Some network operators have already begun to see the potential and are starting to make progress. And operators in general are beginning to think more creatively about partnering. For instance, a Heavy Reading survey of operators, discussed in this paper, found that there is a strong belief that **consumers and end users** represent an important group of "partners"-- evidence that network providers understand how the applications environment is changing.

Yet many operators have made limited headway to date. Barriers to progress include a perception that third parties, especially major Web portals and destinations, may present a competitive threat, and a key question for network operators is how they maximize the opportunity while minimizing the threat.

In this report, we provide a step-by-step guide to working effectively with third parties, setting out the ten key principles they must follow to move forward.

Among other things, this approach includes:

- establishment of a set of key performance indicators (KPIs) to track performance over time;
- a pragmatic and tiered approach to meet the varying needs of different kinds of third parties;
- use of open, Web-based software platforms that will attract the widest group of developers;
- an emphasis on hard-to-copy strengths, including the ability to securely identify and connect consumers wherever they are, on any device or network;
- auto-adaptation to circumstances;
- action to break down internal walls between different telco functions, supported at board level; and
- dismantlement of subscriber data silos to increase the value of this resource to third parties.

Since no single approach is expected to work for every operator in all circumstances, we also highlight factors in understanding what kinds of partnerships are right for particular operators.

Taken together, these steps can go a long way to helping network providers realize what is not just a major opportunity but potentially the **only** opportunity that can, in the long term, help them to retain a major role in the value chain for communications, content and other services delivered using IP.

# I. It's My 3<sup>rd</sup> Party?

### 1.1 Why Third Parties Will Dominate Service Creation

Telco interest in working with third party service providers and developers is growing fast—and with good reason. On any realistic view of the future, third parties will be an important source of new services provided to end users with broadband connections (wireline and wireless), and network providers have only two choices: to be providers of only a small number of mostly commoditized services, or to work with third parties to add value to the customer's overall experience of using Internet and Web services—as well as the network operators's role in creating that experience, and the revenues that go with it.

Consider the applications environment that is currently evolving—how it evolved and where it might take us. Figure 1 shows that telco propositions have expanded only slightly over the last decade; although network operators may offer a wider range of services than those shown, few are widely used. Moreover, the only new wireline telco service that has achieved wide penetration is IPTV, which is a slightly enhanced replica of cable and satellite TV. Compare that to the brandnew service categories that have been developed on the Web by third parties.

Figure 1: Widely Used Network Services, 2000 and 2010, by Type of Provider

	000	2010	
NETWORK PROVIDERS	3 <sup>RD</sup> PARTIES	NETWORK PROVIDERS	3 <sup>RD</sup> PARTIES
Telephony Internet Access SMS Email	Fax Email Search Engines News E-commerce VOIP Maps P2P downloads	Telephony Internet Access SMS Email Ring tones IPTV	Email Search Engines News E-commerce VOIP Maps P2P downloads Online encyclopedias, education & training Instant Messaging Blogging Video Streaming Music Streaming Mash-ups Social & Business Networking Photo Uploading
			Twitter Hosted Software (SaaS)

Indeed, the column on the right of our table probably understates the creativity of the Web community because it takes no account of the bewilderingly wide range of ways in which open platforms such as Facebook are used. To label it a "social networking site" hardly does justice to its protean character.

The consequences are well-understood: except where they operate in under-served or developing markets, all operators are suffering flat and saturated revenues and will need to be able to develop compelling new services or to find a workable model to enrich their relationships with the enviably creative third party community.

The trend is clear, and it's important to note that the drift to third party services is accelerating as more and more software platforms make it easier and easier for creative minds to build and upload new ideas to the Web's expanding community of users.

### 1.2 Taking Stock: Where's the Action?

One of the planning problems facing any network operator is that it is impossible to predict in advance what will be successful. All the same, we believe it's possible to say something about the likely dimensions of the services that will be created. Those services will be:

- Increasingly image and video-centric
- Highly personalized and customizable
- Focused on collaborative and social activities
- Available everywhere they are needed in a seamless, auto-adapting fashion
- Highly automated, making it easy for users to self-install, self-support and self-maintain product and services
- Available on a much wider range of devices, including non-traditional media such as wearable devices
- Open, in the sense that applications will not be siloed but will be
  - o available and launchable out of other applications,
  - o adaptable (so that it is easy to add features, even for end users),
  - o rich (e.g. including content and communications in the same service)
  - o mashable, so that composite services can be easily created by end users
- Agile of necessity, because new services and features come and go at accelerating pace

As this list suggests, the variety and adaptability of services in the future will be much greater than it is today.

It's easy to imagine—to pick one example from a myriad others that might be constructed—that, using these capabilities, people will be able to physically locate a group of friends via a favored social networking site, establish whether they are available and on what kind of device, and open a QoS-supported voice conference call via a map of buddy icons that then mixes in information on a planned social event such as a film trailer and reviews sourced from an OTT video aggregator or recommendation engine, along with detailed instructions on how to get to the cinema from each buddy location. Along the way, the whole transaction might be subsidized by a relevant local ad based on the demographics of the participants, their explicit permissions, and their location.

In transactions like these, value will be provided by the telco and by the third parties, and the key to success for network providers is to understand what their core values are and how they differ from those of a large Web site, for example.

This is explored in more detail in Section II.

# II. Network Providers Get It—But How Should They Do It?

In a 2007 Heavy Reading survey, we asked what actions would contribute most to the future success of mainstream telcos, and Figure 2 shows that better partnering and collaboration already scored higher than any of the other factors, which included transitioning to all-IP NGNs, fixed-mobile convergence and OSS transformation. As the chart, shows, network providers now get it; better collaboration with third parties is the key to their future success.

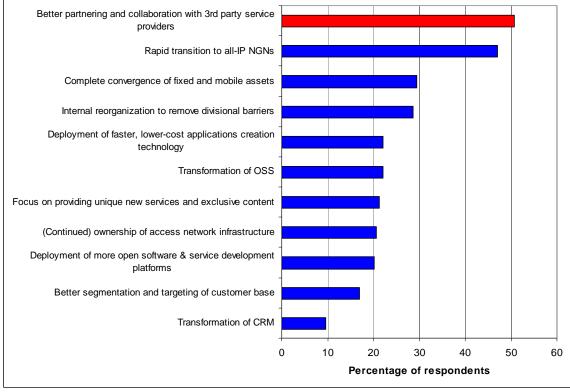


Figure 2: Third Parties Matter

Source: Heavy Reading survey on "Next-Generation Telcos", November 2007. n=132 service providers. Question: Which of the following will be the three most important factors to the future success of today's mainstream telcos? (please select three options)

Most network operators are now trying to deepen their relationships with third party Internet and Web-based service providers and developers, primarily by giving those third parties better access to telco resources, capabilities, assets and databases that could be of value to those parties.

Among the resources that could be made more easily available, we include

- the ability to offer differential QoS;
- demographic and behavioral information on end users;
- information on subscriber devices, location and online status (presence);
- ability to authenticate, identify, charge and bill subscribers;
- exposure of call control and messaging platforms;
- ability to host and maintain services;
- ability to provide 1<sup>st</sup> line customer support.

Relationships between network and 3<sup>rd</sup> parties will likely need to move beyond market and branding agreements to deeper technology and commercial relationships implemented further up the value chain. Many Web and Internet companies still think of network providers as suppliers of basic connectivity and bandwidth, and in some cases they are actively hostile to the idea of a more complex relationship, fearing that network providers are simply seeking to retain or regain control over end users. Independent software vendors, on the other hand, are often put off by the complex and time-consuming (often as much as 12 -24 months) onboarding processes for getting on the operator's "deck" as well as the sometimes-challenging middleware systems that, in many cases, require developers to learn new software procedures.

Can that situation be changed? We believe it can, but to improve and enrich their relationship with third parties, network operators need to demonstrate that they are ready to create equal partnerships that are geared to the way Web developers work, and offer them resources which have real value to them.

Before discussing what's already been achieved and what might be achievable in future, it's worth reviewing the many doubts and fears that network operators harbor in this area. In many ways network providers are like individuals who have converted to a new religion but still harbor doubts about the tenets of their new faith and the rewards it might bring them. Network providers understand that they must open up more and cede control, but they need plenty of reassurance about both the technology risks—and how to minimize those risks—as well as the business case for exposing assets.

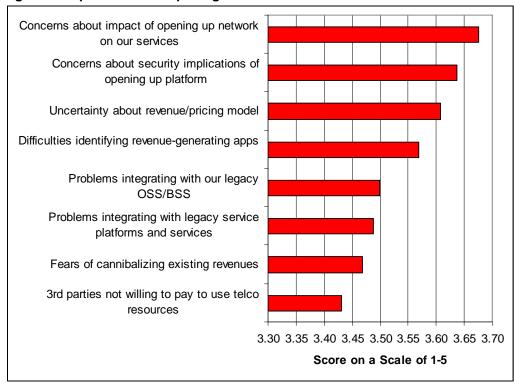


Figure 3: Top Barriers To Opening Networks To Third Parties

Note: only the top 8 barriers from a list of 22 offered barriers are shown

Source: Heavy Reading survey of telco and network operator attitudes to working with 3<sup>rd</sup> parties, September 2008. Question: On a scale of 1 to 5, with 5 being "major obstacle" and 1 being "not a problem at all," please rate the following potential <u>business case and organizational</u> barriers that could prevent your company from fully realizing the opportunity to work with third-party service providers?

As Figure 3 shows, our survey revealed major areas of concern in sourcing acceptable technology solutions or in making the business case or both. Network providers fear above all the impact

that opening up services could have on their existing network and services. This is, of course, a long-standing principle—almost the central precept of telecommunications engineering: defend the integrity and security of the network at all costs. Opening up to third parties has already effectively taken place in wireline networks without telco involvement, and the result is a difficult-to-manage environment in which an endless parade of new over-the-top services put increasing pressure on network resources and on premium services. Network providers need strong assurances that open networks do not lead to anarchy.

The business barriers, meanwhile, focus on the unclear business case. This is not simply about the cost of implementing a technology program versus the revenue; it's also about whether proposals can be created that really appeal to third parties. Our survey found that incumbent telcos were especially inclined to see this as an issue, with over half rating this as a "critical" or "important" barrier.

Fear of the power of major Web, Internet and device providers is an important motivator—or demotivator— in this area. Our survey found that the majority of network providers already see big "soft" service providers—especially Google— as a threat. Yet these "soft" service providers are also potentially among the most important third party partners. The question, therefore, is how to maximize the opportunity while minimizing the threat.

Several interviewees in our survey work also mentioned regulatory challenges in areas such as data privacy. There are real issues about what can be used without violating data privacy rules, and what customers will tolerate. Again, these are issues that will need to be addressed directly.

# III. Who's Doing What: Lessons From The Pioneers

### 3.1 Wireless Leads

Although it's early days, there has already been some progress in this area, with a few pioneering network providers leading the way. For the most part, wireless network providers or divisions are well ahead of wireline network providers and divisions. Mobile operators often already have developer programs and even ecosystems in place. Figure 4 describes some of the running programs, their objectives and published achievements.

This shows that while there are a number of programs running, their achievements to date are relatively limited. The next section discusses one of the best-established programs.

Figure 4: Selected Network Operator Third Party Programs

COMPANY	Program Name	COMMENTARY
AT&T	devCentral	Fairly well-established program with large membership
ВТ	Ribbit	Initial set of RESTful APIs to be released in the first half of 2009; APIs based on other languages are also planned
Bharti Airtel	NA	Open platform for developer community with over 100 members at mid-2008, soon after launch.
Orange	Partner	Well-established program for working with 3 <sup>rd</sup> party developers, with over 30 APIs published and over 60,000 "active" members
O2	Litmus	Creating a very low cost and relatively automated onboarding environment for 3 <sup>rd</sup> party developers; in its early stages
Sprint	Open Network	Program to enable 3 <sup>rd</sup> parties to write to Sprint-supported hand- sets and devices, e.g. to facilitate access to major Web sites
Verizon	Open Development Initiative	Program to test and certify new devices and applications for use on Verizon network
Vodafone	Betavine	Creating an open community for mobile applications developers to create and offer services; in its early stages

## 3.2 The Orange Partner Program

Orange Partner is probably the largest telco third-party ecosystem in existence, and therefore deserves particular attention. The program is also one of the longest-established; it went live in May 2004, and is now said to host over 60,000 developers.

A core objective of the program—and an important one in light of concerns that network providers are too "local" to strike deals with global third parties—was to consolidate separate programs running in different local Orange territories and enable successful services to be easily transferred from one to another. Orange says a key to the early decision to do this, and the significant funding that it subsequently attracted internally, was the strong support of the company's C-level executives, including the CTO, COO and CEO—support that the interviewee regarded as critical to any such program since it was vital to achieving buy-in at the divisional level.

The starting point for developing the program in detail was an extensive market research exercise asking third parties what was most important to them. The key requirements they identified were: an easy-to-use portal; rapid and honest feedback on applications that had been submitted to the program; and rapid testing to ensure that it worked in the Orange network.

The core of Orange Partner is a set of APIs that are free for developers to download. The APIs are initially focused on location-based services, SMS and billing. Orange described the process for creating APIs as complex, with internal API developers having to tap into many internal systems and undertake detailed testing before they could be released. The system for evaluation of new ideas for APIs is therefore rigorous and detailed, with the aim of ensuring that they are actually used and usable once released. To date, Orange has released about 35 APIs. To test applications built using these APIs, Orange established development centers in all its territories, with base stations devoted to testing new applications, as well as the ability to "virtually" test applications on the portal itself. The portal also enabled developers to freely share information. A further element is "Developer Camps", seen as important to developing stronger relationships with and among developers.

Typically, a new product idea is first evaluated by Orange's commercial function. If it is an application that is perceived by Orange to fit a need, the company asks the developer to submit it as a JAVA JAR executable file, and the application is tested to ensure, for example, that it fits into the appropriate device screen(s). After any necessary adaptation, it is submitted to the Orange Compatible testing program. Once the application is approved, it is passed to local units for evaluation. The most promising applications may immediately be promoted "on-deck" on the local Orange unit's own portal. The company said there was no magic formula for inclusion, but a brand that customers recognized or an application that had "intuitive" appeal would be considered for the deck. The commercial model is based on sharing revenue at an agreed split that Orange does not publish. The actual split may vary by up to 15% around this undisclosed figure, based on criteria such as brand and perceived value added.

Orange has also launched an Application Shop that has close parallels with the similar programs run by device vendors such as Apple and Nokia. It is aimed at making it easier for end users to find and download applications developed through Orange Partner. As in the program as a whole, most will be Java-based. A core objective is to speed up and lower the cost of the process for developers to encourage development. As more applications are added, the interviewee envisaged more intelligent means of linking customers to applications, perhaps using customer demographics to target applications at likely users.

The interviewee described revenues from the Partner program as "significant" but does not publish details, and in the context of Orange's wider revenues it is likely to still be small. At April 2009, the program had 63,000 "active" members; the interviewee concurred with anecdotal evidence from other programs that about 5-10% of members actually develop a usable application. Developers range from enterprise verticals such as British Airways to content owners like Walt Disney and many smaller developers—though Orange said that developers tended to be skewed towards large companies.

This description highlights both the strengths and limitations of current generation programs. Orange has made bigger strides than most, but the procedure for onboarding new services through this program is still quite costly and time-consuming—largely, it says, because it wants to ensure there are no bugs and glitches: "Customer calls come to us, not to the developer," so "it has to work every single time," the interviewee said. Hence a typical application may take 12 weeks to go through the process, though it's not unusual for them to take longer than this; some, however, have been developed in as little as 6 weeks, and it's worth noting that these timelines are better than those of many other network operators. Although the program has had some success, it will probably need to be faster, lower-cost and more automated to attract a really wide group of developers of the kind already active on major Web sites.

# IV. Next Steps

### 4.1 Identifying Valuable Resources, Partners & Business Models

Business issues are the critical gating factor when it comes to major decisions to invest in technologies that enable better relationships to be built with third parties. Although network providers also have concerns about the **technical** challenges of opening up networks, our survey and interview program found they had greater concerns about the business challenges, and these will need to be resolved if real progress is to be made.

Network providers do, of course, already earn revenue directly or indirectly via third parties and in a fairly wide range of areas:

- From premium rate telephony & SMS, the best-established and probably most profitable area for third party cooperation to date;
- **From ring tones**, the only really successful value-added content service launched by mobile operators;
- From video content e.g. in IPTV offerings where many network providers have concluded direct deals with content owners, and where there has been considerable progress for the pioneering telcos such as France Telecom, Verizon and Telefonica.

These historical successes show that it's possible for network providers to establish the basis for strong relationships with a very large number of third parties. But it would be misleading to infer too many lessons from this for the way that network providers achieve success on all-IP Webbased network platforms. Some of the core enablers, such as the ability to identify, authenticate and bill customers, are common to both legacy and Web-based third party programs. But network providers can do much more—and arguably **must** do much more, because the open nature of Internet connections allows end users to bypass network providers altogether. In the rest of this section we consider the three areas where network providers must make some basic decisions:

- Identifying which types of **resources** are most valuable;
- Identifying which types of **partners** are most valuable
- Identifying which types of **business models** will be most appropriate

#### **Identifying Resources**

The first requirement is that network providers identify the resources that are really worth exposing, and our 2008 survey of network providers found that providers rated four kinds of enablers as particularly attractive:

- Billing and charging for services and service attributes
- Per-application or per-subscriber quality of service guarantees
- Security tools and services
- Subscriber authentication (who you are) or authorization (what you are entitled to)

Although gauging the views of potential third parties was not part of this survey, we believe that a third-party list of desirable information and enablers might look different, emphasizing elements that, in our survey, the operators rated quite low. These included subscriber demographic information (which rated lowest of all in our survey) and marketing/advertising based on real-time subscriber activity (which rated second-lowest). This possible mis-match may show that there is a need for more dialog between the operators and their potential third party partners. Although the enablers bulleted above are indeed valuable, there are others that may prove equally or more important, especially over the medium and long term.

#### **Identifying Partners**

The second major requirement is that telcos and other network providers identify partners that are most likely to be responsive to working with them. This is a critical question since the very term "third parties," like the similarly vague term "mobile data services," hides great complexity and can sometimes be misleading. Figure 5 shows just how wide the net can be cast, and several findings from our survey stand out here.

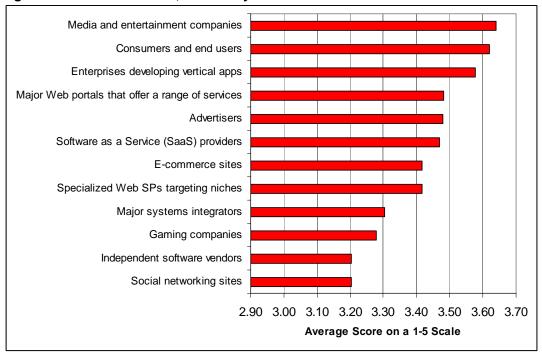


Figure 5: Potential Partners, Ranked by Network Providers Themselves

Source: Heavy Reading survey of telco and network operator attitudes to working with 3<sup>rd</sup> parties, September 2008. Question: On a scale of 1 to 5, with 5 being "critical" and 1 being "not important at all," please rate the importance of the following potential partners to your company efforts to explore collaborative service development?

First, network providers identified as the key partners those that they are already working with—media and entertainment companies. That is an understandable choice but potentially a stifling one if it means that network providers do not explore the many other avenues opened up by the Web.

Second, there is a strong belief that **consumers and end users** represent an important group of "partners". This reflects the widespread view that consumers and end users are now important generators of content, sites and even applications, and it is also evidence that network providers do understand how the applications environment is changing.

More surprising is the lower rating for independent software vendors, who are clearly core to any ecosystem for new service development. This may in part reflect the fact that many network providers and service providers haven't got very far in developing suitable technology platforms and portals for these groups—shortcomings that clearly need to be addressed and are being addressed by some.

### **Identifying Business Models**

As we saw in an earlier graphic (Figure 5), uncertainty about the business or commercial model is one of the biggest barriers to realizing the third party opportunity. This is therefore a key area for operators to pay attention to, and there are in fact several possible models - one reason, perhaps, for the uncertainty. Moreover, new technology models for working with third parties may themselves yield new revenue models, or alter the balance of existing models.

In our survey, we tested four potential revenue models with network operators and service providers:

- per-transaction/session/event fees
- sharing of revenue from advertising and related sources
- flat license fee charged to third parties
- sharing of revenue from end user

Our survey found that sharing revenue from end users was seen as the most important model, with respondents evenly split after that among the other three models.

Revenue sharing from end users is the model already widely established for services such as SMS and ringtones, and this is no doubt the reason that it scored highest here. As well as being the model for services such as premium SMS messaging services or premium phone services, it is also the model that has been frequently used in the new programs described earlier, such as the Orange Partner program.

It does, of course, beg the question of what the revenue split should be, and perhaps one attraction of this model is that it can be (and is) calibrated widely, from models in which the third party keeps most of the revenue, to others where the money is split evenly or favors the network operator. The split may reflect the volume of business being created by the third party, their size and potential, or the nature of the service itself (i.e., the amount of value added), as well as the cost of the service relative to the cost of the underlying network capacity or features (enablers) that are being used.

Another motivation for preferring this model is a desire to control the relationship with end users. In interviews for this research, one telco told us that it wanted to continue billing the customer, even where the chain gets more complex: "Over time I think there will be a lot more multiparty billing, but it's important that we stay as the hub of this. I collect revenue for the advertiser, for instance, but perhaps I share it with a content partner. So revenue-sharing is the main model [but with us in control]." In our survey, we found that over three-quarters of network operators preferred to continue to "own the billing relationship and customer support"—one of several findings which suggest that most will want a commercial model that enables them to maintain a close relationship with customers.

However, we believe it is very important that network operators keep an open mind about potential revenue and commercial models. All of the above models are likely to be used in time, and it is likely that other workable models besides the ones we tested in our survey will be developed—for example, direct fees charged to third parties for delivering services with higher or assured QoS.

Either way, network providers may be underestimating the importance of the advertising-funded model, since in our view this is likely to become a very important source of shared revenue from end users. In a separate question in our survey, 66% said that most revenue derived via third party relationships would come directly from end users, rather than indirectly from advertisers. Doubtless this view is based in part on the very small revenues they currently earn from advertising, as one interviewee told us: "People [on the business side] say, yes, it's the way to go, but they don't see a lot of revenue potential. So there is no case to invest yet." Executives saw no

major proof points at other network providers that appeared to make the case for investment stronger, he added.

However, the vast majority of Web-based services are supplied free of charge to users and supported (if at all) by advertising—and it's likely that advertising will continue to be a core source of revenue for over the top services. The key to progress here for network operators is to make assets available to third parties (most importantly, focused, real-time information on subscriber behavior, demographics and so on) that can drive targeted advertising and make this a real revenue stream both for the operators and for those many third parties that have no real source of revenue today.

It's important to note that, for some operators, the revenue from network usage is enough to justify building third-party relationships, at least for now. An ancillary point is that enriching the customer experience may be justified primarily as a means to improve customer satisfaction and reduce churn. This has been an important motivating factor for many broadband providers, and so long as most operator revenue comes from supplying the connection for a monthly fee, that will continue to be one justification for building third party relationships, albeit not a major one.

Some of the issues that network operators face in this area are undoubtedly organizational; creating business models for working with third parties is certain to be a cross-disciplinary decision that directly or indirectly involves network departments, IT, OSS/BSS, product management and CRM. The silo-bound nature of many network providers, especially larger providers, suggests that breaking down boundaries will be an important catalyst for innovation in revenue models, and in the development of third party relationships more generally.

Either way, there is a strong argument for flexibility and (perhaps) incrementalism in any chosen approach, with a premium on the ability (including the technical ability) to change course if initial approaches do not make headway.

### 4.2 Identifying Technology Enablers

As well as testing attitudes to business enablers, we looked in our survey at the core technology enablers for working more closely with third parties.

Asked to identify the key technology platforms, respondents to our 2008 survey voted strongly for two highly contrasting platforms: IMS and open source software. Third most popular was Web 2.0 widgets and mash-ups.

This was consistent with findings from our interviews. For example, one telco told us that it was looking for "network-oriented" mash-up technologies, but at the same time that IMS would continue to be a core technology in its next-generation service plans. The company said it needed the ability to "build an experience" that is based on what bandwidth is available, where the user is, what device is in use, and so on.

Several interviewees, meanwhile, foresaw a simple API-based solution probably based on the open source REST software architecture at first; this, one interviewee said, was simple, very easy to use and scalable. And, he added, there was a very wide community that already existed around it.

Another question in our survey asked network operators to identify critical technologies for working with third parties, and the respondents identified three key technologies—policy management, service delivery platforms (SDPs), and security tools—that are effectively ways to control the manner in which resources are exposed.

Respondents also believed that significant change is likely in the area of NGOSS. But in interviews it was clear that while there is an expectation that change will be necessary, it's not as

immediate a priority as having an SDP, security framework and policy architecture in place from the start.

In practice, it's likely that network providers will need a range of options that meet the varying needs of different types of partners and applications. For example, while the REST approach may work well for the applications being created by thousands of small-scale Web developers, mainstream developers working with more powerful SOA development environments will likely prefer to continue to work in that environment.

# V. 10 Core Principles For Working With Third Parties

Right at the heart of network operator thinking about working with third parties is the vital but tricky issue of open-ness. Just how open can operators **afford** to be—and how open do they **need** to be? At a technical level there is a fair degree of willingness to open up, with the majority in our survey saying they were ready to have a "fairly open" platform. Yet when we asked about this issue from a business point of view, we found a very strong intention to keep close control over the relationship with end users.

This conservatism may be understandable, but in the longer term it is unlikely to yield the fruitful rewards that network providers hope for from working with third parties. Third parties are in a strong position to negotiate, because they are creating the services that end users value and they can often work around the network operator (as Google is doing, for example, with its location-based services). So the real risk that network providers run is that by failing to understand the needs of third parties and being overly-conservative, they end up being sidelined by those third parties.

We believe there **is** a middle way here, which may be very well-suited to all three stakeholders—the network operators, the third parties and the end users. In this middle way, a level of control safety, and reliability is retained that many end users will prefer, and a range of options is made available for third parties that adds value to basic propositions. Importantly, though, this model implies the availability of a wide range of options that are not tightly controlled at every level by the network operators.

To achieve the optimal position here, we believe network operators need to bear ten core principles in mind as they move forward in this area:

- 1. Establish a set of KPIs that set benchmarks for improving performance in this area. Key benchmarks (set on a timeline) could include number of developers actively using the program, time to develop new services, time to onboard and configure new services, number of services developed per annum, revenue earned from third party programs both in absolute terms and as a proportion of revenues, and Rol on new services deployed.
- 2. Take a pragmatic initial approach to working with third parties, aiming to show through simple early-to-market solutions how the new relationship could work and demonstrating that superior value really can be created.
- 3. At the same time, be ready to have a variety of business and commercial solutions available over time. Since the universe of third parties is vast and varied, different business models and resources may in time need to be made available and marketed, depending on the type of partner, the value of the relationship and so on.
- 4. Understand which third parties are most likely to respond positively to an invitation to work with <u>you</u>, probably through detailed market research. There is no general rule here, as it depends on a range of factors including the network operator's size, competitive position, geographic position, customer set, strategic objectives, services available and so on.
- 5. Use software platforms that are suitable or adaptable for use by particular kinds of developers. This may include using the RESTful and Ajax software architectures used by Web developers, as well supporting more heavyweight environments used by mainstream IT developers.

- 6. Sell the ability to connect third parties with end users wherever they are—through both partnerships and technology. This means resolving issues on behalf of third parties such as the customer's location, type of access network, device and so on. It also means focusing on enablers that feature automatic configuration and auto-adaptation on the fly, as well as customer support. It may also mean actively supporting suitable standards as they emerge from the community.
- 7. Break down internal walls and barriers between the key stakeholders, which will include CIO, CTO, OSS/BSS, network operations, CRM, product management and marketing. This in turn means that programs must be supported and driven at board level.
- 8. Deploy policy and QoS tools that are designed from the start to help enrich relationships with third parties, rather than simply as tools to control the behavior of applications or the telco's own services.
- 9. Focus on dismantling subscriber data silos and getting consensus on rules for using that data. Subscriber profiling in its widest sense could be the most valuable tool that network providers own, enabling highly personalized subscriber offers to be constructed, but consolidating, harmonizing and securing that data is a long-term task.
- 10. Emphasize the ability to identify and authenticate individuals in a secure environment, as well as the ability to bill them. Network providers (especially mobile network providers) are in a strong position to do this, and it is a capability that will be valued by third parties.

# **Appendix A: About the Author**

### GRAHAM FINNIE CHIEF ANALYST, HEAVY READING

Graham has 20 years experience in the telecommunications sector as an analyst and consultant. He joined Heavy Reading in September 2004 following a ten-year tenure at the Yankee Group, where he had directed a European broadband & media research program. He was appointed Chief Analyst at Heavy Reading in February 2007. As well as setting the overall direction of Heavy Reading's content, Graham has been responsible for a wide range of research, focusing primarily on next-generation broadband services and new applications architectures. His recent publications include "Re-Inventing the Telco: A Heavy Reading Progress Report" and "Policy Control & DPI: The New Broadband Imperative."