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Mobile Telephony in the Internet Age: Cloud Telephony Services

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1 Presenting the concept: Cloud Telephony Services

1.1 Mobile telephony in the Internet age

What would mobile telephony look like if it was re-invented today, in the Internet age? This simple question inspired fonYou's founders to develop the Online Mobile Telephony ("OMT") concept, a new business and technology model for mobile operators.

While the Internet has transformed many traditional businesses – banks, travel, retail – it hasn't really changed the telecom sector. The telecoms industry treats the Internet as a destination: Operators try to provide cheaper, faster and more reliable access to the Internet, but they don't use it to improve their customers' services.

fonYou's Online Mobile Telephony allows users to configure their mobile telephony services online and gives them access to their call records, SMS and voicemails as if they were emails. In addition, these Online Mobile Telephony services constitute basic building blocks which can be used to quickly construct new products tailored to the needs of specific customer segments.

In essence, fonYou's Online Mobile Telephony, one of the few comprehensive Cloud Telephony Services concepts available in the market, enables operators to create new and better services for end users based on the principles of Cloud Computing and Web 2.0.

1.2 Telephony as a Cloud Service

In a Cloud Telephony Services set-up, mobile operators enhance their basic telephony services with online services to give users more transparency and control. This expanded role of Mobile Network Operators (MNOs) as online service providers is the basis of the whole Cloud Telephony Services concept: The convergence of mobile and Internet-based services. Cloud Telephony Services represent a true integration of conventional telephony and online services as opposed to the mere addition of Internet connectivity to a mobile handset.

In order to provide end-user Cloud Telephony Services operators need to store, process and display the data related to the usage of telephony services, such as call records, text messages or voicemails. Up to now, however, most operators have made only very limited use of the user-generated "content" that crosses and is registered by their core networks.

While many operators are still busy searching for the “killer app” or trying to figure out which content is most relevant on mobile phones, they seem to forget that the two types of content that are most important to mobile phone users are their personal call records (calls, texts, voicemails) as well as the telephone numbers of the people they communicate with (address book). Apart from a few half-hearted attempts, such as simple registers of outbound calls and messages, the vast majority of MNOs do not make any user-generated content available to their clients via the Internet.

1.3 Detailed description of Cloud Telephony Services

The following list shows the central elements that mobile operators should have if they want to offer their customers an attractive suite of Cloud Telephony Services:

- **Activity Register:** Complete register of all outgoing and incoming voice calls and text messages (with full text), updated in real-time and with full context information (type, time, date, duration...) as well as search capabilities.
- **Online Voicemail:** Online storage of all voice messages received by the user without the limitations of the traditional mobile operator messaging systems. Voice messages can be downloaded and can thus be shared with others via email or social networks. Personalization of the voice message greetings by groups (family, friends, work...) or even per contact.
- **Online Address Book:** Contact information kept in safe custody by the MNO and made available to the users through the Cloud. The Online Address Book can be synchronized with the handset to reflect contact information updates. It is probably one of the most fundamental and valuable services for end users since it provides for ubiquitous access to the users’ contacts and thus addresses common problems such as loss of the handset, back-ups, running out of battery, etc.
- **Call Control:** Allowing the user to define the way incoming calls and messages are routed and managed. Incoming traffic can be either sent to the user’s handset, to the voicemail or to any other phone number or destination depending on number of origin, contact type, time of the day or day of the week. Users can create black lists for certain contacts they want to send directly into voicemail without the phone ringing or define settings for urgent calls to ensure that they reach them in any of a number of destinations.

1.4 Value proposal for users

Once users experience Cloud Telephony Services they quickly become indispensable for them as they remove many limitations of current mobile telephony services, give them total control over their mobile phone and, as a result, create enormous value for the users. Being able to recall the exact date on which an important call was received months ago, keeping important voice messages safely archived or sending unwanted calls directly into voicemail are just a few examples of the attractiveness of Cloud Telephony Services.

The difference between Cloud Telephony Services and traditional telephony services is comparable to the difference between going to your local bank office and using online banking from home. In both cases there is a BEFORE and AFTER; hardly anyone who has gotten used to online banking would voluntarily go back to queuing at their local branch office.

1.5 Case study: fonYou's successful launch of Online Mobile Telephony services

In spring 2008 fonYou signed a Mobile Virtual Network Operator (MVNO) contract for the Spanish market with Telefónica. This contract allows fonYou to be a "Full MVNO", i.e. with its own core network and the right to charge interconnection for incoming traffic.

fonYou launched its Online Mobile Telephony (OMT) services, the only Cloud Telephony services available to mobile users in the Spanish market, at the beginning of July 2009 and since then has managed to establish itself as a leading online brand for mobile services in the market.

fonYou launched its OMT services with a product called "Your Other Number", a virtual mobile number without SIM card that can be redirected to any telephone number in Spain and that offers all the additional online functionalities that were described above (see section 1.3).

Targeting active Internet users, the launch campaign brought Internet dynamics to the mobile market. fonYou involved top Spanish bloggers during the launch phase of the product and made them ambassadors of the new service, gaining a huge presence in the Spanish blogosphere. fonYou raised its profile to become a leading e-brand in mobile telephony in only a few months.

fonYou used tactics that are typical for the Internet sector but unusual in the mobile industry, such as launching in BETA mode or controlling the customer uptake through an invitation system. fonYou made the use of viral marketing one of its priorities and experimented with a variety of different techniques, for example giving its users the right to invite others, emailing campaigns, banners, SEM, the use of Twitter and Facebook pages or competitions in cooperation with blogs to find out which were the most effective ones.

Following the enthusiastic response from fonYou's home market in Spain, at the end of 2009 the company created a licensing model so other mobile operators worldwide could also enable their customers to benefit from the service. This licensing model at the same time constitutes fonYou's international expansion strategy. fonYou's licensed Online Mobile Telephony Platform was officially launched to the mobile operator community in February 2010 during the last Mobile World Congress.

2 The opportunity for operators

2.1 The operators' Internet paradox

The Internet has completely changed the business models and customer relationships of entire sectors such as the banking, airline or music industries. For example, most banks created or absorbed online banks in the nineties and today it would be unlikely that someone who is a regular Internet user would consider opening an account with a bank that doesn't offer online banking. Similar trends are visible in other sectors, for example in the airline industry which saw the advent of new, Internet-based carriers that have since then either been bought up or matched by low-cost brands of traditional airlines. Paradoxically, the telecom industry that provides Internet access to all these companies and their clients has not yet been transformed into a fully developed online industry by the Internet.

fonYou's Online Mobile Telephony concept is a business and technology framework conceived to help mobile operators become "online-enabled".

2.2 Why Online Mobile Telephony is relevant to operators

While traditional operators continue to ponder over the relevance of online services to their businesses, smart phone manufacturers, mobile application developers and other new competitors with Internet-based business models are constantly innovating to provide telecom services that offer more value to customers. This trend is accelerating and MNOs are quickly losing value and visibility towards the customer. To make things worse, phenomena like the explosive growth of smart phone applications have been fuelled by the availability of flat-rate mobile data plans, which in many cases are not profitable for the operators.

Companies such as Skype have grown to become global competitors in the telecom space with Internet-powered business models that were initially belittled or even ignored by traditional operators. According to data published by TeleGeography, the result has been that in 2009 Skype accounted for 12% of the global international voice call traffic. And, judging from deals such as the one that Verizon struck with Skype in February of this year, operators are now starting to listen.

Google is also preparing to assault the global telecom market with a group of coordinated strategies (some more successful than others) in areas such as mobile devices and operating

systems (Android and Nexus One) and, of more relevance from the Cloud Telephony perspective, the purchase of Grand Central which led to introduction of the Google Voice service. These advances into the telecom space are the reasons behind the increasing number of sessions devoted to “How to deal/compete/cooperate with Google” that have been scheduled in telecom conferences and meetings during recent months.

Finally, another, new competitive threat to mobile network operators is posed by their direct competitors: Other MNOs that are more innovative and faster in adjusting to these emerging trends or even collaborate with the companies listed above; i.e. smart phone manufacturers, application stores/developers as well as Google, Skype and other emerging Internet companies that are entering the telecoms space with new proposals.

The message is clear: Just as the growing use of the Internet has forever changed the rules of the game in other industries (consider the newspaper industry as another example), it will also invariably change the way people use and access communication services in the future. As the trends detailed above show, the threats to telcos are real, exist today and are quickly gaining momentum.

Telcos must urgently evolve into facilitators of innovation (open platforms), abandon the walled garden mind set and respond to customer demands for more transparency and control. Embracing Cloud Telephony Services will help telcos change and fight back. Since they own and control the telecom networks, telecom operators are ultimately in a better position to offer Cloud Telephony Services than any of their competitors – if they can learn how to exploit that competitive advantage.

2.3 fonYou’s positioning in the Cloud Telephony Services market

Cloud Telephony Services have been introduced by innovative companies such as Grand Central (now Google Voice), 3jam or fonYou. These companies offer their services by means of virtual or cloud phone numbers that can be used to centralize calls and texts that are then re-directed to other phones lines.

However, fonYou has a unique business model that combines a Mobile Virtual Network Operator business in Spain (B2C – see section 1.5 above) with providing business and

technology services to other telecom operators worldwide (B2B). fonYou has packaged both the technical as well as the commercial aspects of its business concept into a product labelled “Online Mobile Telephony Platform” and licences it to other mobile operators.

fonYou’s Online Mobile Telephony (OMT) is the only operator-developed service that enables mobile operators to compete with the new generation of aggressive, cloud-based models such as Google Voice, Ribbit or Skype and to get closer to their customers. fonYou empowers operators to quickly launch new “sticky” services, greatly improve the user experience and secure their position in the new and growing online market segments.

In Spain, fonYou is a telecom operator with its own core network and service platforms. The technical OMT platform architecture has been designed in house – thus fonYou has developed a service that has been tried and tested on its own network, and that is a proven success. Operators can sign up for the licence in the full confidence that fonYou has already put the services through a stringent set of tests and end-user acceptances, backed up by a highly efficient customer support operation.

This unique combination has given fonYou the necessary credibility to convince MNOs to open up their networks to integrate fonYou’s Online Mobile Telephony Platform with their core networks. fonYou is currently implementing its OMT Platform with two operator clients: One is a tier one European operator with a presence in many different markets around the world and the other an EMEA challenger brand with around 8 million clients. Both operators are expected to go live in the last quarter of 2010.

3 Cloud Telephony Services: Outlook

The introduction of Cloud Telephony Services, such as fonYou's Online Mobile Telephony Platform, by mobile operators is just the beginning of a transformation process that will lead to a whole new range of Internet-based, interactive telecom services. The particular functionalities described in section 1.3 (call register, online voicemail, online address book, call control functions, etc.) are the basic building blocks that operators will be able to use to design new products tailored to specific customer segments. Some examples for such segment-specific products are:

- **Family:** A multi-user account where the two parents have special rights that allow them to monitor their children's spending, usage patterns and, with the integration of location based services, even their whereabouts. Parents would be able to set certain limits, for example no calls after 10 p.m., or even block communication to certain numbers. The localization feature would be attractive especially to families with smaller children and a good sales argument for winning new customers. There are already companies offering similar services (see for example www.bipper.com), but again, operators are ultimately much better positioned to offer such products as they can take full advantage of their network capabilities whereas third-party firms will always encounter certain restrictions.
- **Sales force:** Another case for a multi-user account set-up where the company's sales manager has special administrator rights that let her monitor the activity of her sales agents. The sales manager has access to extensive statistics (per agent as well for the entire sales force) that allow her to rate the performance of the different agents and compare them with the individual and overall sales results. From this information valuable conclusions can be drawn, for example how many calls are necessary on average before a new sale is made, how often existing clients should be contacted to maintain the relationship, etc., etc. Finally, another important benefit of this product is that even when a sales agent leaves the company, the contact information of the clients he or she dealt with stays with the company and can be passed on to other agents to be followed up.
- **Small companies:** For a small company, their address book is almost like their ERP, all their activity centres around it. A Cloud Telephony product for small companies not only puts that address book on the Internet (protected within the personal user space) so that

it can be safely backed-up and is available from anywhere, but also includes all the Cloud Telephony features described above. In addition, the address book is extended to allow for the introduction of detailed descriptions and notes for each of the user's customers. In the activity register, the company's executives can leave comments for each entry (so as to remember the topic of certain conversations, for example). Finally, a virtual PBX agent that enhances the call redirecting functionalities, combined with a voicemail that can be personalized for each contact, adds further value as it gives the user's customers the impression of great customer attention and professionalism.

Over-the-top products as the ones described above can help mobile operators regain ground in the battle for the customer relationship; ground they have been losing to smart phone producers and companies such as Google or Skype. New, Internet-based products will help them to be perceived again as companies that offer valuable, innovative services instead of just being bit-pipes and suppliers of subsidised handsets.

Cloud Telephony Services are gaining momentum and will soon turn into an unstoppable trend. Eventually, these services will become an indispensable industry standard that people not only will become accustomed to but also expect to be available for free (at least in a basic format).

Operators have the opportunity to act on this trend today or risk being left behind by third party providers who will find ways to make these services available to end users even without the operators' permissions (see Google Voice). And there are still many opportunities waiting to be exploited: For example the integration of Cloud Telephony Services with social networking sites which represents a whole new universe of possibilities for enticing services. The best of Cloud Telephony Services is yet to come.

About fonYou

fonYou's mission is to reinvent mobile telephony for the Internet era.

fonYou is a European Telecom company that was founded in Barcelona, Spain in 2006 by three entrepreneurs with extensive experience in the telecom, Internet and technology sectors. In 2008 fonYou signed an MVNO agreement with Telefónica, the third largest telecom operator worldwide, and in July 2009 successfully launched its **Online Mobile Telephony** services as a mobile operator in the Spanish market (see www.fonyou.com).

fonYou is a real telecom operator with its own core network and service platforms. This technical architecture has been designed, developed and implemented by fonYou's Innovation Factory, the company's internal R&D team.

Based on the success of its ongoing MVNO operations in Spain, fonYou licences its services as a product (the "Online Mobile Telephony Platform") to other mobile operators around the globe (see www.fonyoutelecom.com). fonYou's Online Mobile Telephony Platform has been designed to be deployed as an enabling platform within operators' networks to allow them to offer over-the-top Online Mobile Telephony services (i.e. Cloud Telephony Services) to their customer base using their own brand.

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