

VoIP or when can we unplug the phone cable?

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Predicting the future

“It is a scientific toy but it can never be a practical necessity”. This sentence did not describe Intel’s surf board with embedded tablet PC, but was made in the late nineteenth century and described the telephone built by Graham Bell. If anything, this shows how difficult it is to anticipate the success or failure of a technology and even more the wishes and needs of users. Probably the same kind of misjudgment lead market researches to predict in the end of the twentieth century, that Internet-telephony, often called voice over IP (VoIP), will lead to the demise of the traditional telecom companies and generate a multi-billion revenue in only a few years time.

Obviously both judgments were wrong. Telephones are a practical necessity if not even an annoyance sometimes. We all have at least two if not more phones and even my ten-year-old daughter firmly believes that a mobile phone is one of the most important gadgets she needs to survive everyday life. VoIP on the other hand, was not so lucky. After being hailed as a revolutionary technology with the power of changing our communication habits and business models, providers of VoIP services went mostly bankrupt after burning multi-billions of venture capital.

Two Worlds

Still, there is a difference between the two stories. While the success of telephony has proven the skeptics to be wrong, the failure of VoIP in the end of the nineties only shows that one shouldn’t launch a product when the market is still not ready for it yet. Though VoIP services were offered as a cheap alternative for traditional telephony services especially for long distance calls, the users still expected the usage comfort and speech quality they were used to. With only modem lines offering a low bandwidth access to the Internet and VoIP phones consisting of a clumsy and complex to use PC combined with a head set, it was obvious that the VoIP technology could not compete with traditional telephony in terms of speech quality and comfort. Further, with the rapid decline of the prices of long distance calls even the financial incentive seemed to be disappearing.

After a few years of relative silence, VoIP has picked up momentum again. The last two years have seen a renewal upsurge of VoIP providers and manufacturers all over the world. This time, however, the market is ready for it. Broadband access is no longer luxury but commodity. VoIP manufacturers are providing low cost devices that have the same look and feel of ordinary phones and VoIP adapters that allow the users to make calls over the Internet and still use their ordinary phones. Thereby, the first obstacles facing this still young technology have been removed. Calling someone over the Internet today is not much different in terms of speech quality and comfort to calling someone over the traditional telephone service. However, does this guarantee a successful and prosperous future of the involved parties?

Obstacles and Hurdles

VoIP is currently mainly being sold as a low-price alternative to traditional telephony. While this is surely a clever marketing strategy for attracting a high number of subscribers, it can only be seen as a short-term solution. For VoIP to become a lasting success it needs to answer three questions, namely how to generate substantial revenue, how to deal with the regulatory requirements and how to secure the service.

Innovative services and start-ups

Prices of traditional telephony minutes are decreasing continuously. Thereby, the financial aspects will not always be sufficient as an incentive for replacing a well tested technology providing speech communication with another one providing, guess what, speech communication. Of more importance is the value added and benefits perceived by the user as well as the ability of providers and manufacturers to exploit the same technology for different business models. Taken superficially, this sounds like the start of another hunt for the holy grail of the Internet, namely the killer application. However, considering the flexible nature of the VoIP technology, then such a goal might not be far fetched after all. The major advantage of the VoIP technology compared to traditional telephony is not that it supports speech communication with a better quality. Let's face it, it doesn't always. But it can support video conferencing, gaming, presence and chat applications in addition to voice. Further, integrating any of these services with any of our daily applications is straight forward. Instructing our calendar to automatically initiate a call to the flower shop on our wedding day will be the topic of student university projects and not confined to the holy chambers of intelligent networks divisions at the big telecom manufacturers. In this sense, the VoIP technology itself is the killer application. The flexibility and generality of the technology allow for the rapid creation and deployment of novel services. The users will hence see a flurry of new applications and services, lots of them funny and useless but some of them of actual value. This development is further enforced by another prominent feature of VoIP principles, namely openness. The open nature of the VoIP technology removes the barriers for small and medium companies to enter the market and introduce their services and products. Already today it is interesting to notice the VoIP market is dominated by small startups with bright ideas and the ability to anticipate and rapidly react to the users' and providers' needs.

Regulated VoIP

With the increased attractiveness and hence success of VoIP services, providers of VoIP services will have to consider an issue that the Internet has managed to successfully ignore for a long time, namely legal regulations. The traditional telecom market is one of the most regulated market segments. Current regulations describe in great detail how an emergency call must be dealt with in the network and how to intercept the call of a wrong doer. While great effort and many years of standardization have been spent on specifying these regulations, the different nature of VoIP will make a lot of these regulations inapplicable. Thereby, before VoIP becomes a viable substitute for traditional telephony further development and discussions as well as adjustments of the regulations so as to take the specificities of this new technology into account are needed.

On call Viagra

If we have learned one thing from the Internet, then it is that there will always be some people with enough technical skill and time to turn a useful service into a complete annoyance. Already today SPAM mails constitute a major portion of our received mails. Now, deleting an email is a small annoyance. Having to pickup the phone, listen to an announcement saying this is not a SPAM call but a sincere request for help in transferring twenty three million Euros worth of Diamonds to Europe at a 20% participation gain, is a huge annoyance.

VoIP: Where are we going?

So what is the message? The VoIP technology bears the chance of revolutionizing our communication habits and introducing novel and innovative services. Further, it has the means for opening creative companies the doors to new market segments and radically changing the telecommunication market by increasing and redistributing the revenues between a larger number of players. This, however, will come along with tighter regulations and be accompanied with the need for protection from misuse. In any case, VoIP has moved from an interesting toy to a practical necessity for the next generation communication infrastructure.

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