

# SiliconIndia

## **Kirusa: Beyond Voice**

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*A project manager has just fastened his seat belt in the New York to Singapore flight that is ready to take off. A serious software failure at a customer's place has just been reported to him and this calls for a meeting with his team in Singapore, Bangalore, and New York. He has no time to call up all his colleagues and finalize a conference call, nor the time to peck the keys to send a message. Instead, he records a short message in his phone and sends a group Voice SMS to his colleagues.*

*On the other side of the globe, the technical lead is discussing the course of action with the team of developers to solve the issue. When he gets back to his seat from the conference room, he finds a Voice SMS from the project manager on his mobile, which he had left on his desk. He clicks and listens to the message and instantly marks the conference call timing in his diary.*

Voice SMS is a fast way to send a short message that can be retrieved on the receiver's end at the subscriber's convenience. It is similar to an SMS text message. But Voice SMS is much easier to use. When a Voice SMS is sent, an SMS text message is received saying, "Hi, I have sent you a Voice SMS. Click here to listen to your message, or Dial \*0\* to listen to your message". One click and you're listening to your new message in the voice of the sender. You can also reply with your own voice, or forward the message to any other mobile.

This patented technology is pioneered by Kirusa, a New Jersey based company founded in 2001 by Inderpal Singh Mumick and three others who left their comfortable jobs in AT&T and Bell Labs to become entrepreneurs. Roping in 20 customers from different geographies across the globe and with development centers in New Jersey, New Delhi, and Bangalore, Kirusa has positioned itself firmly in the mobile phone industry that is raking in \$85 billion as revenues from value added services (VAS).

The global mobile telephony market grew at a rapid pace in the years that followed the founding of Kirusa. Though the growing subscriber base was a positive impact; the Average Revenue Per User (ARPU) has shrunk, pulling down the operator margins. As ARPU declines and voice gets commoditized, the mobile operators are faced with a challenge to retain customers, develop alternative revenue streams, and create a basis for differentiation in high-churn markets. In the wake of changing industry dynamics, telecom operators started looking at Mobile Value Added Services (MVAS) to provide the next wave of growth. From the early days of "Person-to-Person Short Message Service" (P2P SMS), the industry has emerged to witness a growing portfolio of services including graphics and wallpaper downloads, ringtones and caller ring back tones (CRBT), SMS contests, and games. In the background of such innovation in the mobile space, Mumick and the co-founders of Kirusa stepped in to develop a better way for people to send and receive short messages.

### **The market proposition**

Voice SMS has added a new dimension to messaging, the most widely used and most successful mobile service today. By adding voice to SMS capabilities, SMS has become faster, easier, and more personal without changing its inherent interoperability and ease-of-use benefits. Voice SMS can be added to the wireless infrastructure with minimal impact. While Voice SMS provides immense value to mobile subscribers worldwide, it is particularly well suited for countries like India that have scores of languages with script-based alphabets that make 'texting' more complicated with a standard Roman keypad. Hence, Mumick decided to focus initially on the emerging markets where the subscriber base is expanding and experimenting with various value added services. Therefore, they looked for avenues in India, Bangladesh, and Pakistan. Moreover, the low rate of literacy and low level of penetration of English language in the rural areas, and the focus of the governments on rural growth, was a huge opportunity to the company. "Sending 'voice' instead of 'text' solves problems in parts of Asia where local languages aren't handled by the SMS interface," explains Inderpal Mumick, Founder, Chairman and CEO of Kirusa.

Kirusa deployed its innovative Voice SMS solution at Grameenphone, Bangladesh, in late 2005, which was also incidentally their first customer for the Voice SMS application. Grameenphone is the leading telecommunications service provider in Bangladesh with more than 15 million subscribers. "Kirusa Voice SMS was selected after a comprehensive evaluation of all solutions available in the market as it had the most advanced solution and the fastest installation capabilities," says K. M. Tariquzzaman, Head of Architecture and Service Planning, IT at Grameenphone. He further added, "We needed a highly scalable solution that provided a simple user interface, and a fast integration with existing network and messaging infrastructures. Kirusa demonstrated its product successfully. We were impressed with the fact that the open, standards based multimodal platform helps bridge existing standard services and shows us simplified implementation of future services."

BPL (Mumbai Circle) introduced Voice SMS a year back, allowing BPL subscribers to send Voice SMS messages to anyone in India for INR 1.00. "At the time of the launch we brought out a promotional offer to familiarize the users with the new service and the promotional offer was a huge success as people found the service quite interesting," recalls Sunzay Passari, Vice President VAS and devices, BPL Mobile. This positive experience led BPL to enthusiastically launch the new International Voice SMS service. This innovative service allows BPL subscribers to send a Voice SMS to anybody across the world, even in the countries where mobile operators have not yet launched the Voice SMS service. To take the Voice SMS success story forward, BPL also introduced a plan for sending an unlimited number of Voice SMS messages.

Etisalat, the largest telecom operator in UAE launched the Kirusa Voice SMS application in late 2007, and it crossed 500,000 Voice SMS messages within the first 10 days. Mobile customers of Etisalat found it as an ideal solution to exchange their greetings, allowing them to record their personal voice clips of up to 30 seconds instead of typing text SMS especially during the festival season. The success of the Voice SMS application in Dhaka when Warid Telecom, one of the fastest growing telecom operators in Bangladesh, launched this service, inspired the operator to collaborate with an FM station in Dhaka where listeners can record a song and send it back as a Voice SMS to the Radio Jockey. The RJ will pick the best voice message and invite the sender to the studio. This also added much to the growing popularity of the service with its customers.

The large clientele also brings different challenges to the company. "Every customer is unique and has different requirements and expectations," explains Barinderpal Mumick, Founder, and Executive Director-Operations. To help provide local support to customers, Kirusa partners with local companies. This also means that the company operates through different revenue models with different customers. Kirusa operates through both revenue sharing model and licensed sales model. Since revenue sharing model is there, it does not affect the operator's capital budget in the initial phase of the launch. This has a great advantage to the carriers as they get maximum return on their investment.

The voice message market is estimated to constitute 10 to 20 percent of the SMS market. According to reports, in the next four years, subscribers will send 300 to 600 billion voice messages in a year. In a market where new scenarios and new opportunities are emerging every passing day this number does not look like unrealistic or unbelievable and Kirusa sees several new markets it can address. The mobile operators have penetrated widely into the public call office (PCO) segment, especially in the developing markets where people cannot afford mobile phones. In such areas, Mumick sees a huge potential market for Voice SMS. Advertising segment is yet another area he wants to address. With Voice SMS, the advertisers can embed voice in the message of the product to give a richer and more effective user experience. Moreover, it can take the role of promotional calls (which are quite disturbing in the course of a meeting or an important discussion). "The popularity of the Voice SMS in various roles will expand the market", explains a senior executive at Vodafone India.

Mumick recalls the startup pangs the company came across in the initial years. "We had just one customer in 2005. It was difficult to get the first commercial launch, and equally difficult to get the second one. The deals started to flow after the fifth customer win," explains Mumick. India is a key market for the company where mobile operators like Idea, BPL, and MTNL have already launched Voice SMS services. Carriers like Tata, Aircel, and Vodafone may follow suit soon. Today Kirusa has more than 20 customers across three continents, and reaches 175 million subscribers globally. The company is planning to give more thrust to markets in Africa, the Middle East, Europe, Latin America, and parts of Asia.

### **Expanding the horizon**

The genesis of Kirusa was not intended as an application developer of Voice SMS but as a builder of a very strong multimodal application platform. The founders had envisioned multimodality becoming a catchphrase. The growing realization amongst users about the numerous ways in which they can interact with a service was contributing to this trend.

Multimodality refers to seamlessly combining graphics, text, and audio output with speech, text, and 'touch' inputs to deliver an enhanced experience to the end user. Through the platform, users can perform a number of functions such as speaking, typing, listening (to music), and reading text as well as scanning through graphics while receiving information. When compared to a single-mode interface in which a user can only use voice, audio, or visual modes, multi-modal applications give them multiple options for inputting and receiving information. The function not only makes a service or application more intuitive but it also equips the users with the freedom to experiment and choose how they want to use a service at each step in the process. But Kirusa realized soon that it was too early to market its solutions as multimodality was still evolving. 3G deployments were still not fully operational in various countries due to many reasons. Moreover, carriers were also careful in experimenting with numerous services around VAS. They were not willing to develop applications and services themselves, but were keen on implementing the services developed by others.

Understanding the difficulties in selling a platform, Kirusa decided to initially develop a product or an application before moving on to create an entire platform. After much brainstorming Mumick and the executive team at Kirusa decided to explore the idea of Voice SMS. But they were cautious in their move and started building the application on a very robust platform that would ensure that the application would work in-sync with any wireless handset and in any spectrum and not solely on a 2.5G or 3G spectrum or on a high-end phone. This strategic technology approach of building a robust platform proved fruitful, as today the company is able to add on new features, sophistication, and make the application more scalable. "The uniqueness of the platform is that it offers interoperability between carriers, and provides an open framework for third parties to deliver applications," explains Raja Moorthy, Head of Engineering. This proved a winning point for the company to convince venture

capitalists that always look for a differentiation a company can offer in the market. "What attracted me to Kirusa was this overall platform approach that would help different players in the market," explains Ashish Gupta of Helion Ventures. Kirusa recently received a second round of financing of \$13.3 million from Helion Ventures, Nexus India Capital, Qualcomm Ventures, Eastven (Ericsson Venture Partners), and Erasmic. The interoperability of the platform of Kirusa was also acknowledged by GSMA, the global association of GSM mobile operators. The vendors would need to adhere to the GSMA standard to provide the interoperability, which is expected to help augment potential revenues to mobile carriers. "Kirusa successfully demonstrated the interoperability of its platform in Pakistan between two mobile operators under the technical specifications developed by the association" explains Jaikishan Rajaraman, Director-Product and Service Development, GSMA.

The carriers in the market can be quite fluctuating in their demands. In a scenario where customer requirements change dynamically, Kirusa's platform is well equipped to stand up to the customer requirements in a fast paced manner. Moreover, they are quite ahead of anticipating and building the services ahead of the market requirements. Hence they went on to build the complete ecosystem to ensure the smooth and steady functioning of the service, adds Gupta. The platform used by Kirusa has the ability to manage and synchronize data and voice interactions, while its integration with IMS and other standards enables operators to cost-effectively deploy additional revenue generating services. "To further enrich its platform, Kirusa is concentrating on making the platform interoperable between different networks like GSM, CDMA, IP based, and fixed line," explains Ewald Anderl, CTO of Kirusa.

Building a robust application integrating several networks and operators is a challenging task. The core functionality of the application is voice processing. Recording and playing messages promptly, and recognizing the user instructions requires high-performance services. Critical to the success of Voice SMS is the architecture, which has the ability to handle very high capacity of traffic that results from the popularity of the service. A strong platform that manages message processing and billing, and directs the voice message to the appropriate recipient anywhere in the world is also required for the optimal use of Voice SMS service. Making the service easy to use requires developing an easy user interface in multiple languages, integrating with the address book on the handsets, and providing seamless interoperability between networks. These are some of the exciting challenges the engineers at Kirusa address each day.

To further enhance its scope, Kirusa has partnered with various communications solution providers, such as HP, NMS, and Nuance. Kirusa partnered with HP to deliver the Voice SMS solution on the HP OpenCall Media Platform (OCMP) and HP carrier-grade servers. Kirusa solutions integrated with the robust HP OpenCall Media Platform enables service providers to quickly deploy new value added services that excite their customers. The company won HP Global Business Partner Award in March 2007, the leading OpenCall partner at a global level. According to Jean-Rene Bouvier, General Manager, OpenCall Business Unit, HP, "The combination of Kirusa's Voice SMS and HP OpenCall Media Platform is a potent revenue-generating solution that can be delivered in a cost-effective way".

However for a company to convert challenges to opportunities needs the best of resources and a high degree of innovation. The executive management team and the founders, which comprises Inderpal Mumick, Ewald Anderl, Taranjit Batra, David Berkley, Bice Delgado, Louis Golm, Raja Moorthy, and Barinderpal Mumick are industry veterans from AT&T, Lucent and Vodafone Airtouch who have an inventive streak in them. They encourage the team to take up research activities and also understand the market thoroughly. The company recruits the best of minds from renowned institutes all over the world. The open culture and atmosphere of innovation at Kirusa is evident in the number of patents it has to its credit. Kirusa already has seven issued patents for the technologies it pioneered and dozens more are pending with the U.S. Patent office, and patent offices around the world.

Building and maintaining a large market for any enterprise in a market which is evolving under cutthroat competition is not a cakewalk. But taking into consideration the credentials the company has achieved in the past seven years it looks like Kirusa will garner significant attention in the mobile value added service space.

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