

Cellebrum Deploys Highly Successful Mobile Radio Service in India

Case Study

Scalability of Dialogic® Technology Helps New Service Grow to 450 Million Transactions Per Month

CASE SUMMARY

Challenge

With its expertise in mobile technology and the delivery of music-related Value-Added Services, Cellebrum decided to create a new service called Mobile Radio, designed to provide the personalization of an MP3 player to a mass audience via their mobile phones. From its previous experience as a provider of hosted services, Cellebrum knew that it would face some development challenges, and even more formidable tests in packaging the service at a low price point and deploying it quickly if it became popular.



Solution

Because of their proven reliability and scalability, Cellebrum decided to deploy with Dialogic® signaling and media products, which it has worked with for more than a decade. Although Cellebrum expected only 100 million transactions per month in the first year of Mobile Radio availability, it has already reached more than 450 million transactions per month, and Mobile Radio is expected to overtake CRBT in popularity in India within a year. Cellebrum has successfully met the challenge of the fast-paced deployment of Mobile Radio with its own energy and expertise and with an infrastructure based on Dialogic signaling and media products.

Challenge

Cellebrum Technologies is a dynamic company with a solid grounding in technology and broad experience in delivering Value-Added Services (VAS). Although other companies might lay claim to similar traits, Cellebrum has something special — an ability to think creatively and come up with successful, innovative solutions that have broad audience appeal. Cellebrum offers Background Music (BGM), Select Caller List, a USSD/SMSC platform, and Social Networking solutions, but also services that are distinctive. For example, Cellebrum has not only developed a Prepaid Mobile application, but also “Pay 4 Me” — a “collect call” service for mobile phones that allows a caller to request that the other party pay for the call if the caller has no minutes left. In a region where prepaid is popular, Pay 4 Me can be a critical service when someone needs to make an important call.

One of Cellebrum’s most popular services is BGM, which provides both music and sound effects on demand — and another revenue stream for carriers and for Cellebrum, the only current provider of BGM in India. Other than the commercial appeal of having the right background music for a business meeting or a hotel or restaurant reservation service, BGM has other, very practical uses, as Saket Agarwal, the CEO of Cellebrum, explained with tongue-in-cheek. “We call this our ‘lovers and liars’ service,” he explained. “If a young man wants to call and invite someone on a date, we can play romantic music for him in the background to set the proper mood. If that same young man oversleeps the next day, he can have background music with traffic sounds when he calls his boss to explain that he will be late, even if he is still in bed.”

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Cellebrum has also developed special expertise in “jukebox” applications that allow callers to easily browse clips of music in multiple languages using artificial intelligence techniques and IVR technology.

Suiting a Service to Its Audience

By combining its core knowledge of “wire-free” call technology and its successful techniques for delivering reliable music-related VAS, Cellebrum decided to create a service called Mobile Radio. “India is a country of a billion people,” Agarwal recalled as he described the thinking behind this new service, “and we know that at least 300 million of them have cell phones. At the same time, many of these people do not have the means to buy an MP3 player, yet they love music and Bollywood spectacles.” Agarwal and his team decided to create a service to satisfy this popular passion at an affordable price, delivering “the personal touch of an iPod but at a low price point and on a single device.”

Solution

Once it had the idea for its new service, Cellebrum expected deployment to be a significant challenge. Because of its previous work in hosting services for carriers, Cellebrum knew that a new service such as Mobile Radio would have its best chance of success if it developed and hosted the new service and depended on carriers to advertise it and recruit subscribers. Actual in-house development of the Mobile Radio service itself took only six weeks in 2007.

Deploying VAS in India is complex. Mobile phone service is delivered to 23 service areas, consisting of 19 Circle Service Areas and 4 Metro Service Areas in which 17 languages are spoken. The number of languages ruled out text prompts and menus, which was no problem for Cellebrum whose developers are well-versed in artificial intelligence and personalization techniques. The company planned to offer a toll-free number that potential customers would call to become subscribers. Initially new subscribers would be offered a selection of the latest hit songs, and then could create their own personal selection of songs in an area called “MyZone” where they can add and delete songs at will.

Scaling Quickly with Dialogic® Products

To create this complex VAS delivery infrastructure, Cellebrum looked to open-standards-based Dialogic® products, which it has been deploying successfully for more than a decade. Because the service had a huge potential audience, Cellebrum decided to go with tried-and-true technology that it was confident could scale quickly. Cellebrum chose Dialogic® Digital Signaling Interface (DSI) Components, including Dialogic® DSI SS7G2x Signaling Servers used as Dialogic® DSI Signaling Interface Units (DSI SIUs) with a Dialogic® DSI ISUP Layer and with Dialogic® Global Call Software on the host. For media speech and voice resources, Cellebrum is using multiple Dialogic® DM/V4800BC Media Boards.

“We began by putting up Dialogic hardware in each service area,” explained Agarwal. “We started with signaling interface units and CompactPCI servers with the DMV4800s, and, of course, storage solutions since we are hosting more than 100,000 full-track songs. We did this across all 23 service areas, and we connected to four or five different carriers. Dialogic products (for example, its signaling units) provide us with scalability, reliability, and ‘up-time’. And, more importantly, these units allow us to host multiple applications around them and connect multiple application boxes for SMSC, USSD, BGM — essentially anything we would want to do. We have a partnership we cherish with Dialogic and together we have challenges, but we are getting the support we need.”

Since reliability is important, Cellebrum is taking full advantage of Dialogic’s dual-resilience architecture, which is standard with the DSI SIU. “With all the scalability challenges that we have had in learning to handle 450 million transactions per month in such a short time, and working with, for example, 16 media boards instead of 4 or 6 so quickly, Dialogic products and our relationship with Dialogic has been more than satisfactory,” commented Agarwal. The Mobile Radio service includes selecting music, playing music, and sending songs to others, and each activity requires several transactions per request.

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Results

Agarwal describes the phenomenal success of Cellebrum's new Mobile Radio service as a "nightmare, but a wonderful one, especially because we had to provision toll-free numbers for monthly subscribers very quickly — I think such a ramp is unprecedented in the entire world. We had originally anticipated about 25% of the growth we actually experienced in the first year — about 100 million transactions per month — but instead we already have 450 million transactions per month [August 2008], with a surge in the last four months because of heavy promotion. But this is only 3% penetration of the Indian market, so we have a large potential market and a long way to grow."

During its pilot program, Cellebrum was retailing Mobile Radio at 7 rupees per minute (approximately 42 rupees are equal to an American dollar according to current exchange rates), and only 15,000 songs. Cellebrum has now brought the cost down to 1 rupee per minute and is offering 100,000 songs. As Agarwal explains, "our first challenge after development was one of packaging, that is, achieving a very low price point, along with providing a broad selection of songs, which are constantly refreshed with the latest content at a rate of 2,000 to 3,000 songs per month. Then our challenge became technical — phenomenal scaling to keep up with demand."

An Eye to the Future

Cellebrum has begun to deploy Mobile Radio outside of India, and although part of Cellebrum's staff is very busy with the Mobile Radio ramp, other parts of the company are continuing with ongoing research and development and exploring new technologies, including Dialogic® Host Media Processing Software. "For example, one carrier is using HMP for Mobile Radio, and we are aware of the advantages of HMP, IP, and SIP, which is why we are exploring the use of 3G phone technology, and, of course, techniques for delivering video services such as Video Mail and Video on Demand."

Although CRBT is very popular in India, Agarwal reports that Mobile Radio is quickly overtaking it, and is expected to outpace CRBT in six months to a year. But Agarwal and Cellebrum are not satisfied with only current successes: "We are already looking forward to new technical challenges, and to creating even more successful and innovative services with Dialogic products."

About Cellebrum Technologies Ltd

Cellebrum Technologies Limited is a Spice Group company with a special focus on Telecom Solutions, Office Automation and Information Technology, and Value-Added Services. Cellebrum embraces the constant momentum of innovation in today's world and meets it with passion and a formidable ability to effectively leverage revenue-enhancing opportunities for its customers. Cellebrum constantly strives to find simple ways of solving complex business problems, and all its solutions are built on open industry standards and scale easily. Redundancy and portability are built into every solution.

For more information, visit www.cellebrum.com.

About Dialogic Corporation

Dialogic Corporation is a leading provider of world-class technologies based on open standards that enable innovative mobile, video, IP, and TDM solutions for Network Service Providers and Enterprise Communication Networks. Dialogic's customers and partners rely on its leading-edge, flexible components to rapidly deploy value-added solutions around the world.

For more Information, visit www.dialogic.com.

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Information about Cellebrum has been provided by the Cellebrum for this case study.