

PIKA Technologies Case Study: **GlobeStar Systems**

DESIGNING A DTMF CLAMPING APPLICATION



GlobeStar Systems is a market leader in wireless integration software solutions for any organization. Using communication standards, its core competency is interfacing both hard-wired and wireless real-time event driven systems with communication networks either privately or publicly deployed through wireless voice and data devices.

GlobeStar's flagship product, ConnexALL, is a standard modular software engine, which closely integrates a wide array of communication resources to any business system. The ability to receive real-time notification and text messages anywhere in the world gives organizations the competitive edge in decision-making.

GlobeStar turned to PIKA Custom Engineering Services when they needed a dual tone multi-frequency (DTMF) clamping feature for ConnexALL in the healthcare industry.

The challenge

Real-time communications for mobile staff is critical in the hospital environment. GlobeStar's wireless system is the answer to a hospital's communications needs. The easy-to-use, innovative wireless solution makes communications between nurses and doctors extremely palatable. One symptom occurred though when the new ConnexALL system was integrated with a legacy [older] system...

During a conversation a staff member might inadvertently hit a button on the handset's keypad, which would emit a DTMF tone. The new wireless system would unintentionally disconnect the call. Not wanting to leave any room for an error to occur during a critical communication, GlobeStar prescribed the addition of a DTMF clamping feature to the ConnexALL system.

GlobeStar did not have the necessary tools to design the DTMF clamping application in-house. So they began a search to find a vendor that would provide them with the DTMF clamping application.

The custom designed solution

Jason Wilson, Vice President Research & Development, GlobeStar, tells his story, "At GlobeStar we design state-of-the-art monitoring and wireless communications for the healthcare industry. We needed a specific feature for our solution-DTMF

clamping-however we didn't have the necessary tools to design the feature. After researching and discussing this feature unsuccessfully with a couple of other board vendors, we met with PIKA Technologies. The DTMF clamping feature did not come standard in the PIKA software developer kit (SDK) either, however, their team listened to our needs and proposed that their in-house engineers custom design the feature for us."

A small team of PIKA Technologies' design experts met with GlobeStar's design experts. Together they formalized the design goals. For example, the application needed to block certain DTMF digits, while not degrading the voice quality. Also, the solution had to keep the same functionality to which hospital staff was accustomed - there was to be no visible difference between call handling in the legacy landline system and new wireless system. Working together, the teams came up with a functional spec for the project and then began the custom engineering work.

It became a collaborative design effort. Both PIKA Custom Engineering and GlobeStar engineers worked on pieces of the application. "This went extremely well," explained Cindy Xu, Senior Field Application Engineer, PIKA Technologies. "We shared information from a technological perspective which helped to advance the design cycle. The age-old cliché, 'two heads are better than one' was definitely at play here. We finished the design cycle in just under a month. That is very fast for a project of this magnitude."

Once the design cycle was finished, the DTMF clamping application was tested in PIKA Technologies' testing lab. The project also included sample code, documentation, and training at PIKA Technologies' headquarters so that the GlobeStar team would know how to implement the application.

Mike Belanger, Manager of DSP Software Development, PIKA Technologies, worked on the project. "We have day-to-day experience designing new DSP applications," explained Mike. "So we can decrease the complexity of any development project. GlobeStar is a perfect example of how our Custom Engineering Services can help our customers retain and win competitive advantage in their chosen markets."



The benefits

"The engineering work and testing was done quickly and professionally," said Jim Thomas, V-P Global Sales and Marketing, GlobeStar. "We are winning the business of a number of hospital campuses."

GlobeStar saw the following benefits by working with PIKA Custom Engineering Services:

- A DTMF clamping feature was not available off-the-shelf and GlobeStar did not have the tools internally to design the feature. Working with PIKA Technologies' knowledgeable engineers, GlobeStar achieved their design goals.
- PIKA Custom Engineering Services is flexible when it comes to custom engineering projects. Customers can outsource a project in its entirety or augment their resources with engineers from PIKA Technologies. GlobeStar augmented their resources. The result: GlobeStar had the application designed more quickly and more cost effectively.
- The DTMF clamping application gives GlobeStar competitive advantage in the healthcare marketplace.

Looking down the road

After the application was successfully deployed in the hospital, GlobeStar decided to use PIKA Technologies as their board vendor of choice - not only for customized applications, but also their regular computer telephony applications. "We are very pleased with the success of this first design project," said Jason Wilson, GlobeStar. "We will certainly turn to PIKA Technologies' engineering services team if a custom designed application is needed."

About GlobeStar Systems

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About PIKA Technologies

PIKA Technologies designs and manufactures computer plug in voice cards and software that connect computer systems to both TDM- and IP-based networks to provide advanced voice services. For almost two decades PIKA Technologies has been serving companies around the world that require voice cards to design sophisticated phone services for recording systems, voice services applications, and PC-PBX systems. The company has built a reputation for delivering innovative products and exceptional technical support by working closely with its customers. Headquartered in Ottawa, Ontario, Canada, the company has ranked in The Branham300, an authoritative ranking of successful Canadian high tech firms, for three consecutive years. Visit www.pikatechnologies.com or call +1-613-591-1555 for more information.



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