

Delivering Results With Clarity.

At Clarity, we partner with our clients to develop custom product solutions that generate new business and streamline operations with the latest mobile technologies. Our clients include major wireless carriers, mobile device suppliers, infrastructure equipment manufacturers, and application service providers.

Clarity's distinguished team of engineers, averaging over 20 years of experience, is drawn from the upper echelons of the wireless industry. Additionally, our ISO 9000-2000 and TL9000 quality certification reflects an organization committed to producing superior communications products.

Custom Product Development Project Profiles

Clarity At-A-Glance:

Clarity Communication Systems specializes in the design, development and deployment of solutions for wireless networks and mobile devices, including: End-to-end Push-to-Talk (PTT) services, Location-Based Services (LBS), network infrastructure equipment and software, and a wide range of custom-built products. Founded in 1998, Clarity is headquartered in suburban Chicago and has additional locations in New Jersey, Colorado, and Arizona.

Advanced Products Group

Project Profile: *Leading supplier of Internet infrastructure solutions licenses Clarity's Push-to-Talk technology to provide instant and secure voice service.*

Business Case: Our client wanted to generate new revenue by offering its wireless carrier customers PTT functionality on a cell phone. They wanted a solution to satisfy the needs of enterprises to use instant communication for deployed workers and address the growing desire of consumers to stay connected to friends and family. With the solution's "always-on" connection, calls are made instantaneously without dialing, ringing or waiting for the phone to be answered.

Solution: Clarity's PTT technology, based on VoIP and SIP technologies, satisfies the need for both point-to-point and multipoint usage. The service can be used across disparate wireless networks and is available in BREW and Windows Mobile versions, with a Java client in development. Enhancements such as adding additional security measures and architecting the solution for the client's facility were made to the core PTT product. Clarity also worked closely with a mobile phone supplier to adapt phones to support PTT services.

Benefits: Our client benefits by the associated increase in revenues from introducing these new services quickly and cost-effectively without making a large investment in product development.

Project Profile: *Top provider of mobile content and software applications licenses Clarity's award-winning personal security application.*

Business Case: Our client was seeking a technically sophisticated – yet easy to use – solution to satisfy customer interest in Location-Based Services (LBS). Clarity's Whereabouts™ solution, a solution that enables parents to use their cell phones or the Internet to instantly locate family members, fit the bill. Whereabouts also serves as a Personal Navigation System, with directions, turn-by-turn navigation, maps, and points of interest (POIs).

Solution: By licensing Whereabouts, our client can offer its users a wide variety of LBS capabilities such as child location, real time navigation, directions, emergency notification, and instant communication – all from the same user-friendly interface. It provides real-time alerts for emergency notification, speeding, and arriving or departing a location at a particular time. The solution is available in Java and BREW versions to support a variety of mobile phones and can be easily ported across platforms.

Benefits: By leveraging Clarity's expertise in the development of mobile client solutions and deployment of LBS services, our customer can cost effectively enter an emerging market and quickly benefit from additional revenue generating services, increased brand loyalty, and service differentiation.

Custom Product Development Project Profiles

Why Clarity for Custom Product Development?

- Project requires highly specialized wireless expertise
- Appropriate internal talent is insufficient
- Time-to-market pressures
- Stronger risk management is required
- Project is in trouble or has failed
- Total Cost of Ownership needs to be lower

No matter what the constraints, Clarity is capable of meeting the most stringent needs for tight deadlines, high quality, and process control. For more information on Clarity's products and services, contact sales@claritycsi.com.

Custom Solutions Group

Project Profile: *Over-the-Air Activation Function (OTAF) enables mobile phone users to download updates at point-of-sale or in the field.*

Business Case: Our client, a leading wireless infrastructure provider, needed to provide a major customer with a way to program and update the mobile phones on its network. The client wanted to offer an OTAF solution – the *228 function on many mobile phones – to help this customer reduce costs and provide a better end-user experience.

Solution: Clarity provided software design, development, integration, testing, documentation, and product support for the OTAF project. End users can update phone configuration data and roamer lists virtually anytime, from anywhere, without having to rely on authorized agents or dealers.

Benefits: By satisfying the growing need of mobile users to automatically configure and update their phones at the point-of-sale or in the field, our client was able to reduce costs, differentiate its offering, and increase brand loyalty with one of its key customers.

Project Profile: *Position Determining Entity (PDE) calculates a mobile phone's location for E-911 compliance.*

Business Case: Our client, a leading provider of network communication systems, services and software, wanted to offer a PDE to enable CDMA service providers to meet the FCC's E-911 Phase-2 mandate. With millions of CDMA phones already deployed, our client wanted a highly capable PDE that would use the most accurate calculation approach for each E-911 call, even those from phones that are not GPS-capable.

Solution: Clarity provided software design and development, testing, training, documentation, deployment, and 7x24 customer support. The software, which runs on a NEBS-compliant server platform, performs geo-location calculations using satellite and/or network triangulation data to best determine the handset's position on the globe. The product has successfully completed field trials with several major carriers and is in commercial service.

Benefits: The client was able to offer a timely, cost effective, and robust solution to meet E-911 compliance regulations.

Critical Need Group

Project Profile: *High-speed SS7 Links relieve an I/O bottleneck in flagship wireless switching center of leading communications network provider.*

Business Case: The SS7 links for a wireless carrier's mobile switching centers in Metro NYC were approaching saturation. The network provider's in-house staff was unavailable to immediately address the situation, but urgent attention was still required to avoid an impending capacity problem.

Solution: Clarity designed, developed, and tested high-speed SS7 links that were put into service only days before the 9/11 disaster. The solution included

changing DS-0 interfaces to DS-1 interfaces and developing new software components to manage these interfaces. The completed project was delivered early and performed flawlessly under some of the most extreme conditions imaginable.

Benefits: Our client did not have the staff with the right expertise available to deliver the feature in the required time frame. Clarity offloaded their technical staff and met an aggressive schedule to successfully thwart an I/O bottleneck with potentially extreme consequences.

Clarity is proud to be a minority-owned business and is a member of the Chicago Minority Business Development Council.

Clarity Communication Systems Inc.
2640 White Oak Circle, Aurora, IL 60502
phone: (630) 499-1234 fax: (630) 499-1230
www.claritycsi.com

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