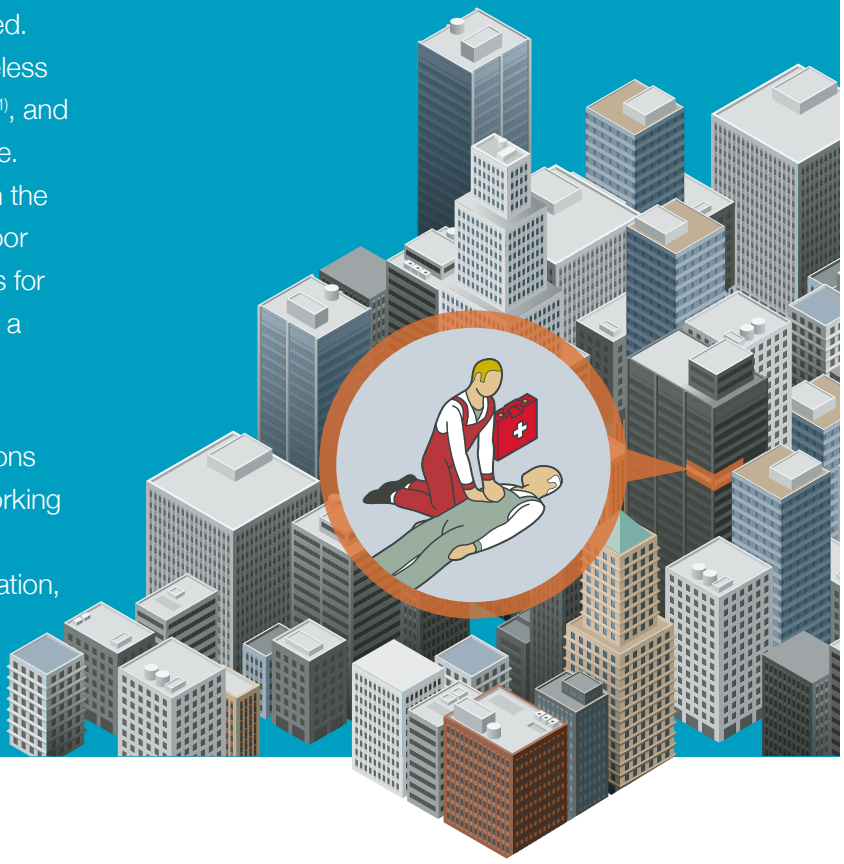
NextNav

Precise Indoor Location Is Now Within First Responders' Reach

The time for Phase II E911 modernization has arrived. Each year, 145 million 911 calls are made from wireless phones. This represents up to 70% of all 911 calls [1], and the number of calls placed indoors continues to rise. With compliance guidelines originally established in the late 1990s, the FCC has specifically exempted indoor environments from the location accuracy standards for Phase II wireless location. The cited reason: lack of a reliable indoor location technology.

But a recently concluded test by the Communications Security, Reliability and Interoperability Council, Working Group III (CSRIC III, WGIII) demonstrates that new technologies can consistently provide accurate location, including vertical, from indoor wireless calls.

(1) Source: http://www.fcc.gov/guides/wireless-911-services



The CSRIC National Testbed Program: Creating Achievable Accuracy Standards For Indoor Location

Sanctioned by the FCC, CSRIC III consisted of major public safety organizations, the four largest U.S. wireless operators (AT&T, Sprint, T-Mobile USA, and Verizon) as well as established and emerging technology vendors. CSRIC III created a national testbed in the San Francisco Bay Area to validate what is technically achievable in indoor location accuracy. This rigorous blind test program concluded in December of 2012, with results reported to the FCC in March of 2013.

> "Tighter performance is required, particularly in urban and dense urban environments, to narrow the search ring to a single building or a more reasonable number of adjacent buildings…"
>
> ***— From the conclusions of the CSRIC report***

The CSRIC trials prove that relevant, mission-critical indoor location is now a reality.

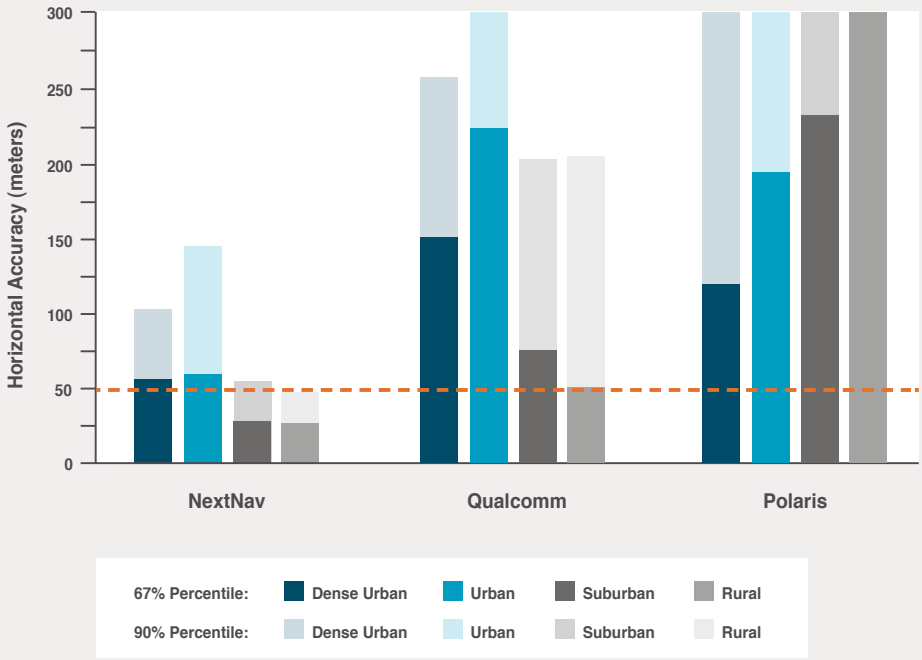
A Rigorous Trial To Establish Standards For Mission-Critical Wireless Communications

The CSRIC national testbed program challenged participating technologies in dense urban, urban, suburban and rural locations. Tens of thousands of test calls were placed across 75 locations from the financial district of San Francisco to rural areas in San Benito County. Horizontal and vertical performance was measured. The program was conducted on a completely "blind" basis to the participants, both in location selection and during the trials.

Technologies Tested and Results

Three companies provided technologies able to complete the CSRIC trial: NextNav, Qualcomm, and Polaris Wireless.

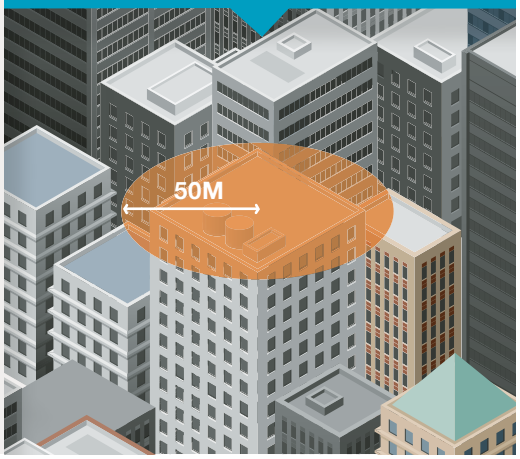
Cumulative CSRIC Results at 67% and 90%



NextNav reduces search area by 10x compared to competing technologies.

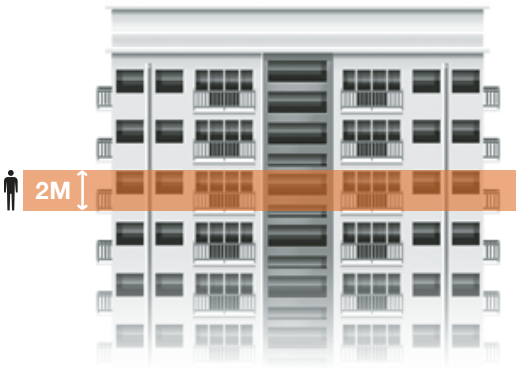
"...the desire would be for the smallest possible search ring… Horizontal position fixes that substantially exceed **50 meter accuracy**, provide only general location information..."

— From the conclusions of the CSRIC report



NextNav's Vertical Capabilities Provide Reliable Floor-Level Accuracy

NextNav was uniquely capable of demonstrating height capabilities. With a median height accuracy of approximately 2m (about a person's height), vertical positioning with accuracy relevant to first responders' needs (i.e., floor-level data) is now reliably achievable.



Read the full CSRIC III report at http://www.fcc.gov/encyclopedia/communications-security-reliability-and-interoperability-council-iii

For more information, visit us at www.nextnav.com