

★ A CALL FOR ★

CONVERGENCE

A MANIFESTO

A SEAMLESSLY CONNECTED SOCIETY. NEW ENVIRONMENTS THAT DRIVE SOCIAL AND ECONOMIC DEVELOPMENT. SMART CITIES, SMART HOMES, SMART BODIES. A VAST WORLD OF POSSIBILITIES YET TO BE IMAGINED.

THIS IS OUR VISION

Since 2001, Boingo has been a pioneer in wireless connectivity, driving innovation in both licensed and unlicensed spectrum. Today, as we survey the ever-evolving wireless landscape, it is clear that we are at a tipping point. The physical and digital worlds are coming together at a pace that requires new thinking, new paths forward, and a new way of working together. We have the opportunity to leap into the next decade of innovation. But it will require all of us, as a wireless industry, to work in concert. And it will begin with a deep commitment to convergence at every level.



WE SUBMIT THE FOLLOWING

CONVERGENCE WILL PROPEL OUR CONNECTED LIFESTYLES

Mobile is no longer a device, it's a lifestyle. Our phones, tablets, cars, refrigerators—even our pets are connected 24/7. Mobile data consumption is skyrocketing—and forecasters predict it will grow sevenfold by 2021. Our current licensed infrastructure can't support the coming tsunami of data, so we must embrace new converged solutions that can survive the extraordinary pressures coming our way. The lifeboat has two paddles: one labeled "licensed" and the other labeled "unlicensed." We'll need both to survive the storm.

THERE'S NO "I" IN CONVERGENCE

Mobile network operators, carriers, OEMs, device manufacturers, government entities, cable operators—we're all in this together. The new wireless frontier is at our fingertips and together we are at the cornerstone of influencing tomorrow's converged network. We must depend on each other; challenge each other; and leverage our strengths.

CONVERGENCE MAKES THE CONNECTED WORLD OF TOMORROW POSSIBLE

Powering a new generation of connections requires access to more airwaves. This is why the upcoming 5G capacity will be based on the unified aggregation of multiple bands. The industry has largely accepted that this will include the convergence of licensed and unlicensed spectrum, as 5G is not economically practical without coexistence. Merging licensed and unlicensed networks gives us more throughput, reduced latency, better coverage and lower costs. Convergence opens a larger pool of airwaves, creating more lanes and less RF congestion. This is a win-win as it allows us to answer the demand for more mobile data, more wireless connectivity and new horizons. The best part? Users will not know if their connectivity is coming from licensed or unlicensed bands as networks will be blended through a centralized controller.

SUCCESSFUL CONVERGENCE CALLS FOR UNLICENSED SPECTRUM

Data-heavy innovations like M2M communication, autonomous vehicles, virtual reality, and instant streaming demonstrate both the potential and the challenge to our networks. To solve the data onslaught, industry players like the MulteFire Alliance and LTE-U Forum are working on new network trials and deployments where unlicensed technologies are front and center. Wi-Fi in particular is crucial for enabling next generation networks the ability to handle 5G requirements that include one gigabyte of speed, one millisecond of latency and extraordinary user demand. But it doesn't stop there. The unlicensed wireless portfolio is full of frequencies we can take advantage of for a more seamless connected experience. Short range, medium range and long range unlicensed technologies such as WiGig, Wi-Fi HaLow and LoRa have shown encouraging momentum for facilitating broad interoperability and roaming capabilities—key attributes for deployments like IoT and smart homes. Unlicensed means more power, more signals, more range and more connected opportunities. It's already made significant impact and will continue to push us forward.



WE STAND FOR CHAMPIONING CONVERGENCE AND ACCOMPLISHING INCREDIBLE THINGS. TOGETHER WE'RE BETTER. LET'S START NOW.

Derek Peterson, Ph.D., is chief technology officer at Boingo Wireless, a leading DAS and Wi-Fi provider. He is responsible for Boingo's technical vision and strategy, and pioneering the adoption and deployment of the latest wireless network technologies, including Passpoint, network virtualization and convergence.