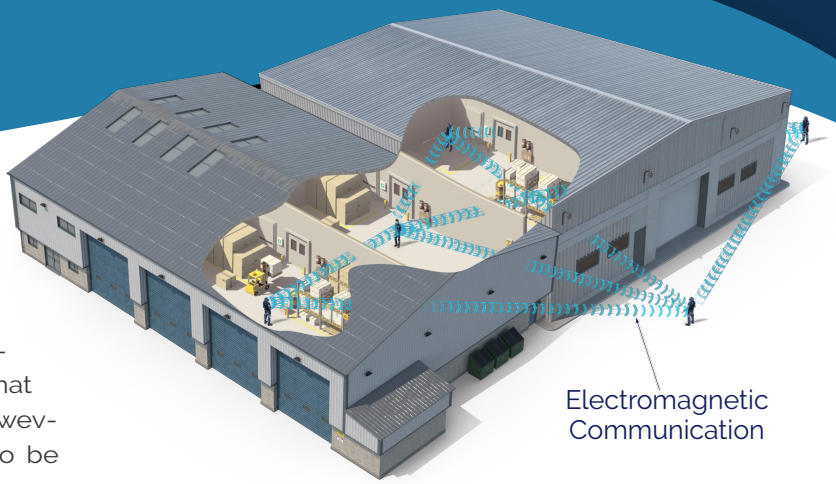
Breakthrough Technology For FutureG COMMUNICATIONS

Saltenna LLC

Breakthrough technology for underwater communications



5G offers very high transmission rates with low latency and high security. These factors will encourage the development of many new applications that could not have been contemplated previously. However, the spread of usable 5G networks threatens to be constrained by the short transmission distances characteristic of the very high frequencies being used in the 5G standards.

Saltenna LLC was formed in 2017to develop novel applications of plasmonics and metamaterials. Saltenna has been engaged in several DARPA-sponsored advanced research and development projects to advance novel techniques for radio communications and imaging. Saltenna has developed several innovative, patented antenna systems for **5G networks**, which provide a considerable size, weight, power, and cost (SWAP-C) and coverage advantage over current commercial systems.

The primary emerging challenge for low-latency, high-bandwidth 5G applications appears to be the very high frequencies used for transmissions. At these frequencies, transmission distances are limited resulting in the need to install many more repeaters and routers than were needed with 4G. In addition, 5G signals do not pass easily through solid objects like walls and buildings. Saltenna's 5G antennas, however, using our plasmonics-optimizing designs, will enable **transmission through walls and metal surfaces** and will use existing surfaces to **expand the coverage areas of the antennas.**

Our antennas will enable a single repeater to cover whole floors, large metal warehouses, and whole buildings.

Our antenna enables **transmission of 5G and Wi-Fi signals through conductive enclosures**. This novel capability may be used for improving 5G or Wi-Fi connectivity in buildings, metal warehouses, and under-ground tunnels, as well as for remote examination of metal enclosures, such as shipping containers.

We believe that the Saltenna antennas will become an integral and essential part of the 5G rollout.

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