# Dossier: REMCOM INC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $1,183,692.00

**Award Date:** 2023-09-28

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

REMCOM INC. is a software company specializing in electromagnetic simulation and site-specific radio propagation software. Their primary business revolves around providing engineers with powerful tools for designing, analyzing, and optimizing wireless communication systems, electronic devices, and other electromagnetic phenomena. REMCOM’s mission is to accelerate the development and deployment of advanced technologies by enabling faster, more accurate, and more cost-effective electromagnetic modeling. They address the problem of expensive and time-consuming physical prototyping by offering high-fidelity simulation software that allows engineers to predict the performance of their designs before building physical prototypes. Their unique value proposition lies in the combination of advanced modeling capabilities, user-friendly interfaces, and comprehensive support services, enabling both academic and industrial users to tackle complex electromagnetic challenges efficiently.

**Technology Focus:**

* XFdtd Electromagnetic Simulation Software:\*\* REMCOM’s flagship product, XFdtd, is a full-wave, time-domain solver for electromagnetic analysis. It offers features such as finite-difference time-domain (FDTD) modeling, subgridding, and high-performance computing capabilities, enabling simulations of complex geometries and large-scale systems with high accuracy. It includes advanced features such as circuit element modeling and antenna array design tools.
* Wireless InSite:\*\* Wireless InSite is a radio propagation software tool used for simulating wireless communication in urban, indoor, rural, and mixed environments. It incorporates ray-tracing techniques and detailed terrain data to predict signal coverage, path loss, and interference in complex environments. It provides advanced features like MIMO and massive MIMO simulation capabilities.

**Recent Developments & Traction:**

* Wireless InSite MIMO and Massive MIMO capabilities:\*\* In 2022, REMCOM announced enhancements to Wireless InSite with extended capabilities for simulating MIMO (Multiple-Input Multiple-Output) and massive MIMO wireless systems, crucial for 5G and beyond technologies. This included features for complex channel modeling and antenna array design.
* New XFdtd features:\*\* Several new features have been added to XFdtd in the last two years (2022-2024), including enhanced material modeling capabilities and improved integration with third-party CAD tools.
* Strategic Partnerships & Publications:\*\* REMCOM routinely collaborates with universities and publishes application notes highlighting the use of their software in various defense and aerospace applications, suggesting ongoing engagement with the sector. Specific funding or DoD partnerships were not publicly evident in the scope of this search.

**Leadership & Team:**

* Gregory Skidmore (CEO):\*\* No specific prior experience in defense or aerospace was readily identifiable from publicly available information, but his tenure as CEO suggests a deep understanding of REMCOM's business and technology.
* Dr. W. Clark Penn (Chief Technology Officer):\*\* Dr. Penn has extensive experience in computational electromagnetics, antenna design, and radio propagation modeling. He holds a PhD in electrical engineering.

**Competitive Landscape:**

* Ansys:\*\* Ansys offers a broad portfolio of simulation software, including electromagnetic solvers. REMCOM differentiates itself with its specific focus on wireless communication and site-specific radio propagation, offering specialized tools and expertise in these areas.
* Altair:\*\* Altair provides simulation and data analytics software. While they offer electromagnetic simulation capabilities, REMCOM emphasizes its user-friendly interface and dedicated support for wireless communication applications.

**Sources:**

1. [https://www.remcom.com/](https://www.remcom.com/)

2. [https://www.remcom.com/xfdtd/](https://www.remcom.com/xfdtd/)

3. [https://www.remcom.com/wireless-insite/](https://www.remcom.com/wireless-insite/)

4. [https://www.everythingrf.com/news/details/3799-remcom-releases-wireless-insite-2022-with-mmwave-mimo-capabilities](https://www.everythingrf.com/news/details/3799-remcom-releases-wireless-insite-2022-with-mmwave-mimo-capabilities)