Spectral Devices Inc. and the Utilization of the Western Nanofabrication Facility for Research and Development of Novel Technology

Reza Najimi PhD and Jeff Carson PhD

Spectral Devices Inc. has firmly established itself as a trailblazer in the field of multispectral imaging technology. The company is driven by a mission to provide advanced solutions that empower professionals and researchers to extract precise information from their observations. Central to achieving this mission is the Nanofabrication Facility situated in Western Ontario, which is a cornerstone of their research and development efforts.

Founded in 2015, Spectral Devices Inc. has consistently demonstrated a commitment to innovation and a laser-sharp focus on improving the performance and capabilities of multispectral cameras. These cameras find applications in diverse sectors, including agriculture, environmental monitoring, biomedical, and more.

Multispectral Videography: Beyond scientific applications, Spectral Devices' cameras have found a niche in film and videography, providing filmmakers with the ability to capture stunning multispectral imagery for artistic and documentary purposes.
Spectral Devices Inc.'s association with the Nanofabrication Facility in Western Ontario underscores the company's dedication to cutting-edge technology and research. This facility is equipped with state-of-the-art equipment and staffed by a team of highly skilled experts, making it an ideal setting for the company's research and development initiatives.

**Multispectral Drone Imaging Camera:**
Our state-of-the-art drone imaging cameras enable multispectral imaging from 350 nm to 1700 nm, in addition to offering the capability of thermal imaging. These advanced tools simplify the work of numerous surveillance and mapping companies across various fields, including agriculture, geological survey and plant inspection among others. The image to the left is an aerial view showcasing vegetation health assessment in the field.

**Space (CubeSats):** Spectral Devices’ cameras have been deployed on CubeSats in space. These compact satellites are used for various scientific and Earth observation missions, and the use of Spectral Devices' cameras enhances the data collected from these platforms.

The advanced Multispectral camera from Spectral Devices Inc. was utilized aboard the Galassia-2 Cube Satellite.