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8 Wing Trenton Public Affairs

On Tuesday, February 23, 2021, aircraft technicians with 429 Transport Squadron, Canadian Forces Base (CFB) Trenton, along with their colleagues from Boeing, led the Royal Canadian Air Force through a new technical frontier. Using Microsoft HoloLens mixed reality devices with Boeing-developed software, they completed repairs on a CC-177 Globemaster III aircraft.

Normally, Boeing specialist technicians, known as the recovery and modification services team, travel to CFB Trenton to complete specific CC-177 maintenance. However, these trips were impeded by COVID-19 travel restrictions, which led to using Boeing's mixed reality system. Mixed reality is the merging of the real and virtual worlds to produce new environments and visualizations, where physical and digital objects co-exist and interact in real time.

The technicians from 429 Squadron were able to complete the repairs while the Boeing technicians in the United States provided them with technical drawings and documents, real time feedback and directions.

"Through a secure connection, our technicians and those of Boeing worked together seamlessly by sharing information in real time, including iris tracking. This let the Boeing technicians see exactly what our technicians were doing and provide them constantly evolving support," said Lieutenant Michael Sitkowski, Aircraft Maintenance Support Officer with 429 Transport Squadron. "This capability could allow for more efficient maintenance of our CC-177 fleet and allow for our technicians to continue to develop with the help of leading subject matter experts."

429 Transport Squadron's Commanding Officer, Lieutenant-Colonel Adam Pentney, said the squadron will continue to champion the use of this kind of technology, in an effort to increase the overall efficiency and effectiveness of the squadron. "Our aircraft are always in demand supporting the movement of CAF personnel and equipment around the world. The potential applications of this type of technology to enable that mission are limited only by imagination. Anything that we can do to reduce the amount of time our aircraft are in maintenance and increase the amount of time they are available for missions, better enables our support to the CAF and Canadians."