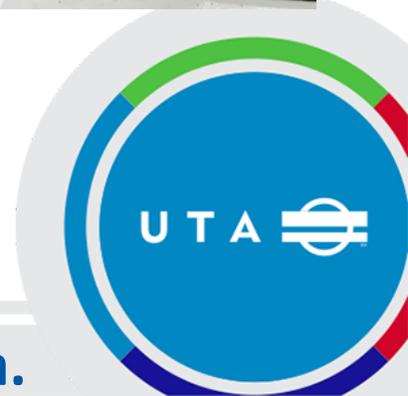


Polarized Infrared Optical Imaging Transit Infrastructure Project Update



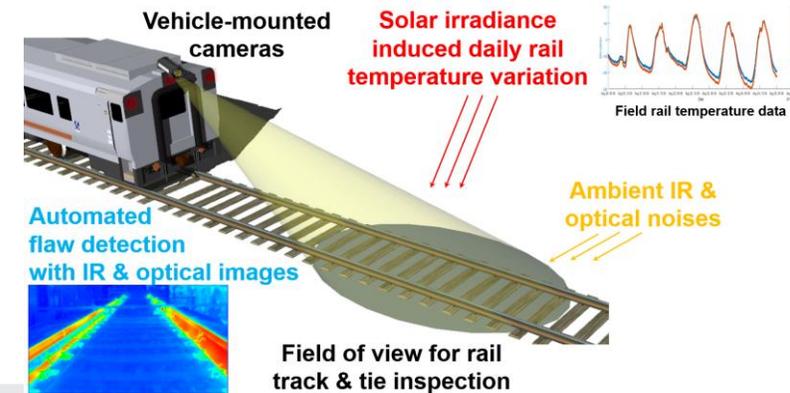
Polarized Infrared Optical Imaging Transit Project

- The transit industry is concerned about safety issues arising from track and tie structural deficiencies, which can result in accidents, derailments, and harm to transit employees
 - Currently, track inspections are conducted by workers who walk along the corridor when the rail is not in service
 - Ultrasonic rail flaw detection is also utilized, but it has limitations
- To address these challenges, UTA partnered with the University of Utah (U of U) and Visionairo Systems (Visionairo)
 - This initiative was funded by the Federal Transit Administration through the Real-Time Transit Infrastructure and Rolling Stock Condition Assessment Research and Demonstration Program
 - Together, the project team has conducted research on an automated rail track and tie inspection system



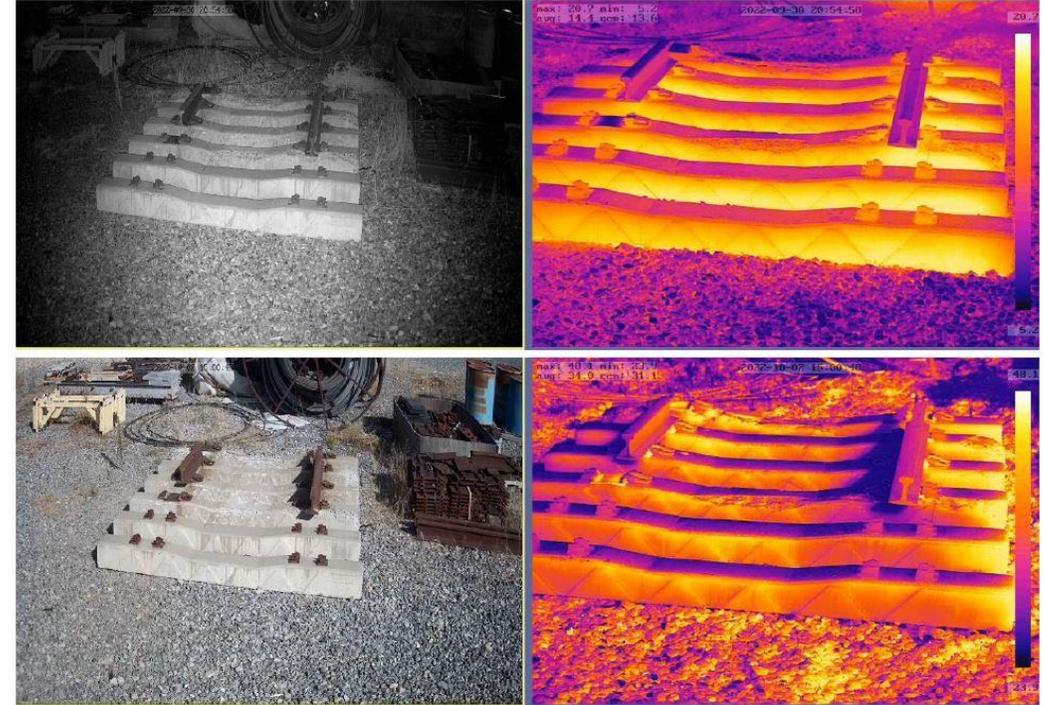
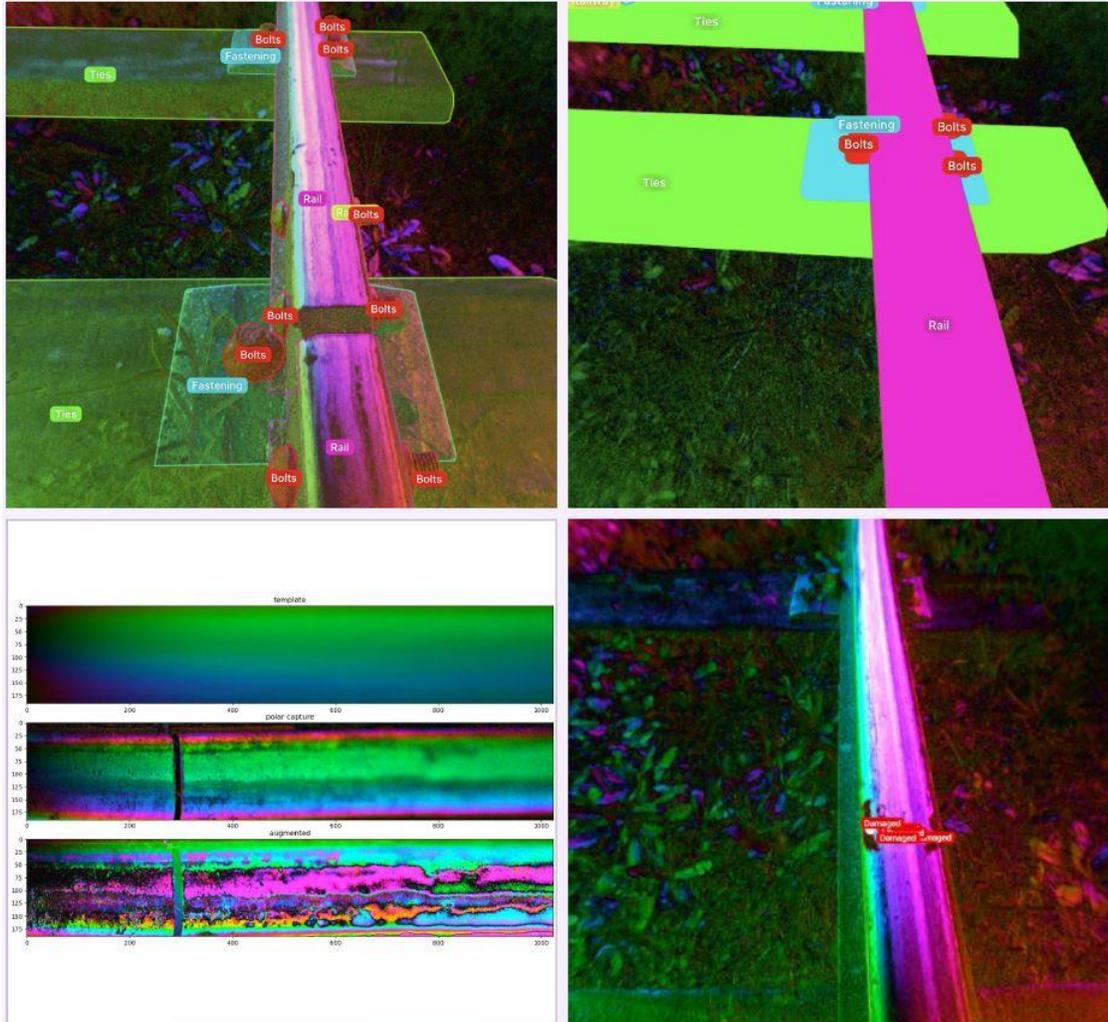
Polarized Infrared Optical Imaging Transit Project

- This project had two overarching objectives. **To enable early detection and long-term monitoring of hazardous asset condition**, the project team:
 - Developed a polarized infrared measurement system for internal structural deficiency inspection (U of U)
 - Developed a polarized optical measurement system for external structural deficiency inspection (Visionairo)
- **To enhance the system robustness and improve right-of-way safety for transit workers**, the project team:
 - Developed an in-motion track structural deficiency inspection prototype
 - Demonstrated and evaluated prototype performance on revenue-service lines
- This project covered three phases: research, development, and demonstration
 - Final demonstration testing was completed on UTA’s light rail system last month



Polarized Infrared Optical Imaging Transit Project

UTAH TRANSIT AUTHORITY



Agenda Item 6.a.