

<b>UTC Project Information</b>	
Project Title	MagAcc: Proof-of-Concept for Experimental Propulsion System (TR5-TR6)
University	University of Alaska Fairbanks
Principal Investigator	Billy Connor
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Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$60,000 University of Alaska Fairbanks \$ 60,000
Total Project Cost	\$120,000
Agency ID or Contract Number	69A3551747110
Start and End Dates	March 16, 2022-June 30, 2023
Brief Description of Research Project	<p>Our goal is to develop a scaled-down prototype of the propulsion portion of the MagAcc system and demonstrate the actions of the linear polarity switching series of the magnetic fields and polarity orientation. Our test of this concept for a new propulsion system will prove how to achieve the train's acceleration, slowdown and braking by solely utilizing permanent magnets. We propose to complete the construction and perform tests on a track that would accelerate a train over a ten-foot oval area. In particular, this track will demonstrate the effectiveness of acceleration solely utilizing permanent magnets arranged in the London Assemblage (LA) configuration. This track will allow us to test the peak speed of the train, as well as gain understanding of how existing train tracks can be retrofitted with this propulsion system.</p> <p>Preliminary research suggests that the Linear Polarity Switching series features inherent advantages, such as cheap and simplistic construction, because windings and electricity are eliminated; less stress due to high force ripples, less vibration and acoustic noise, and less complex polarity switching control units, because its switching is internal. We expect that this new research on the MagAcc propulsion system will confirm that. Once developed and scaled up, this alternative propulsion system should outperform present Maglev systems in efficiency and cost.</p>

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none"><li>• Reports</li><li>• Project Website</li></ul>	