

## TRANSLATION DRIFT BENCHMARK

Reference No / Version	B-TD-0.01
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Adopted Protocol	Any protocol that involves periodic object translation (P-IHT-0.01, P-GT-0.01, P-GR-0.01).
Scoring	<p>Assessment is based on the length of drift vectors <math>\mathbf{d}</math> obtained through the following steps. For each recorded periodic manipulation motion:</p> <ol style="list-style-type: none"> <li>1) Isolate motion end points.</li> <li>2) Compute offset vectors between subsequent endpoints.</li> <li>3) Compute the mean offset (drift) vector <math>\mathbf{d}</math> of the above offset vectors.</li> <li>4) Compute the length of the mean drift vector <math>\ \mathbf{d}\ ^2</math>.</li> </ol> <p>The resulting length corresponds to an average drift of a specific manipulation motion. If different objects are used, the steps are repeated for each instance.</p>
Details of Setup	To assist with data processing and drift vector computation, code samples are provided.
Results to Submit	<p>For each sensorized object and manipulation motion:</p> <ul style="list-style-type: none"> <li>• Assessed hand model and control details.</li> <li>• Computed drift vector lengths <math>\ \mathbf{d}\ ^2</math>.</li> <li>• Plots of recorded point clouds with highlighted end points.</li> <li>• Comments on obtained results with respect to the hand model and control.</li> </ul>