

Abstract

Mercator projection is the most widely used projection method in the maritime sector, yet many students and seafarers still experience difficulties in processing its theoretical knowledge.

The synopsis of this thesis is the development of a visual program based on the transformation formulas of Mercator projection. The program presents the loxodrome and the orthodrome routes simultaneously on both a globe and a Mercator map. The intended target audience are students and teachers from various nautical schools who want to view the subject matter from an alternative perspective.

As a prelude to this tool, the frequent misconceptions among students and seafarers, similar didactic tools and the mathematics behind the Mercator projection are initially explored.