NOTICE OF
Graduate Seminar Presentation

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Wednesday, September 5, 2007

Room E-11 @ 2:00 pm

Comparison between Multi-baselines Kinematic Solutions in Marine Environment

ABSTRACT

With increasing use of Global Positioning System for hydrographic surveying and navigation, the need for better positional accuracies has also increased. This paper focuses on investigating the impact, comparison and analysis of using baselines of various lengths in marine environment.

Two sets of multi-baselines of approximately 204 km and 75 km respectively are used for post-processing kinematic data of a boat. The first set of base stations is FRDN+HLFX ("long" multi-baseline) and the second is CGSJ+DRHS ("short" multi-baseline). The goal is to compare the results of the "long" with the "short" and determine the "best" solution, and the criteria (metric) for determining the best solution. This is achieved by using the Waypoint Products Incorporated software GravNav 7.80 to process seven days (February 15, 2004 to February 21, 2004) of GPS data obtained from the Princess of Acadia Project.

In answering the question of what is really the "best" solution, this paper presents the criteria that can be used to determine, or at least indicate, the "best" solution. The results show that the "long" and "short" multi-baselines are not equivalent and comparisons made indicate that using a forward/reverse separation plot, the shorter baseline has a better solution.

Faculty Members and Graduate Students are invited to attend this presentation.