



Inland Navigation Animation Module (INAM)

Start Date: Mar 2005

POC:

Projected

End Date: Jan 2008

[POC](#)

Problem Addressed:

The Corps of Engineers, as custodian of the nations navigable waterways, has access to very large datasets such as the Lock Performance Monitoring System and Waterborne Commerce Statistics Center data. The models created and executed by the Corps also produce very large data sets. These large data sets are much too large to understand in tabular form. Queries which break the data into smaller more focused groups of information are one way to ease the analysis process. Charting and other visual representations of the data are other tools analysts use to understand the data. However, these methods are not well suited to understanding a large dataset that contains data which represents variations over time and space.

Objective:

Advances in Human Computer Interface technology have allowed large, dense datasets to be interacted with in a fashion that enhances understanding of patterning in large datasets. Advanced visualization of LPMS data will allow Corps analysts to be more effective and efficient as they seek to understand the temporal and spatial patterning of navigation traffic flow. The Navigation System Simulation model (NaSS), which is another element of the NETS program, will be designed to efficiently feed INAM. Therefore this module will allow an analyst to visually review and understand both LPMS data and NaSS output, and to easily compare the two datasets.

Benefits:

One benefit of the INAM will be that it can serve as a teaching tool to help those who don't understand the lockage process. By watching the animation, a person should be able to easily understand various concepts related to the lockage process. The INAM can also serve as a error checking tool. Data errors will be revealed as a knowledgeable user reviews the data in an animation format. The INAM will also be used as a debugging tool for the NaSS model. Since output from NaSS can be fed into INAM, the output can be reviewed in the animation and errors in programming logic will be revealed. On a larger scale, region and basin wide traffic patterns and carrier behavior will be able to be analyzed. This will be especially useful for analyzing carrier response to scheduled and unscheduled closures. For example, the McAlpine Event Study found very few tows arrived at McAlpine during the river closure. The INAM will be able to easily show where the tows operated or tied up during the closure. This information will help the NaSS team develop shipper and carrier response algorithms in NaSS.

Status:

Completed.



Contract Data:

120171, A1230;
130465, C3200

Progress:

[Software by INAM Team, Jan 14, 2008](#) (120.4
MB, exe)

Products (Bookshelf/Toolbox):**Related Links:**

[Navigation Economic Technologies](#)

[McAlpine Event Study](#)

[NaSS Model](#)

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US Army Corps
of Engineers

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