

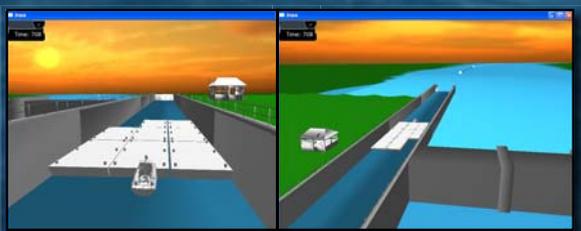
Visualization For Navigation Simulation Models Why, What and How



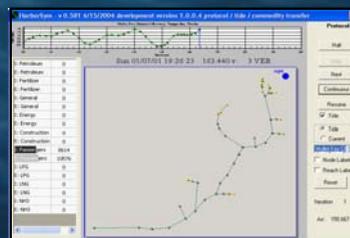
Geographic-Underlays



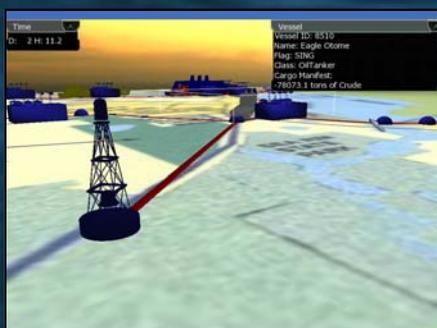
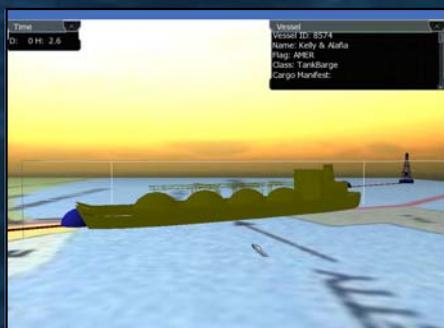
**3D
Animation**



**Enhanced communication of process
and results**



Abstract / Symbolic Formats



Drill-down/Query ability from visualization into model data

The Institute for Water Resources (IWR) plays a critical role in developing innovative economic-engineering tools to support planning, policy and operations decisions for the US Army Corps of Engineers navigation mission.

Visualization For Navigation Simulation Models - Why, What and How

Contemporary problems for navigation planning and analysis in the United States

- Increased stakeholder involvement leads to heightened *scrutiny of public investments*
- More abundant and accessible electronic data are *increasing analytical expectations*
- Budget constraints and competition for limited funding *require improved decision making methods*
- Real-world complexity and variability demands *effective communication strategies*



IWR responds to the challenge through innovative model development solutions

- Achieving model transparency through “glass box” development approaches
- Increasing credibility and stakeholder confidence with data/ model validation and certification
- Illuminating underlying relationships and impacts of alternative actions to decision makers with fully integrated graphical visualization



The IWR Navigation Economic Technologies (NETS) program is developing decision support tools for:

- Inland navigation
- Deep-draft navigation
- Lock analysis models



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