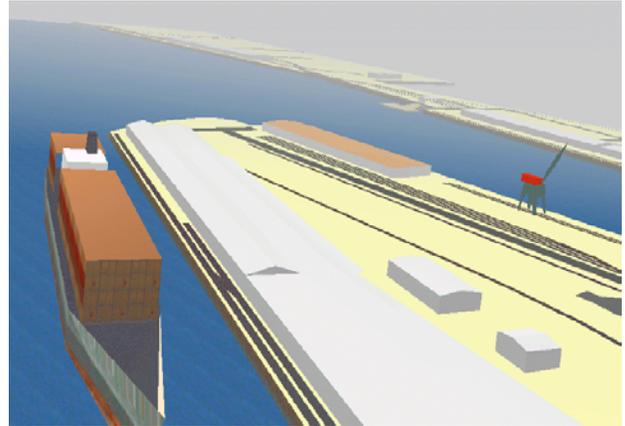


# PORTSIM: A Simulation Model of Seaport Operations

**What is PORTSIM?** PORTSIM is a detailed time-stepped, stochastic simulation model of seaport operations. Its primary focus is modeling the deployment of military forces (equipment, supplies, and personnel) through a commercial seaport. The model has two levels of capability. First, it is an information system with reference to seaport data, unit equipment, and strategic sealift databases, providing textual data and reference graphics (maps, imagery, and CAD drawings). Second, it is a simulation (with animation capabilities under development) which models the details of movement and processing of equipment, supplies, and port and transportation assets moving through a port to ship loading operations. When fully developed, PORTSIM will be an integral part of end-to-end deployment modeling systems.

**What Does PORTSIM Do?** PORTSIM determines a throughput capability for a seaport under a given set of assumptions, identifies infrastructure constraints, and provides port-specific clearance profiles. A number of commercial and open-source port references are integrated into the system for easy access and reference. The simulation is dynamically animated for visual monitoring and quick identification of port problems. Current development activities include the use of real-time data on port operations in the simulation model.



**Visualizations of seaport operations are being developed as part of PORTSIM**

**Why is PORTSIM Being Developed?** The goal of PORTSIM is to create a seaport simulation model that is...

- *Detailed.* Movement and status of each item is modeled.
- *Dynamic.* Start-stop capability for modeling events, delays, and new information received during the simulation.
- *Versatile.* Useful for port analysis, deliberate planning, command and control, and training.
- *Easy-to-use.* Modern graphical user interface techniques, self-directing screens, and simple point-and-click menus.

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