TEST & EVALUATION SOLUTIONS, LLC

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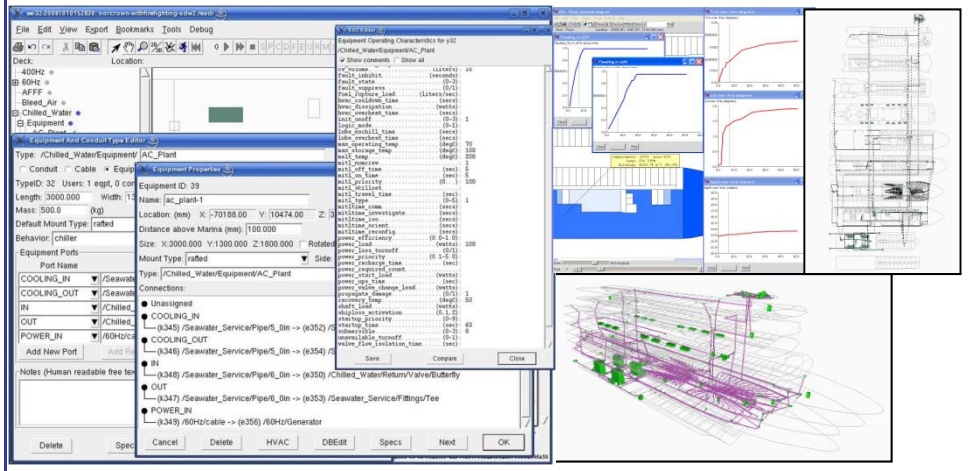
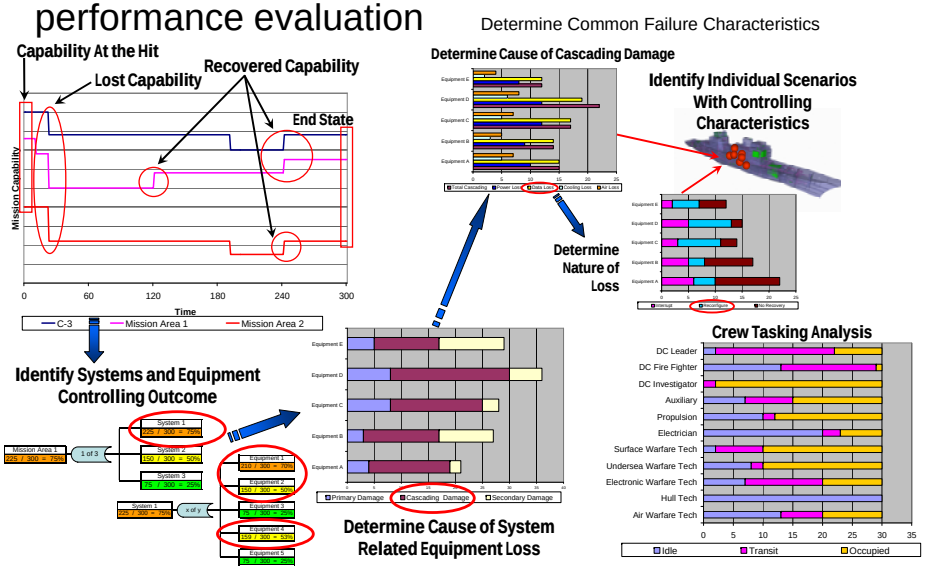
Integrated Recoverability Model (IRM)

- The Integrated Recoverability Model (IRM) has been used by the DDG 1000 and Cruiser Modernization Programs
- Provides a single software solution for systems engineers to:
  - Build a detailed connectivity model of all interconnected systems using an existing library of components
  - Select component behaviors (e.g. pump, valve, generator, ABT, MBT, Fuel Tank, etc.)
  - Conduct time based operational ship systems simulations to evaluate inter-dependencies of systems and components in order to identify potential points of failure across all systems, including personnel
  - Conduct rapid and detailed design trade-off studies
  - Conduct detailed zonal or threat based damage scenario analysis with physics-based fire and flooding simulations

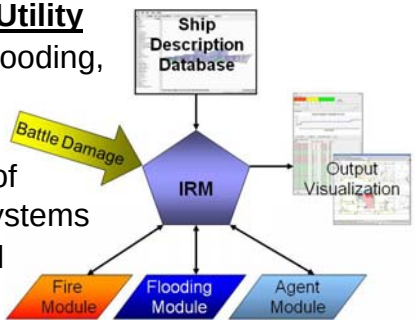
- GUIs provide means to quickly enter, view, and verify data needed to fully describe the ship's structure and equipment



- Data output provides rapid integrated, time-based performance evaluation



IRM has Wide Utility



- Interacts with physics-based fire, flooding, and structural stability simulations
- Provides simulation/stimulation capability to conduct early testing of shipboard software and controls systems
- Meets ship design survivability and LFT&E analysis requirements
- Database can be used in a ship product model application
- Supports many other analyses and uses, such as:
  - Systems and mission operational assessments
  - Human system integration studies and analyses
  - FMECA and reliability analyses
  - Systems engineering and total ship feasibility studies
  - Development of operational concepts and procedures