Equipment Maintenance Database

University of Miami
Marine Technology Group

Developed by Ilya Nikanorov
University of Miami, Marine Technology Group

Topics

- Equipment Maintenance Database outline
- Structure and components
- Implementation and Operations

What is Equipment Maintenance Database?

- EMD is a collection of several databases and software which supports, organizes, and improves operations of Marine Technology Group.
- EMD targets the following areas:
  - Inventory monitoring and control
  - Creation and implementation of various procedures
  - Scheduling
  - Knowledge exchange
  - Report generation

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Structure and Components

- The EMD consists of:
  - Main database group
  - Vessel database group

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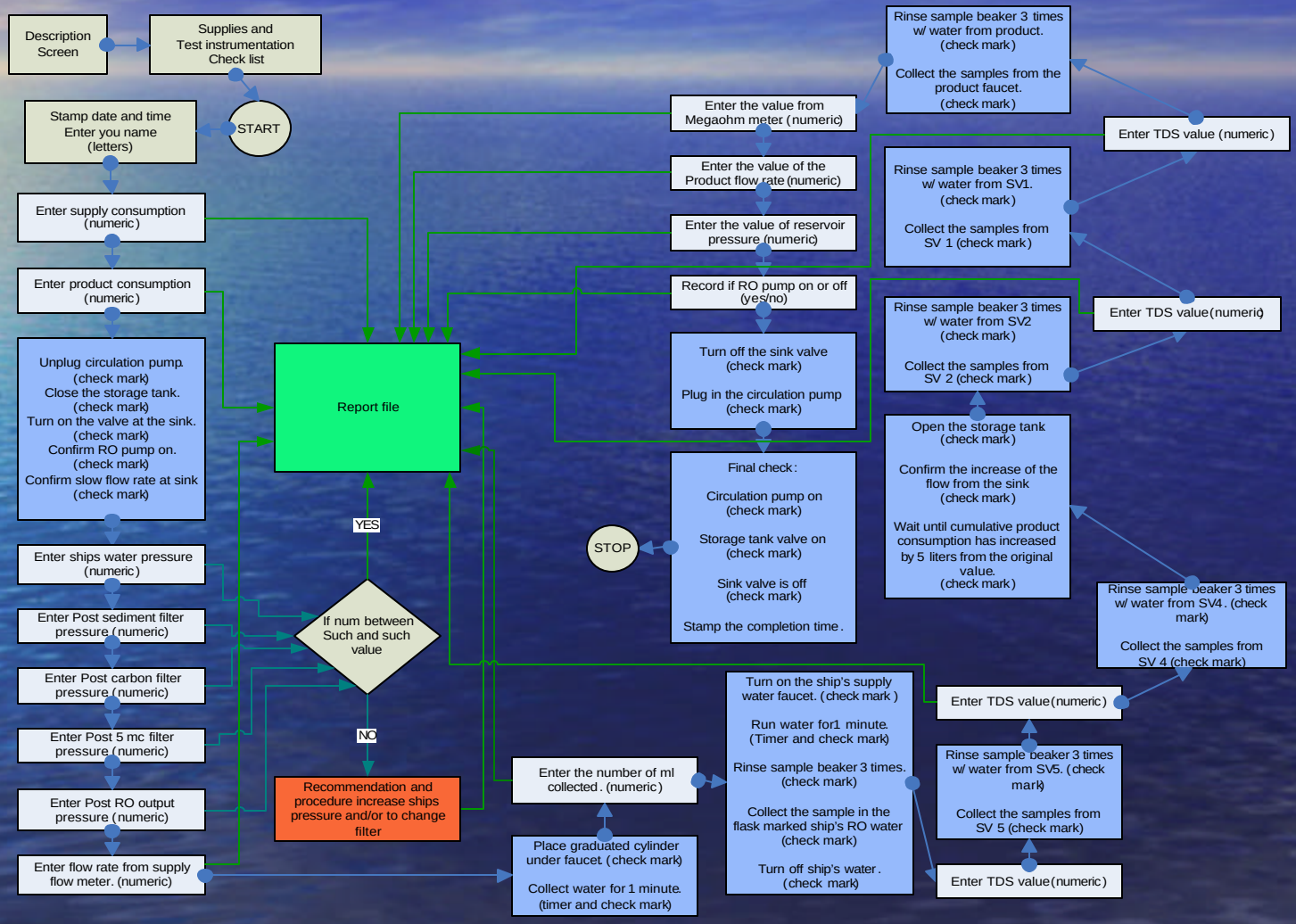
Structure and Components

- Main Database group
  - Located on shore
  - Provides inventory monitoring and update
  - Provides schedule control system
  - Allows user to create and implement procedures
  - Stores instrument historical data

Structure and Components

- Vessel Database Group
  - Located on each ship
  - Provides access to inventory information
  - Controls completion of procedures
  - Record collection
  - Report generation

Data flow example



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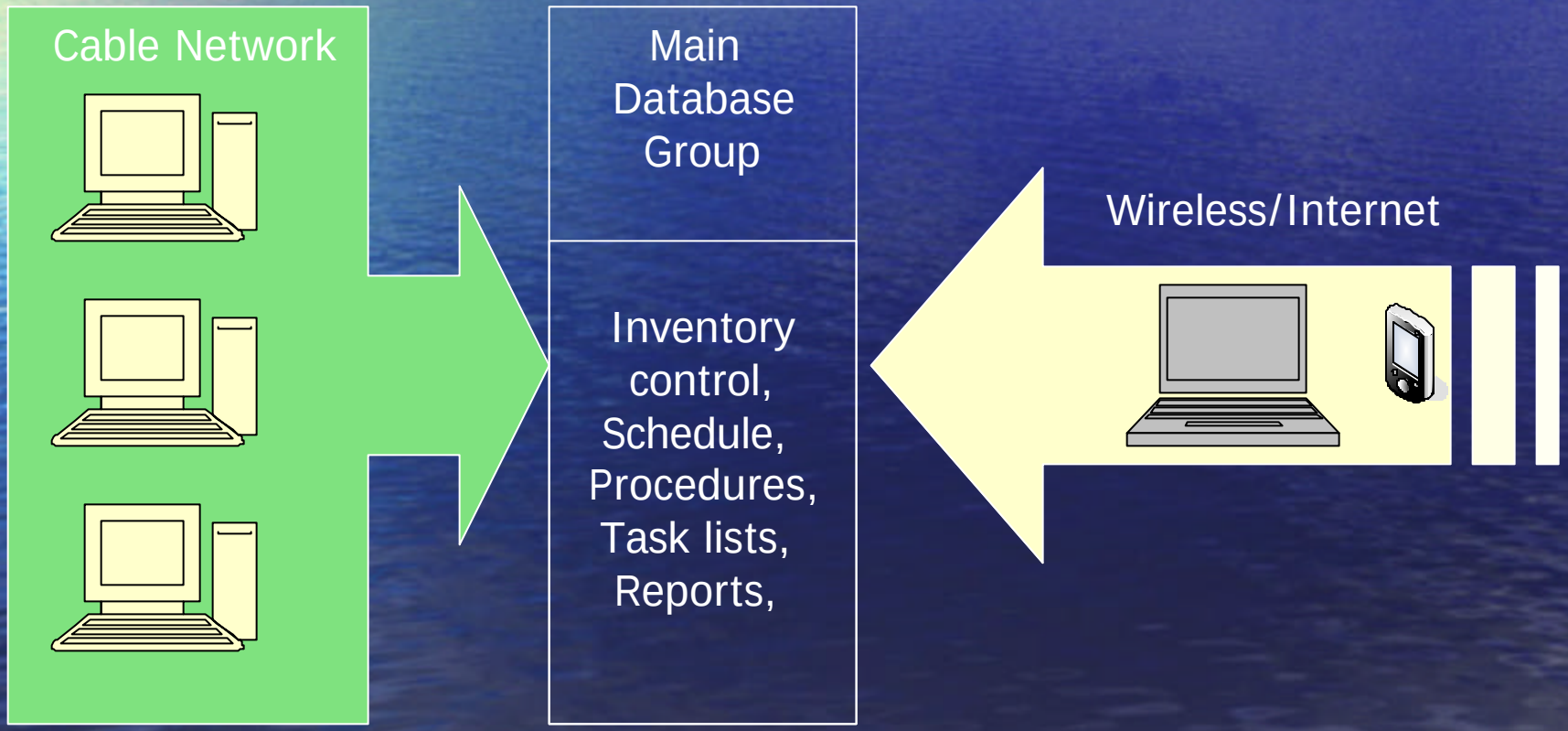
Implementation and Operations

- Database software technology
  - MS SQL Server 2000 as database server
  - Server running MS Windows 2003 Server with MS .NET Framework
  - Dynamic web pages generated using ASP .NET technology
  - Code written in C#
  - HTML output is using cascading style sheets and Java script.

Implementation and Operations

- Implementation on shore



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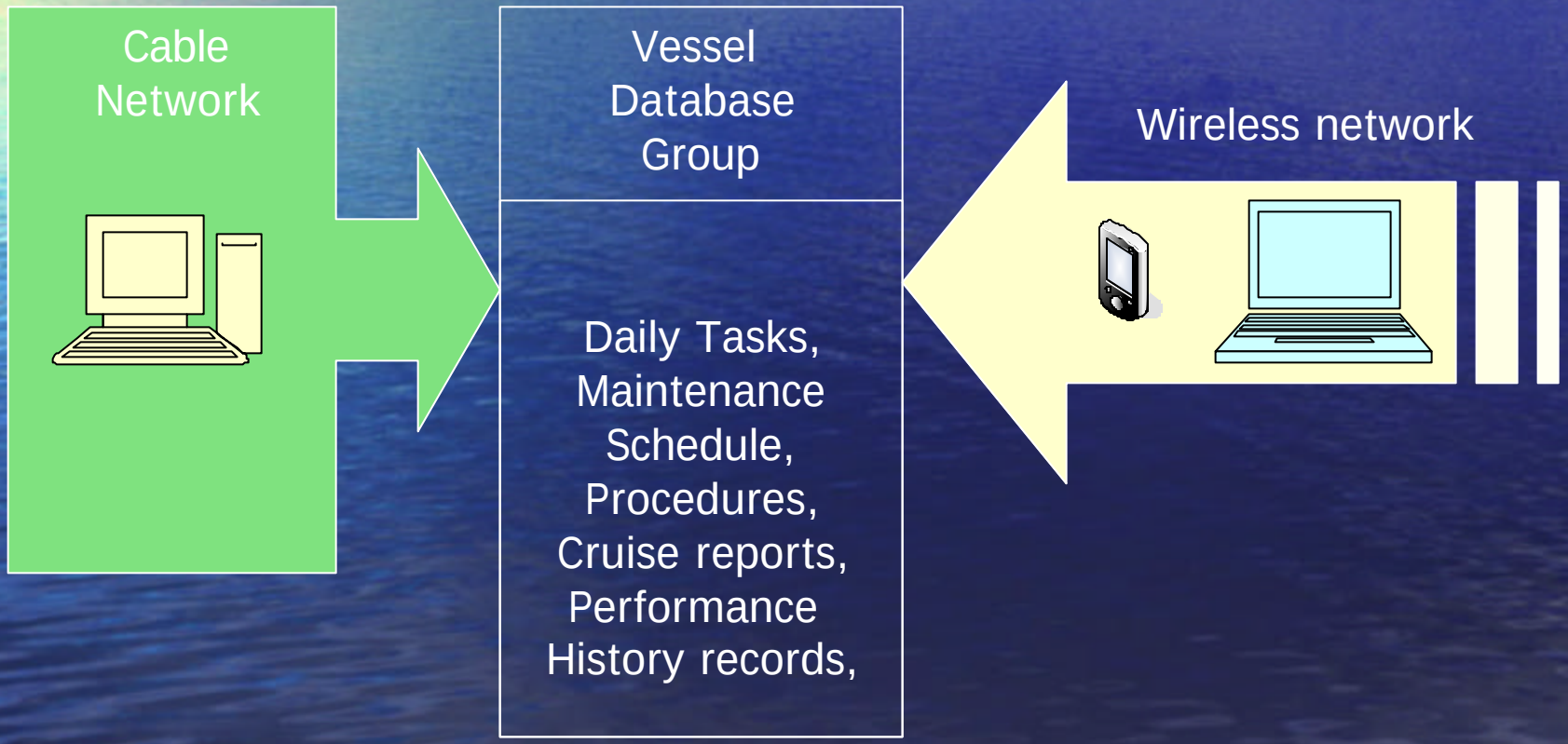
Implementation and Operations

- Implementation on a vessel



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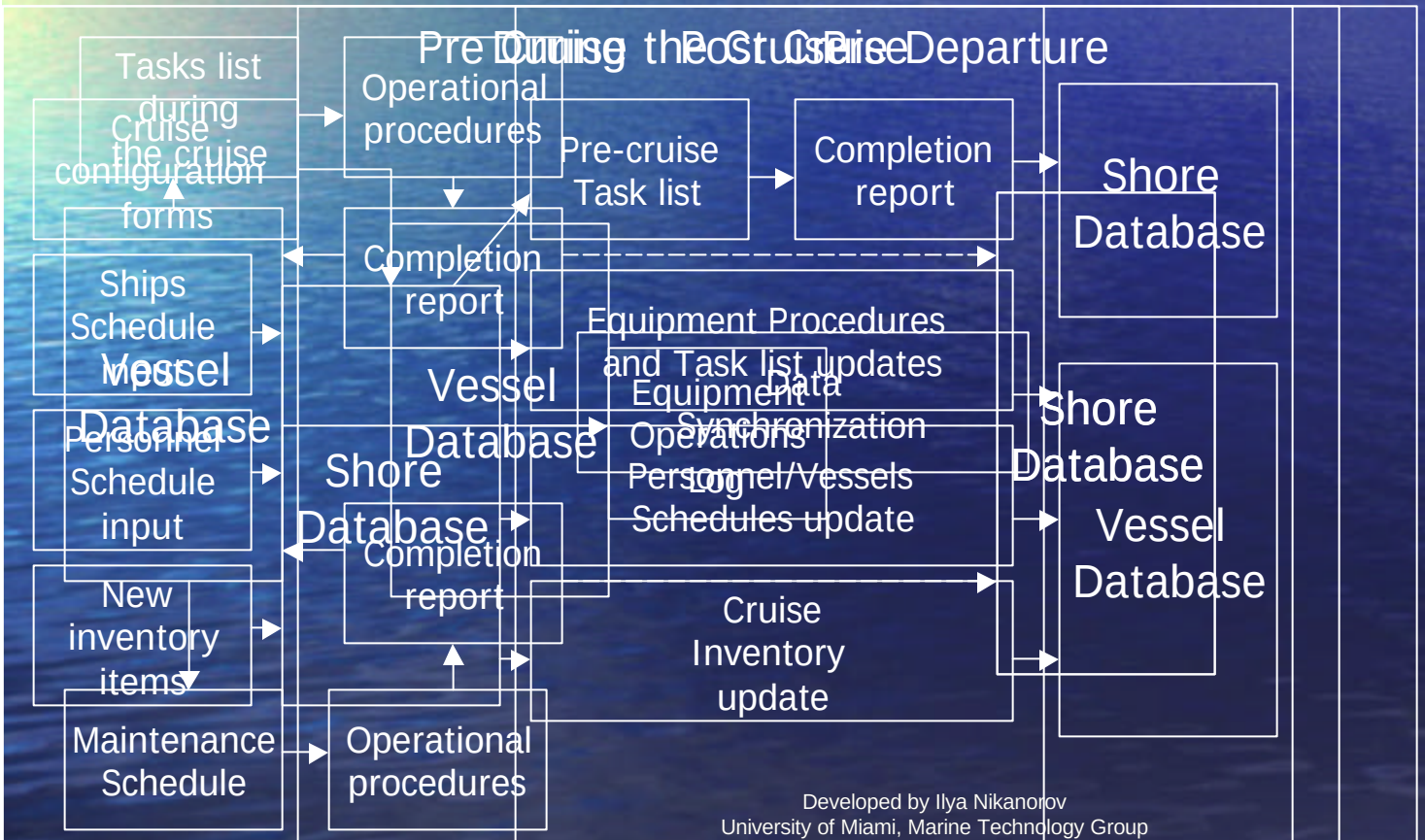
Implementation and Operations

- Overall operations



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