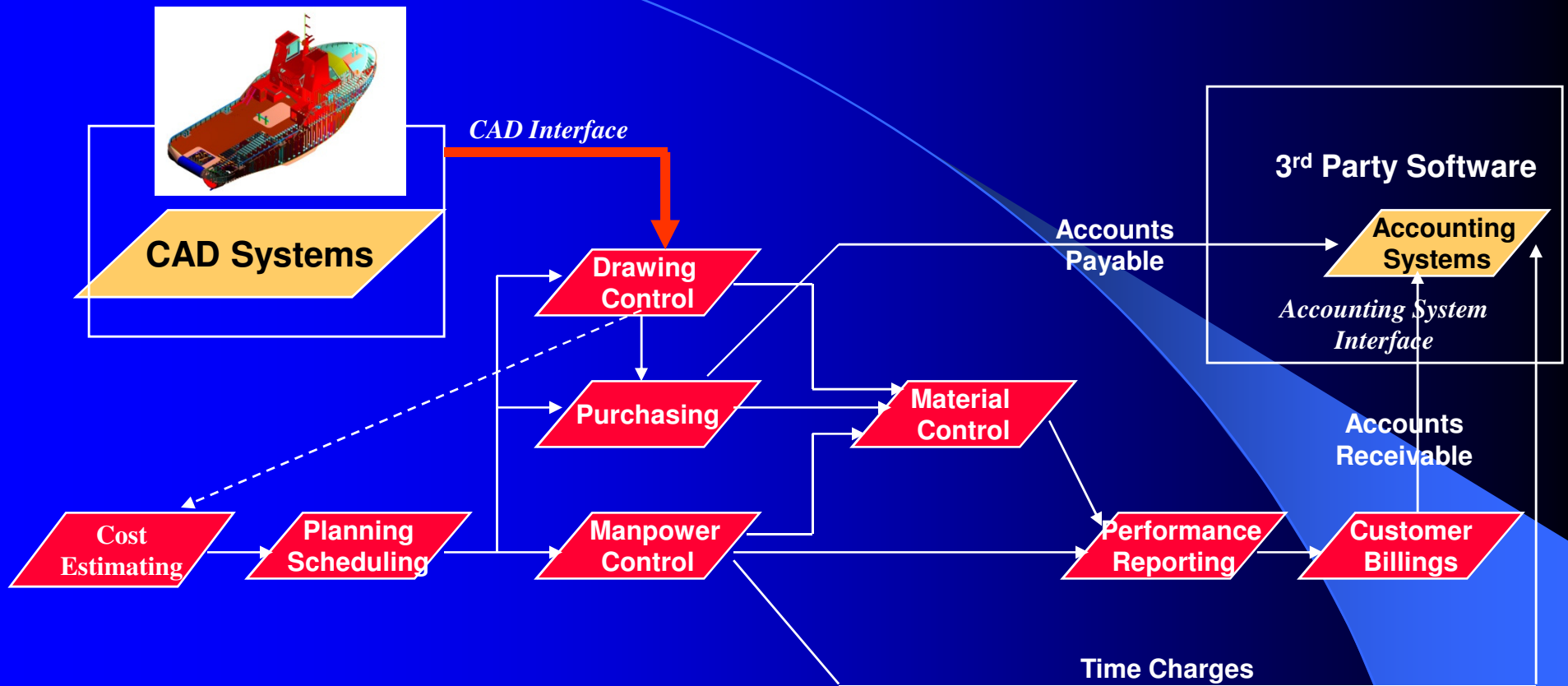




35 Years serving the shipbuilding and repair industry with computer systems for planning and managing production operations.

Integrated Software Solutions

- **Cost Estimating**
- **Planning & Scheduling**
- **Labor Work Order & Time Charge Management**
- **Material Purchasing & Inventory Control**
- **Job Costing & Forecasting**
- **Activity-Based Accounting - Direct & Indirect Costs**
- **Government Cost/Schedule Control Systems Reporting**
- **Contract Change Order Management**

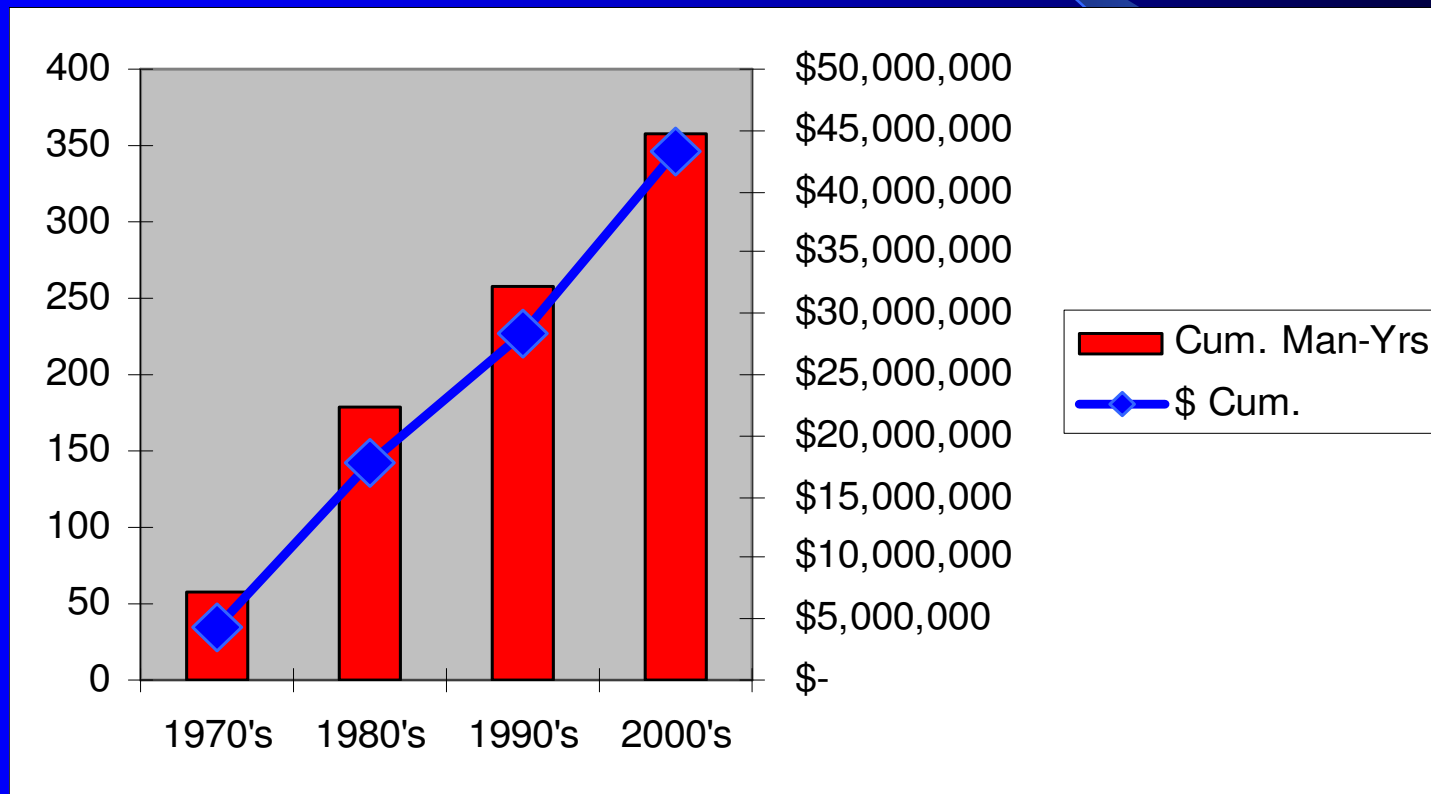


PERCEPTION®, an Integrated Shipyard
 Planning & Resource Management System

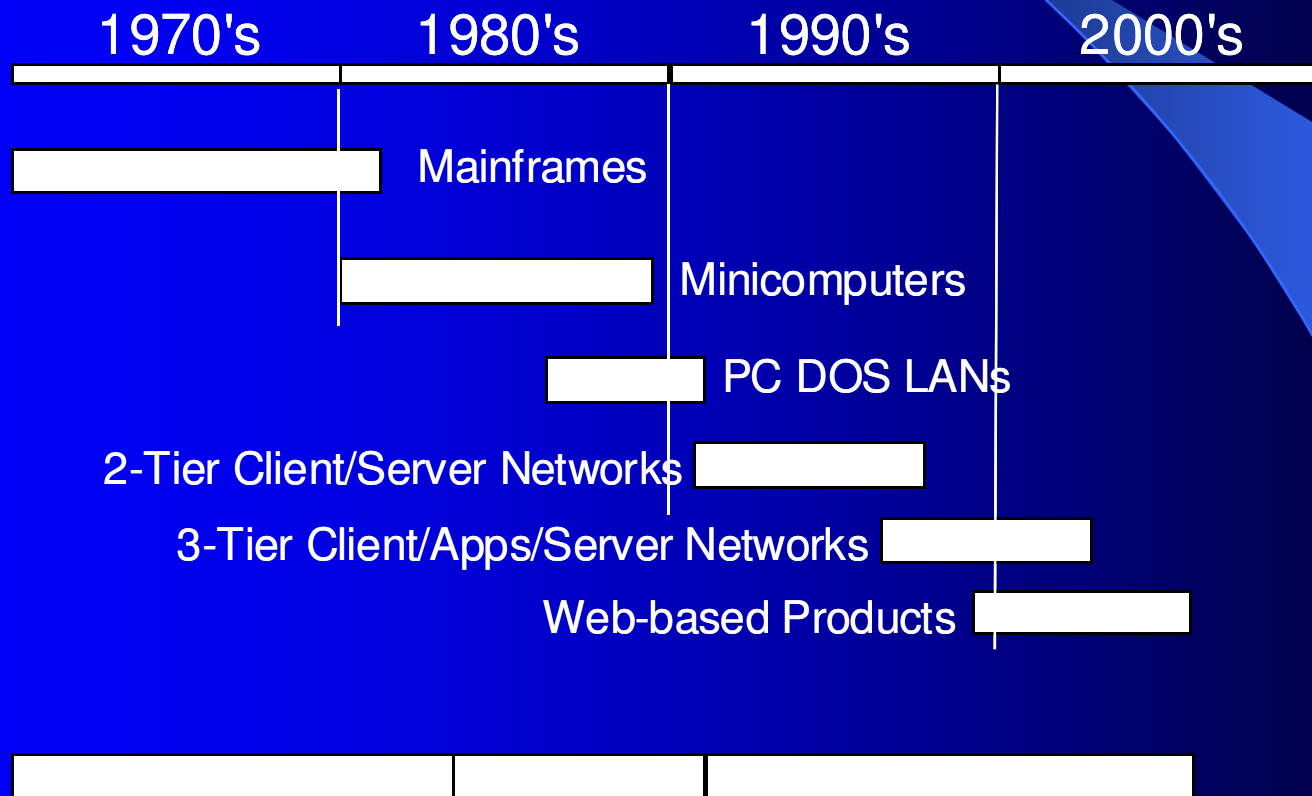
SPAR's Business Focus

- **Software to Support Shipbuilding (Commercial & Naval)**
- **Software to Support Ship Repair, Overhauls & Modernization Projects (Commercial & Naval)**
- **Services to Support Shipyard Planning & Project Management**
- **Independent Cost Estimating Services to Support Shipyards, Ship Owners, Design Agents & Government Agencies**
- **Management Consulting Services**

Investment = Experience



SPAR's Technology Advances

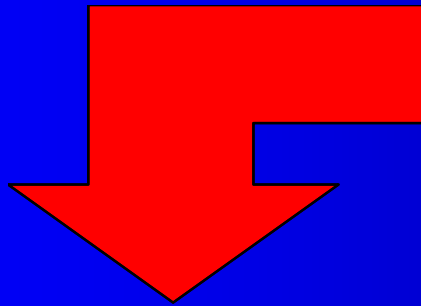


Development Projects

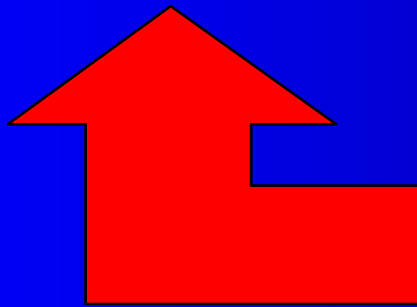
In addition to extensive in-house development efforts, SPAR has been involved in various industry-leading development projects:

- **DARPA Maritech – Modular Tanker Consortium (Kvaerner Masa Marine, Bethship, McDermott, Proteus) – *ESTI-MATE* development**
- **U.S. Navy PODAC (Prime Contractor) – application of *ESTI-MATE* at shipyards**
- **DARPA Maritech – FIRST Project (Proteus, Intergraph & Newport News) – design/cost systems integration**
- **Maritech ASE – Parametric Design & Cost Model (NASSCO, Halter, Proteus)**
- **DRS Technologies Team Member to Develop Navy Open-Source Seakeeping/Dynamic Stability Code - TEMPEST**

Executive Information Portal



Name	Description	Quantity
10000	10000	10000
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- Interim Products Catalog
- Drawings & Sketches
- Parts Bill of Material
- Work Order Instructions
- Budgets, Costs, & Forecasts
- Schedules & Milestone Forecasts
- Purchasing & Vendor Data
- Engineering & Technical Data
- QA Requirements
- Work Center Performance & Forecasts

Support Services

- **Training**
- **Customized Software Development**
- **Systems Integration**
- **Data Conversion**
- **Software Maintenance**
- **Management Consulting**
- **Independent Cost Estimating**

Cost Estimating (US Navy “PODAC”)

SPAR provided a new cost estimating model to the U.S. Navy that reflects modern shipbuilding methods.

The system is called the Product Oriented Design and Construction (“PODAC”) Cost Model.

PODAC Shipyard Participants

As the Navy's prime contractor, SPAR worked with most of the large U.S. shipyards:

- **Bath Iron Works, Bath, ME**
- **National Steel & Shipbuilding, San Diego, CA**
- **Ingalls Shipbuilding, Pascagoula, MS**
- **Avondale Shipbuilding, New Orleans, LA**

Cost Estimating Services (USCG “Deepwater”)

SPAR provided cost estimating services to the U.S. Coast Guard for the review of industry proposals for the \$10-billion “Deepwater” program.

SPAR’s efforts provided the Coast Guard with assessments of cost realism for these proposals.

Samples of Recent Independent Commercial Cost Estimates

- **San Francisco Transit Authority Fast Ferry Designs**
- **NYC Sludge Tanker**
- **Short Sea Shipping High-Speed Trimaran**
- **Commercial SWATH/SLICE Cost Model**
- **Product Carriers & Alaskan Crude Tankers**
- **Barges & Towboats**
- **Hydrographic Research Vessels**
- **Search & Rescue Vessels**
- **Fire Control Vessels**
- **Containership Conversions**
- **Forebody Replacement Cost Studies**
- **Alternate LNG Tank Design Cost Study**
- **Alternate Bulkhead Design Cost Study**

Samples of Recent Independent Military Cost Estimates

- **Navy Joint High Speed Vessels (JHSV) Trimaran & Catamaran Transport Ships**
- **Navy Joint High Speed Sealift (JHSS) Trimaran Transport Ship**
- **Navy High Speed Sealift (HSS) Vision Composite Trimaran Transport Ship**
- **Navy Rapid Strategic Lift Ship (RSLs) Mono-Hull**
- **Navy Heavy Air Lift Seabasing Ship (HALSS) Trimaran**
- **USCG Cutters, Patrol Boats & Buoy Tenders Cost Models**
- **USCG Fast Response Cutter (FRC) “B” Design Alternatives in Steel, Composite & Aluminum**
- **USCG National Security Cutter (NSC) Design/Construction Cost Alternatives**
- **Navy Aircraft Carrier HVAC Modernization**

Established Cost Estimating Libraries

- **“Commercial Shipbuilding New Construction Cost Estimating Relationships”**
- **“U.S. Navy Shipbuilding New Construction Cost Estimating Relationships”**
- **“Commercial & Government Ship Repair Cost Estimating Relationships”**

Cost Models

The *SPAR* Cost Models (Mono-Hull, Trimaran & Catamaran) are used to estimate concept and preliminary ship designs.

The cost models permit quick assessments of costs, risk, and design/mission cost trade-off and build strategy alternatives.

Special variant mono-hull cost models include:

- *Tankers & Product Carriers*
- *Container Ships*
- *Patrol Boats, Cutters & Frigates*

Technical Publications

- **“Shipyard Cost Estimating”**
- **“Planning New Construction & Major Ship Conversions”**
- **“Guide For Shipyard Material Control”**
- **“Prototype Description of a Shipyard Earned Value Management System (EVM)”**
- **Comparing Methods of Measuring Progress, Earned Values & Estimated Cost at Completion”**
- **Managing Design & Engineering Costs & Schedules with Earned Value Management *EVM) Methods”**
- **Benefits of Expanded Modularization for Ship Design & Construction”**