

# TRIDENT

From the idea to the ship

## TRIDENT origins

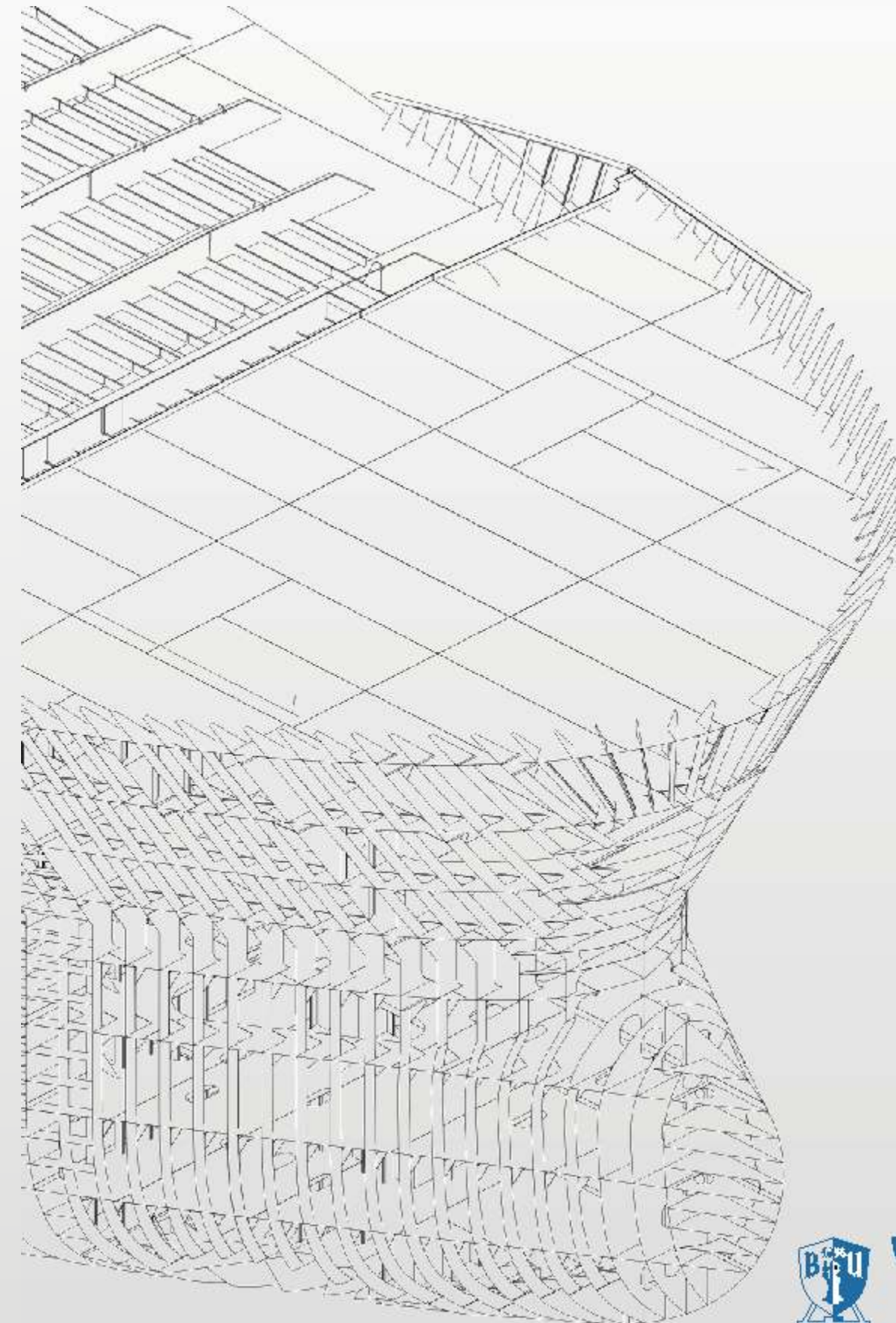
- 1972 - SEAKING (VDC Gothenburg, Sweden)
- 1973 - VIKING (VDC Gothenburg, Sweden)
- 1980 - VIKING - ULJANIK Shipyard version
  - New facilities and work with a/n terminal
- 1983 - KOBRA system
  - Hull structure lofting
  - Shell plate development

## TRIDENT development

- 1987 - Hull form
- 1987 - Naval calculations
- 1990 - Hull structure
- 1991 - Cable routing
- 1994 - New Hull structure
- 1995 - Nesting
- 1999 - New Nesting
- 2000 - PDM system
- 2002 - CAD/PDM - integration with MARS®

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From the idea to the ship



**USCS**  
ULJANIK SHIPBUILDING  
COMPUTER SYSTEMS

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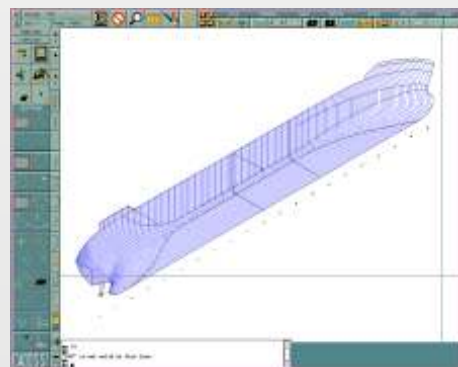
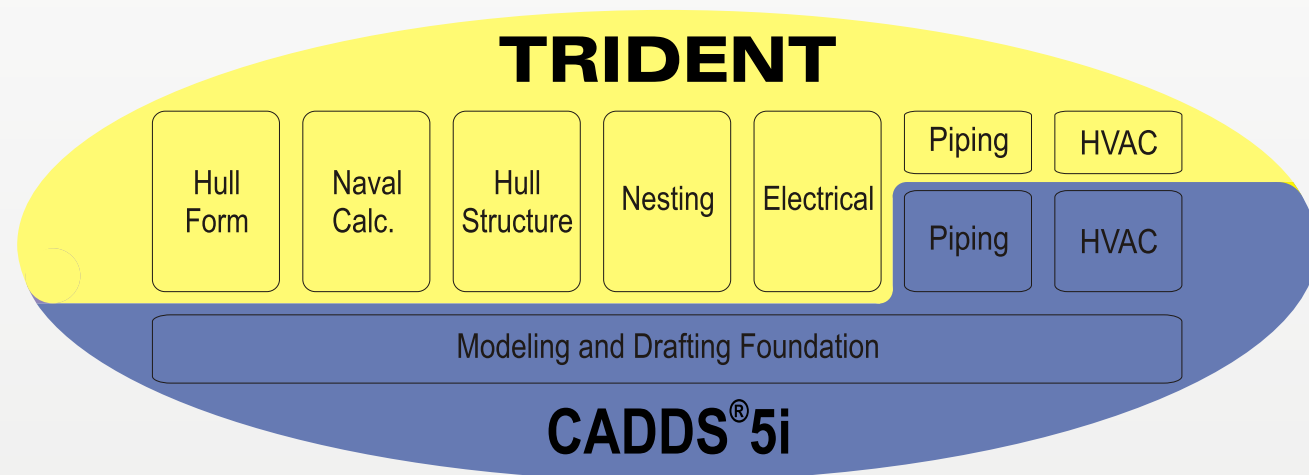


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TRIDENT is a fully integrated CAD/CAM solution based on PTC® CADD5i product database. It integrates the entire CAD/CAM shipbuilding process through its modules: HULL FORM, NAVAL CALCULATIONS, HULL STRUCTURE, NESTING, ELECTRICAL, PIPING and HVAC.

TRIDENT can be adjusted to any shipyard to meet its specific production requirements.

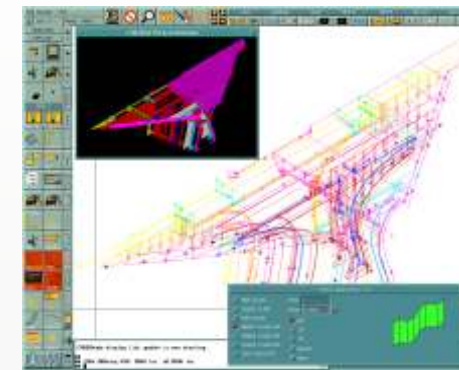
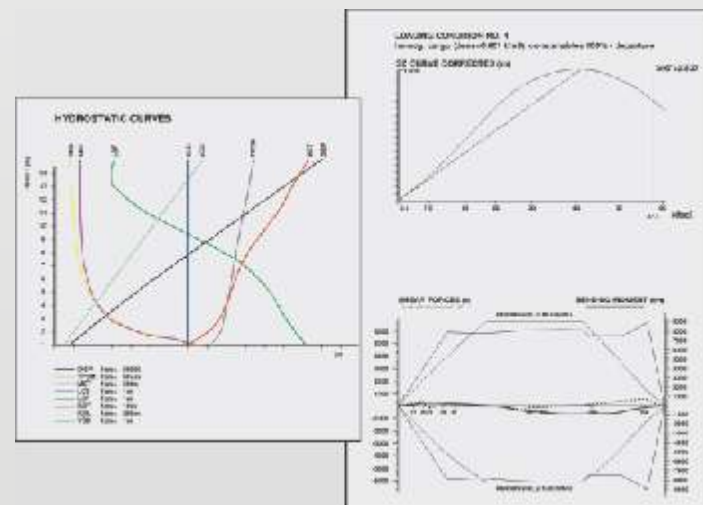


### HULL FORM

- Tools for fairing curves and surfaces based on shipbuilding experience
- Modeling a hull from the sketch
- Transformation of existing hull forms to meet the required L, B, T, displacement or LCB
- Calculation of basic form properties (displacement, KM, VCB, LCB)
- Archive of existing hull forms

### NAVAL CALCULATIONS

- All calculations from hydrostatics to damage performed on the hull created by HULL FORM module
- Results presented in printed or diagram form
- Generation of 3D model based on hydrostatic sections
- Automatic drawing of deadweight scale

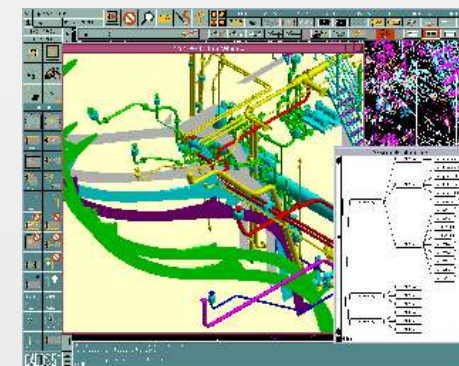
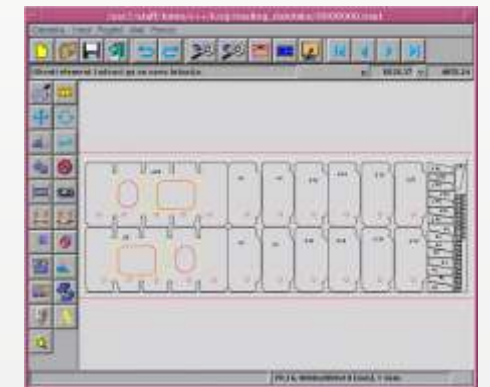


### HULL STRUCTURE

- Definition of all hull structure elements such as plates, profiles and brackets
- Generation and expansion of shell plating
- All elements provided with the appropriate tables and standards
- Workshop drawings, bills of materials or specifications for robot cutting generated directly from the model
- Database with topology relations between elements
- Incorporated shipbuilding experience, knowledge and standards

### NESTING

- Inner structure and shell plating information obtained directly from the 3D model
- Variety of manipulation tools for intuitive and interactive nesting
- Integrated shipbuilding experience for CNC code generation
- Easy output file customization for different types of cutting machines

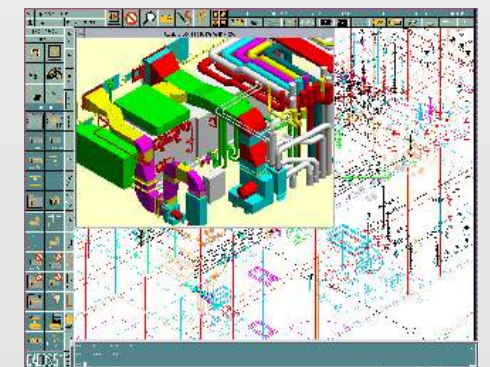


### PIPING

- Piping and Instrumentation Diagrams (P&ID) for functional schemes and bills of materials
- 3D piping and equipment modeling for outfitting design (interactively with the HULL FORM module) using CAMU product structure
- Tools for pipe supports, pipe spools and generation of output data for manufacturing

### HVAC

- Support for the development of major HVAC systems, including flow calculation
- Tools for duct spooling and generation of output data for manufacturing



### ELECTRICAL

- All electrical aspects of the ship design and production covered
- Generation of wiring diagrams
- 3D modeling of electrical equipment
- 3D modeling of cable trays and automatic cable routing