

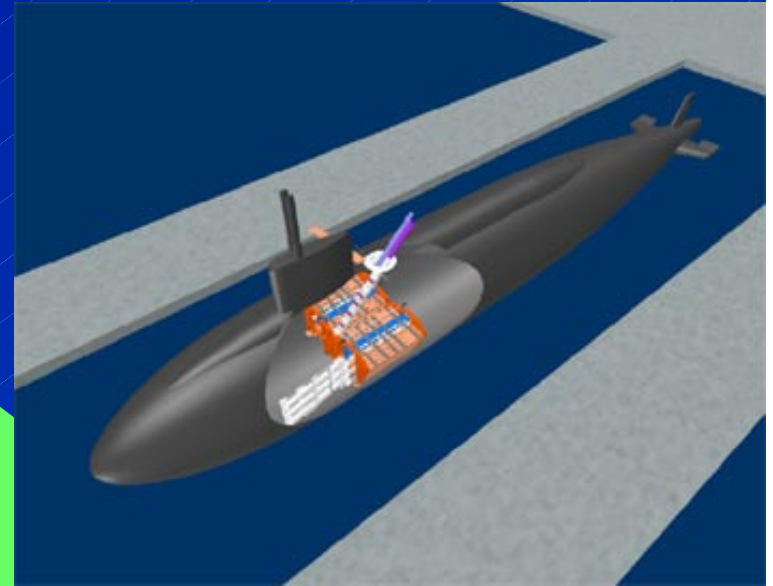
DARPA Funded Simulation Based Design and Advanced Surface Combatant Programs

General Dynamics
Electric Boat - NSSN

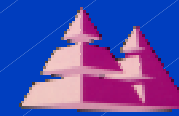
Digital Mockup and
Digital Manufacturing:

- 50% Reduction in Design and Build Time (14 to 7 years)
- 50% Reduction in Change Orders
- 30% Reduction in Manufacturing Cost
- 25% Reduction in Manufacturing Time
- Manufacturing Efficiencies Previously

Achieved on the Third Ship Set are
now Realized on the First Ship Set.



AAAV
LPD - 17
JSF
ADC(X)

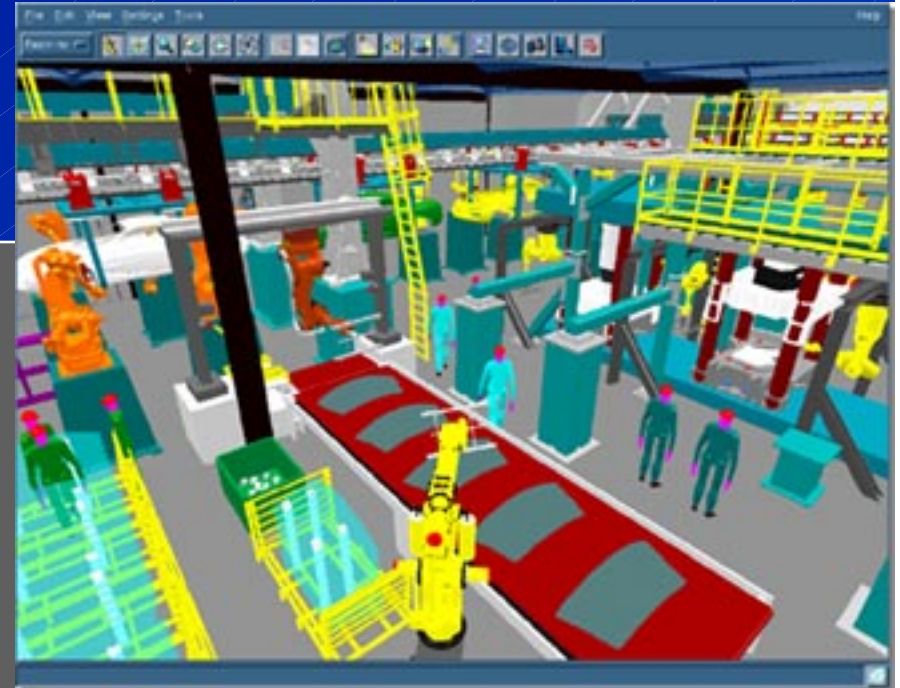


Deneb

Digital Manufacturing and Production System (DMAPS)

The Chrysler Approach

- CONCURRENT PRODUCT AND PROCESS OPTIMIZATION
- "DESIGN AND SIMULATE EVERYTHING WE DO IN MANUFACTURING"
- SHORTEN MANUFACTURING LEAD TIME BY 20%
- ELIMINATE PROCESS VARIATION
- IMPROVE QUALITY
- REDUCE TOOLING COSTS



KEY SUCCESS FACTORS

✓ Top management believes that there is a crisis in their business situation. They vigorously direct and fully support the use of the new technology as a way to save the company or win a critical program. Adopt a make it work attitude!

-OR-

✓ Program managers have been educated on the benefits of the technology, make it a formal program requirement and demand that the enterprise participants adopt it as the way of doing business for their program.

✓ A dictatorship works best

