

DDG 1000 Zumwalt Class

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Advanced Gun System
Program Manager

PEO (IWS)



Zumwalt Description

◆ Mission

- Littoral Battlespace Dominance
- Multi-mission capable
- Network-centric operations

◆ Description

- Precision strike
- Naval surface fire support
- In-stride mine avoidance
- Optimized crewing
- Life cycle affordability
- Robust survivability

◆ Employment

- Provide forward presence and power projection, independently, and in connection with Joint Forces

Key Performance Parameters

Interoperability
Number of Guns
Gun Magazine Capacity
Vertical Launch Cells
Radar Cross Section
Manning
Force Protection
Survivability

Hull

Wave-Piercing Tumblehome

Characteristics

Length	600 ft	Displacement	14,987 LT
Beam	80.7 ft	Installed Power	78 MW
Draft	27.6 ft	Crew Size	148
Speed	30 kt	(incl. Aviation detachment)	

Integrated Power System (IPS)

(2) Main Turbine Generators (MTG)
(2) Auxiliary Turbine Generators (ATG)
(2) 34.6 MW Advanced Induction Motors
Integrated Fight Through Power

Sensors

Dual Band Radar (DBR)

- S-Band Volume Search Radar (VSR)
- X-Band Multi-Function Radar (MFR)

HF & MF Bow Sonar Arrays
Multi-Function Towed Array
EO/IR System
ES System

Aviation

MH60R and (3) VTUAVs
(Capacity for 2 MH 60Rs)

Weapons

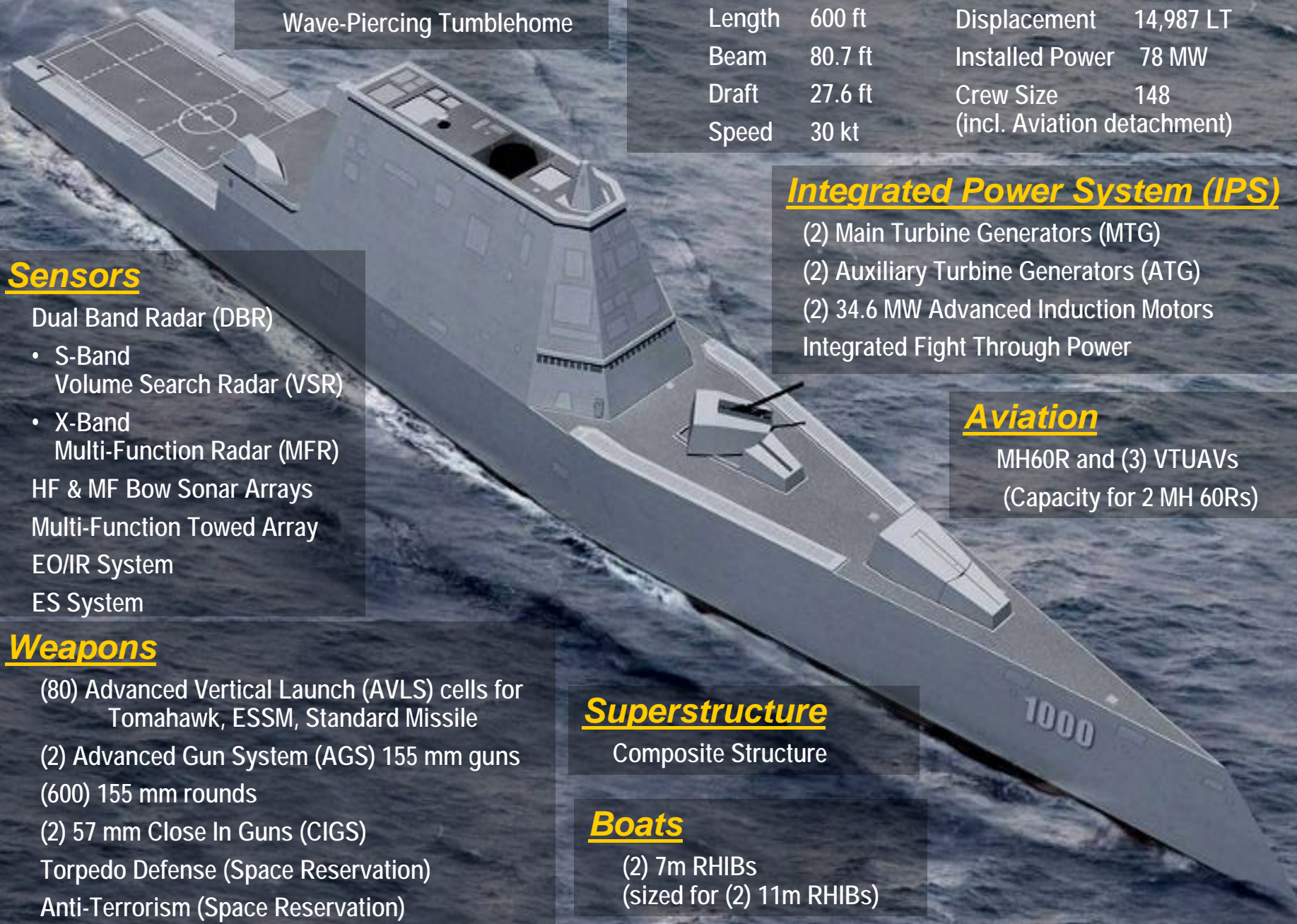
(80) Advanced Vertical Launch (AVLS) cells for Tomahawk, ESSM, Standard Missile
(2) Advanced Gun System (AGS) 155 mm guns
(600) 155 mm rounds
(2) 57 mm Close In Guns (CIGS)
Torpedo Defense (Space Reservation)
Anti-Terrorism (Space Reservation)

Superstructure

Composite Structure

Boats

(2) 7m RHIBs
(sized for (2) 11m RHIBs)



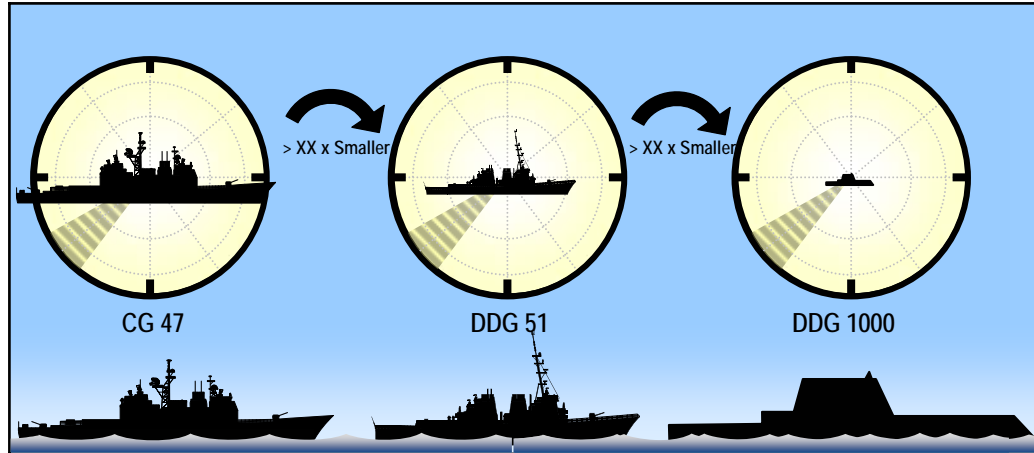
Zumwalt / DDG 51 Flight IIA Comparison



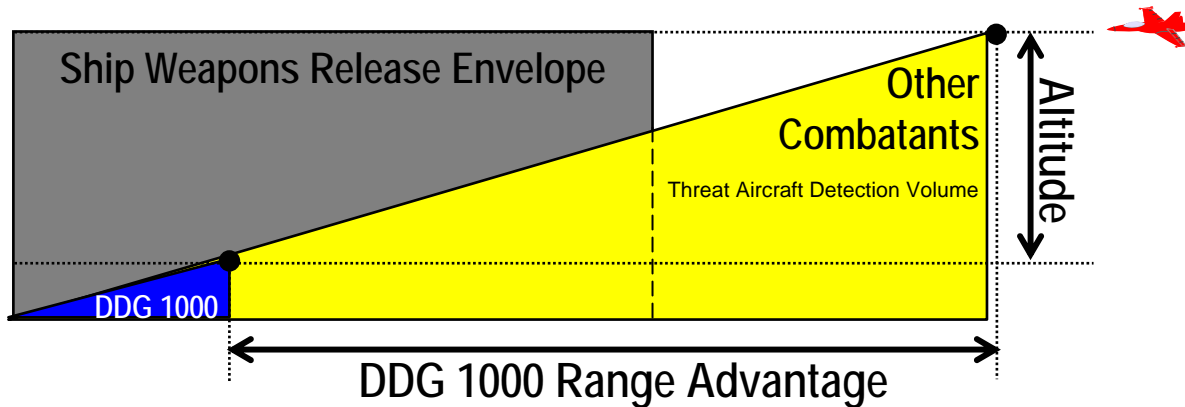
<u>Zumwalt</u>		<u>DDG 79</u>	
Displacement	14,987 LT	Displacement	9,217 LT
Length / Beam	600 ft / 80.7 ft	Length / Beam	509 ft / 67 ft
Draft	28 ft	Draft	31 ft
Crew Size	148	Crew Size	314
Flight Deck	150 ft x 51 ft	Flight Deck	71 ft x 57 ft (fwd) 44 ft (aft)
Freeboard	22 ft	Freeboard at hangar	13 ft
Electric Power Available	78 MW	at transom	16 ft
Connectivity	Net-Ready / Unmanned Radio Room	Ship's Service Power	7.5 MW
		Connectivity	14 Radio Personnel

Zumwalt Advantage

Anti Air Warfare -- Aircraft and ASCMs in Littoral



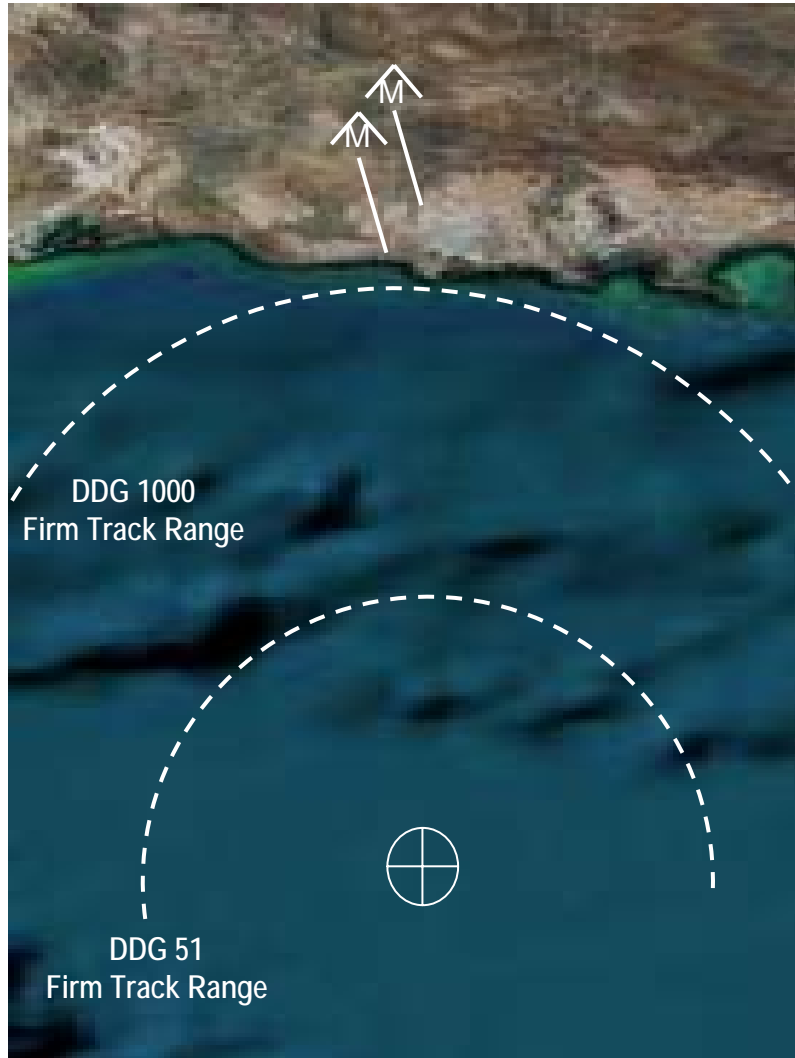
Radar Cross Section of a Fishing Boat



Harder to Detect, Localize, Classify, and Target; Improved Detection and Engagement Ranges of Threats

Zumwalt Advantage

DBR vs SPY-1D in Clutter



DBR (SPY-3)



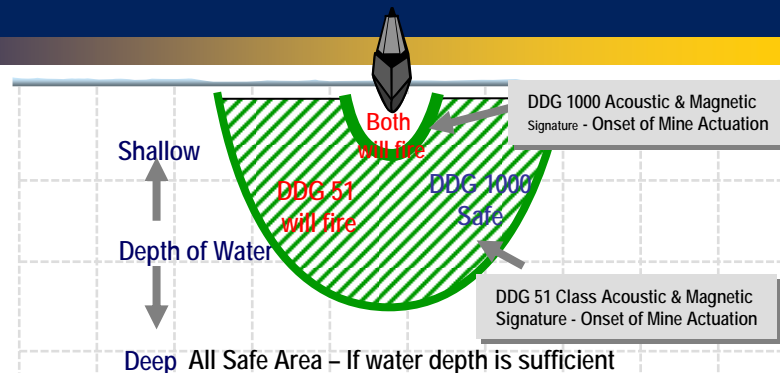
SPY-1D(V)



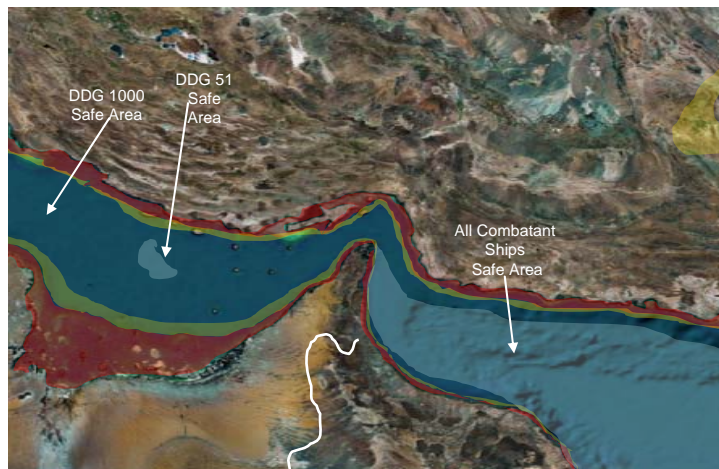
Enhanced Performance Against Advanced Threats and Targets in Clutter

Zumwalt Advantage Integrated Undersea Warfare

◆ Quieter Acoustic and reduced Magnetic Signature

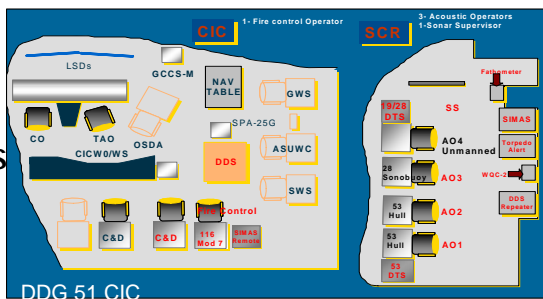


◆ Enables significant increase in safe operating Area against mine threats



◆ With 50% decrease in manning for In Stride Mine Avoidance plus ASW

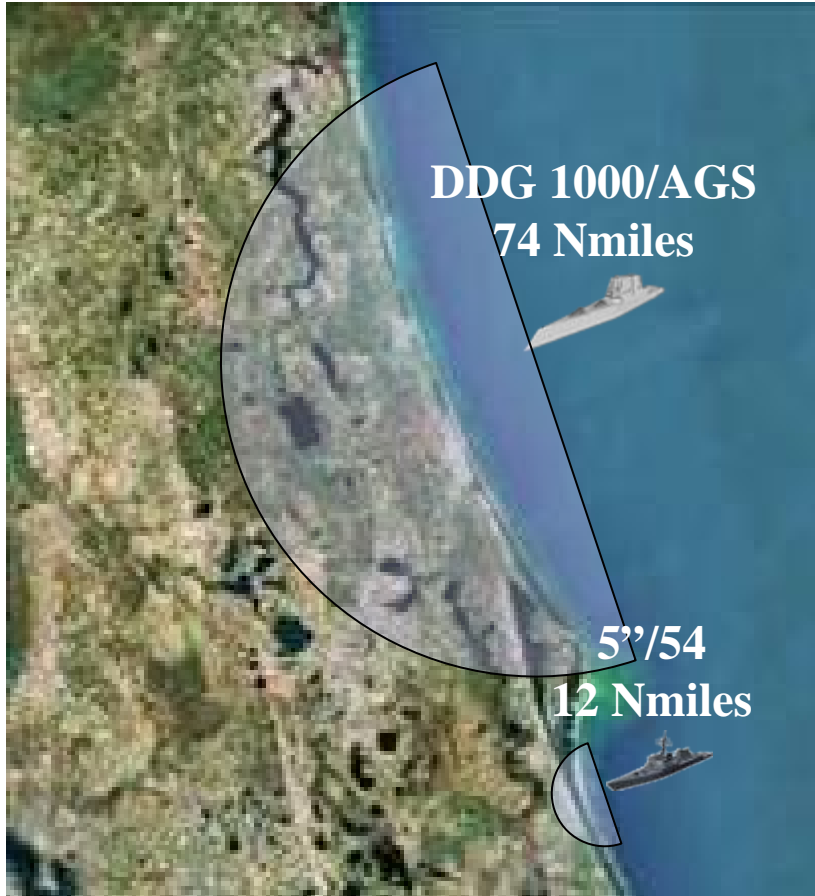
DDG 51 = 10 watchstanders



DDG 1000 = 5 watchstanders

Zumwalt Advantage

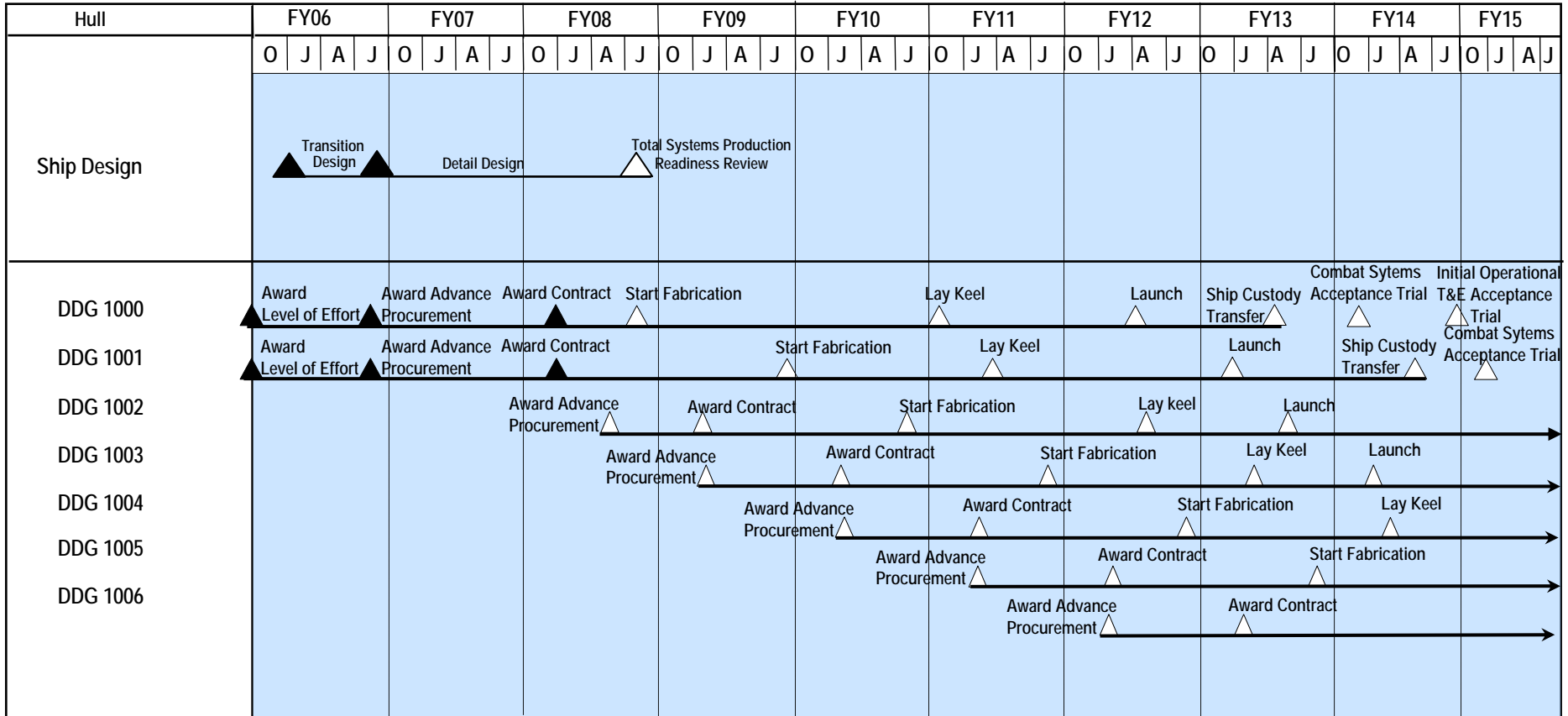
Land Attack



AGS / LRLAP

	DDG 1000*
Munition Weight (AUR)	320 lbs
Magazine Capacity	600 LRLAP
Ordnance Stored	192,000 lbs
Manning (excl Fire Control)	Unmanned
Warhead Weight	60 lbs
Sustained ROF	20 rpm
Volume of Fire (W/H*ROF)	1200 lbs/minute
Range (spec)	74 nmiles
Ashore Coverage @ 25 nmile standoff	5,000 nmiles ²

DDG 1000 Program Schedule



BAE Systems Mission System Equipment



Cordova, AL



AGS Components



First Production Barrel
on Hollow Spindle Lathe



Carriage Weld Sub Assembly