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Title: Performing Detailed Design Reviews of a U.S. Navy Surface Combatant within an Integrated Data Environment

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Abstract: Between November 2006 and March 2009, the U.S. Navy's first ZUMWALT class Guided Missile Destroyer, DDG 1000, underwent Detailed Design. According to a Government Accountability Office shipbuilding study in 2005, late changes to a ship's design is recognized as the primary factor contributing to increasing ship construction costs. Therefore a strict Detailed Design review process was implemented for DDG 1000 that included improved Computer Aided Design tools and more efficient communication methods than previous ship Detailed Design efforts. The actual benefit of the design reviews of the ZUMWALT Class will not truly be known until after the Lead Ship has been commissioned, however, the design reviews, along with the unprecedented involvement by stakeholders via an Integrated Data Environment, have already proved to be an effective means for reducing the probability that setbacks will be encountered at the waterfront.

Keywords: DDG 1000; Detailed Design; Naval Ship Design; Integrated Data Environment