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FY 2004/2005 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET Exhibit R-2

DATE: February 2003

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0203761N
PROGRAM ELEMENT TITLE: Rapid Technology Transition (RTT)

COST: (Dollars in Thousands)

PROJECT NUMBER/ TITLE	FY 2002 ACTUAL	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	FY 2008 ESTIMATE	FY 2009 ESTIMATE
R4021 Rapid Technology Transition	0	0	14,662	14,683	14,701	14,691	14,690	14,685

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Consistent with the goals of Sea Enterprise as a supporting element of Sea Power 21, the mission of the Rapid Technology Transition (RTT) program is to increase the rate at which new, innovative and potentially disruptive technology is inserted into Department of Navy (DoN) acquisition programs and the hands of the warfighter. A key aspect of the RTT program is its mission to transition technology from any source. Increased knowledge of developments in commercial markets, especially those not traditionally associated with defense technology, will increase the opportunities for spiral development of capability through technological innovation, validated by experimentation. Specific individual activities will increase Fleet/Force capability, reduce total ownership cost, and leverage external funds to address naval needs. An effective and robust integration of commercial and military manufacturing can improve military acquisition capabilities and capacity dramatically. Therefore, RTT will coordinate and collaborate with industry to ensure that integrated manufacturing issues are taken into account from the outset whenever a transition is under consideration, in order to increase warfighting capability at substantially lower unit and life cycle costs than would be achievable in a "military-unique" production environment. RTT will work closely with the full spectrum of the commercial sector, from start-ups to small businesses to large corporations. In the broadest sense, RTT will be a catalyst for transformation of the Sea Enterprise.

Rapid transition opportunities occur when a sufficiently mature technology is identified that can meet a particular need on a timetable which matches that of an acquisition program, and is supported by a business case which justifies the associated cost and schedule risk. The combination of circumstances which create such opportunities will vary in each case; they appear, and disappear, well inside the POM cycle. Accordingly, the RTT program will be pro-active in identifying opportunities and will be flexible and agile in exploiting them. RTT will carry out pilot studies and demonstrations of e-business tools and other business practices to identify technology needs of the warfighter and the acquisition community, as well as potential technology solutions from all sources.

To ensure the widest possible awareness of emergent commercial technology opportunities, RTT will interact with the venture capital community and industry. These interactions will be exploited to increase warfighting capability at affordable cost. The RTT program will coordinate closely with PEOs/PMs to maintain awareness of insertion opportunities. Utilizing existing authorities, RTT will apply execution year funds where necessary to "jump-start"

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transitions so they can be inserted and validated by Sea Trial experiments leading directly to deployment and/or demonstrations of high risk/high payoff technologies. Examples of crucial areas where rapid technology transition likely will have immediate impact include: precision underwater mapping in support of mine warfare, titanium nitride coating technology for helicopter turbine engine blades used in harsh environments, and real-time oil analysis to monitor diesel generator health aboard ship, among others.

B. PROGRAM CHANGE SUMMARY:

	FY 2002	FY 2003	FY 2004	FY 2005
FY 2003 President's Budget Submission:	0	0	0	0
Adjustments from FY 2003 President's Budget:				
Start Rapid Technology Transition	0	0	+14,662	+14,683
FY 2004/2005 President's Budget Submission:	0	0	14,662	14,683

PROGRAM CHANGE SUMMARY EXPLANATION:

Schedule: Not Applicable
Technical: Not Applicable

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FY 2004/2005 RDT&E,N PROJECT COST ANALYSIS
Exhibit R-3

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PROGRAM ELEMENT TITLE: Rapid Technology Transition (RTT) Project Title: Rapid Technology Transition (RTT)

COST: (Dollars in Thousands)

PROJECT NUMBER/ TITLE	FY 2002 ACTUAL	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	FY 2008 ESTIMATE	FY 2009 ESTIMATE
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demonstrations of high risk/high payoff technologies. Examples of crucial areas where rapid technology transition likely will have immediate impact include: precision underwater mapping in support of mine warfare, titanium nitride coating technology for helicopter turbine engine blades used in harsh environments, and real-time oil analysis to monitor diesel generator health aboard ship, among others.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 02	FY 03	FY 04	FY 05
RTT	0	0	14,662	14,683

FY 2002 ACCOMPLISHMENTS:
Not Applicable

FY 2003 PLANS:
Not Applicable

FY 2004 PLANS:

This new start will be managed by the Commercial Technology Transition Office (CTTO) within the Office of Naval Research. Initial program thrusts will include:

- **Identify and fund high risk/high payoff rapid transition opportunities**, especially those leading to the capabilities required by Sea Power 21. While FY04 emergent candidates cannot be predicted very far in advance, the kinds of opportunities which could exist are suggested by some examples which could be exploited in FY03(were this program to exist): precision underwater mapping in support of mine warfare, titanium nitride coating technology for helicopter turbine engine blades used in harsh environments, and real-time oil analysis to monitor diesel generator health aboard ship, among others. Partnering with other organizations, including leadership within Sea Trial and Sea Enterprise, has already begun, to align some of these efforts in preparation for FY04.
- **Establish pilot project to demonstrate rapid technology transition knowledge management tools.** The ultimate goal is to have web-enabled knowledge management tools available worldwide 24/7/365, to allow direct inputs by, and interactions among, warfighters, technologists, and solution providers. Both SIPRNET and NIPRNET versions will be developed. Benefits include understanding all sides of the rapid technology transition equation. In particular, the ability to rapidly transition high risk/high payoff technologies requires a real-time, always-available set of data that identify naval needs and possible technologies that might address such needs, along with a comprehensive list of people, companies, and industries that can build solutions - from the garage inventor to the large primes. The RTT will:
 - o Create a pilot knowledge management system that includes naval needs by working with Navy and Marine Corps Warfighters, Program Executive Officers and Program Managers--accessible by OSD, other services and designated Federal agencies.

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- o Identify commercial technology that could be adapted to meet naval needs, and incorporate them into the pilot knowledge management system. These technologies may not currently be fully exploited within the commercial sector, but could be developed with a modest investment.
- o Begin population of the knowledge management system with feedback from Sea Trial lessons learned, Fleet Battle Experiments, Advanced Warfighting Experiments, Limited Objective Exercises, Wargames, to include joint experimentation.
- **Engage the venture capital (VC) community to acquire warfighting capability at affordable cost.** Such engagement will provide increased awareness of commercial sector technology developments and leverage the value of unique naval assets and intellectual property (IP). The RTT will accomplish this objective by bringing together naval assets and commercial entities that can use or develop products that meet naval needs. Venture Capitalists have access to large funding sources which they invest in small, agile, technology companies. The RTT will work with VCs to achieve a commitment on their part, then to leverage their funds in support of technologies meeting naval needs (goal: 5:1 leverage). This effort could reduce acquisition program costs, promote more efficient DoN business operations and practices, and increase warfighting capability.
- o The program envisions that engaging the VC community will increase DoN awareness and reduce time to market for technologies identified as required to meet current naval needs, and that this approach will add to the supply of technology which was previously unavailable in the marketplace.
- o A key aspect of the RTT mission is to rigorously evaluate various rapid technology transition strategies and business models via role-playing games and other means. The RTT will support senior acquisition decision makers by conducting assessments and creating roadmaps of alternate transition paths. Benefits include evaluating various business models with minimum expenditure of resources, and applying Lessons Learned to business approaches. This enterprise approach can lead to more rapid - and more effective - transitions of new technology into naval systems.

FY 2005 PLANS:

- Identify and fund rapid transition opportunities, especially those leading to the capabilities required by Sea Power 21. The approach will be similar to FY04, with specific transitions identified as opportunities appear.
- Maintain and extend the pilot SIPRNET and NIPRNET RTT knowledge management system.
- Expand RTT venture initiatives.

C. OTHER PROGRAM FUNDING SUMMARY:

NAVY RELATED RDT&E: All technology investments in DoN

NON-NAVY RELATED RDT&E: All technology investments outside DoN.

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D. ACQUISITION STRATEGY: Utilize existing authorities on a case-specific basis to exploit rapid technology transition opportunities.

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