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*Navy-Marine Corps Tactical Air Integration Plan:  
Background and Issues for Congress*

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**Abstract.** The Department of the Navy (DON) in 2003 began implementing a Navy-Marine Corps Tactical Air Integration (TAI) plan aimed at more closely integrating Navy and Marine Corps strike fighter inventories. DON said the plan will reduce strike fighter procurement costs by about \$35 billion, but increase strike fighter readiness costs by about \$16.5 billion, resulting in a net savings of about \$18.5 billion. DON in June 2005 modified the TAI plan to respond to increased operational tempo. The TAI plan raises several potential oversight issues.

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# CRS Report for Congress

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## Navy-Marine Corps Tactical Air Integration Plan: Background and Issues for Congress

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### Summary

The Department of the Navy (DON) in 2003 began implementing a Navy-Marine Corps Tactical Air Integration (TAI) plan aimed at more closely integrating Navy and Marine Corps strike fighter inventories. DON said the plan will reduce strike fighter procurement costs by about \$35 billion, but increase strike fighter readiness costs by about \$16.5 billion, resulting in a net savings of about \$18.5 billion. DON in June 2005 modified the TAI plan to respond to increased operational tempo. The TAI plan raises several potential oversight issues. This report will be updated as events warrant.

### Background

**Navy and Marine Corps Strike Fighters.** The Navy and Marine Corps, which make up the Department of the Navy (DON), each operate hundreds of strike fighters. The Navy fields F/A-18C/D Hornets, F/A-18E/F Super Hornets, and F-14 Tomcats. The Marine Corps fields F/A-18C/Ds and AV-8B Harrier VSTOL (vertical/short takeoff and landing) "jump jets." The Navy plans to shift to a combination of Super Hornets and F-35 Joint Strike Fighters (JSFs), while the Marine Corps plans to shift to an all-JSF strike fighter force. Consistent with these plans, DON in FY2004 and subsequent years plans to procure additional F/A-18E/Fs for the Navy and JSFs for the Navy and Marine Corps.<sup>1</sup>

**Proposed Tactical Air Integration Plan.** In 2003, DON began implementing a Navy-Marine Corps Tactical Air Integration (TAI) plan aimed at more fully integrating the Navy and Marine Corps strike fighter forces. Key elements of the plan, which would be carried out between late-FY2003 and FY2012, include the following:

- **Operate a smaller total number of DON strike fighters.** The planned total number of operational DON strike fighters is to be reduced. This

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<sup>1</sup> For more on these programs, see CRS Report RL30624, *Military Aircraft, the F/A-18E/F Super Hornet Program: Background and Issues for Congress*, CRS Report RL30563, *Joint Strike Fighter (JSF) Program: Background, Status, and Issues*, and CRS Issue Brief IB92115, *Tactical Aircraft Modernization: Issues for Congress*, all by Christopher Bolkcom.

smaller force is to be made more effective through increased spending on aircraft readiness and modernization, as described below.

- **Reduce planned procurement of strike fighters.** Consistent with the reduction in the total number of operational strike fighters, planned purchases of F/A-18E/Fs and JSFs are to be reduced.
- **Increase the readiness of Navy strike fighters.** DON is to use some of the savings from reduced F/A-18E/F and JSF procurement to increase the readiness of Navy strike fighters. Navy strike fighter squadrons, whose readiness traditionally had been allowed to decline between the times that they are assigned to deploying Navy aircraft carriers, are to be maintained at a more consistently high level of readiness over time (like Marine Corps strike fighters), so that they will be available in times of emergency for surge deployments aboard Navy carriers or with deploying Marine Corps units.
- **Enhance funding for DON strike fighter modernization and ancillary equipment.** To further increase the capability of the smaller strike fighter force, DON is to use some of the savings from reduced F/A-18E/F and JSF procurement to enhance funding for DON strike fighter modernization (i.e., upgrade) programs and procurement of DON strike fighter ancillary equipment (such as targeting pods).
- **Cross-assign Navy and Marine Corps strike fighter squadrons.** On a day-to-day basis, 3 Navy strike fighter squadrons would be assigned to deploying Marine Corps units, and 6 Marine Corps strike fighter squadrons would be assigned to help fill out Navy carrier air wings. This is intended in part to familiarize pilots from each service with the operations of the other service and thereby ensure that in times of emergency, strike fighters from one service could be readily surged to meet the strike fighter needs of the other service. The cross-assignment of the 6 Marine Corps squadrons would add to the 4 Marine Corps strike fighter squadrons that, since the 1990s, have been assigned to help fill out Navy carrier air wings, bringing the total number of cross-assigned Marine Corps squadrons to 10.

**Reduced Number of Operational DON Strike Fighters.** As shown in **Table 1** below, the TAI plan would reduce the total number of operational DON strike fighters, with much of this change coming from reducing active-duty Navy JSF squadrons.

**Reduced Overall Strike Fighter Procurement.** DON said the 212-aircraft reduction in the planned number of operational strike fighters translates into a 497-aircraft reduction in planned overall strike fighter procurement. The TAI plan, DON said, will permit DON to reduce procurement of F/A-18E/Fs to 460 from 548 (a reduction of 88 aircraft, or about 16%) and procurement of JSFs to 680 from 1,089 (a reduction of 409 aircraft, or about 38%). The combined F/A-18E/F and JSF buy would thus be reduced to 1,140 aircraft from 1,637, a reduction of 497 aircraft, or about 30%. Not procuring these 497 aircraft, DON said, will save DON about \$35 billion in constant (i.e., inflation-adjusted) FY2002 dollars in aircraft procurement costs through FY2021.

**Table 1. Planned DON Operational Strike Fighter Force Structure**

(Number of squadrons times number of operational aircraft per squadron = number of operational aircraft, known as Primary Authorized Aircraft, or PAA)

		Previous plan	2003 TAI plan
Navy	F/A-18 (active)	20 x 12 = 240	20 x 12 = 240
	JSF (active)	20 x 12 = 240	13 x 10 = 130
	F/A-18 (reserve)	3 x 12 = 36	1 x 12 = 12
	JSF (reserve)	0 x 12 = 0	1 x 10 = 10
	USN squadrons	43	35
	USN aircraft	516	392
Marine Corps	JSF (active)	14 x 12 = 168	14 x 10 = 140
	JSF (active)	7 x 20 = 140	7 x 14 = 98
	F/A-18 (reserve)	4 x 12 = 48	0 x 12 = 0
	JSF (reserve)	0 x 10 = 0	3 x 10 = 30
	USMC squadrons	25	24
	USMC aircraft	356	268
TOTAL DON	<b>Squadrons</b>	<b>68</b>	<b>59</b>
	<b>Aircraft</b>	<b>872</b>	<b>660</b>

Source: U.S. Navy data supplied to CRS Mar. 3, Apr. 10, and Apr. 22, 2003.

**2004 GAO Report.** An August 2004 Government Accountability Office (GAO) report on the TAI plan concluded the following:

The Department of the Navy based its conclusion that it could meet the Navy and Marine Corps' operational requirements with a smaller force primarily on the findings of a contractor study that evaluated the relative capability of different tactical aviation force structures. GAO's review of the contractor's methodology and assumptions about force structure, budget resources, and management efficiencies suggests that much of the analysis appears reasonable. However, GAO noted some limitations — including the lack of analytical support for reducing the number of backup aircraft — increase the risk that the smaller force will be less effective than expected.

The Navy and Marine Corps each followed a different process in selecting a reserve squadron to decommission. The Marine Corps made a clear and well-documented analysis of the operational, fiscal, logistical, and personnel impacts of different options that appears to provide decision makers with a reasonable basis for selecting the Reserve unit to decommission. By contrast, the Navy selected its reserve squadron without clear criteria or a documented, comprehensive analysis, and thus with less transparency in its process.

Two other factors that might affect successful implementation of the Plan are the potential unavailability of readiness funding and delays in fielding the new force. Although the contractor recommended that the Navy identify future readiness-funding requirements, to date, the Navy has not conducted this analysis. In addition, the Department of the Navy is experiencing engineering and weight problems in developing the Joint Strike Fighter that will cause it to be delayed until 2013, at least

1 year later than had been projected, and other high risks to the program remain. Because these delays will cause the Navy to operate legacy aircraft longer than expected, they might also increase operations and maintenance costs, making an analysis of future readiness funding requirements even more important.<sup>2</sup>

**2005 Modification to Plan.** In August 2005, it was reported that DON in June 2005 had modified the TAI plan in response to increased DON strike fighter operational tempo resulting from operations in Iraq, Afghanistan, and elsewhere. The modification, called *capabilities-based scheduling*, relaxes, at least temporarily, the commitment to cross-assign 3 Navy strike fighter squadrons and a total of 10 Marine Corps strike fighter squadrons. DON says the modification results in a more flexible approach to assigning Navy and Marine Corps strike fighter squadrons that responds to increased strike fighter operational tempo and better aligns the TAI plan with the Fleet Response Plan (FRP), which aims at improving the Navy's ability to surge forces in response to contingencies.<sup>3</sup>

## Issues for Congress

Congress expressed concern over the TAI plan in marking up the FY2004 defense authorization bill (H.Rept. 108-106, page 327; S.Rept. 108-46, page 123) and FY2004 defense appropriation bill (Section 8141 of P.L. 108-87 ). Potential issues for continued congressional oversight include the three below.

**Total DON Strike Fighter Capability.** What effect will the TAI plan have on total DON strike fighter capability? DON argues that the plan's operational strike fighter force, though numerically smaller, will provide more forward-deployed DON strike fighter capability on a day-to-day basis due to the enhanced individual aircraft capability, and will improve DON's ability to surge aircraft in emergencies due to the increased surge readiness of Navy strike fighters, the improved ability to assign surged aircraft from one service to meet the needs of the other service, if need be, and the enhanced individual capability of all DON strike fighters. Skeptics may question whether the smaller force, even with its improvements in readiness, modernization, and ancillary equipment, would have enough aircraft to fight and win two regional conflicts at the same time.

In assessing this question, one issue concerns the plan's enhanced funding for strike fighter modernization programs and ancillary equipment. DON said that in the case of the TAI plan, enhanced funding refers, to a significant degree, to an *increased likelihood* that DON in coming years would be able to afford certain modernization programs and ancillary equipment included under its old plan. Potential oversight questions include How much of the plan's enhanced funding represents increased funding, and how much represents an increased likelihood of being able to afford items included in DON's old plan? If the increase in funding likelihood is less than DON believes, would the TAI force still provide more capability than the previously planned force?

A second potential issue concerns the measurement of individual aircraft capability. Assuming the TAI plan would result in a strike fighter force reflecting greater amounts

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<sup>2</sup> GAO-04-900, August 2004.

<sup>3</sup> Richard R. Burgess, "The Power Pool," *Seapower*, Aug. 2005, pp. 28-30. For more on the FRP, see *Navy Ship Deployments: New Approaches — Background and Issues for Congress*, by Ronald O'Rourke.

of spending for modernization and ancillary equipment, what is the resulting amount of improvement in individual aircraft capability? If the improvement is less than DON believes, would the TAI force still be more effective than the previously planned force?

A third potential issue concerns the TAI plan's impact on pilot training. Marine Corps pilots are trained as infantrymen before they become pilots, so that they will better understand the battlefield needs of ground forces. As pilots, they receive extensive training in close air support (supporting friendly troops on the ground by attacking nearby enemy ground forces). Navy pilot training, in contrast, has traditionally focused more on air-to-air combat and on interdiction (attacking enemy forces and assets in locations away from friendly ground forces). The cross-assignment of strike fighters under the TAI plan suggests that DON strike fighter pilots might need to either increase their total training load or spend less time training in their own service's most prominent missions. What effect would the TAI plan have on individual pilot training loads or the ability of DON pilots to achieve high levels of proficiency in specific mission areas?

A fourth potential issue concerns the impact of the 2005 modification of the TAI plan to capabilities-based scheduling. DON officials argue that it effectively accelerates DON tactical aircraft integration.<sup>4</sup> Skeptics could argue that the relaxation of the commitment to cross-assign strike fighter squadrons will reduce DON strike fighter integration, reducing the originally advertised benefits of integration. Potential oversight questions for Congress include the following: Will capabilities-based scheduling increase or reduce DON strike fighter integration? If the number of DON strike fighter squadrons is reduced, but the originally planned degree of integration is not achieved, how will this affect DON strike fighter capability? Will the DON strike fighter force be able to meet operational needs? Have the inventory reductions carried out under the TAI plan made it more difficult for DON to manage strike fighter operational tempo? Should the strike fighter force be increased to permit DON to better manage operational tempo?

**Cost Effectiveness.** A second potential issue for Congress is the cost effectiveness of the TAI plan. When all the cost impacts of the TAI plan are taken into account, will the net cost impact of the plan be worth the resulting change in overall DON strike fighter capability? Although DON estimates that the TAI plan will reduce DON strike fighter procurement costs by about \$35 billion in constant FY2002 dollars through FY2021, the plan will create additional expenditures in other areas. Most prominently, the plan will require additional operation and maintenance spending to increase the readiness rates of Navy strike fighters. DON estimates that increased spending for strike fighter readiness under the plan would total about \$16.5 billion in constant FY2002 dollars through FY2021 and would continue to accumulate thereafter.<sup>5</sup> For the six years covered by the FY2004-FY2009 Future Years Defense Plan (FYDP), DON estimates that the TAI plan would reduce DON aircraft procurement costs by about \$1 billion and increase aircraft readiness spending by about \$3.7 billion. DOD aircraft operation and maintenance costs have been growing in recent years, particularly for older aircraft. New models of DOD aircraft have sometimes, if not often, proven to be more expensive to operate and maintain than planned. This raises the possibility that the increased readiness costs of the TAI plan may be underestimated. On the other hand, since the costs of at

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<sup>4</sup> "The Power Pool," op. cit.

<sup>5</sup> The \$35 billion and \$16.5 billion figures would change if computed on a discounted basis to reflect the investment value of money over time.

least some (if not many) past DOD aircraft procurement programs have also been underestimated, there is also a possibility that the procurement cost savings of the TAI plan may be underestimated.

A second potential source of additional expenditures under the TAI plan would be increased spending for DON strike fighter modernization and ancillary equipment. Although much of the enhancement of funding in these areas under the TAI plan refers to an *increased likelihood* of being able to afford modernization and ancillary equipment programs included under DON's previous strike fighter plan, some of the enhancement would come in the form of *increased amounts* of spending in these areas.

A third potential source of additional expenditures under the TAI plan would be increased unit JSF procurement costs. The 409-aircraft reduction in DON purchases of JSFs that is to occur under the TAI plan would reduce the total planned buy of JSFs (2,912 aircraft, including 60 for the Royal Navy) by about 14%. Any Air Force or Royal Navy JSFs that were scheduled to be procured after these 409 DON JSFs would now occur earlier on the production learning curve and therefore be more expensive for these services to procure (though perhaps only marginally so). In addition, if the reduction in the planned DON JSF buy results in reduced *annual* JSF procurement rates in certain years compared to the old JSF procurement plan, then the JSFs produced during those years could be more expensive due to reduced spreading of manufacturer and supplier fixed overhead costs. The resulting increase in unit procurement cost would be incurred by whatever services are procuring these JSFs. If the reduced DON JSF buy under the TAI plan somehow affects the number of JSFs sold to foreign buyers, this could further affect unit procurement costs of JSFs built for the United States.

**Implications for Further Aviation Integration.** A third potential issue for Congress is the potential implications of the TAI plan, if implemented, for further integration of U.S. military assets in the future. Could implementing the TAI plan lead to additional integration of Navy and Marine Corps aviation assets in the future? If so, what form might this further integration take, and what would be its potential impact on DON capabilities and costs? The Marine Corps by law (10 U.S.C. 5063(a)) is to be a combined-arms force that includes its own aviation assets. Even so, there have been proposals from time to time for turning the Marine Corps' fixed-wing aircraft over to the Navy. Some observers may wonder whether the TAI plan, if implemented, could become the first step on a "slippery slope" toward total integration of Navy and Marine Corps fixed-wing aviation. Advocates of such integration have argued that it could reduce DON costs and would be consistent with the Army's reliance on Air Force and Navy fixed-wing aircraft for close air support. Marine Corps officials and others have opposed the idea on the grounds that maintaining a separate Marine fixed-wing aviation capability is critical to the service's success as a combined-arms force, particularly in expeditionary operations where Marine Corps fixed-wing aircraft serve as the equivalent of the Army's more extensive artillery support units. The TAI plan in the longer run could renew discussions from earlier years over the cost-effectiveness of maintaining separate aviation components in the Air Force, Navy, Army, and Marine Corps — the so-called "four air forces" issue.<sup>6</sup> Some press reports suggest that DOD is looking at this issue as part of the 2005 Quadrennial Defense Review (QDR) to be reported to Congress in early 2006.

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<sup>6</sup> For a discussion, see CRS Report 93-823 F, *Four U.S. "Air Forces:" Overlap and Alternatives*, by Allan W. Howey. (Out of print. Available from Christopher Bolcom at 7-2577.)